

Man-Tak Leung  
Lee-Ming Tan *Editors*

# Applied Psychology Readings

Selected Papers from Singapore  
Conference on Applied Psychology, 2017

 Springer

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Man-Tak Leung · Lee-Ming Tan  
Editors

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on Applied Psychology, 2017

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*Editors*

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# Preface

2017 Singapore Conference on Applied Psychology (SCAP 2017), organized by East Asia Research and supported by the Hong Kong Shue Yan University and Singapore University of Technology was held on June 29–30, 2017 at Holiday Inn Singapore Atrium.

The Special theme for SCAP 2017 was ‘Connecting Theory to Practice’. The annual SCAP conference series organised by East Asia Research are major international events aimed at supporting the Applied Psychology and Human Resource communities in Asia. Psychologists, healthcare professionals, academicians and researchers from all fields of applications get to meet, network and learn here.

The programme consisted of an opening speech by the conference chair, Dr. Leung, Man-tak Mike, Hong Kong Shue Yan University and two and a half hour plenary lectures by Dr. Yow Wei Quin and Dr. Denise Dillon. There are also three parallel sessions of 44 oral presentations (20 min each) and 14 poster presentations. A total of 120 registered delegates from the following countries participated in SCAP 2017: Australia, Hong Kong, India, Indonesia, Japan, Korea, Kuwait, Malaysia, Philippines, Poland, Russia, Singapore, Taiwan, Thailand, Turkey and United Kingdom. Participants were invited to submit papers to the present volume. We wish to thank Dr. Leung, Man-tak Mike from Hong Kong Shue Yan University, SCAP 2017 Conference Chair, for coordinating the reviewing of the submitted papers.

## **East Asia Research (EAR)**

Established in Singapore in 2015, East Asia Research (EAR) envisions to be the gateway to improving lives and enhancing productivity in Asia through promoting cross-geographical exchange of ideas and knowledge in various faculties. This will be achieved through the dissemination of knowledge from the Asia-focused research conferences and publications by EAR.

EAR academic conferences provide a meaningful platform for researchers, post-graduates, academicians, and industry practitioners to share unique insights and drive innovation. This is a great opportunity for expanding contact networks beyond a singular field and kick-starting a strategic collaboration. Such partnership

can bridge the resources and expertise of multiple disciplines to spearhead pioneer movements, giving rise to breakthroughs in long-standing issues.

The present volume embraces various research topics in applied psychology of music and marketing, health and community psychology, psychotherapy, cybernetic psychology, sport psychology, psychology of gambling addiction, social and personality psychology, cognitive psychology, parenting, school psychology, educational development psychology, motivation and emotion, industrial and organizational psychology, psychometrics and their cross overs. These papers will serve as supplementary readings and references for applied psychologists in doing their research.

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## About the Editors

**Dr. Leung Man-Tak Mike** is currently (August, 2017) an Assistant Professor of Counselling and Psychology at the Hong Kong Shue Yan University. Dr. Leung obtained his Ph.D. in Educational Psychology from the Chinese University of Hong Kong, three Master Degrees from Hong Kong University in Educational Assessment (M.Ed.), Applied Statistics (M.Soc.Sc), and Information Technology in Education (M.Sc.) respectively. His research embraced undergraduates and high school students' achievement emotions, achievement goals, social achievement goals, achievement motives related with their study processes, learning strategies and self-regulated learning with various antecedents such as personality traits, enneagram, attachment styles, sense of school belonging, cyber-informatics addictive behaviour, classroom climate, action and control belief, eastern and western parental styles, Chinese values, motivational beliefs, epistemological belief in ability, implicit belief in intelligence, self-construal, self-efficacy, self-enhancement and academic self-concepts leading to subsequent achievement outcomes. He had presented not less than 50 conference papers in various international conferences as well as local conferences held in Australia, New Zealand, Hawaii, Singapore, Japan, Malaysia, Mainland China and Hong Kong. Dr. Leung had published Books and academic papers in International Peer-reviewed Journals, Book Chapters, Conference Proceedings, Theses, Dissertations and Consulting Reports and were awarded Distinguished Paper Award in ISEP 2013, Best Student Paper Award in ACAP 2014, ACAP 2015 and SCAP 2016 respectively. He adores Jack-Russell Terriers, enjoys travelling and taking photos, listens to musics and enjoys doing research and supervision of students' research projects.

**Mr. Anthony Tan Lee-Ming** is the founder of East Asia Research and he obtained his Master of Applied Finance from The University of Adelaide. He is deeply interested in how humans function and react with each other. An insight into how people's minds think and how they work together is invaluable in just about every field. Outside of work, Anthony Tan enjoys outdoor activities and the occasional computer game.

# Musical Accompaniment as a Factor of Psychological Effectiveness of Advertising

Natalia V. Antonova and Vladislav Gorbov

**Abstract** The purpose is to investigate the influence of three components of the musical accompaniment of advertising (dynamic range (DR), volume, and tempo) on its psychological effectiveness. The psychological effectiveness of advertising is understood according to the AIDA model. The study involved 296 people aged 17–40 years. An intergroup experimental study was conducted. Respondents were shown the advertising, in which the parameters of musical accompaniment were varied: dynamic range of musical accompaniment, volume level, and tempo. To measure the level of psychological effectiveness of advertising, a questionnaire was elaborated. The data were analyzed using ANCOVA covariance analysis and Mann–Whitney U test. The results showed the following relationships: (1) there is an influence of DR on the overall effectiveness of advertising, attention and interest, as well as the desire to purchase advertised goods; (2) there were no influence of volume on attention, but the effect of volume on the emotions was observed, as well as the combined effect of volume and dynamic range; (3) the hypothesis about the influence of the music tempo on the effectiveness of the advertising effect was partially confirmed: the rate only exerts its influence together with other factors; (4) the assumed influence of the side variables (familiar musical composition and familiar advertising) on the indicators of the effectiveness of advertising turned out to be significant. Results can be used in the development of promotional products.

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**Keywords** Advertising · Psychological effectiveness of advertising  
Musical accompaniment of advertising · Dynamic range (DR) · Loudness  
Volume · Tempo

## 1 Introduction

Advertising was originally created in order to increase sales of any products. The music accompaniment in advertising videos undoubtedly has a powerful impact on people's mental processes, because the information that is delivered through music is perceived affectively, and not critically. Accordingly, music can increase the effectiveness of advertising.

Despite the importance of musical choice in advertising, the research in this area is not sufficiently developed and sometimes contradictory:

- There are contradictions between the research data on the loudness of music in the 1960s, in modern research and objective reality. The influence of the loudness of compositions on the effectiveness of advertising has not been studied in psychology.
- In psychological studies, only the concept of “loudness of music” was used, but this phenomenon can be interpreted in more than 20 different definitions.
- The impact of the tempo of music on cognitive processes is a poorly studied area in the context of both consumer behavior and advertising impact. It is only known that tempo affects the behavioral reactions and the speed of the memory processes.

Mainly, investigations are focused on the influence of the presence or absence of music in advertising on the effectiveness of the advertising, as well as the influence of some specific components of the music (tempo, timbre, loudness, tonality, and genre) on consumer behavior. Some investigations are devoted to the influence of advertising in general (without a musical aspect) on mental processes. Therefore, it is necessary to systematize the data of existing psychological and marketing research on these issues and conduct further empirical verification.

### *1.1 Psychological Effectiveness of Advertising and Its Measurement*

Psychological effectiveness of advertising is determined by the degree of influence on the mental processes of consumers. This type of effectiveness is characterized by the number of consumers involved, the degree of attraction of their attention, as well as the depth of impression that remains in the memory of recipients of advertising.



According to Lebedev, “psychologically effective advertising provides the consumer the opportunity to become an advertiser himself, to use the acquired goods in order to socially stand out, to attract attention, to get approval from others, to have a high social evaluation, to preserve and thereby maintain a sense of personal dignity” (Lebedev-Lubimov, 2002, p. 20).

To analyze the psychological effectiveness of the advertising impact, an attitudes model is usually used that includes the following components:

- the cognitive component: the impact on cognitive processes, including the formation of knowledge about the product, memorizing the product, understanding its advantages;
- the affective component: the impact on the emotional sphere, the excitation of positive emotions, and attracting to the product;
- the behavioral component: the desire to buy the product and purchase; it is related to the actualization of the relevant motives and needs; in connection with this, the motivational component (Kupreychenko, 2008) is often additionally identified.

When advertising is created, cognitive, affective, and behavioral components must be harmonized and balanced to ensure that advertising is effective. For example, if advertising is overloaded with information about the product, it can cause both cognitive and emotional oversaturation in the recipient. If advertising causes too strong emotions, then it negatively affects the consumer’s behavior, as he will not have the desire to purchase goods. Suggestive component should not be explicit in advertising. Thus, when creating an effective advertising, it is necessary to take into account all the components and their consistency among themselves, as well as to what mental processes are affected by this advertisement.

In assessing the psychological effectiveness of advertising exposure, different scales and models are used. One of the most popular models of advertising impact is the AIDA (AIMDA) model, in which the impact of advertising is understood as a consistent impact on the cognitive and motivational processes of the individual: attracting attention (A), generating interest (I), arousing desire (D) based on actualization, a certain motivation (M), and finally, the action caused by this desire—purchase (A). On the basis of this model, various scales for assessing psychological effectiveness (5-rank and 6-rank scale) have been developed, but they are intended primarily for marketing research purposes and do not allow to conduct psychological analysis of effectiveness.

## ***1.2 Music and Psychological Effectiveness of Advertising***

Effective advertising should be able to attract consumer’s attention, and then keep it. Music plays a significant role in this process, as it is able to distinguish the advertised product from a number of competing ones. The impact of music on

emotions has also been studied by researchers. Zajonc (1968) was proved that people like any object more if they have seen it before. People usually tend to interpret this phenomenon with those positive qualities that they endowed with the object. This effect was called the “familiarity effect” (or the Zajonc effect). The Zajonc effect is also observed in music: a person experiences positive emotions if he/she hears a song that he/she has already heard. In addition, when a person hears familiar music, the parts of the brain that are responsible for emotions become more active, regardless of whether they like it or not (Pereira et al., 2011).

However, not only the Zajonc effect affects the emotions caused by music. The emotional impact of music is also achieved through the repeatability of its components. Diana Deutsch in 1995 opened a phenomenon called “Speech-to-song effect.” Its meaning lies in the fact that with repeated looping repetition of any part of the text by a speaker, a person begins to perceive speech as singing. This is due to the fact that when repeating the same passage of text a person begins to pay attention not to the meaning of what was said, but to the rhythm and height of the tone of words (Deutsch, Lapidis, & Henthorn, 2008). The so-called semantic saturation effect is similar, when a word repeated many times loses its meaning. Thus, listening to repeating fragments in a song, a person pays attention to the nuances and expressive elements of music.

Further studies have shown that music without repetition is perceived by people worse. Elizabeth Margulis in her study invited students without musical education to listen to the excerpts of composers, notable for the lack of repeating elements in their compositions: Luciano Berio and Elliott Carter. One group of subjects reproduced the original passages and the other group changed, with repeated fragments. The results of this experiment showed that the subjects preferred the fragments with repeating elements; in addition, respondents who listened to the original passages perceived them as unnatural (Margulis, 2013).

The influence of music on memory can be enormous. In the last twenty years, a phenomenon known to many people as the “earworm (brainworm) phenomenon” has become known. It consists in the fact that, regardless of the genre, the song, melody or piece of music, that was recently listened to by a person (willingly or unwillingly) is repeated again and again. It seems to the person that the song is “stuck in the head.”

The first to consider the “earworm phenomenon” was the American psychologist James Jay Kellaris. In 2001, he introduced the concept of “cognitive itching,” comparing it with the sensation that a person experiences when his skin itches. According to the researcher, itchy skin can motivate a person to scratch and relieve discomfort, but causing a cycle of repeated scratching. In the same way, the only way to eliminate “cognitive itching” is a mental repeating of a stuck melody that only exacerbates the situation by launching a cycle of involuntary repeat of the melody (Kellaris, 2003, p. 66). This process is responsible for the auditory zone of the cerebral cortex, which is activated when listening to music and is reactivated when a person represents in his head the sound of just heard music (Kellaris, 2001, 2003).

Further studies of the effect of music on memory have shown that the brain tends to fill in missing information when a piece of familiar music abruptly and suddenly interrupts. This fact was studied in the experiment of scientists from Dartmouth College. At the moment when the researchers interrupted a familiar song for the respondents, the MRI scanner registered how the auditory zone of the brain continued to “sing along” the missing fragment of the song. If the musical composition was unfamiliar to listeners, this phenomenon was not observed (Kraemer, Macrae, Green, & Kelly, 2005).

Thus, though the “Earworm phenomenon” is currently not sufficiently explored, we see that music can have a powerful effect on human memory. This fact is used by advertising specialists who insert in the TV or radio advertising simple melodies that can cause this phenomenon in the audience. Thus, the memorability of the advertised products increases, and communication between consumers is enhanced, which provides the transmission of a “stuck” song and of an advertising message as well. Also, positive associations with the product are strengthened, and consequently, loyalty to the advertised product is ensured.

Over the past half-century, numerous studies of the influence of music on consumers have been conducted. A classic study in this field is the study of Gerald Horn, conducted in 1982. The researcher studied the influence of background music on the psychological effectiveness of advertising. He found that pleasant and unpleasant background music, which sounds in the commercial, is associated with the advertised product. It was revealed that the product, which is advertised accompanied by unpleasant music, is perceived by consumers as unnecessary and undesirable (Gorn, 1982).

Since the impact on consumer behavior and advertising impact have similar mechanisms, we will review existing research on the influence of specific music components on consumer behavior and advertising impact.

### ***1.3 Loudness of Music***

The influence of the loudness of music on purchasing power was studied by scientists from the sixties of the twentieth century. In 1966, Smith and Curnow experimentally revealed the fact that under the influence of loud music playing in the store, buyers were inclined to spend less time choosing a product than under the influence of quiet music. Despite this fact, the decrease in sales of this store did not follow (Smith, & Curnow, 1966).

There is a very interesting phenomenon observed in the music industry as a “loudness war,” which affects indirectly both consumer behavior and advertising. The essence of this phenomenon, observed in broadcasting and in digital editions of albums (on CDs, on DVDs and sold on the Internet), is that musicians, producers and record companies tend to increase the volume of their compositions to make the sound louder, than competitors have.

The history of the “war of loudnesses” dates back to the 1960s, when it was revealed that louder music attracted more attention from the audience. From an evolutionary point of view, this can be explained by the fact that louder sounds always received increased attention in order to survive. As a result, music producers have decided to add volume to the released compositions in order to increase competitiveness. However, at that time, the music was produced on vinyl records, which, due to technical features, did not allow increasing the volume of compositions. Later, with the invention of CDs, producers and record companies were able to significantly increase the volume of produced music (Vickers, 2010). The psychological effects of the “war of loudness” have not yet been investigated.

### ***1.4 Genre of Music***

A number of studies on consumer behavior have shown a link between the music genre and the decision to purchase. A study of Areni and Kim, conducted in 1993 in a wine shop, showed that when a classical music was playing in the hall, there was a general increase in consumer activity, compared to the period when pop music (“top 40”) was playing. It is interesting that under the given conditions, neither the time spent by shoppers in the store nor the sales volume increased, that is, classical music influenced only the decision of consumers to buy more expensive wines (Areni, & Kim, 1993). The results of this study confirm the ideas of MacInnis, who argued that conviction is reinforced when the genre of music suits the context in which it plays (MacInnis, & Park, 1991), and the results of Yalch’s study, according to which classical music is associated with more expensive goods (Yalch, & Spagenberg, 1990).

### ***1.5 Music Tempo***

In 1982, Ronald Milliman explored the impact of the tempo of music on shoppers’ behavior in stores. According to the results of this study, the different rate of music played through hands-free communication in the store affects the speed of movement of buyers and the number of purchases made by them. That is, at a slow tempo of music, buyers in the store moved slower, they chose the product significantly longer, buying more units of goods, while when the music was at a rapid tempo, there was a reverse situation (Milliman, 1982).

In 2006, Steve Oakes and Adrian North studied the impact of the tempo and timbre of background music in radio advertising on the affective response of listeners. Two different experiments were conducted, one of which studied the influence of the tempo and the other on the timbre of the background music of radio advertising on the affective response of listeners. According to the results of the first experiment, the use of music at a slow tempo significantly increased the

memorability of the content of the commercial by respondents, in comparison with fast music. The presence of music (both at a fast and at a slow tempo) significantly reduces the level of remembering the content of advertising. According to the results of the second experiment, there is a significant positive relationship between the congruence of the timbre of music with the memorability of the content of advertising and the affective response to it (Oakes, & North, 2006).

## 1.6 *Popularity of Music*

Popular music is “all favorite” music for “ordinary people,” which has a wide impact and attractiveness, but usually for a certain period of time (Shuker, 1994).

David Allan in 2006 explored the influence of popular music in advertising on the processing of advertising messages. He conducted the experiment on 111 respondents, aged from 18 to 24 years, who were divided into four groups. In the control group, the respondents did not listen to music, and in the experimental groups, the song that sounded in the advertisement was either with the original text, or with a modified text, or instrumental (without text). The study selected four songs from “top 40” and four popular brands (Kodak, Ikea, Heinz, and Sony). Further, the questionnaire measured the attention caused by the advertising message and the memorability of the advertised brand. The results of this study showed that songs in which vocals are present, original or modified, are more effective incentives for advertising impact on attention and memory than instrumental songs or total absence of music. It is worth noting that the original text affects the listener better than the changed text (Allan, 2006).

In turn, Michelle Roehm considered the influence of the version of the popular song (instrumental or with the original vocal) on memorability of the advertisement, with the introduction of such parameter as “acquaintance of the song” for the person. As a result of the research, it was concluded that if a person is familiar with the song, then the instrumental version is more conducive to memorizing the advertisement than the version with the original vocal. Conversely, for people who are not familiar with the song, the more effective for remembering advertising is the original version, not the instrumental one. The author explains this result by the fact that a person familiar with the song, when hearing the instrumental version of it, is inclined to sing along with it and thereby to generate texts that carry an advertising message. And “singing” the text of a well-known song promotes the memorability of the content of the advertisement, in contrast to listening to the song with the original text. At the same time, a person who is not familiar with the song cannot generate the text in his imagination, so he needs a version with vocals to memorize the content of the alleged advertising message (Roehm, 2001).

So, summing up all of the above, we can conclude that the musical accompaniment does influence the effectiveness of the advertising impact. However, research focuses on individual parameters of music accompaniment, such as tempo, genre, and loudness, but not on the impact of different parameters in their

combination. The influence of the dynamic range on the effectiveness of advertising is almost not investigated. Based on the theoretical analysis, we have chosen for our study the following parameters of the musical accompaniment: dynamic range, volume, and tempo.

## 2 Methodology

The purpose is to investigate the influence of three components of the musical accompaniment of advertising (dynamic range (DR), volume, and tempo) on psychological effectiveness of advertising. The psychological effectiveness of advertising is understood according to the AIDA model: the effectiveness of attracting attention, the interest caused by advertising, the memorability of both the clip itself and the advertised product, the power of emotions after viewing, and the willingness to purchase the advertised product.

### Hypotheses:

- (1) Advertising with musical accompaniment having high dynamic range is more effective in all components than advertising, which uses music with a low dynamic range.
- (2) The higher the volume of the musical composition in the advertising is, the higher is the effectiveness of the advertising impact in terms of “attracting attention” and “emotions.”
- (3) The higher the tempo of the musical composition is, the higher is the effectiveness of the advertising impact on the indicators “attracting attention,” “interest,” and “the power of emotions.”
- (4) Additional hypothesis: the side variables, such as preliminary knowledge of the musical composition and of the advertising itself, increase the psychological effectiveness of the advertising.

Sample: The study involved 296 people aged 17–40 years (mean age 19.7 years, standard deviation = 2.9). All subjects were randomly assigned into 12 experimental groups.

Methods: An intergroup experimental study was conducted. Respondents were shown the advertising, in which the parameters of musical accompaniment were varied: dynamic range of musical accompaniment, volume level, and tempo. To measure the level of psychological effectiveness of advertising, a questionnaire was elaborated.

Data analysis: ANCOVA covariance analysis, Mann–Whitney U test.

The investigation included the following stages:

1. Preparation of demonstration material. As a demonstration material, a promotional video for the men’s perfume Dior Homme Fragrance was selected, featuring the famous actor Robert Pattinson, directed by Romain Gavras in 2013. In the original commercial, the song by Led Zeppelin “Whole Lotta Love,”

released in 1969, was used. To reduce the influence of the side variables, instead of extracting the sound track from the video clip, the digital copies of the composition in the original edition of 1969 and in the 2007 edition differing only in the “dynamic range” parameter were found. Then, using the “TT DR Offline Meter 1.1” program, the dynamic range of both copies of the songs was measured. The 2007 version was expected to be “louder” than the 1969 version (less dynamic): the dynamic range was DR8 and DR11, respectively. However, in order to reflect the current musical trends of a too narrow dynamic range, it was necessary to further narrow the dynamic range of the 2007 version. As a “reference,” digital CD-copies of a number of tracks were selected, which were similar to the given in terms of genre and mood (with DR3–DR6). As a result, by compressing and limiting the audio track using FL Studio 12 digital sound workstation, this composition was approximated by the characteristics of the dynamic range to the reference ones. The dynamic range of the “loud version” of the composition for the commercial was DR4.

Further, two versions of the song by Led Zeppelin “Whole Lotta Love” with DR11 and DR4 bands varied in volume with the help of FL Studio 12. The volume of the composition with a narrow dynamic range was adjusted based on the decibel meter’s “peaks” of the composition with a wide dynamic range. This procedure was carried out in order to reach the effect when subjectively to the listener, at the loudest moments of the song, both versions sounded equally loud. As a result, the volume of the composition with the DR4 band was reduced by 25%, and then, the version with the DR11 range was lowered by 25%. It turned out four versions of the same composition:

- Loud, low dynamic (range DR4, volume 100%)
- Quiet, low dynamic (range DR4, volume 75%)
- Loud, highly dynamic (range DR11, volume 100%)
- Quiet, highly dynamic (range DR11, volume 75%).

Subjectively for the listener, the first version is very loud throughout the composition; the second is quieter than the first and equally loud throughout the composition; the third is quiet in the intro, louder to the chorus; and the fourth is the quietest.

Next, using the tempo change tools in the FL Studio 12 program, the data for the four versions varied in tempo. The tone, volume, and dynamic range of all versions were preserved. As a result, all versions were accelerated by 5% and slowed by 5%. As a result, the same composition was presented in 12 variations (see Table 1).

Next, the audio tracks were superimposed on the commercial video using Sony Vegas Pro 13 software. As a result, 12 types of commercials were compiled for the pilot study.

2. Developing a questionnaire for assessing the psychological effectiveness of advertising. This technique is based on a seven-point six-rank scale measuring the effectiveness of advertising: attention, interest, memorability of the

**Table 1** Experimental groups

No. of group	DR	Volume (%)	Tempo (%)
1	DR4	100	100
2	DR4	75	100
3	DR11	100	100
4	DR11	75	100
5	DR4	100	95
6	DR4	75	95
7	DR11	100	95
8	DR11	75	95
9	DR4	100	105
10	DR4	75	105
11	DR11	100	105
12	DR11	75	105

commercial, memorability of its content (advertised goods), emotional attitude to advertising, and the desire to buy the advertised product. Respondents are encouraged to answer questions that measure these video clip indicators by placing their response on a scale of  $-3$  to  $+3$ .

3. Carrying out a pilot survey and an expert interview.
4. Carrying out the basic research. The entire sample was divided into 12 experimental groups. Immediately before the experimental test, the researcher read out the instructions for the test subjects. Further, depending on the group, the subjects were presented with one of 12 videos on the screen. Variations of music in the commercial for DR, volume and tempo, and group numbers are shown in Table 1.

### 3 Results

Since an intergroup multifactor experiment was conducted (there are several levels in each factor), in this case, it is expedient to apply the one-dimensional generalized linear ANCOVA model for each dependent variable.

However, the use of the ANCOVA model imposes two restrictions on the use: firstly, all dependent variables should be normally distributed in the study groups, and secondly, the variances in these groups should be equal. In order to check the normality of the sample distribution in each of the groups, as well as the equality of group variances, the values of asymmetry and excesses, as well as the standard deviation of each variable in each of the groups, were counted.

We can see that the values of asymmetry and excesses of each variable do not exceed 2 modulo; in addition, the standard deviations differ not more than twice. Consequently, we can assume that the distribution of each of the variables for each factor is normal. The hypothesis of the equality of the variances of each of the groups



is also confirmed, since in these groups the difference between the lowest and the highest values of the variance does not exceed five times. The above facts give us the reason to believe that the ANCOVA method is applicable for this sample.

Further, an ANCOVA covariance analysis with DR, volume, and tempo factors was performed sequentially with each dependent variable: “attention,” “interest,” “clip memory,” “memorability,” “emotions,” desire to purchase/recommend the product, and the general effectiveness of the advertising. As the covariant, the following variables were chosen: “attitude to the actor from the commercial,” “attitude to the advertised brand,” “frequency of buying the brand,” and “relation to the song from advertising.” The answers to the question “To what extent do you think the song suits the commercial?” were referred to as covariates “congruence of the song to advertising.” The results of this analysis of each of the dependent variables are shown in Table 2.

As we see in the table, taking into account all the covariates, the following factors were significant:

- (1) The impact of the dynamic range of the musical composition (DR) on attention attracted to the video, interest in the video, the desire to purchase/recommend the product, and accordingly, the overall effectiveness of advertising;
- (2) The impact of the volume of the musical composition on the emotions caused by the video;
- (3) The combined effect of DR and the tempo of the musical composition on the memorability of the products;
- (4) The combined effect of the volume and tempo of the musical composition on the emotions caused by the video;
- (5) The combined effect of all three factors (DR, volume, and tempo of the musical composition) on the memorability of the products.

The following covariates were also significant:

- (1) The attitude to the actor from the commercial affects the attention attracted to the video, the interest to the video, the emotions caused by the video, and the overall effectiveness of advertising;
- (2) Attitude to the advertised brand significantly affects the attention attracted to the video, interest to the video, memorability of the video, memorability of the goods, the desire to purchase/recommend the product, as well as the overall effectiveness of advertising;
- (3) The frequency of buying a brand affects the memorability of the goods and the desire to purchase/recommend a product;
- (4) The attitude to the musical composition of the commercial influences the memorability of the video and the emotions caused by advertising;
- (5) The congruence of the song to the advertisement influenced the attention attracted to the video, the interest to the video, the emotions caused by the video, the desire to purchase/recommend the product, as well as the overall effectiveness of advertising.

**Table 2** Results of the ANCOVA analysis of the effect of three factors and covariates on each of the dependent variables (significance of the F-test)

	Attention	Interest	Memorability of advertising	Memorability of product	Emotions	Desire to purchase	Efficiency of advertising
DR	0.011**	0.005**	0.066	0.691	0.203	0.028**	0.004**
Volume	0.191	0.750	0.137	0.832	0.012**	0.526	0.155
Tempo	0.924	0.933	0.732	0.762	0.257	0.362	0.836
DR + volume	0.862	0.594	0.906	0.976	0.169	0.341	0.750
DR + tempo	0.457	0.438	0.893	0.011**	0.678	0.526	0.535
Volume + tempo	0.243	0.141	0.071	0.714	0.003**	0.454	0.070
DR + volume + tempo	0.954	0.114	0.466	0.026**	0.748	0.268	0.198
Attitude to the actor	0.001**	0.000**	0.155	0.337	0.006**	0.138	0.000**
Attitude to the brand	0.025**	0.040**	0.005**	0.002**	0.612	0.006**	0.000**
Frequency of purchase	0.768	0.720	0.879	0.051**	0.247	0.032**	0.133
Attitude to the song	0.075	0.055	0.009**	0.230	0.013**	0.528	0.082
Congruency of song and advertising	0.000**	0.000**	0.116	0.271	0.000**	0.022**	0.000**

\*\* $p \leq 0.05$

Let us consider in more detail the effect of each factor on independent variables. The covariates appearing in the model were estimated at the following values: the ratio to the actor from the commercial = 4.21; attitude to the advertised brand = 5.11; frequency of buying a brand = 3.09; the relation to a song from advertising = 5.48; congruency between song and advertising = 5.57.

The significance of each of the variables that differ significantly in the dynamic range turned out to be higher in the groups with a high dynamic range. Thus, it can be concluded that more dynamic music in advertising attracts more attention to the commercial, increases interest, increases the intensity of the desire to purchase the advertised product (or recommend it to friends), and increases the effectiveness of advertising in general. The marginal averages (the adjusted averages obtained after removing all covariant estimates) and the values of the standard variable error by the “dynamic range” factor are presented in Table 3.

Increasing the volume of music in advertising positively influenced the emotions caused by the commercial. In groups with standard volume of advertising music in 100%, the marginal mean on the “emotions caused by the video” scale was 5.386 (std error = 0.074), and in groups with volume reduced to 75%, the value was 5.105 (std. error = 0.083).

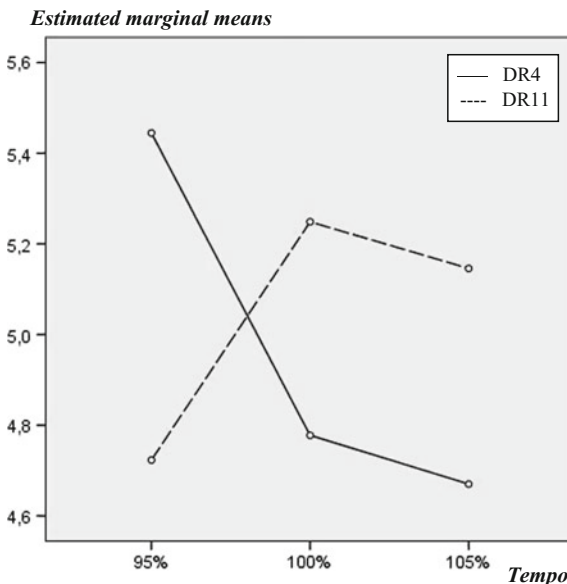
To analyze interactions between factors, taking covariates into account, we plot the graphs of the marginal means of the dependent variables (Fig. 1).

In Fig. 1, one can see that with a slowed-down 95% tempo of music used in advertising, memorability of the product is more pronounced when the dynamic range of music is small. However, at a standard tempo, the memorability of the goods drops sharply when the dynamic range of music in advertising is small, and it increases dramatically when the music is highly dynamic in range. With a further increase in the tempo up to 105%, the memorability of the goods gradually decreases for any dynamic range. Thus, the most powerful on the memorability of the goods was a commercial with a slow tempo and low dynamic range of music (compare = 5.445), and the least powerful was a video with a fast tempo and a low DR value (compare = 4.670). The adjusted average values of the variable “memorability of product” and the standard error are presented in Table 4.

**Table 3** Estimated marginal means and standard errors of advertising effectiveness variables by group

		DR4	DR11
Attention	Mean	5.312	5.652
	Standard error	0.094	0.094
Interest	Mean	4.544	5.011
	Standard error	0.118	0.117
Desire to purchase	Mean	3.973	4.231
	Standard error	0.082	0.082
Effectiveness of advertising	Mean	4.801	5.064
	Standard error	0.064	0.064

**Fig. 1** Graph of estimated marginal means for the variable “memorability of products” according to DR and tempo

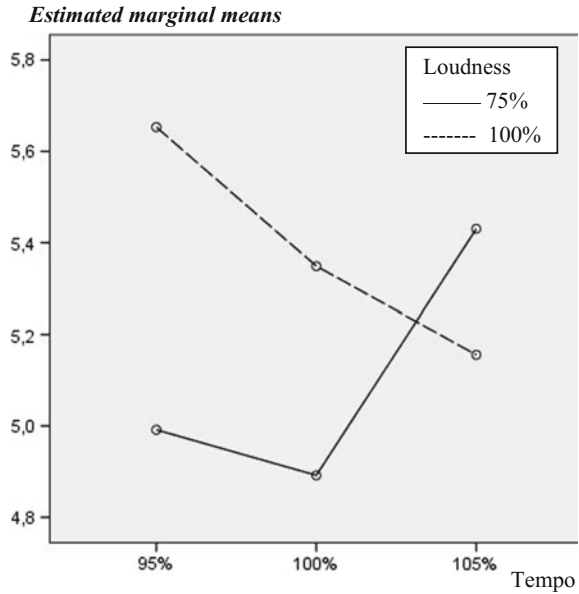


**Table 4** Estimated marginal averages and the standard error values of the variable “recallability of goods” according to DR and the tempo

DR	Tempo (%)	Mean	Standard error
DR4	95	5.445	0.241
	100	4.778	0.219
	105	4.670	0.235
DR11	95	4.723	0.213
	100	5.249	0.221
	105	5.146	0.258

From the graph of the estimated marginal means of the variable “emotions caused by the video” for the “volume” and “tempo” factors (see Fig. 2), it follows that the expression of positive emotions decreases with the increase in the tempo of the musical composition in the advertisement if the volume of music is 100%. When the volume of music is reduced to 75%, then there is a different trend: the expression of positive emotions caused by the video smoothly decreases with the increase in tempo from 95 to 100%, but rises sharply with an increase in the rate from 100 to 105%. It is worth noting that the emotions caused by the clip at 95 and 100% are significantly worse when the volume is reduced to 75% than at a standard volume of 100%. As soon as the tempo rises to 105%, emotions become more positive with a volume level of 75% than at 100% volume. In this case, the most positive were the emotions when watching a commercial with slow music tempo and with a standard 100% volume (mean = 5.653), and the least positive emotions were when watching a video with music, in which the volume is reduced to 75%, and the tempo is standard (mean = 4.892).

**Fig. 2** Graph of estimated marginal means for the variable “emotions caused by the roller” by volume and tempo



The adjusted average values of the variable “emotions caused by the video” and the standard error are presented in Table 5.

The next question for the consideration was the impact of all three factors on the dependent variable “memorability of product.”

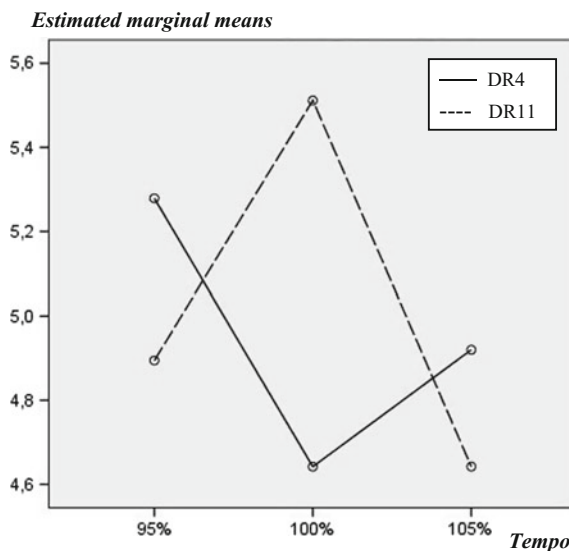
As for the memorability of the product with the standard volume of advertising music (100%), the graph of the adjusted averages of this variable has, in this case, a different view (see Fig. 3). At a slower tempo of music (95%), memorability of the goods is higher when the dynamic range is lower; at a standard tempo, the memorability of the goods is much higher with a high dynamic range of music; and at an accelerated tempo (105%) of music, the value of memorability is again higher with a low dynamic range.

On the graph of the marginal means of the variable “memorability of goods,” varied by factors “DR” and “rate” at a volume of 75% (Fig. 4), the following dependencies are observed: for a narrow dynamic range of a composition, the memorability of the product decreases with increasing tempo, and for a wide

**Table 5** Estimated marginal means and standard errors for the variable “emotions” by volume and tempo

Volume (%)	Tempo (%)	Means	Standard error
75	95	4.992	0.141
	100	4.892	0.136
	105	5.431	0.155
100	95	5.653	0.127
	100	5.349	0.123
	105	5.156	0.136

**Fig. 3** Graphs of the estimated marginal means for the variable “memorability of product” according to DR, volume, and tempo (Volume = 100%)



dynamic range with increasing tempo, the memorability of the product increases. In addition, at a rate of 95%, the memorability of the goods is higher with a low dynamic range, and with the other two values of the tempo, the memorability of the goods is higher with a high dynamic range.

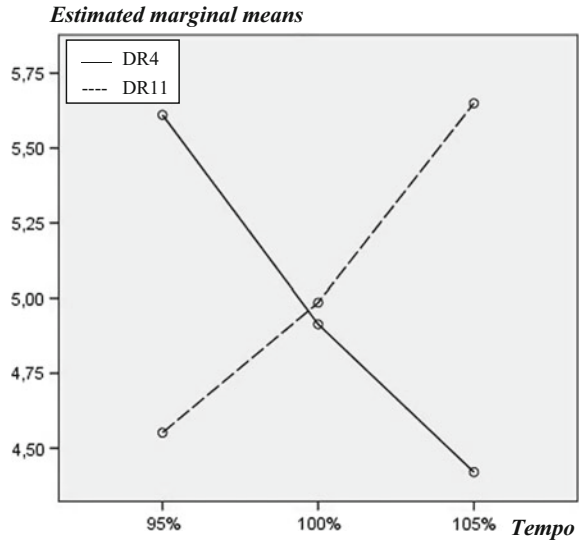
Thus, the greatest memorability of the goods was in the case when the advertisement was accompanied by accelerated high-dynamic music with a volume reduced to 75% (mean = 5.650), and the smallest—with accelerated low-dynamic music with a volume of 75% (mean = 4.420). The estimated marginal means of the variable “memorability of the product” and the standard error for the interacting these three factors are presented in Table 6.

Now we would like to consider the possible influence of random factors on the variables of advertising effectiveness. In this study, random factors were not included in the one-dimensional generalized linear model of ANCOVA, since the sample size is insufficient for adequate analysis: the sample is segmented into a large number of small groups.

The following variables were considered as random factors: “knowledge of the actor” (the question in the questionnaire: “Do you know the actor who appeared in the commercial?”), “knowledge of the song” (question in the questionnaire: “Have you heard the song sounded in the commercial before?”), and “knowledge of advertising” (question in the questionnaire: “Have you seen this advertisement before?”). The descriptive statistics for each of the groups are as follows: the greatest variation was observed in the factor “knowledge of the actor”: from the 296 subjects, 272 people know the actor (91.9%) and only 24 people (8.1%) do not know.

A significant influence was exerted only by two factors: “knowledge of the song” and “knowledge of advertising.” The factor “knowledge of the song” affects

**Fig. 4** Graph of the estimated marginal means for the variable “memorability of goods” according to DR, volume, and tempo (Volume = 75%)



**Table 6** Estimated marginal means and standard errors for the variable “memorability of product” according to DR, volume, and tempo

DR	Volume (%)	Tempo (%)	Mean	Standard error
DR4	75	95	5.611	0.386
		100	4.914	0.330
		105	4.420	0.376
	100	95	5.279	0.291
		100	4.642	0.288
		105	4.920	0.282
DR11	75	95	4.551	0.285
		100	4.986	0.323
		105	5.650	0.365
	100	95	4.895	0.318
		100	5.512	0.301
		105	4.642	0.367

the variable “memorability of the goods,” and the factor “knowledge of advertising” influences the variables “attention,” “interest,” “memorability of the clip,” and the general variable “advertising effectiveness.” In addition, the “knowledge of the actor” factor tends to affect the “interest caused by the video” variable ( $p = 0.05$ ).

After comparing the average values, we can conclude that those who have already heard the song, that sounds in the commercial, remembered the advertised product worse (av.v. = 4.84, std. dev. = 1.652) than those who heard song for the first time (av.v. = 5.24, std. dev. = 1.686).

**Table 7** Average values of advertising effectiveness variables and standard deviations, grouped by the factor “knowledge of advertising”

		Did not see the advertising before	Saw the advertising before
Attention	Mean	5.26	5.69
	Standard deviation	1.324	1.131
Interest	Mean	4.49	5.06
	Standard deviation	1.596	1.468
Memorability of advertising	Mean	4.74	5.23
	Standard deviation	1.421	1.354
Effectiveness of advertising	Mean	4.7920	5.0556
	Standard deviation	0.88487	0.89275

Knowledge of the commercial has a direct impact on the variables “attention,” “interest,” “memorability of the video,” and “advertising effectiveness.” The average values of these variables were higher for those subjects who had previously seen this video before. These means and standard deviations are presented in Table 7.

## 4 Conclusions

1. The hypothesis about the positive impact of the dynamic range (DR) of music on the effectiveness of the advertising impact and its three indicators were partially confirmed: there is an influence of DR on the overall effectiveness of advertising, attention and interest, as well as the desire to purchase advertised goods. The influence of DR on emotions caused by advertising has not been revealed.
2. The hypothesis of the influence of music volume on the effectiveness of advertising was also partially confirmed: there was no influence on attention, but the effect of volume on the emotions was observed, as well as the combined effect of volume and dynamic range.
3. The hypothesis about the influence of the music tempo on the effectiveness of the advertising effect was partially confirmed: the rate only exerts its influence together with other factors (tempo and DR affect the memorability of the goods; all three factors together also affect the memorability of the goods; tempo and volume affect emotions).



4. The assumed influence of the side variables (familiar musical composition and familiar advertising) on the indicators of the effectiveness of advertising turned out to be significant.

Results can be used in the development of promotional products.

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# Trauma Amongst TV News Crews: The Protective Function of Crew Solidarity

Jasmine B. MacDonald and Rachael Fox

**Abstract** Past research indicates that journalists' ongoing exposure to trauma can result in psychopathology. However, previous research has not considered whether trauma exposure and reactions differ depending on whether news workers are working individually or within a crew. The research question was as follows: *What functional roles do crew relationships play in enhancing individual resilience?* In-depth semi-structured interviews were conducted with 21 TV news camera operators and reporters. The findings indicate that news workers emphasise the importance of the relationship amongst crewmembers in times of trauma exposure, as opposed to their own individual experiences. Working with other crewmembers simultaneously reduces physical and psychological risks and improves the quality of the journalistic product. Additionally, experienced news workers serve a vital mentoring function and also act to shield less experienced news workers from potentially stressful situations. Crew solidarity functions as a protective factor for news crewmembers exposed to trauma and other work-related stressors.

**Keywords** Journalism · Trauma · Television news · Crew solidarity  
Reporter · Camera operator · Interviews · News crew · Mentoring  
Social support · Physical risk · Psychological stress

## 1 Introduction

News frequently requires footage of stories relating to fatal car accidents, crime, murder, suicide, natural disasters, and various other forms of violence and tragedy within society. Individuals working within the television (TV) news industry find themselves exposed first-hand to a wide range of potentially traumatic events

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(PTEs) as a result of their daily work. A review article by MacDonald, Hodgins, and Saliba (2017) found that journalists have PTE exposure prevalence rates as high as 95%, exceeding rates of exposure reported for general population studies. The term PTEs acknowledges that not all people respond to circumstances in a uniform way; some will experience an event as traumatic whilst others will not (Bonanno & Gupta, 2012; Bonanno, 2005). The nature of trauma responses is therefore best understood in terms of a continuum based on individual differences, in which some people will experience little or no symptomology and others will have severe traumatic responses (Bonanno & Gupta, 2012).

Research spanning the nexus of journalism and psychology indicates that elevated trauma exposure amongst journalist samples is accompanied by elevated symptoms of post-traumatic stress disorder (PTSD). Prevalence rates of PTSD amongst journalist samples range from 4.3 to 19.7% (Backholm & Björkqvist, 2012; Dworzniak, 2011; Feinstein & Owen, 2002; Hatanaka et al., 2010; Newman, Simpson, & Handschuh, 2003; Pyevich, Newman, & Daleiden, 2003; Weidmann, Fehm, & Fydrich, 2008). Other psychological implications associated with journalistic work include increased levels of depression symptoms (Feinstein, 2013; Feinstein, Owen, & Blair, 2002), altered world assumptions (Pyevich et al., 2003), increased levels of burnout (MacDonald, Saliba, Hodgins, & Ovington, 2016), and substance use (MacDonald, Saliba, & Hodgins, 2016).

The research summarised above is invaluable in its ability to assist researchers, practitioners, and news organisations to better understand the experiences of individual news workers and devise support strategies. However, it appears that no research to date has considered the extent to which trauma exposure within TV news workers is collective in nature. The research question addressed in this chapter is as follows: *What functional roles do crew relationships play in enhancing individual resilience?* Specifically, the present research was concerned with whether TV news workers consider there to be a difference in the impact of covering a PTE as part of a news crew, as compared to covering a PTE alone. Past research indicates that increased levels of perceived social support are associated with post-trauma resilience (Hatanaka et al., 2010; Newman et al., 2003), particularly when the perceived social support comes from colleagues and supervisors (Weidman et al., 2008). Therefore, it would be expected that individual news workers who have the ability to work within a news crew have pre- and peri-trauma social support that individuals working alone do not have, and therefore, they would perceive the PTE exposure to be less impactful.

Past research has focused on individual differences and how they impact journalists' psychological functioning post-trauma exposure, including age and gender. However, such factors cannot be as readily or ethically addressed by news organisations. If working within a crew has a protective function, then news organisations may have the ability to improve the psychological well-being of their staff and reduce the costs that may be associated with trauma exposure and psychological distress, such as sick leave and staff turnover.

## 2 Method

### 2.1 Methodological Framework

This section outlines the theoretical framework from within which the research was conducted and the data analysed. The present research was informed by *social constructivism* (Matthews & Ross, 2010). Essentially, the research aims were exploratory and emphasised the participants' subjective experiences of their work and the associated trauma exposure. From such a perspective, participants' perceptions and attitudes relating to the research area are prioritised and viewed as socially constructed.

In terms of the assumptions underlying the data collection and analysis, *interpretivism* informed the present study (Matthews & Ross, 2010). Research primed by interpretivist tenets focuses on interpretations and understandings, and permits the exploration of a range of attitudes and perceptions across participants. This approach is congruent with social constructivism as it emphasises subjective experiences and suggests that the data obtained are specific to the context in which it was collected. Both social constructivism and interpretivism call for data collection methods that are capable of producing data that are rich in depth and detail, such as in-depth semi-structured interviews (Matthews & Ross, 2010).

Analysis of the data was conducted according to the thematic analysis (TA) method prescribed by Braun and Clarke (2006). This method of analysis was adopted because it is systematic and transparent in nature and has been specifically developed for use within the context of psychological research. Open-ended questioning and responsive probing were used; equal weight was given to each section of data in order to identify novel and nuanced findings.<sup>1</sup> In this way, the findings reflect both manifest and latent codes and themes.

### 2.2 Participants and Sampling

**Sampling Criteria.** Participants were required to be over 18 years of age, and to be currently working or to have previously worked as a TV news camera operator or reporter. By allowing current and past news camera operators and reporters to be involved, the study was able to explore experiences of people who have for whatever reason left the job and also to assess potential differences over time in this constantly developing industry. This latter point is pertinent because participants in the present research indicated that changes in organisational policies and

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<sup>1</sup>Participants were not provided standard definitions of relevant terms. Because they were considered to be domain experts, participants were encouraged to provide their own definitions and understandings of terms. The author then used probing questions to ensure understanding of the definitions.

telecommunications have resulted in changes in role responsibilities. It was considered important to sample both staffers (individuals employed full-time through a news organisation) and freelancers; increasingly, individuals are pushed towards freelance work with full-time organisation-based roles becoming more competitive and lower in number. Participants were also sought from each Australian state and territory, covering both regional and metropolitan newsrooms in both public and commercial broadcasters. Considering these criteria, the sampling method adopted is best characterised as maximum variation purposeful sampling.

**Recruitment.** In order to recruit participants, contact was made with a range of journalistic organisations, including unions and representative bodies for both reporters (and journalists more broadly) and camera operators (and production crew more broadly). Each of the Australian regional and metropolitan commercial news networks, as well as the Australian Broadcasting Corporation (ABC) and Special Broadcasting Service (SBS), was contacted. In addition, journalism and TV production departments of various Australian universities were contacted. Each of the listed outlets was sent information about the research, encouraged to ask questions, and asked if they might be willing to promote the research to their staff and industry contacts. These organisations did not play a role in data collection; consequently, only the first author knew the identities of those interviewed. Social networking sites were useful in the recruitment phase as a range of profession and role-based groups and mailing lists are accessible online.

**Participants.** The overall sample included 21 Australian TV news workers (15 camera operators and 6 reporters). All 15 camera operators that participated were male, and four of the six reporters were female. Eighteen of the participants were currently working in the TV news industry, whilst three had worked in the TV news industry in the past. Thirteen participants were (or had been) employed as a staffer; the remaining eight participants were working (or had worked) as freelancers. It is worthwhile noting that before moving into freelance work, a majority of the freelancers had experienced working within news organisations, some as staffers, and some as causal or part-time staff. Participants ranged in age from 25 to 72 years. The average age was 43.7 years; almost half of the participants recruited were in their forties ( $n = 9$ ). Each of the decades covered by the age range was represented in the sample.

**Data collection.** Data collection and analysis were carried out concurrently. In-depth semi-structured interviews were conducted with 21 participants. The length of the interviews ranged from 1 to 3 h, with an average length of 1.5 h. The interview schedule contained topics for exploration relating to participants' exposure to various PTEs, the kind of exposure, psychological impacts of the work, and perceived differences in exposure as a result of news crew role. Probing questions varied depending on participant responses and experiences. Questions were posed in an open-ended fashion to encourage participants to provide insights and novel comments that the interviewer would not otherwise know to ask about. Interviews were conducted in a range of ways, including face-to-face, on the phone, and via Skype. Flexibility in the way interviews were conducted was beneficial to the research in that it provided access to valuable and experienced individuals who

otherwise might not have participated. It also served to make the research experience as comfortable and convenient as possible for participants. The nature of news production means that there was potential for participants to be travelling or have little time to meet face-to-face.

### **3 Findings and Discussion**

Throughout the interviews, camera operators emphasised the importance of their relationships with reporters in times of trauma exposure and vice versa. Participants tended to emphasise the importance of these relationships and working within a crew, as opposed to their own individual experiences. There was much discussion relating to the similarities and differences apparent between the two roles and the protective function of working within a news crew in times of disaster or tragedy coverage. Two key themes were identified and will be explored in this findings section. The first theme relates to the protective function of working within a crew. Specifically, participants indicated that working within a crew as opposed to alone simultaneously reduces the psychological and physical risks associated with PTE coverage and improves the quality of the journalistic product they are working towards. The second theme to be considered concerns the protective function of working with experienced colleagues. Participants indicated that experienced news workers serve a vital mentoring function, but also act to shield less experienced news workers from potentially stressful situations. In this way, experienced news workers are important assets in the newsroom and in the field.

#### ***3.1 Protective Function of Working in a Crew***

Participants described a shift that has occurred in TV news production models meaning that the typical sizes of news crews going into the field are smaller than they have been in the past. Crews are now most likely to consist of a reporter and camera operator or, in many instances, only a camera operator; whereas the traditional crew was made up of four news workers (reporter, camera operator, producer, and sound recordist). Advances in electronic news-gathering (ENG) technology have also facilitated the shift towards single-person crews. For example, ENG cameras are now smaller and have built-in audio capacities that have reduced the dependence on a second individual to carry and operate external audio equipment. A number of participants who were veterans of the news industry indicated that four-person crews are still used in specialised reporting programmes:

We're talking particularly about [Current Affairs Programmes] which I call in my way of talking, the Rolls Royce way of making television current affairs, because, to send four people overseas, you've got four air fares, you've got to accommodate them, so there are four hotel rooms. The last year, couple of years, I find [broadcasters] have what they call

video-journalists, and that's just one person, one person goes out and does the lot ... I was actually very hostile to it, because it was a cost venture. It's not an artistic or creative decision, it's a cost venture. We just don't want to spend that much money on sending a crew out to get a story. Bryan

As Bryan's comments demonstrate, news workers often lament the fact that crews are reducing in size because of reasons associated with financial cost. Such trends signify a diminished appreciation of the respective roles of creativity and quality in the news production process. It is not only the size of crews being sent into the field that are being contracted, so too are the overall staff numbers in many news organisations:

In those days, we were two-man crews, cameraman and sound, and now you're doing everything on your own ... When I was at [National Broadcaster] we had 26 two-man crews ... But basically out of the camera department there were over 50 guys, now they've got six crews, one-man crews, so you've now got, on any one day there might be 10 cameramen all up, but six on any one day. So that's the difference in the pool, you know, it's so much smaller. Owen

Both camera operators and reporters in the present study provided resounding support for working within a crew as opposed to alone. This was the case even in the wake of discussing potential points of conflict that arise between crewmembers:

We've got different skill sets, and different roles to play, while we're out there but we still see the same stuff, we still report on the same stuff. Um, and I think that's probably what, in the old days bonded us with journos I think, but I don't believe the bond is there now. Adam

Working within a crew was considered better than working alone for a range of pragmatic and social support reasons. Three prominent benefits of working within a crew were identified and are discussed presently. Specifically, participants felt that working in a crew reduces psychological stress, reduces physical risk, and improves the quality of the journalistic product. It seems apparent that the three benefits of working in a crew as opposed to alone discussed in this section are inextricably linked. For example, when physical risk is reduced and when the quality of the work is improved, reduced stress is a likely by-product.

**Reduced Psychological Stress.** The first perceived benefit of working within a crew is that it reduces psychological stress. Shared experiences and having social support readily available serves a protective function for news crews in times of stress. Direct links were made to increased levels of stress on the job as a result of working in a smaller crew or independently and thus having less social support around you:

When I first started as a journalist, you had, you know, you went out all day on a story, you were generally with the same camera crew so you had a chance to you know, shoot the breeze, talk about stuff, and maybe debrief on stuff, in a kinda informal way, and then you would come back to the editor, and they'd be "Oh mate, that was terrible" kinda stuff. Whereas you know, the way we work now is quite different, you know, we do a lot more remotely, you know, I file half my stories writing them on my phone, you know, we do a lot more live crosses, where it's instant, and off you go, so that whole ability to stop and actually process and debrief as you go, um, is kind of almost gone altogether, so it becomes much more of a cumulative thing. Brooke

Not surprisingly, social support from personal and professional networks has been found to be a significant factor in reducing post-trauma distress in a range of populations, including journalists (for a review, see MacDonald, Hodgins, & Saliba, 2015), Navy divers (Leffler & Dembert, 1998), firefighters (Regehr, Hill, Knott, & Sault, 2003), and emergency personnel (Weiss, Marmar, Metzler, & Ronfeldt, 1995). However, a nuanced finding specific to the present study and the occupational setting of TV news is that participants emphasised the importance of having someone to talk to in the car on the way back to the station. Participants stressed that typically the discussion does not revolve around the emotional impact of what had been seen. Instead, the primary value of social support in the car after a story was having the event acknowledged as real and perhaps unusually challenging by someone who had shared the experience with you or who has been in a similar situation in the past:

People will talk because, especially journos and camos in cars, talk about this stuff every day, everyday conversation like, “I’ve been over here”, or “I haven’t done that”, or “I’m feeling like this is not the right job for me.” Simon

And that’s all it comes down to too, is that, just that, one minute conversation can make all the difference, you know, and it’s like “Oh yeah, I saw this and this is what happened and yeah it was bad” and they’ll just go “Oh yeah, that’s similar to what I saw” and one minute, it’s just done and dusted. Cos people that have never seen it would just, just wouldn’t understand it. Adam

It is striking just how similar Simon and Adam’s responses are, despite never working together or knowing one another. In fact, many of the participants echoed the sentiment that they were wary of discussing their experiences with “outsiders” and felt that colleagues were better suited to this kind of discussion, as they are more likely to understand. Keats (2010) also found that photojournalists reported a preference towards discussing their experiences with colleagues as opposed to friends or family. This kind of functional support in the workplace is on the decline as a result of the move towards single-person crews. Additionally, it was not uncommon for participants in the present study to raise the point that their workload simply does not allow the opportunity to discuss and reflect upon their shared experiences in detail. A common phrase employed was “*you just get on with it*”. But even some kind of brief acknowledgement of what has happened on scene does help to reduce a sense of isolation and stress:

Sometimes um, you might just sort of ask the joumo if they’re ok, or they might ask you, you know, if you’re right or whatever but, you might get back and you might feel deflated, you know, everyone’s sort of doing their normal job, so you kinda just, it’s sort of a sad thing but you just sort of get on with it, but you do have a little bit of a debrief but you don’t have a formal one. Just an informal, and it might not be all the time ... you might still be on the camera, it might be late in the afternoon, and you might be like “We gotta get this back and we gotta put this to air, because we’re going to air in half an hour”. So you might not have a chance to even worry about it. Cameron

Other research with journalist samples has similarly shown that social support is an important factor in post-trauma resilience (Hatanaka et al., 2010; Newman et al.,



2003). Weidman et al. (2008) in particular found that social acknowledgement of exposure to a PTE by colleagues and supervisors was the most significant social support variable in predicting PTSD symptoms.

Another nuanced finding associated with social support and news work is related to overseas coverage. Participants in the present study who have experienced conflict or disaster coverage overseas stated that in these kinds of working conditions the need for social support is magnified. Again, the preferred kind of social support is not an in-depth discussion of the emotional aspects of the job. Rather, participants appreciated having someone around to check in with, have everyday conversations with, and to lighten the mood occasionally with humour:

When you're on the road overseas um, you don't have, you're not just a cameraman, you know, you're a producer, you're everything for the journalist, because you work as a team and you're under the pump like, both of you are fatigued and exhausted and hungry and everything else, you need to, you bounce off each other to keep going ... We don't really talk about what we saw or anything, we're just chilling and we don't say too much but it's just I guess having someone there just to talk about normal stuff and you know, whatever, and then it just winds you down, it takes, it slows the adrenalin down, and then you can sleep a bit better. Nick

There is enough there for all of everyone to know that you're in a nasty situation now. Phones don't work, you're surrounded by people, you're living in some dreadful rat infested hotel, yeah this is not a pleasant experience, and yeah, it's great sometimes to be able to laugh with and say "Wow, what are we doing here? How did we get ourselves into this situation?" and kind of laugh it off a bit. Bryan

Overall, participants indicated that shared experiences of PTEs or at least the opportunity to discuss your own experience with like-minded colleagues served a protective function. This held true even where emotional impact was not the focus of the social support. Responses from a number of participants indicated that debriefing emotionally with colleagues was likened to group therapy in a derogatory sense and considered undesirable and inappropriate. Instead, shared humour and having a familiar person around were two factors considered particularly helpful. Such attitudes are possibly the result of a traditionally stoic industry culture.

**Reduced Physical Risk.** The second perceived benefit of working within a crew rather than alone is that having colleagues around you reduces the physical risk associated with covering PTEs:

We come together to survive, there's that um, it's, camos [camera operators] survive better if they're going out with a journo ... You sort of protect each other. Simon

Participants such as Brooke argued that in terms of looking out for each other and avoiding potential dangers, the bigger the crew the better. Although they conceded that the ideal situation is for everyone to keep each other's safety in the forefront of their minds, in reality there is a range of pragmatic constraints to watching out for each other in the field, both literally and figuratively. Specifically, there is usually a lot happening in times of disaster or tragedy coverage that can be distracting and

require careful attention, coupled with the omnipresent pressure of covering the story better and faster than potential competitors:

Sometimes you might have just a single cameraman, and sometimes you might have a cameraman with a sound person, that's more ideal in more um, difficult situations. But um, that kind of teamwork is really important, and making sure you are sort of looking out for one another's um, welfare. But um, you know, you, it's so easy to get caught up in the moment and caught up in um, you know, needing to be somewhere to get the story, and the pressure's enormous to get that angle and that story and make sure you've got that photograph because you know, if your competitors are putting it online long before you are then you're in trouble. So all that kind of stuff has to be weighed up with welfare of crews.  
Brooke

An interesting finding was that the aforementioned perceived safety in numbers even occurred across news organisations. An example of this was that camera operators covering a story alone from one network would look out for camera operators from other networks in times of potential danger:

You go and cover a court story, you're on your own basically. The best you can hope for as back up is, you know, you might have a cameraman there, a mate from another network or a couple of photographers or whatever, and they all kinda look after each other. But um, there's no institutionalised protection at all [laughing] ... When you attend a job, any job, with other media um, ninety per cent of the time you work very closely together to cover the story, and help each other out as much as you can, cos you're all mates. Evan

Similarly, Keats (2010, p. 44) found that newspaper photojournalists emphasised how “tight-knit” the industry is; “tight-knit included being associated with like-minded people who, on occasion, offered safety to one another, especially during foreign work”. Just as there is a perceived sense of safety in covering PTEs when surrounded by colleagues, a number of participants indicated that they experienced increased levels of stress in anticipation of covering a PTE alone:

So you would get a call to go and a lot of cases the journo wouldn't go with you so you were there by yourself. And what was the traumatic side was how you were going to be accepted at that particular scene. Mark

Participants such as Mark felt a sense of vulnerability and uncertainty of what might happen when they arrive on scene and how people such as victims, bystanders, and emergency personnel would respond to their presence. Although this was not experienced by a large number of participants, it nonetheless raises an important element of being called out to a scene: the anxiety prior to going into the field that is associated with not knowing what to expect. There are a number of potential contributors that might predispose some news workers to increased anxiety when covering PTEs alone, including individual differences, previous experiences of covering trauma or stressful stories, the specific qualities of the PTE to be covered, and the amount of support available to the news worker.

**Improved Journalistic Product.** Working in a crew was also considered to be associated with greater quality of the journalistic output or product. The better the working relationships between crewmembers, the more likely that they will do their job well and try to make their colleagues look good. The attitude is that each

crewmember brings unique expertise, and by working together, the story is developed to a point that would not be likely when working individually:

If you work together, you're gonna actually have a much stronger story ... if you're respectful of [the camera operator] and thank them for their work and give them feedback on the great pictures they've shot, they're going to try harder for you, they're gonna frame the piece-to-camera beautifully ... You're gonna have a much weaker story if you think it's all about you. So I think it's really about respecting the expertise of your team, and because they'll pull it out for you if you do and together you'll pull off great work. Emma

It literally is a collaboration, so, you know, if you've got the journalist working with a cameraman who's investing in the story themselves, and you've got an editor who's investing in it, then the story comes out much better. Evan

The relationship component of this theme was made evident in Cameron's description of how it is different working with a reporter you enjoy working with compared to working with a reporter you do not respect professionally:

[She is] great you know, I collaborate really well with her, and you know, you take your time to make something as best you can when you work with someone you wanna work with you know. Whereas the other one I just do the job, get it done, get it sent and forget about it. Cameron

Working as a team also opens up avenues for managing difficult interviews and building rapport with individuals that would otherwise be very difficult or impossible for a sole news worker:

Sometimes you had such a connection with that journalist, you could be in cahoots with them a little so, if the interview wasn't going that well, you would break it by saying "I need to change a battery" or "We need to change a tape" or something, just giving them both like two minutes to talk offline to try and get the conversation back on track, and for the journalist to get their trust again ... maybe you'd say something funny, like you'd make a joke or something just to try and help the process along and um, yeah if you were a good team you would know when to do those things. Will

In a practical sense, it is understandably questionable that one individual is as capable as a complete crew when it comes to the various tasks involved in news production (e.g., carrying and optimally operating equipment, engaging an interviewee, planning the overall story and how it will come together, liaising with the office, and transferring content for broadcast). Beyond the pragmatics, however, this theme highlights that reporters and camera operators perceive the news production process as one suited to creativity, collaboration, and reciprocation. Investment by multiple individuals, each drawing on unique experiences and expertise, is considered paramount. Research in the area of job satisfaction has reported that collaboration between colleagues is an important factor (Konrad, Fletcher, & Carey, 2004). Therefore, working in a crew not only improves the quality of journalistic product but may also reduce costs associated with turnover resulting in reduced job satisfaction.

### 3.2 *Protective Function of Working with Experienced Colleagues*

Participants in the present study raised concerns regarding the casualisation of the industry and the reducing number of staffer positions available within news organisations. As a result of such trends, many are forced to work in a freelance context with less support globally, including social support, sick leave, insurance, etc. Another derivative of this process is that invaluable social capital<sup>2</sup> is being stripped from the newsroom. Even those news workers who do secure staffer positions no longer have access to senior and knowledgeable reporters and camera operators in the same way they would have in the past. This means reduced social support and an inability to learn from others' experiences. The findings also suggest that news workers coming into the industry are less likely to assert themselves when they feel pressure to work in less than ideal circumstances for two reasons: (1) they may not be aware that they currently have less access to supportive colleagues than was available in the past and (2) they may fear that they are replaceable, so they do not question the management. Participants indicated that these changes are concerning because of the myriad of benefits of having experienced news workers in the organisation. Two such benefits are discussed below: mentoring less experienced colleagues and shielding less experienced colleagues.

**Mentoring.** Historically, mentoring has played an important role in the news industry. Despite the increased tendency for reporters in particular to enter the industry with tertiary qualifications, many participants in the present study held journalism to be a practical field where you learn on the job. This is perhaps unlike other professions where a university degree and other qualifications may signal professional integrity. As such, much emphasis and respect is accredited to those who are considered to have “been around the block” or to have “earned their stripes”, so to speak. In the past, news organisations had a more formal system whereby new staff would work their way up the ranks and develop their professional skill set through taking direction from seasoned staffers:

You used to start as an assistant cameraman ... you worked with a different cameraman pretty much every week, but you'd learn the good and the bad things ... and you'd find people who you know, worshipped I guess, or looked up to, followed, and tried to copy their style, where now they don't have it, and [National Broadcaster] have actually just gone through this problem, because they sacked everyone, and they've got a whole lot of junior guys in there. Robert

More recently, however, news organisations are functioning with less staff and with less experience overall. Robert moved into freelance work after an extensive career as a staffer camera operator and frequently gets calls from management at various

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<sup>2</sup>Social capital can be defined as “the networks and resources available to people through their connections to others” (Aldrich, 2012).

broadcasters asking his opinion of someone they are looking to employ and the applicant's capability of working independently immediately:

They rang me to check him out and I recommended him, um, so he's got the job but they said to me "Oh, can we just let him loose?" and I said "No, he'll need a bit of training." ... Instead of what we used to get in the old days, you'd get maybe two or three years worth of sort of training, you know, as an assistant cameraman, um, he's getting one month, and then he's gonna be cut loose. Robert

Training TV news camera operators involves equipping them with the ability to get the right kinds of shots, work efficiently, and balance assignments with deadlines. Regardless of whether a month is a sufficient time period to learn these skills before covering stories alone, this model does not account for the kinds of skills and resilience required to cover PTEs. Large-scale disasters and tragedies do not occur every day. The month in which newly appointed staffers have the opportunity to work alongside practiced crewmembers may be busy in the traditional sense of constant demands and restrictions on time and other resources. Nevertheless, it may be a relatively quiet month without any form of trauma exposure. In which case, the newly appointed staffer is denied the chance to observe more experienced colleagues manage their own trauma exposure or to learn about employing organisation's practices and support for staff in challenging circumstances. Training, practice, and support regarding trauma is increasingly relevant to the news workers' role as they have considerably high levels of trauma exposure compared to the general population and to other professional occupations (MacDonald et al., 2017).

It appears that news organisations have fewer staffers on their books, a greater proportion of less experienced staffers than they may have had previously, and reduced social capital within the organisation to train and support less experienced staffers. This latter point regarding social capital is important because news workers require social support for the day-to-day stressors of the job and to prepare them for, and support them in the wake of, trauma exposure. Hence, the intrinsic problem with reducing the length of time newly appointed staffers have with more seasoned colleagues and removing veterans from the newsroom is that employees become less equipped to manage stressful experiences. Adam recounted an experience that highlights this important point aptly and thus warrants the inclusion of a relatively lengthier extract:

Look [young news workers are] gonna develop their own experiences, and their own coping mechanisms... But there's gonna be times where they're going to wish they had someone with more experience, at least holding some hands ... I was disgusted one night, it was actually when I was a sub, there was a photographer and a journo ah who went out, and it was their first fatal [car accident] that either of them had ever been to, and the editor sent them out at like, I dunno, it was half past five I suppose, in the arvo, and sent them out to this fatal, knowing very well that neither of them had ever been to a fatal before. And they were there for like two hours and in the meantime the editor's just gone home. Just gone home, and just left the subs there ... and I've just gone "Hang on, these guys haven't been to fatals before and there's no one here, there's no duty of care" ... They might not need it but they might need it, you know ... So they walked back in the door and I've just jumped on both of them, "Do you wanna talk about what you've seen, are you ok? Are you all good with it?" ... They were just appreciative that there was actually someone there to, that sort

of understood. None of the other subs did, they'd never been out in the field, they didn't have a clue. It's a real shame that you know, there's a lot of, it's not just technical experience or media experience sort of leaving the industry, it's just a real shame that a lot of people with real life experience are actually leaving the industry. Adam

A number of pertinent concerns are embedded within Adam's response. He was frustrated with the seemingly pervasive illusion that entry-level qualifications are sufficient to prepare a newly appointed staffer to execute all facets of their job. Adam suggests that the work requires a range of skills that could be broadly categorised into two components. One component is associated with domain knowledge and practical skills relating to news production. Arguably, all new staffers are expected to have a firm grasp on this aspect of their role, otherwise they are unlikely to be appointed. The other component is what Adam refers to as life experience, but more broadly encompasses the ability to balance professional and personal elements of working in stressful environments. The working conditions are competitive and demanding, and in addition to this, the content of the work can be emotionally challenging. Therefore, inexperienced staffers need the ability to balance their own professional and personal needs in order to be successful in their work and maintain a sense of well-being.

Adam's response suggests that management perpetuates the illusion of entry-level qualifications being sufficient to perform the role when they knowingly send inexperienced staffers to reasonably difficult situations without preparing them or providing follow-up support. He scrutinises the tendency for some management to demonstrate a less than adequate duty of care for their subordinate staff. Specifically in this example, sending inexperienced staffers to a difficult incident and then leaving work for the day. As noted in the response, news-worthy incidents occur sporadically and not necessarily during working hours when inexperienced workers can access support, whether related to their psychological state or physical safety. Management passively relinquishing their obligation to the well-being of their staff leads individuals such as Adam to feel a professional responsibility to provide support for their inexperienced counterparts. There is a sense of moral obligation that comes from having insight regarding the potential emotional reactions that accompany trauma coverage.

Participants indicated that regional areas in particular experience rapid turnover in reporting staff. One suggested reason for this was that regional areas are often viewed as stepping stones to more affluent and prestigious metropolitan networks. However, participants indicated that career progression opportunities are less available to camera operators. In combination, this means that experienced camera operators in regional areas often find themselves responsible for providing on the job training and mentoring for young and inexperienced reporters. For some, this was a positive experience that affirmed the hard-earned knowledge they had accumulated over the years:

I was there for seven years so I had to almost mentor a lot of younger journalists cos a lot of them came in from university, so it was their first real job ... I've seen enough journalists do their job to say "Aw, you should do this" and "You should do that", or "If you're talking to this person make sure you ask them this and that" ... It felt good to be the person who

knows what's happening ... I had been there so long that I was always training up new camera guys. Jack

You get a lot of very young journalists coming through and so, um, someone with my experience now, I do do quite a lot of mentoring, um working with them and you know, even helping out writing, you know, they'll ask me what I think about an element of the script or you know, if they've gotta write a piece-to-camera on the fly they'll put it past me, you know, things like that, um, where you become quite closely involved. Evan

Overall, it seems that the journalism industry is characterised by a professional respect for those news workers who have proven their skills through experience. However, due to a range of factors, experienced news workers are being pushed into freelance work. Additionally, organisations are moving away from role specialisation and are also less likely to provide traineeship style periods for newly appointed staff. Those that maintain organisation-based roles experience increased pressure to provide informal training to colleagues of differing roles, a task which is not accounted for in their official role responsibilities. This reinforces the negative attitudes some have about providing on the job training for colleagues in a different role. For some news workers, the necessity to provide on the job training for inexperienced reporters was sometimes perceived as just another task added to an already long list of responsibilities.

**Shielding Behaviours.** Seasoned news workers often feel it is their responsibility to protect or shield less experienced workers from unpleasant experiences. This theme has two distinct categories. Experienced news workers may attempt to shield or protect their less experienced colleagues from: (1) potentially distressing content or scenes and (2) other news professionals. Shielding behaviours relating to potentially distressing content or scenes will be discussed first. There were multiple examples throughout participant responses where more experienced individuals actively sought to shield their inexperienced counterparts:

Crews [camera operators] see more of it than we [reporters] do, um, because traditionally, and on ah station wise, they get there first or they see first and most of them will say to the kids, especially a female, "Oh, you don't want to see that" or they'll describe it a bit and then the guys just won't even go and have a look. Sophie

So I was doing that, sussing it out, and I looked at the road, and thought ok that's an arm, and that's a, and that pink stuff up the road's just mince meat ... She was spread for like 70 metres up the road yeah. And then there was two um, tarpaulins about 20 feet ... I went straight to the journo who hadn't made it up that far yet, and I just backtracked him. I said "Ok, you've been to one fatal and that was with me a few weeks ago" and he didn't see anything, I kept him fairly sheltered from it. Um, I said "You don't wanna go up there. It's up to you, it's your call, I'd never tell you what to do but it's not a pretty scene, it's not a good sight. But you make the call on what you wanna do, but I'm telling you it's not pretty". In the end he did walk down, he come down, to his credit. Adam

Adam's response highlights the complexity of the shielding process. Experienced workers have the desire to protect those with less experience from potentially distressing content. But they also tend to hold strong personal attitudes about self-censorship. Although senior staffers are willing to shield less experienced colleagues, they simultaneously believe that sustaining a career in the industry

necessitates the ability to handle exposure to trauma and distressing content with composure and without self-censorship. As such, dependence on the protective nature of experienced news workers is expected to be short-term.

The second distinct category was attempting to shield or protect less experienced colleagues from other news professionals. This kind of response provided a practical example of the kinds of conflicts that can occur across roles. Responses typically related to camera operators supporting other less experienced camera operators who they see as being unfairly denigrated by reporters. Essentially, seasoned camera operators try to model or comment on what an acceptable camera operator/reporter relationship is and what is not acceptable:

All camos have a common enemy with the journalist. Other camos will look after other camos from other stations if their journo's, like, if I'm at [National Broadcaster 1] and a [National Broadcaster 2] journo is giving, you know, being unreasonable to the camo, you can step in and say something to them, whereas the camo can't because they'll cop it when they get back. If you're from a different station you can go "Oh, back it off", you know. I've done that three or four times to help them out because they're young, or they're new. They're not doing anything wrong it's just the [reporter] is unorganised and they're blaming someone, you step in, it does you know, helps them out a bit, gives them a bit of breather to actually "Hang on, other people were stepping in for me here so maybe they [the specific reporter] are an idiot." Simon

More experienced camera operators from a different network and freelancers were the most likely to engage in this kind of behaviour, as they have less to lose from directly challenging the involved reporter. Responses in this theme of shielding less experienced colleagues involve striking a balance between protecting those with less experience and giving them the opportunity to act autonomously. Whilst senior staffers are willing to model appropriate behaviours and help ease newer staffers into the often distressing realities of the job, they concurrently expect their new colleagues to develop the ability to fend for themselves in order to do their job well and gain the respect of those around them.

## 4 General Discussion and Conclusions

This chapter aimed to answer the following research question: *What functional roles do crew relationships play in enhancing individual resilience?* The findings of this chapter have answered this question by detailing two interrelated themes. First, the benefits of working within a crew as opposed to alone were explored. Second, it was established that experienced news workers are important assets in the newsroom for a range of pragmatic, technical, and psychological reasons. The findings of this research highlight the protective functions of relationships between crewmembers and how they can serve to minimise the negative psychological implications of TV news work. This chapter has demonstrated that both camera operators and reporters emphasise the importance of relationships between crewmembers in times of trauma exposure, in contrast to their own individual



experiences. The capacity to work with other crewmembers simultaneously reduces physical and psychological risks and improves the quality of the journalistic product. Considerable emphasis was placed on the protective functions of having someone to relate to and with whom to share experiences for better or worse. A finding not previously reported elsewhere is that news workers typically use the drive from a PTE back to the station to bond with each other and cope with their experiences. They place greater emphasis on discussing work-related PTE exposure and reactions with those who have had similar experiences, as opposed to having to try and relay the experience and associated emotions adequately to family and friends after the fact.

It was also found that news crews are smaller now than they have been in the past, with camera operators commonly covering trauma alone in the field. These changes are partly due to cost-cutting endeavours that have resulted not only in single-person crews, but also in the casualisation of the industry, which has pushed many news workers into freelance employment. News workers are increasingly expected to have competence in a broad range of skills, rather than having specialised skills in a specific area. For those who are forced into freelance work, there is less support globally, meaning reduced access to social support, sick leave, insurance, etc. Another derivative of this process is that invaluable social capital is stripped from the newsroom. The immediate implications regarding mentoring and shielding of less experienced news workers were examined in the discussion above. It is worth adding that there are ripple effects in the diminishing of social capital in newsrooms. As described above, new staffers now have reduced access to experienced news professionals and, amongst other things, their local and industry knowledge, their learned coping mechanisms, and problem-solving behaviours. Moreover, this means that the ties to those experienced news professionals' extended networks and key contacts are also, inherently, severed. Research has shown that resilience and recovery after PTE exposure is in part dependent on the quality of the social capital of a community (Aldrich, 2012). To the authors' knowledge, this research is the first to connect sociological theory relating to social capital with the area of journalism and trauma.

Crew solidarity serves a protective function for news crewmembers exposed to trauma and other work-related stressors, despite potential interpersonal conflicts based on role differences. Having an understanding and experienced colleague with whom to discuss experiences was associated with an increased sense of resilience. The process of openly discussing experiences is also likely to normalise emotional reactions as an appropriate response when exposed to PTEs. Conversely, management and senior staff who do not acknowledge the potential psychological sequelae associated with journalistic work run the risk of inadvertently perpetuating perceptions that may be detrimental. For example, staffers working in such conditions may think that the experience of negative emotional states as a result of their work is an indicator of a personal flaw or professional inadequacy (Beam & Spratt, 2009).

The findings indicate that the psychological well-being of TV news workers could be enhanced by allowing them to work within a team, as opposed to covering

PTEs alone. News workers find their work more fulfilling and less stressful when they are able to work within a crew that looks out for them in dangerous situations, and equally, one that allows them to work creatively and collaboratively to improve the end product. Using a team to cover a story may have greater financial costs; however, organisations should be aware of the potential risks involved in using single-person crews and consider whether it is more suitable, and cost-effective in the long-term, to avoid sending single-person crews out to cover certain events, especially those events that are likely to be particularly distressing. Through realising the benefits of crew relationships and employing readily available social capital, the workplace can be part of the resilience building process. Potential mid- to long-term financial benefits include reduced stress, increased resilience, improved job satisfaction, reduced staff turnover and sick leave, increased productivity, and reduced risk associated with employer negligence claims. The findings have been used to suggest the means by which news organisations can foster crew relationships that are healthy, productive, and enhance recovery.

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# Fear of Missing Out, Mobile Phone Dependency and Entrapment in Undergraduate Students

Ananya Upreti and Priyanka Musalay

**Abstract** The objective of this study is to observe the relationship between fear of missing out, mobile phone dependency and entrapment in undergraduate students from government and private colleges in Hyderabad, India. Purposive sampling technique was used to select a sample of 300 undergraduate students. The present study used the Fear of Missing Out Scale (Przybylski et al. in *Comput Hum Behav* 29(4):1841–1848, 2013), the Mobile Phone Dependence Questionnaire (Toda et al. in *NipponEiseigakuZasshi (Jpn J Hyg)* 59(4):383–386, 2004) and the Entrapment Scale (Hall and Baym in *New Media Soc* 14(2):316–331, 2012). Correlational analysis showed that there is a significant relationship between fear of missing out, mobile phone dependency and entrapment amongst undergraduate students from government and private colleges. The results of ANOVA found significant differences in fear of missing out, mobile phone dependency and entrapment amongst undergraduate students from government and private colleges. The limitations and implications are discussed.

**Keywords** Fear of missing out · Mobile phone dependency · Entrapment Undergraduate students

## 1 Introduction

Fear of missing out is steadily becoming a global phenomenon. Studies have estimated that around 70% of all adults in developed countries suffer from a scary, frenzied and frantic feeling that something is happening and that they are not a part of it (Schreckinger, 2014). According to Herman (2000), fear of missing out is an apprehensive attitude towards the likelihood of failing to expend the present

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opportunities and missing out on the expected pleasure associated with succeeding in doing so. It is a ubiquitous anxiety brought on by our cognitive potentials to recognize potential chances or opportunities. It can be manifested in many ways, varying from a brief pang of envy to a real sense of inferiority which has now taken a form of social anxiety. This is often triggered by posts seen on social media websites. The fear of missing out (FoMO) episode occurs mid-conversation with friends and loved ones, often leading to the individual/s who are involved in the conversation, that are troubled with fear of missing out (FoMO) to experience isolated incidents of intense rage.

This contemporary sentiment is deeply ingrained as an ancient survival instinct, and there is a valid reason as to why the expression begins with “fear”. Gibling in 2014, stated that the stress we experience from seeing other people having more fun, originates from a part of the brain known as the Amygdala (Luna, 2014). Not having enough vital information or getting the impression that one is not a member of the “in” group is enough for many individuals’ amygdala to activate and engage the stress or activation response or the “fight or flight” response (Sanz, 2015). In other words, when we feel left out as though we are not a part of some event or activity, we begin to worry or feel stressed out as though we are missing out (Malespina, 2016).

The psychology behind fear of missing out, in behavioural economics, and decision theory, can be partly explicated by the concept of loss aversion (Zaslave, 2015). From the theoretical perspective of psychological needs, fear of missing out could be ascribed to long term or even situational deficits in the satisfaction of psychological needs (Przybylski, Murayama, DeHaan, & Gladwell, 2013), the prevalence of which promotes an escalating clarity of other’s social life and an increasing quantity of real-time information (Amichai-Hamburger & Ben-Artzi, 2003). As stated by the uses and gratifications theory, people actively and deliberately choose and use social media to achieve their specific needs (Katz, Haas, & Gurevitch, 1973), such as their need for information or staying in touch with others through socializing (Park, Kee, & Valenzuela, 2009). For individuals who struggle with fear of missing out, involvement in social media poses as an attractive opportunity since it serves as an appropriate device to be socially connected at a comparatively lower price (Ellison, Steinfield, & Lampe, 2007; Vaughn, 2012).

Self-determination theory asserts that a person’s psychological satisfaction in their competence, autonomy and relatedness must be fully satisfied for the individuals to sustain their optimal performance and well-being (Deci & Ryan, 1985). Individuals with lower levels of basic psychological satisfaction experienced a greater degree of fear of missing out. In other words, a significant correlation was found between basic psychological satisfaction and fear of missing out (Przybylski et al., 2013). Additionally, nearly four out of ten young people stated that they experience fear of missing out occasionally or frequently (Vaughn, 2012). Fear of missing out was discovered to be negatively correlated with age and men reported fear of missing out more than women (Vaughn, 2012).

The fear of missing out is often activated and triggered by the latest form of communication: social media. It has always been imperative to be “in the know” even when we wandered about in small groups. These systems, which were

developed over a period of time, today exist in the form of television, newspapers, the Internet, and social media platforms. The main purpose of this development was to help the humans consolidate and enhances communication amongst other humans to keep each other informed of important information, including potential sources of danger to our tribes/countries/species. It is also partially due to this reason why individuals are active participants in networking platforms like Facebook or Twitter (Sanz, 2015).

It is mostly due to being motivated by this anxiety and insecurity of missing out on the potential opportunities, all the more accentuated via the medium of social media, that fear of missing out is steadily proving to be a destructive force. The findings of a survey done by National Stress and Wellbeing in Australia Survey (Australian Psychological Society, 2015) reported that most teenagers today suffer from the fear of missing out which is activated when using social media. About 15% or more than half of all the teenagers who participated in the survey admitted that they use social media for 15 min before bed every night; 37% or four in ten of the teen respondents, in the presence of others, use social media, and 24% or one in four teens stated that they join or connect to social media, while eating breakfast and lunch every day. The report stated that the fear of missing out is more commonly seen in people who heavily rely and use social media. One in two Australian teenagers or around 50% of the respondents admitted that they constantly feel the fear of missing out on their friends' inside jokes and activities, and moreover to successfully convey that they are having fun on social media. Young adults also frequently compare themselves to their friends and feel like they have less rewarding experiences than them. For example, a person who is watching TV at home decides to casually check and skim/scroll through Facebook or Instagram. The person then comes across the photos that his/her friends posted photos of them out clubbing and he/she suddenly feel like they are missing out on something very important (Australian Psychological Society, 2015).

In this day and age, we are all the more open, vulnerable and exposed to what others are doing around us, and we are constantly troubled and haunted with a plaguing sense of alarm about whether or not we have made the right choice about what we are doing and where we have to be at all stages of our life. This sensation of fear of missing out is raising rapidly with the real-time and location-based media apps (Vaughn, 2012). Partly because Millennials are the first generation of digital native, they are specifically more exposed and thereby more defenceless against the affect of fear of missing out (FoMO) (Popcorn, 2012).

As per the study conducted by Elhai, Dvorak, Levine, and Hall (2017), it was revealed that overdependence or problematic use of smartphone was most correlated with anxiety, fear of missing out (FoMO) and need for touch (NFT). The study stated that behaviour activation mediated associations between smartphone use and both anxiety and depression, and the results demonstrate the importance of social and tactile need fulfilment variables that explain problematic smartphone use. Also, emotional suppression also mediated the association between problematic smartphone use and anxiety.

Savvy brands are also shaping different marketing techniques, aiming to target and exploit this fear of missing out to influence the Millennials either by provoking or escalating discomfort about missing out. When compared to previous generations, Millennials possess a distinct perspective, in terms of what they are willing to spend their money on by letting FoMO or “fear of missing out” influence or drive their monetary decisions. As per a recent survey conducted by Eventbrite in 2014, it was reported that around 78% of 18–34 year olds were willing to pay for experiences rather than things, with nearly 70% of the people accepting that fear of missing out dictate their financial choices. Fear of missing out is a kind of social anxiety which may have always been present, but currently is going into an overdrive. This can be ascribed to the loss of non-virtual relationships due to emerging smartphones and mobile applications. This can probably explain the current phenomenon which leads to mobile phone dependency that can be witnessed in nearly 75% of young adults who use social media, i.e. through the medium of mobile phone apps (Chaudhry, 2015).

The communication technologies today have changed and revolutionized our lifestyle, allowing the smartphones to become a basic necessity in our daily lives. As per 95% Indian respondents, mobile phones have become an integral part of their lives. According to a survey done by online travel company Expedia in 2014, 75% of the people use a mobile phone app on their cell phone or tablet to book accommodation; around 86% of Indians own and use a smartphone. It has been noted that India has the highest number of smartwatch owners globally, with 18% of them owning and using the device (Mishra, 2014). While cell phones were initially used as a communication device, today, they are a twenty-first-century symbol that performs multiple roles (García-Montes, Caballero-Munoz, & Perez-Alvarez, 2006), mainly socialization. Mobile phones can be regarded as a bank, when using mobile banking (Jayamaha, 2008), a calculator, personal organizer, a camera or a social networking device (Bicen & Cavus, 2010), to stay connected with their friends and family (Aoki & Downes, 2003) and to use the Internet, email and social media such as Twitter and Facebook. Such wide array of features makes mobile phones the ultimate social-interaction gadget.

As indicated previously, this ever-growing trend of fear of missing out is leading to mobile phone dependency amongst its users. Mobile phone dependency can be defined as regular reliance of the users on mobile phones such that the mobile/cell phones become a part of the adopters’ lives to such an extent that the person using the gadget feels lost in its absence (Hooper & Zhou, 2007). Rogers (1995) recognized this as “commitment” to using an innovation. It can be noticed that the increasing tendency of the fear of being without mobile phone is also taking over the general population in today’s world due to increasing mobile phone dependence. It can be predominantly observed amongst the high school and college students. A study done by YouGov in 2010 found that about 53% people using smartphones in UK get disturbed when they either run out of battery, have no network coverage or when they lose their phones (Merz, 2013).

Hooper and Zhou (2007), on the basis of Maslow’s motivation model, posited that human behaviour can be considered as the definite performance of behavioural

intentions which are driven by certain concealed motives. This perspective emerges to be in congruence with the adoption theories like Ajzen's theory of planned behaviour (1991) and Davis's technology acceptance model (1989). Essentially, Taylor and Todd (1995) explained that these models put forth the view which states that the product's attributes (for instance, perceived ease of use, perceived usefulness or relative advantage) impact the behavioural intention, which consequentially triggers behaviour. These motives result in six types of behaviour identified with cell phones usage. These behaviours are voluntary, mandatory, habitual, addictive, compulsive and dependent behaviour (Hanley & Wilhelm, 1992; Hooper & Zhou, 2007; Madrid, 2003; O'Guinn & Faber, 1989). Dependent behaviour, unlike addiction, is generally influenced by the added and attached importance of a social norm (Hooper & Zhou, 2007). Therefore, it is rather the attached importance of communicating with others to a great extent and not the addiction of mobile phone usage.

Profound dependence on mobile phones devices to inform, share, coordinate and spend quality time with friends creates strong obligations and compulsion to be responsive (Baron, 2008). The brief, targeted pattern of continuous communication amongst friends can become a *habitual ritual* which becomes institutional and the call becomes an obligation as well as a duty (Licoppe, 2004). This sense of duty/obligation is the result of an expectation of relational maintenance, wherein the friends and fellow peers expect each other to maintain their friendship and stay in touch via the mobile phones to communicate and include.

Entrapment can be defined as the expectations of others (particularly friends and peers) to inform, share and maintain relationships via text messaging or phone calls which leads to one experiencing the overwhelming feelings of being trapped or imprisoned (Baym, 2010). Since it is a compact and portable device which provides us with convenience, the cell phone encourages the relational companions to be in constant and perpetual contact (Katz & Aakhus, 2002).

The crux and the chief concern of entrapment are to perpetually stay connected. Katz and Aakhus (2002) said, "An age of perpetual contact, at least in terms of potential, is dawning". The increasing accessibility and mobile phone usage in maintaining interpersonal relations develop the perception as well as the expectation for individuals' availability and presence in future. The relationship is negatively impacted in case one fails to meet these demands for contact (Baron, 2011; Hall & Baym, 2012; Licoppe, 2008; Yan, 2015).

Surely, while on one hand perpetual contact is regarded as a positive characteristic of the phone (e.g. its ability to stay globally connected with friends and family), Baron (2011) declared that the idea of freedom-entrapment could be disruptive, resulting in negative outcomes when cell phones are too often used and the expectations become irrational and unrealistic. In the context of texting, Baron found that failing to be quick with one's response may be interpreted as a rude gesture, therefore having a negative impact over the relationship (Baron, 2011). This goes on to show the two-sided effect of communication and technology, especially with the mobile phones using which any person can be tracked at any place or time. Research studies conducted on romantic relationships focus on the



issues of entrapment when studying the dialectical tension of autonomy–connection (Duran, Kelly, & Rotaru, 2011). In escalation to the candidates, voicing their frustration and exasperation over the constant anticipation and pressure over who is going to text or call, which points to the direction of anxiety being caused due to constant contact (Duran et al., 2011), which is the very essence of the entrapment concept (Yan, 2015).

A distinguishing feature of fear of missing out is the desire to stay continually connected with what others are doing (Przybylski et al., 2013) which is often experienced by *Millennials* who are at the threshold of adulthood in early twenty-first century, i.e. students attending universities and colleges today (Jonas-Dwyer & Pospisil, 2004). They are the major users of social media applications and devices in comparison to other sections of the population, and use them quite extensively for communicating with other persons in their age group and their fellow students in their respective disciplines (Ophus & Abbitt, 2009; Subrahmanyam, Reich, Waechter, & Espinoza, 2008). But the flip side of such extensive usage of social media is that it may lead to adverse impact on the psychological well-being of the users (Alabi, 2013; Alavi, Maracy, Jannatifard, & Eslami, 2011). These concerns about the adverse psychological issues due to extensive social media usage amongst university or college students have led to increasing awareness about a relatively new phenomenon, popularly referred to as fear of missing out (Alt, 2015). This is likely to result in addiction of the users to mobile phones to such extent that these devices become an integral and inseparable part of the user and without them one feels lost and helpless (Hooper & Zhou, 2007). Rogers (1995) identifies this as a desire and propensity for using a new device/product in era of ever-evolving technology innovations. The importance attached to the need for remaining in contact and easy accessibility to others itself leads to constant pressure and anxiety in the users resulting in them feeling trapped or imprisoned. Therefore, the combination of these variables, i.e. fear of missing out, mobile phone dependency and entrapment was selected for the current study, which is exponentially and quite frequently encountered by undergraduates or college students.

## ***1.1 Research Questions***

1. Is there an influence of type of college (viz. government and private) and gender of undergraduate students on fear of missing out, mobile phone dependency and entrapment?
2. Is there a relationship between fear of missing out, mobile phone dependency and entrapment in undergraduate students from different types of colleges (viz. government and private)?

## **1.2 Objectives**

1. To observe whether there is an influence of type of college (viz. government and private) and gender of undergraduate students on fear of missing out, mobile phone dependency and entrapment.
2. To observe whether there is a relationship between fear of missing out, mobile phone dependency and entrapment in undergraduate students from different types of colleges (viz. government and private).

## **1.3 Hypotheses**

- H1 There will be a difference between undergraduate students from government and private colleges with respect to (a) fear of missing out, (b) mobile phone dependency and (c) entrapment.
- H2 There will be a difference between undergraduate boys and girls with respect to (a) fear of missing out, (b) mobile phone dependency and (c) entrapment.
- H3 There will be a relationship between fear of missing out and mobile phone dependency in undergraduate boys from government colleges.
- H4 There will be a relationship between mobile phone dependency and entrapment in undergraduate boys from government colleges.
- H5 There will be a relationship between fear of missing out and entrapment in undergraduate boys from government colleges.
- H6 There will be a relationship between fear of missing out and mobile phone dependency in undergraduate girls from government colleges.
- H7 There will be a relationship between mobile phone dependency and entrapment in undergraduate girls from government colleges.
- H8 There will be a relationship between fear of missing out and entrapment in undergraduate girls from government colleges.
- H9 There will be a relationship between fear of missing out and mobile phone dependency in undergraduate boys from private colleges.
- H10 There will be a relationship between mobile phone dependency and entrapment in undergraduate boys from private colleges.
- H11 There will be a relationship between fear of missing out and entrapment in undergraduate boys from private colleges.
- H12 There will be a relationship between fear of missing out and mobile phone dependency in undergraduate girls from private colleges.
- H13 There will be a relationship between mobile phone dependency and entrapment in undergraduate girls from private colleges.
- H14 There will be a relationship between fear of missing out and entrapment in undergraduate girls from private colleges.
- H15 There will be an interaction between gender and type of college between the variables of fear of missing out, mobile phone dependency and entrapment.

## 2 Method

### 2.1 Research Design

The present study adopts a between groups design to determine whether there are any gender differences between undergraduate students going to government colleges and those going to private colleges in terms of fear of missing out, mobile phone dependence and entrapment. This study also adopts a correlational design to determine whether there is any relationship between fear of missing out, dependence on mobile phones and entrapment amongst undergraduate boys and girls going to government and private colleges. The study was conducted on students from government and private colleges.

### 2.2 Sample

A non-probability purposive sampling method was used to select a sample of 300 undergraduate college students aged 17–22 years. Out of the total sample, 150 were studying in government colleges, 75 boys and 75 girls and 150 were studying in private, 75 boys and 75 girls.

- **Inclusion criteria:**

- Participants aged between 17 and 22 years were included
- Participants who were pursuing their graduation from government and private institutions were included
- Participants who own a mobile phone (smartphones) were included.

- **Exclusion criteria:**

- Participants who were not pursuing or have already completed their graduation were excluded.

### 2.3 Instruments

- **Information Schedule**

Participants were asked to provide their gender, age, education, type of institution and the like in the information schedule.

- **Fear of Missing Out (FoMO)**

The FoMO scale was designed by Przybylski, Murayama, DeHaan and Gladwell in 2013. It is a psychometrically valid ten-item scale that measures individual differences in the experience of the pervasive apprehension that

others are engaged in more rewarding activities or social relationships than the self. Participants answered each item on a scale from 1 (“Not at all true of me”) to 5 (“Extremely true of me”). The scales items showed good consistency ( $\alpha = 0.84$ ).

- **Mobile Phone Dependence Questionnaire (MPDQ)**

The Mobile Phone Dependence Questionnaire was developed by Toda, Monden, Kubo and Morimoto in 2004. This scale is a 20 item self-report survey that evaluates the frequency of occurrence of behaviours associated with mobile phone. On a four-point scale ranging from (3) *Always* to *Hardly Ever* (0), participants specify and select the general frequency with which they perform certain mobile phone-related behaviours. Scores range from zero to sixty, with higher scores indicating greater levels of dependence. High internal consistency has been found in adult populations ( $\alpha = 0.86$ ) (Ezoe et al., 2009; Toda et al., 2004).

- **Entrapment**

Entrapment was measured by adapting seven items from the qualitative analysis of Baron (2011) and Ling and Ytri (2002) by Hall and Baym in 2012. Items expressed the degree to which participants felt stressed and pressured as a result of mobile phone usage, dependence and communication with their friends. The seven items were found reliable ( $\alpha = 0.86$ ).

### 3 Procedure

After selecting the measures, a few arrangements were made for data collection. The questionnaires and the information schedule were prepared and organized. The authorities of the government and private colleges were contacted for permission regarding collection of data in their college. The researcher then visited the colleges on the scheduled dates. Rapport was established with the students and they were made aware that their participation in the study was purely voluntary. They were assured of maintaining confidentiality throughout the study. The students who agreed to participate in the study were requested to sign an “Informed Consent Form”. Next, the written and verbal instructions were given and the information schedule was administered followed by the questionnaires (namely the fear of missing out, mobile phone dependency and entrapment). There was no fixed time limit for any of the questionnaires. However, the participants were expected to complete the questionnaire in 30 min.

### 4 Statistical Analysis of Data

The obtained data of this study were analysed using two-way analysis of variance and product-moment correlation using the statistical package for social sciences (SPSS) version 21. Means of fear of missing out, mobile phone dependency and

entrapment were calculated for the groups. Two-way analysis of variance (ANOVA) was conducted to determine whether there are any gender differences between undergraduate students from different types of colleges (viz. government and private) in terms of fear of missing out, mobile phone dependency and entrapment. Product-moment correlation was computed to determine whether there was any significant correlation between the fear of missing out, mobile phone dependency and entrapment amongst undergraduate boys and girl from different types of colleges.

The overall mean of the scores obtained by the participants in the present study for FoMO, mobile phone dependency and entrapment were 27.06, 26.89 and 19.41, respectively, while the standard deviation for FoMO, mobile phone dependency and entrapment were 6.73, 7.83 and 5.22, respectively. The mean of the scores obtained by the undergraduate students from government collages for FoMO, mobile phone dependency and entrapment were 27.54, 28.61 and 20.47, respectively, while the mean of the scores obtained by the undergraduate students from private collages for FoMO, mobile phone dependency and entrapment were 26.58, 25.17 and 18.35, respectively. Also, the mean scores obtained by the undergraduate boys from government and private collages for FoMO, mobile phone dependency and entrapment were for FoMO, mobile phone dependency and entrapment were 27.54, 28.61 and 20.47, respectively; whereas the mean scores obtained by the undergraduate girls from government and private collages for FoMO, mobile phone dependency and entrapment were 26.98, 25.85 and 19.32, respectively.

## 5 Results

Table 1 indicated a significant difference between the undergraduates from government and private colleges with respect to mobile phone dependency ( $F = 15.60$ ,  $p < 0.01$ ). The undergraduate students from government colleges ( $M = 28.61$ ) scored significantly higher than undergraduate students from private colleges ( $M = 25.17$ ) with respect to mobile phone dependency.

There is also a significant difference between the undergraduates from government and private colleges with respect to entrapment ( $F = 13.08$ ,  $p < 0.01$ ). The undergraduate students from government colleges ( $M = 20.47$ ) scored significantly higher than undergraduate students from private colleges ( $M = 18.35$ ) with respect to entrapment. In other words, undergraduate students are more influenced by mobile phone dependency and entrapment than undergraduate students from private colleges.

Table 1 reveals no significant difference ( $p < 0.05$ ) between the undergraduates from government and private colleges with respect to fear of missing out.

Additionally, Table 1 reveals a significant gender difference with respect to the mobile phone dependency ( $F = 5.64$ ,  $p < 0.05$ ). Undergraduate boys ( $M = 27.93$ ) scored significantly higher than undergraduate girls ( $M = 25.85$ ) with respect to

**Table 1** Results of two-way ANOVA with gender and type of college as the IVs and fear of missing out (FoMO), mobile phone dependency and entrapment as the DVs ( $N = 300$ )

Variables	Type of college		F	Gender		F	Gender X Type of college F
	Government (N = 150)	Private (N = 150)		Boys (N = 150)	Girls (N = 150)		
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)		
FoMO	27.54 (7.01)	26.58 (6.44)	1.52	27.14 (6.52)	26.98 (6.97)	0.042	0.76
MPD	28.61 (6.21)	25.17 (8.85)	15.60**	27.93 (6.52)	25.85 (7.79)	5.64*	3.33
Entrapment	20.47 (4.96)	18.35 (5.28)	13.08**	19.49 (4.79)	19.32 (5.63)	0.087	7.08**

Note

SD Standard Deviation

FoMO Fear of missing out

MPD Mobile phone dependency

\*\* $p < 0.01$  level

\* $p < 0.05$  level

mobile phone dependency. In other words, the undergraduate boys students are more dependent on mobile phones than the undergraduate girls students.

Table 1 also states that there is no significant gender difference ( $p < 0.05$ ) with respect to the fear of missing out and entrapment.

Simultaneously, Table 1 also indicates an interaction between gender and type of college between the variables of fear of missing out, mobile phone dependency and entrapment.

Table 2 reveals that there is statistically no significant relationship ( $p > 0.05$ ) between fear of missing out (FoMO) and mobile phone dependency in undergraduate boys from government colleges. Also, there was no significant relationship ( $p > 0.05$ ) between fear of missing out (FoMO) and entrapment and between mobile phone dependency and entrapment in undergraduate boys from government colleges.

Table 3 shows that there is statistically no significant relationship ( $p > 0.05$ ) between fear of missing out (FoMO) and mobile phone dependency and between mobile phone dependency and entrapment in undergraduate girls from government

**Table 2** Results of the correlation between fear of missing out (FoMO), mobile phone dependency and entrapment in undergraduate boys from government colleges ( $N = 75$ )

	Mobile phone dependency	Entrapment
Fear Of missing out (FoMO)	0.16	0.18
Mobile phone dependency		0.01

\*\* $p < 0.01$  level

\* $p < 0.05$  level

colleges. But, it was seen there exists a high significant positive correlation between fear of missing out (FoMO) and entrapment ( $r = 0.39, p < 0.01$ ) in undergraduate girls from government colleges.

Table 4 reveals a high significant positive correlation between fear of missing out (FoMO) and mobile phone dependency ( $r = 0.32, p < 0.01$ ) in undergraduate boys from private colleges. There is a high significant positive correlation between mobile phone dependency and entrapment ( $r = 0.40, p < 0.01$ ) in undergraduate boys from private colleges. And there exists a significant positive correlation between fear of missing out (FoMO) and entrapment ( $r = 0.25, p < 0.05$ ) in undergraduate boys from private colleges.

Table 5 reveals that there is no significant relationship between fear of missing out (FoMO) and mobile phone dependency in undergraduate girls from private colleges. There is a significant positive correlation between mobile phone dependency and entrapment ( $r = 0.23, p < 0.05$ ) in undergraduate girls from private colleges. And there exists a high significant positive correlation between fear of missing out (FoMO) and entrapment ( $r = 0.33, p < 0.01$ ) in undergraduate girls from private colleges.

**Table 3** Results of the correlation between fear of missing out (FoMO), mobile phone dependency and entrapment in undergraduate girls from government colleges ( $N = 75$ )

	Mobile phone dependency	Entrapment
Fear Of missing out (FoMO)	0.19	0.39**
Mobile phone dependency		0.14

\*\* $p < 0.01$  level

**Table 4** Results of the correlation between fear of missing out (FoMO), mobile phone dependency and entrapment in undergraduate boys from private colleges ( $N = 75$ )

	Mobile phone dependency	Entrapment
Fear Of missing out (FoMO)	0.32**	0.25*
Mobile phone dependency		0.40**

\*\* $p < 0.01$  level

**Table 5** Results of the correlation between fear of missing out (FoMO), mobile phone dependency and entrapment in undergraduate girls from private colleges ( $N = 75$ )

	Mobile phone dependency	Entrapment
Fear Of missing out (FoMO)	0.20	0.33**
Mobile phone dependency		0.23*

\*\* $p < 0.01$  level

\* $p < 0.05$  level

## 6 Discussion

The rationale of the current study was to see if the type of college and gender influences fear of missing out, mobile phone dependency and entrapment in undergraduate students. The objective of the current study was to find out if there is any relationship between fear of missing out, mobile phone dependency and entrapment in undergraduate students from different types of colleges, i.e. government and private colleges.

In the present study, the results using two-way analysis of variance (ANOVA) indicated that the undergraduate students from government colleges scored higher than undergraduate students from private colleges in mobile phone dependency and entrapment.

The results of the study conducted by Dixit et al. (2010) are suggestive of mobile phone dependence amongst the students of M.G.M. Medical College, Indore. The data indicated that fear of being out of mobile phone contact seems to be an emerging problem of undergraduate college students in modern times, as mobile phones have ceased to be a status symbol but has become a necessity due to its extensive features which makes it perform various roles from a personal assistant to a handy musical device (Dixit et al., 2010). According to DNA India, nowadays, there is now a higher level of awareness in the people not only to judge each other on the basis of their clothes and their houses, they also tend to rate others on the basis of the gadgets they use in public. Therefore, one of the plausible reasons for the undergraduates from government colleges to score higher than private colleges could be the need to attain an equivalent social status (in the case of cell phones) in the society ("Gadgets Often Seen As", 2013).

The results in the present study have indicated that undergraduate boys are more dependent on mobile phones than undergraduate girls. This can be supported by a research done on males and females by Devis, Carmen, Vicente and Thomas (2009) which reported that girls spend less time on mobile phones than boys. A study done by Turner, Love and Howell (2008) stated that the individual traits like gender and age and personality are associated differentially with certain features of mobile phone-related behaviour. In contrast, it was discovered by Walsh, White, Cox, and Young (2011) that gender was associated with mobile phone involvement but not with frequency of use.

On the other hand, other studies concluded that there were a high mobile phone dependency and usage in women than in men. Billieux, Van der Linden, and Rochat (2008) examined the gender differences in terms of impulsion and problematic phone usage faced by the young. It was found that women are more dependent on phones than men who tend to use their cell phones more frequently only in dangerous circumstances. Jenaro, Flores, Gómez-Vela, González and Caballo (2007) analysed the compulsive and obsessive smartphone and Internet use amongst 337 Spanish college students, and learned that excessive mobile phone use is viewed as a feminine quality, and having high level of anxiousness and insomnia.



In the current study, the results showed that there was an interaction between gender and type of college in the variable of entrapment.

Using Pearson's product-moment correlation coefficient, it was found that there was a significant relationship between fear of missing out and entrapment in both undergraduate girls from government colleges and in undergraduate girls from private colleges. In contrast to the results of the present study for fear of missing out and mobile phone usage, it was discovered in a study done by Abel, Buff and Burr (2016) that while assessing gender and FOMO, there was no significant finding that was found. Also, the average total fear of missing out (FoMO) score for men was marginally lower than that reported by women. The results have also indicated that there was a significant relationship between fear of missing out, mobile phone dependency and entrapment in undergraduate boys from private colleges.

Findings of present study for fear of missing out (FoMO) and mobile phone usage are supported by a research done by Trnkova, Nguyen, and Madeira (2015) who have suggested that there is an underlying correlation between fear of missing out and usage of mobile phone. Though the term fear of missing out (FoMO) is rather new in psychology, its consequences have been known for the past many decades. Easy connectivity at all times and all places increases real-time digital updates on our constant group contacts via our smartphone. People keep on checking their cell phones in their anxiety not to miss any new information or rewarding experience (Vaughn, 2012). According to Chaudhry (2015), the phenomenon of fear of missing out (FoMO) can be indirectly linked to loss of their relationships with their close social media relations/contacts through smartphones and mobile applications. The fear of missing out, a current phenomenon experienced by nearly 75% of young adults using social media, results from constant usage of social media due to its efficiency for providing prompt and constant connection to social networks and contacts. This inevitably leads to a deep addiction and dependence to social networking sites, and thereby to extensive usage of the mobile apps, to phones also (Chaudhry, 2015).

Findings of the present study for mobile phone dependency and entrapment are supported by a research done by Subba et al. (2013). This study aimed to discover the proportion of students who experienced "ringxiety" (phantom ringing) and other perceived effects, as well as the pattern of the mobile phone usage amongst private college students. Amongst the total number of students, the proportion of the students who had the symptom of "ringxiety" was 34.6% (116). Of these, 51.8% (60) were males and 48.2% (56) were females. This study illustrates that men are more affected by "phantom ringing" and other perceived effects of the mobile phones, which could be one of the possible reasons which is creating more dependence on mobile phone especially in males.

Findings of present study for fear of missing out and entrapment are also supported by a research done by Alt (2015) which established positive linkage between two motivational factors: Extrinsic and amotivation for learning and social media engagement and these links are more likely to be mediated by fear of missing out (FoMO). As mentioned earlier, students extensively depend on mobile phone tools and apps to stay in touch with others through mobile phones (Ophus & Abbitt, 2009)

which is likely to lead to hyper-coordination, i.e. the need to socialize and interact with others on a daily basis (Ling, 2004; Ling & Yttri, 2002) which finally leads to entrapment (Baron, 2011; Hall & Baym, 2012).

The results in the current study have indicated that there was a significant causal relationship between mobile phone dependency and entrapment in undergraduate girls from private colleges. A research done by Hall and Baym (2012), who concluded that the overdependence on mobile phones, is built upon the feeling of entrapment, but instead of cementing the desired relationship, it may lead to loss of satisfaction in the relationship linkage. Though extensive usage of mobile and social media can help create more connectedness, but its adverse consequences may result in cementing of suffocative constant contacts over autonomy, which can also lead to feelings of addictive overdependence and finally entrapment. This inevitable contradictory pulls between remaining in constant contact through technology and feeling entrapped and imprisoned by technology are reported in different user profiles, from American college students (Baron & Ling, 2007) to poor urban Philippine spouses (Portus, 2008) and middle-class Indian families (Donner, Rangaswamy, Steenson, & Wei, 2008).

## **6.1 Limitations**

Regression can be done to explore the relationships between fear of missing out, mobile phone dependency and entrapment and predict how they affect and influence each other.

The second limitation is that sample in the study has been restricted to just college undergraduates from different types of colleges. This study can be further conducted on adolescents, adults and older people to assess whether or not people from different age groups experience fear of missing out, mobile phone dependency and entrapment.

## **6.2 Implications**

It is observed from the present study that the undergraduate students from government colleges, especially boys are more dependent on mobile phones than the undergraduate students from private institutions. Thus, these findings can help the teachers and school psychologists in government educational institutions to determine the source of anxiety and stress for the young adults and help in building measures for reducing the same.

The study also helps the students and even the adolescents in identifying to what extent they are dependent on mobile phones, which is increasing at a rampant pace due to them experiencing this phenomenon of fear of missing out, and in many cases leads to them feeling entrapped or cornered. It will be helpful in introspecting different ways to counteract and reduce the same.

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# Re-evaluation of the Factor Structure of Motivations of Marathoners Scales (MOMS)

I. T. Heazlewood, J. Walsh and M. Climstein

**Abstract** The Motivations of Marathoners Scales (MOMS) was developed by Masters et al. (1993) to assess participant motivation in marathon runners. It contained 56 stem generic items or questions using a seven-point Likert response scale, which represented nine first-order factors or motives to participate in marathons using male and female pooled data. The nine first-order factors represented four second-order factors as follows: general health orientation and weight concern (second-order factor physical health motives); affiliation and recognition (second-order factor social motives); competition and personal goal achievement (second-order factor achievement motives); and psychological coping, self-esteem and life meaning (second-order factor psychological motives). The psychometric instrument displayed internal consistency, test-retest reliability and factorial validity of scales. The instrument has been applied at international multisport events to evaluate differences in participant motivation in different genders, ages and different sports. The research aim was to re-evaluate the first- and second-order factor structure of the MOMS instrument with a different sport cohort of male and female athletes competing at the 2009 World Masters Games (WMG). The study was approved by a university human research ethics committee. Male and female athletes competing at the 2009 World Masters Games volunteered to participate in the research project (male  $n = 2522$ ; female  $n = 2428$ ). Athletes completed an online survey using the Limesurvey™ interactive survey system. Factor analysis was completed via SPSS version 23 using principal component analysis, orthogonal and oblimin rotations. The results using non-constrained first-order factor analysis produced eight factors with the majority of items loading significantly on factor 1.

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The constrained ( $n = 9$ ) first-order factor analysis produced a similar result with most items loading on factor 1. Varimax rotations resulted in loadings on other factors but not consistent with the original instrument. Second-order factor analysis following a similar approach produced only one significant factor instead of the expected four using the non-constrained approach. When the solution was constrained to four factors, once again, the majority of nine first-order factors loaded on factor 1. In conclusion, the factor structure identified in the original MOMS instrument was not reproduced with the WMG male and female cohort. Initial solutions for first-order factors (explained variance 38%) and second-order factors (explained variance 57.8%) the majority of items loaded on a significant factor 1, which explained most of the variance in the correlation matrix. Constraining models to the original nine first-order factors and four second-order factors slightly improved the solution when mapped with the original instrument factor structure. However, based on these results with the WMG cohort suggests one significant underpinning factor that of participant motivation for competition at this level.

**Keywords** Re-evaluation · Factor structure · Motivations of Marathoners Scales (MOMS) · Participant motivation · Masters athletes

## 1 Paper Preparation

### 1.1 *Motivations of Marathoners Scales (MOMS)*

The Motivations of Marathoners Scale (MOMS) is a self-report sport psychological instrument that measures factors to participate in sport Masters, Ogles, and Jolton (1993). Motivating people to be physically active has been identified as the most important factor to engage people in and to get them to adhere to physical activity (Marcus & Forsyth, 2009; Weinberg & Gould, 2015). The original MOMS instrument was developed by Masters, Ogles and Jolton to evaluate these factors in marathon athletes (Masters et al., 1993). However, the instrument has been applied to masters' sports athletes of both genders competing at international competitions across different sports events (Adams et al., 2011; Heazlewood et al., 2011, 2012, 2015).

The MOMS instrument consists of 56-item stem questions related to nine first-order motivating factors with a seven-point Likert scale response for each item. The spectrum of responses exists from 1 = least important through to 7 = most important reason. The MOMS instrument was developed based on nine first-order participant motivation factors, which are health orientation, weight concern, personal goal achievement, competition, recognition, affiliation, psychological coping, life meaning and self-esteem. The original instrument evaluated for factor validity, internal reliability and test-retest reliability utilized marathon runners of both genders, specifically 387 males and 95 females (mean = 37.5; SD =  $\pm 9.21$  years; age range = 16–63 years), indicating masters-age athletes were represented in the



original instrument development sample. A second sample was analysed and utilized marathon runners of genders, specifically 601 males and 111 females (age range = 16–79 years), and again, indicating masters-age athletes were represented in the original instrument. The MOMS instrument was assessed for reliability and validity analysis and displayed high internal consistency (Cronbach's alpha range 0.80–0.93), good test-retest reliability (intraclass correlations, R range 0.71–0.90), factor validity, construct validity, convergent validity and discriminant validity (Masters et al., 1993; Ogles & Masters, 2000). The theoretical model for the secondary factors was substantiated using structural equation modelling (SEM). The nine first-order factors were theorized to represent and then theoretically collapsed into four second-order factors as follows.

### 1. Physical Health Motives

Based on first-order factors of general health orientation representing concepts such as to improve my health, to prolong my life, to become more physically fit, to reduce my chance of having a heart attack and to stay in physical condition; and weight concern representing concepts such as to look leaner, to help control my weight and to reduce my weight. The standardized statistical weights for the primary factors based on the structural equation model were 0.705–0.954.

### 2. Social Motives

Based on first-order factors affiliation representing concepts such as to socialize with other runners, to meet people, to visit with friends and to share a group identity with runners; and recognition representing concepts such as to earn respect of peers, people look up to me, brings me recognition and to make my family or friends proud of me. The standardized statistical weights for the primary factors based on the structural equation model were 0.687–0.743.

### 3. Achievement Motives

Based on first-order factors competition representing concepts such as to compete with others, to see how high I can place, to get a faster time than my friends and to beat someone I've never beaten before; and personal goal achievement representing concepts such as to improve my running speed, to compete with myself, to push myself, to beat a certain time and to try to run faster. The standardized statistical weights for the primary factors based on the structural equation model were 0.701–0.998.

### 4. Psychological Motives

Based on first-order factors psychological coping representing concepts such as to become less anxious, to distract myself from daily worries, to improve my mood, to concentrate on my thoughts and to solve problems; self-esteem representing concepts such as to improve my self-esteem, to feel more confident, to feel proud of myself, to feel a sense of achievement and to feel mentally in control of my body; and life meaning representing concepts such as to make my life more purposeful, to make myself feel whole, to feel a sense of belonging with nature and to feel at peace with the world. The standardized statistical weights for the primary factors based on the structural equation model were 0.758–0.989.



Oglesand Masters (2000) applied the MOMS instrument to assess participant motives in younger and older; however, in this context, the instrument was applied and not re-evaluated for reliability and validity as this was thought to have been established in the MOMS original instrument.

Zach et al. (2015) retested and developed upon the Motivation of Marathoners Scale (MOMS) model instrument based on their attempt to assess cross-cultural validation of MOMS. The original 56-item instrument was applied in a different cultural context where the MOMS instrument was translated from English to Hebrew using back translation and the committee approach and applied to 233 men, 58 women marathon athletes (age ranging 20–77 years; mean = 41.87; SD =  $\pm 8.58$  years) who completed the Hebrew version of the MOMS questionnaire. They applied confirmatory factor analysis to re-evaluate the initial first-order factor structure of the original Masters et al., instrument and failed to confirm the nine first-order factors of health orientation, weight concern, personal goal achievement, competition, recognition, affiliation, psychological coping, life meaning and self-esteem. They subsequently applied exploratory factor analysis to the MOMS 56-item data set. The final factor solution accepted and based on this method consisted of eleven factors and supported by the significant factor loadings, which were redefined as psychological coping 1 (emotional-related coping); psychological coping 2 (everyday-life management); life meaning; self-esteem; recognition; affiliation; weight concerns; general health orientation 1 (reduced disease prevalence and longevity); general health orientation 2 (keep fit); competition; and personal goal achievement. A final confirmatory SEM model was applied to the new eleven-factor model to confirm the new theoretical model.

Ruiz and Sancho (2011) translated the MOMS to a Spanish version based on the original 56-item instrument developed by Masters et al. (1993). Using the 56-item instrument and two samples of Spanish running athletes, they derived a seven first-order factor model to represent the correlations between the stem items as compared to the original nine as derived by Masters, Ogles, and Jolton (1993) and the eleven derived by Zach et al. (2015). The seven first-order factors derived and linked to second-order factors were health orientation and weight concern (second-order health and physical activity motivation); personal achievement and competition (second-order achievement motivation); recognition and affiliation (second-order social motivation); and psychological goals and self-esteem (second-order psychological motivations). The number of stem items in the Spanish version of MOMS was reduced to 34 items to better reflect this new seven first-order factor model. A path analysis was then conducted on the 34 item instrument with the seven first-order factors linked to the four second-order factors for confirmation of the new Spanish version representing the MOMS instrument. Internal reliability was also conducted on the revised instrument, and the items with the new seven factors displayed good Cronbach's alpha values from 0.80 to 0.90.

To summarize, where the original MOMS instrument was subjected to cross-cultural testing and cross-cultural validation, the results were different in terms of the factors derived. The original instrument that displayed nine first-order

and four second-order factors, and the Hebrew version that displayed eleven first-order and second-order factors were not analysed in this study, and finally, Ruiz and Sancho's Spanish version generated seven first-order and four second-order factors, although the second-order factors in this research were similar to those of the original instrument. This indicates the instrument factor structure both theoretical and empirical is dependent upon the unique responses from athletes in different cultures with different languages and questions the generalizability of the instrument across different cultural sport settings.

## ***1.2 Research Aim***

The research aim was to re-evaluate the generalizability of the first- and second-order factor structure of the MOMS instrument with a different sport cohort of male and female athletes, with athletes from different sport cultures (nations) and with masters' age athletes participating across a variety of sports and competing at the 2009 World Masters Games (WMG).

## ***1.3 Research Design***

The research design consisted of action research to re-evaluate both first- and second-order factor of the original MOMS instrument Masters et al. (1993) by applying both confirmatory factor analysis and exploratory factor analysis to the data set generated from the 2009 World Masters Games, which is a multisport and multination international sporting event. Exploratory factor analysis was applied without constraints in terms of the number of factors expected and allowed the statistical criteria of eigenvalues greater than one as the initial criterion for the selection and identification of significant factors (Hair et al., 2006, 2010). An open-ended approach suggested by the diverse research findings in the introduction. Confirmatory factor analysis (Hair et al., 2006, 2010) was applied to evaluate if the nine first-order factors of health orientation, weight concern, personal goal achievement, competition, recognition, affiliation, psychological coping, life meaning and self-esteem could be derived and replicated from the 51 item instrument and if four second-order factors of (1) physical health motives, (2) social motives, (3) achievement motives and (4) psychological motives could be derived and replicated from the nine first-order factors representing the theoretical and actual factor structure presented by Masters et al. (1993). In this context, the researcher defined nine factors for the first-order factors and four factors for the second-order factors.

## 2 Methods

### 2.1 Sample

The study was approved by a university human research ethics committee. Male and female athletes competing at the 2009 World Masters Games, Sydney, Australia, volunteered to participate in the research project (male  $n = 2522$ , mean = 53.72, SD = 10.05 years, range = 25–91 years; female  $n = 2428$ , mean = 49.39, SD = 9.15 years, range = 26–91 years). Athletes completed the self-report instrument via an online survey using the Limesurvey™ interactive survey system linked to the World Masters Games Web page. The athlete sample represented 84 nations and competed in 28 different sports at this international level competition, essentially analogous to the Olympic Games for masters' age athletes.

### 2.2 Psychometric Instrument

The Motivations of Marathoners Scale (MOMS) (Masters et al., 1993) was the self-report sport psychological instrument evaluated based on the instruments theorized and empirically pre-validated factor structure by applying both exploratory and confirmatory factor analyses methods that measures the different factors that determine participant motivation of athletes to compete 2009 World Masters Games at the in sport. The instrument completed prior to competing and during competition at the games. The structure of the instrument is explained in detail in the introduction section. The seven-point Likert scale used was on a spectrum from 1 to 7 as in the following example. Table 1 lists the 56-item stems.

Not a reason						A most important reason
1	2	3	4	5	6	7

The MOMS scoring instructions and coding for the instrument for items loaded with first-order and second-order factors in the original instrument are:

Step 1—Average the items for each of the following nine scales.

Step 2—No items are reverse scored.

Step 3—First-order factor loadings for each item.

Health orientation—8, 14, 17, 26, 37, 44

Weight concern—1, 4, 21, 42

Personal goal achievement—5, 9, 22, 35, 46, 51

Competition—2, 40, 43, 52

Recognition—3, 6, 19, 45, 48, 54

Affiliation—7, 12, 16, 24, 30, 33

Psychological coping—10, 15, 18, 28, 36, 38, 39, 47, 50

**Table 1** Original items in the 56-item instrument

Items	
1	To help control my weight
2	To compete with others
3	To earn respect of peers
4	To reduce my weight
5	To improve my running speed
6	To earn the respect of people in general
7	To socialize with other runners
8	To improve my health
9	To compete with myself
10	To become less anxious
11	To improve my self-esteem
12	To have something in common with other people
13	To add a sense of meaning to life
14	To prolong my life
15	To become less depressed
16	To meet people
17	To become more physically fit
18	To distract myself from daily worries
19	To make my family or friends proud of me
20	To make my life more purposeful
21	To look leaner
22	To try to run faster
23	To feel more confident about myself
24	To participate with my family or friends
25	To make myself feel whole
26	To reduce my chance of having a heart attack
27	To make my life more complete
28	To improve my mood
29	To improve my sense of self-worth
30	To share a group identity with other runners
31	It is a positive emotional experience
32	To feel proud of myself
33	To visit with friends
34	To feel a sense of achievement
35	To push myself beyond my current limits
36	To have time alone to sort things out
37	To stay in physical condition
38	To concentrate on my thoughts
39	To solve problems
40	To see how high I can place in races
41	To feel a sense of belonging in nature

(continued)

**Table 1** (continued)

Items	
42	To stay physically attractive
43	To get a faster time than my friends
44	To prevent illness
45	People look up to me
46	To see if I can beat a certain time
47	To blow off steam
48	Brings me recognition
49	To have time alone with the world
50	To get away from it all
51	To make my body perform better than before
52	To beat someone I've never beaten before
53	To feel mentally in control of my body
54	To get compliments from others
55	To feel at peace with the world
56	To feel like a winner

Life meaning—13, 20, 25, 27, 41, 49, 55

Self-esteem—11, 23, 29, 31, 32, 34, 53, 56

Step 4—Second-order factor loadings.

1. Physical Health Motives—composed of health orientation and weight concern.
2. Social Motives—composed of affiliation and recognition.
3. Achievement Motives—composed of competition and personal goal achievement.
4. Psychological Motives—composed of psychological coping, self-esteem and life meaning.

### 2.3 Statistical Analysis

The athletes completed the original instrument development by Masters et al. (1993), that is, the 56-item stem question. Both confirmatory factor analysis and exploratory factor analysis were applied to the data set generated from the 2009 World Masters Games using SPSS version 23. In the context of multivariate statistical analysis, the primary objectives of factor analysis are (Hair et al., 2006, 2010):

1. To identify underlying constructs or factors that explain the correlations among a set of measured variables.
2. To test explicit hypotheses about the structure of the variables in this research the structure of the events in decathlon and heptathlon.

3. To summarize a large number of variables with a smaller number of derived latent variables or factors.
4. To determine the number of dimensions or factors to represent a number of variables.
5. To achieve the simplest, parsimonious and pragmatically more meaningful factor solution that can be related to existing theories if they exist.

A number of factor analyses and rotations were applied based on recommendations to derive the most interpretable factor solution, specifically, principal component analysis, unweighted least squares, generalized least squares, maximum likelihood, principal axis factoring, image factoring and alpha factoring. Each method differs in the criterion used to define goodness of fit indices, and the reader is referred to Hair et al. (2006, 2010) for a more detailed explanation of these factor analytic approaches. Although the factor matrix obtained from the extraction phase indicates the number of significant factors, the percentage of variance explained and initial factor loadings, it is sometimes difficult to identify or obtain factor simplicity from the initial matrix. As one of the major goals of factor analysis is to identify factors that are substantively or theoretically meaningful, the factor rotation method was applied to transform the initial factor matrix into a rotated matrix that can generate conceptually easier models to interpret.

## 3 Results

### 3.1 *Exploratory—First-Order Factors*

Exploratory factor analysis based on principal component analysis derived eight factors and not the expected nine factors based on the original instrument. The initial extraction non-rotated orthogonal solution was set to display factor loadings at 0.4 or greater. Total variance explained was 67.9%, and some factor complexity was noted as a small number of items loaded with two or more derived factors. In the initial solution, 51 items loaded with factor 1 which explained a very significant 38.1% of the explained variance, five items with factor 2 (6.7% variance), seven items with factor 3 (6.4% variance), six items with factor 4 (5.6% variance), four items with factor 5 (3.9% variance) and derived factors 6 (2.9% variance), 7 (2.4% variance) and 8 (1.9% variance) did not have any significant factor loadings greater than 0.4. This indicated the initial responses across the majority of items were in the same direction. The subsequent factor rotations as expected generated some partitioning of the factor loadings. The varimax rotated solution with Kaiser normalization did provide some more theoretical meaning to the analysis and dispersed the items more meaningfully across the eight factors, as the eight-factor rotated model loaded with some of the underpinning theoretical constructs. Specifically, factor 1 was loaded with items associated with psychological coping, factor 2 items associated with recognition, factor 3 with health orientation, factor 4 with self-esteem,

factor 5 with competition, factor 6 with affiliation, factor 7 with personal goal achievement and factor 8 with weight concern and life meaning was not identified as a specific factor. Limited space does not permit the presentation of the rotated factor matrix based on the 56-item instrument.

### 3.2 *Exploratory—Second-Order Factors*

The derivation of the second-order factors was assessed using factor structure of the nine factors as scored in the original instrument using the scoring criteria based on relevant items. Significant correlations were evident between all the nine factors, and as a consequence, only one significant factor was derived (explained variance 57.8%).

As a consequence, not rotations can be performed. The component matrix is displayed in Table 2. In this solution all the first factors are loaded with only the one second-order factor derived. This result is inconsistent with the expected four second-order factors of physical health motives, social motives, achievement motives and psychological motives.

### 3.3 *Confirmatory—First-Order Factors*

In this solution, the researchers defined nine first-order factors to be derived. Total explained variance 70.4%. The initial solution, once again, indicated that 52 items loaded with factor 1, eight items with factor 2, six items with factor 3, seven items with factor 4, three items with factor 5 and no significant loadings of any items with factors 6, 7, 8 and 9. This indicates the responses are in the same direction for most athletes across the majority of participant motivation items. Once again factor

**Table 2** Component matrix second-order factor

	Component 1
Weight concern	0.726
Competition	0.693
Health orientation	0.692
Goal achievement	0.747
Recognition	0.784
Affiliation	0.547
Psychological coping	0.808
Life meaning	0.872
Self-esteem	0.912

*Note* Extraction method: Principal component analysis. One component extracted

complexity was noted for a number of items as they loaded across two factors and did not represent the more unique loadings suggested in the original instrument development and validation. Varimax rotation did redistribute the loadings to partially replicate the nine factors postulated by Masters et al. (1993) with factor 1 representing a mix of psychological coping and self-esteem, factor 2 psychological coping, factor 3 personal goal achievement, factor 4 health orientation, factor 5 affiliation, factor 6 recognition, factor 7 weight concern, factor 8 self-esteem part 2 and factor 9 competition. However, there was a moderate degree of factor complexity with self-esteem loaded with factor 1 and factor 8. It was interesting to note that competition only loaded with one item on factor 9 and other items evaluating competition did not display significant loadings. Once again, limitations based on space do not permit the inclusion of the 56-item factor matrix table.

### 3.4 Confirmatory—Second-Order Factors

The initial solution displayed in Table 3 indicates that all first-order factors load with factor 1, as well as displaying some factor complexity for weight concern with factor 1 and factor 2, competition and goal achievement with factor 1 and factor 3, and affiliation with factors 1, 2 and 4. The explained variance in this model was 86%. The varimax-rotated solution displayed in Table 4 loads recognition, psychological coping, life meaning and self-esteem with factor 1, competition, goal achievement, recognition and self-esteem with factor 2. However, factor complexity is displayed for both recognition and self-esteem. Weight concern, health orientation goal achievement load with factor 3, however, once again complexity is displayed for goal achievement loading with both factors 1 and 3. Finally, affiliation loads significantly with factor 4.

**Table 3** Initial solution component matrix

	Component			
	1	2	3	4
Weight concern	0.726	-0.491		
Competition	0.693		0.628	
Health orientation	0.692	-0.506		
Goal achievement	0.747		0.445	
Recognition	0.784			
Affiliation	0.547	0.503		0.622
Psychological coping	0.808			
Life meaning	0.872			
Self-esteem	0.912			

*Note* Extraction method: Principal component analysis. Four components extracted



**Table 4** Varimax-rotated component matrix

	Component			
	1	2	3	4
Weight concern			0.800	
Competition		0.897		
Health orientation			0.871	
Goal achievement		0.760	0.460	
Recognition	0.658	0.521		
Affiliation				0.948
Psychological coping	0.878			
Life meaning	0.845			
Self-esteem	0.678	0.444		

*Note* Extraction method: Principal component analysis. Rotation method: Varimax with Kaiser normalization. Rotation converged in 6 iterations

## 4 Discussion

### 4.1 Exploratory Factor Analysis

The results are to some degree inconsistent with the theoretical construct and empirical validity of the original (Masters et al., 1993). The initial solution produced eight significant factors and not the expected nine, and loadings on the initial solution were low for factors 6, 7 and 8. The initial exploratory factor analysis solution indicated significant loadings for the majority of items on a derived factor 1 and which explained most of the variance in the correlation matrix. This factor 1 in this context could be referred to as a general participant motivation disposition, which was supported by the significant factor loadings for many of the items. The varimax-rotated matrix provided a more meaningful solution, where items were associated with first-order factors as health orientation, weight concern, personal goal achievement, competition, recognition, affiliation, psychological coping and self-esteem. However, the theorized factor of life meaning was not generated.

The expected four second-order factors did not eventuate in this research as only one significant factor was derived and all the nine first-order factors loaded with this derived factor. This result using this method was inconsistent with the second-order factor structure presented in the original MOMs instrument and suggests the one second-order factor derived in this research represents a more global participant motivation orientation to international competition at this level. In his research, the athletes were from many cultures/nations and participating across many different sports, whereas previous research sampled marathon and distance runners. Results from Zach et al. (2015) generated eleven and Ruiz and Sancho (2011) seven significant first-order factors, respectively, and these were from samples in homogeneous cultures/nations and represented different results from the hypothesized

structure in the original instrument evaluating participant motivation in endurance running athletes.

## 4.2 *Confirmatory Factor Analysis*

This analysis constrained the analysis to generate nine first-order factors and four second-order factors based on the 2009 World Masters Games data set. A data set was multicultural/multinational and represented a diversity of individual and team sports. The initial solutions for the first-order factors reflected to a degree, the results of the exploratory factor analysis, where the majority of item loaded with one factor the general or global disposition for participant motivation, although some factor complexity was noted. The varimax rotation is to generate a more meaningful solution and partially consistent with the nine-factor model of Masters et al. (1993). Specifically, factor 1 representing a mix of psychological coping and self-esteem, factor 2 psychological coping, factor 3 personal goal achievement, factor 4 health orientation, factor 5 affiliation, factor 6 recognition, factor 7 weight concern, factor 8 self-esteem part 2 and factor 9 competition. Although self-esteem constructs did appear with factor 1 and factor 8 and questions related to the factor of the competition were in most cases excluded as meaningful to the solution based on 2009 World Master Games athletes.

The second-order factors (Masters et al., 1993) were the following.

1. Physical Health Motives—composed of health orientation and weight concern.
2. Social Motives—composed of affiliation and recognition.
3. Achievement Motives—composed of competition and personal goal achievement.
4. Psychological Motives—composed of psychological coping, self-esteem and life meaning.

In this research, significant factor loadings were:

Factor 1—recognition, psychological coping, life meaning and self-esteem.

Factor 2—competition, goal achievement, recognition and self-esteem.

Factor 3—weight concern, health orientation and personal goal achievement.

Factor 4—affiliation.

These results are different from the predicted model as recognition appears as a factor without affiliation as factor 4 and yet appears in factor 1 as well indicating factor complexity. Personal goal achievement is loaded with weight concern and health orientation in factor 3 as well as in factor 2. However, psychological coping, life meaning and self-esteem do load together on factor 1 and in part replicating this concept from the original instrument for this second-order factor.

## 5 Conclusion

Both exploratory factor and confirmatory factor analysis in an attempt to replicate the first- and second-order factor structure of the Masters et al. (1993) MOMS instrument to measure participant motivation in athletes did not display generalizability when applied to different cultures, cohorts and sports. This study confirmed the findings of Zach et al. (2015), Ruiz and Sancho (2011) that different first-order factor structures are different across different cultural and sports settings and suggests modifications of the original instrument to be more cultural and sport-specific when evaluating athlete participant motivations.

The identical statement is relevant when the second-order factor structure of the original English version of the instrument is evaluated as the second-order structure in his research was significantly different when evaluated via exploratory and confirmatory factor analysis based on the athletes sampled from the 2009 World Masters Games.

The next step in the research is to apply structural equation modelling to the existing data set to evaluate the best theoretical and empirical model that fits the data and possibly resulting in further refinement of the original instrument when evaluating participant motivation in masters' athletes, competing in many different sports from many different cultures/nations.

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# The Diagnostic Criteria of Gambling Disorder of DSM-5 in Chinese Culture: By Confirmatory Factor Analysis (CFA) and Item Response Theory (IRT)

Wing-Yip Chui, Shu-Kam Lee, Yuk-Lan Mok and Chun-Kei Tsang

**Abstract** Problem and pathological gambling are currently known as gambling disorder as listed in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorder* (DSM-5; American Psychiatric Association in Diagnostic and statistical manual of mental disorders. American Psychiatric Association, Washington, DC, 2013). Nevertheless, in Hong Kong, the development of gambling disorder treatment and research is still at an infant stage (Shek, Chan & Wong in *Int J Child Health Hum Dev* 6(1):125–144, 2013). This article will discuss the diagnostic criteria gambling disorder listed in DSM-5 in Hong Kong context. With confirmatory factor analysis (CFA) and item response theory (IRT), the diagnostic criteria of gambling disorder listed in DSM-5 were found to be a reliable and valid assessment. With differential item function (DIF) analysis, it was found that the diagnostic criteria of gambling disorder listed in DSM-5 could discriminate those who experience and demonstrate gambling disorder. Hence, the aforementioned criteria could serve as a screening tool differentiating those who have or do not have

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gambling disorder. To facilitate the clinical procedure, the IRT results suggested a procedure of interviewing potential clients with the diagnostic criteria of gambling disorder for screening purpose.

**Keywords** Gambling disorder · DSM-5 · Hong Kong · Confirmatory factor analysis (CFA) · Item response theory (IRT) · Differential item functioning (DIF)

## 1 Introduction

Problem and pathological gambling are currently known as gambling disorder as listed in the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorder* (DSM-5; American Psychiatric Association, 2013). The prevalence rate of gambling disorder was found between 0.2 and 5.3% (Hodgins, Stea, & Grant, 2011). In Hong Kong, a study conducted in 2011 (Ho, Chung, Hui-Lo, & Wong, 2012) indicated that the prevalence rate of possible gambling disorder was 1.4–2.2%, respectively. Gambling disorder could have various adverse effects on individuals, families and society. The undesirable consequences would entail debt problems, marital conflicts, criminal behaviour, family violence and breakdown as well as severe emotional and mental health problems (Abbott, 2001; Krishnan & Orford, 2002; Black, Monahan, Temkit, & Shaw, 2005). Therefore, a reliable and valid assessment tool screening individuals with gambling disorder for pre-emptive treatment is of paramount importance. Nevertheless, in Hong Kong, the development of gambling disorder treatment and research is still at an infant stage (Shek, Chan, & Wong, 2013). This article will discuss the diagnostic criteria gambling disorder listed in DSM-5 in Hong Kong context.

### 1.1 Gambling in Chinese Culture

Social-cultural influences can determine an individual's health-related behaviours (Stokols, 1996). In Chinese culture, it is convinced that small betting is fun, but excessive betting ruins the mind (Wu & Lau, 2014). Gambling with small wagers is acceptable and conceptualized as “game-playing” or “gaming” for entertainment rather gambling. Some traditional games such “mah-jong” and “pai-ju” are even deemed as cultural assets (Wu & Lau, 2014). In Chinese context, although high-stakes gambling is inappropriate and greed for money is thought to be unethical, “gaming” is widely socially acceptable. “Gaming” serves different social functions (Steinmuller, 2011; Wu, Tao, Tong, & Cheung, 2012). Playing mah-jong is an essential part of celebrations such as during a wedding reception. Even children are allowed to bet on games with their adult family members during Chinese New Year. It is believed to be an opportunity to foster interpersonal connections (Steinmuller, 2011).

## 1.2 Diagnostic Criteria of Gambling Disorder in DSM-5

According to the DSM-5, there are in total of nine diagnostic criteria for gambling disorder, namely preoccupation with gambling; tolerance; loss of control; withdrawal; escape gambling; chasing losses; lying about gambling behaviour; significant social, employment or education consequences; and seeking financial bailouts (Weinstock et al. 2013). The threshold value is 4 out of 9 criteria. The severity levels are classified into being: mild (4–5 criteria), moderate (6–7 criteria) and severe (8–9 criteria). DSM-5 is a Guttman scale and a worldwide diagnostic guideline for the helping professionals. On the other hand, as mentioned above, gambling is culturally specific. At least, gambling exists with its unique features in Chinese culture. The researchers were interested in how the DSM-5 gambling disorder diagnostic criteria can be applied to Hong Kong Chinese context. Moreover, the researchers were curious of the reliability and validity of the DSM-5 gambling disorder diagnostic criteria in Hong Kong Chinese context where the corresponding diagnostic criteria could function as an accurate clinical assessment screening individuals with gambling disorder.

## 2 Current Study

The current study aimed at investigating the reliability and the validity of the DSM-5 gambling disorder diagnostic criteria using confirmatory factor analysis (CFA) with weighted least square (Byrne, 1998; Kline, 2010) and item response theory (IRT) by 2-parameter logistic regression Rasch model (2-PL model; Smith, 2004; Bond & Fox, 2007). Later on, the differential item functioning (DIF) between samples with and without gambling disorder would be investigated. Descriptive statistics were analysed using SPSS 22.0; CFA was investigated utilizing Lisrel 8.51; and the item parameter statistics and DIF were examined utilizing IRTPRO 2.1.

## 3 Methods

### 3.1 Participants

Data ( $N = 1694$ ) for the analyses of the current study were retained from a total 2066 respondents to the street intercept survey. Among the 1694 respondents, 875 respondents (51.65%) were male while there were female; 593 respondents (35.01%) were or below 17 years old while 1101 respondents (64.99%) were or above 18 years old; 1085 respondents (64.05%) were students while 609 respondents (35.95%) were not students; and 1574 respondents (92.92%) reported not

having gambling disorder while 120 respondents (7.08%) reported having gambling disorder, i.e. the respondents' accumulative scores in reference of the DSM-5 gambling disorder were equal to or higher than the threshold of four.

### 3.2 Measure

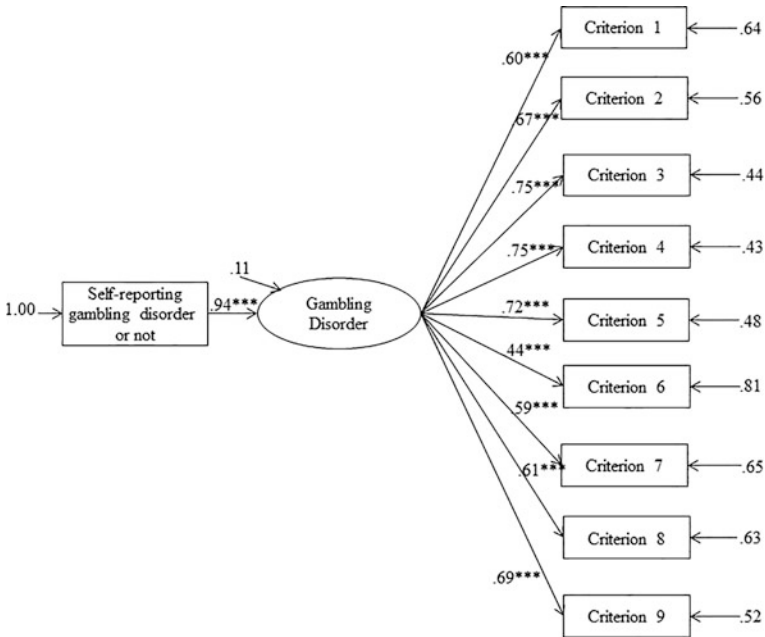
The survey was grounded on the nine diagnostic criteria for gambling disorder of DSM-5 which is a dichotomous Guttman scale. "Yes" referred to presence of the symptoms while "no" referred to absence of the symptoms. According to DSM-5, the threshold number of symptoms is four. The severity levels are determined as follows: mild (4–5 symptoms), moderate (6–7 symptoms) and severe (8–9 symptoms).

## 4 Result

The validity and reliability would be investigated in this session. Before CFA analysis was conducted, the respondents had been classified into two groups: group 1—those who reported not having gambling disorder and group 2—those who reported having gambling disorder. With the dichotomy of the dummy variable having gambling disorder (0 = no, 1 = yes), multiple-indicator-multiple-cause (MIMIC; Kline, 2010) modelling approach was employed. The model fitness of a MIMIC-CFA model would be appropriate given that comparative-fitness index (CFI)  $\geq 0.95$ , goodness-of-fit index (GFI)  $\geq 0.90$  and standard root mean error of approximation (RMSEA)  $\leq 0.080$  (Byrne, 1998; Hu & Bentler, 1999; Kline, 2010). The estimated model of the gambling disorder demonstrated acceptable model fitness to the data,  $\chi^2$  ( $df = 35$ ) = 521.13, RMSEA = 0.084, CFI = 0.95, GFI = 0.95. The composite reliability ( $\rho$ ; Fornell & Larcker, 1981; Raykov, 2009) was 0.87 which illustrated the appropriate reliability. The CFA model is depicted in Fig. 1.

As for item response theory (IRT), unidimensionality is an underlying assumption (Bjorner, Kosinski, & Ware, 2003; Brown, 2006; Cook et al., 2007). The aforementioned CFA result indicated that the nine diagnostic criteria of gambling disorder would belong to a single factor model. The diagnostic criteria of gambling disorder were analysed by IRT by using 2-PL Rasch model (Smith, 2004; Bond & Fox, 2007). IRT utilizes probabilistic model to construct a questionnaire based on the relationship between an individual's response to a question and the individual's level on the construct ( $\theta$ ) being measured by the scale. This relationship is conditional in those individuals with higher probability of endorsing response categories that are consistent with higher trait levels (Hambleton, Swaminathan, & Rogers, 1991; Bond & Fox, 2007). IRT also allows the responses (raw scores) from different items representing different severity. Therefore, IRT model is that an individual's





**Fig. 1** MIMIC-CFA model of the diagnostic criteria of gambling disorder of DSM-5

response to any given item reveals a level of ability in the trait being measured. The Rasch model aims at looking beyond a logistic function that relates the respondent’s underlying traits and item difficulty to the probability of endorsing an item (Smith, 2004). Furthermore, item information function (IIF) is imperative to describing and evaluating an assessment (Hambleton & Swaminathan, 1985). IIF highlights the contribution of each item to the total assessment information and the consequences of selecting a particular item independently from other items in the assessment independently from other items in the assessment (De Ayala, 2009).

There were two groups classified for IRT analysis: group 1 referred to the respondents reporting no gambling disorder. The goodness-of-fit indices are illustrated in Table 1. The item parameter statistics of group 1 and group 2 are tabulated in Tables 2 and 3, respectively. The item information curves of every single criterion of group 1 and group 2 are visualized in Figs. 2 and 3 correspondingly. The total information curves of group 1 and group 2 are illustrated in Fig. 4.

**Table 1** Table of the likelihood-based values and goodness-of-fit statistics

	-2loglikelihood	Akaike information criterion (AIC)	Bayesian information criterion (BIC)
Gambling disorder	5421.16	5493.16	5688.81

**Table 2** Item parameter estimates and fit statistics of 2-PL model of gambling disorder (group 1—normal samples)

Item	<i>a</i>	<i>c</i>	<i>b</i>	$\chi^2$	<i>df</i>	<i>p</i>
Criterion 1	1.80	-4.16	2.31	15.48	2	0.0004
Criterion 2	2.37	-5.06	2.14	25.05	2	0.0001
Criterion 3	1.13	-4.71	4.18	15.05	2	0.0005
Criterion 4	2.01	-6.48	3.23	11.08	2	0.0039
Criterion 5	1.29	-4.23	3.28	13.01	2	0.0015
Criterion 6	1.52	-2.15	1.42	21.75	2	0.0001
Criterion 7	1.06	-4.03	3.79	12.45	2	0.0020
Criterion 8	0.74	-3.98	5.38	7.29	2	0.0261
Criterion 9	1.50	-6.20	4.14	11.63	2	0.0030

**Table 3** Item parameter estimates and fit statistics of 2-PL model of gambling disorder (group 2—samples reported having gambling disorder)

Item	<i>a</i>	<i>c</i>	<i>b</i>	$\chi^2$	<i>df</i>	<i>p</i>
Criterion 1	0.56	-1.01	1.81	12.77	4	0.0124
Criterion 2	-0.80	4.06	5.08	14.66	4	0.0055
Criterion 3	1.59	-4.43	-4.43	28.11	4	0.0001
Criterion 4	1.33	-3.90	2.94	23.45	4	0.0001
Criterion 5	2.57	-7.19	2.79	22.74	4	0.0001
Criterion 6	-0.27	2.45	9.22	17.74	4	0.0014
Criterion 7	3.81	-12.41	3.26	32.95	4	0.0001
Criterion 8	1.35	-4.27	3.17	39.21	4	0.0001
Criterion 9	4.42	-14.83	3.35	5.80	3	0.1215

Differential item functioning (DIF) refers to a psychometric difference in how an item functions across groups. An item that performs differently must necessarily be less valid, in some senses, for at least one of the groups. As a result, an effort to detect and eliminate DIF from tests seeks to increase the validity of the test for all groups (De Ayala, 2009). With respect to the detection of DIF, the expected value curve (EVC) of the responses groups to an item was employed (Hagquist & Andrich, 2015). DIF across different groups implies that for the same values of the variable, and the EVC of the response to an item for members of the groups is different. If the differences along the variables are homogenous, then the DIF is referred to as uniform; otherwise, it is said to be as non-uniform (Hagquist & Andrich, 2015), i.e. uniform DIF appears when responses to an item vary consistently according to the respondents' characteristic after allowing for the level of the scale score. Non-uniform DIF emerges when the magnitude of such response differences vary according to the level of the matching variable. The DIFs of all the diagnostic criteria between two groups were examined by Wald test (Lord, 1980; as cited in Cohen, Kim, & Baker, 1993). The DIF statistics are illustrated in Table 4. The DIFs of all the corresponding items are visualized by the item characteristic curves (ICCs) of Fig. 5. The item information curves of all the criteria demonstrating DIF are visualized in Fig. 6.

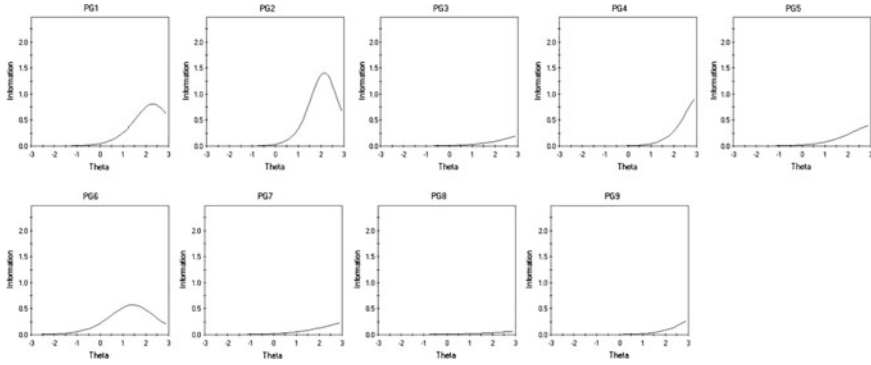


Fig. 2 Item information curves of group 1 those who reported not having gambling disorder

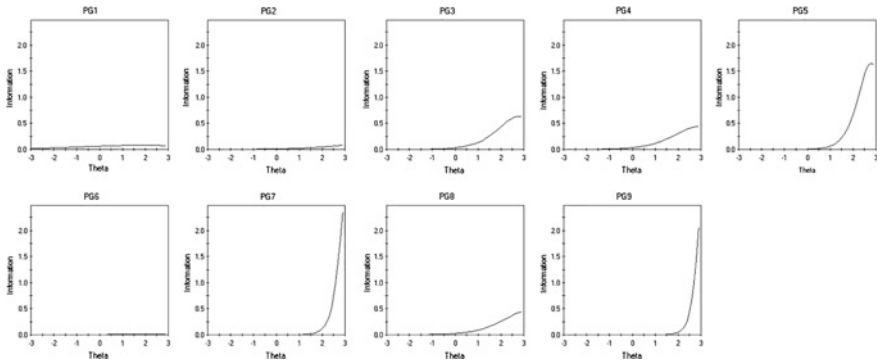


Fig. 3 Item information curves of the gambling disorder diagnostic criteria for group 2 those who report having gambling disorder

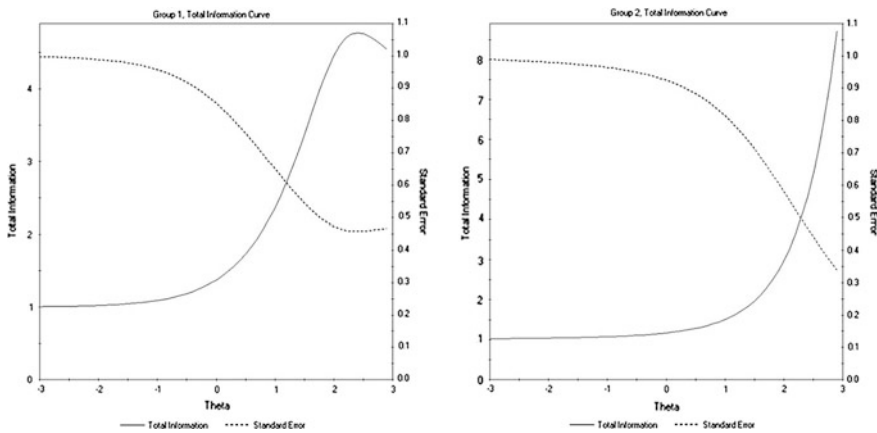
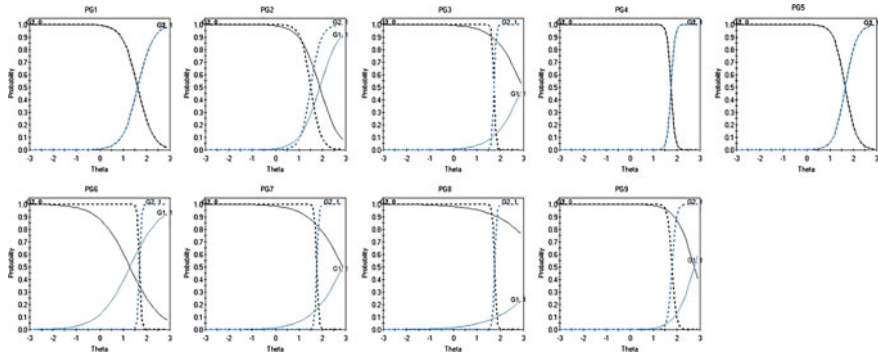


Fig. 4 Total information curves for group 1 and group 2

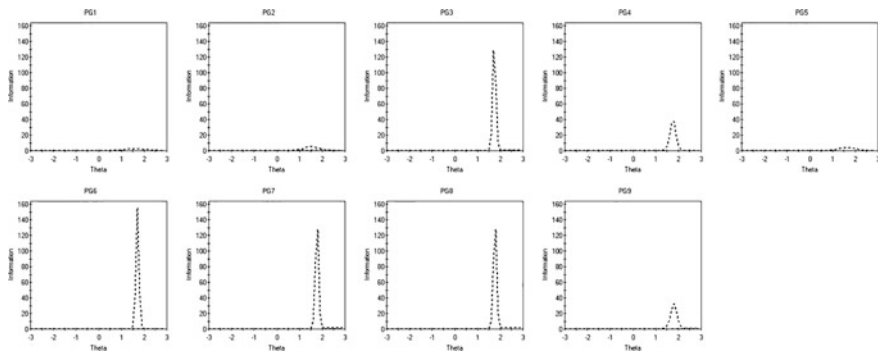
**Table 4** Differential item functioning statistics for graded items of gambling disorder

Item numbers in:		Total $\chi^2$	df	p	$\chi^2_d$	df	p	$\chi^2_{c a}$	df	p
Group 1 (normal)	Group 2 (disordered gambler)									
Criterion 2	Criterion 2	9.2	2	0.0102*	1.8	1	0.1855	7.4	1	0.0065**
Criterion 3	Criterion 3	5674.8	2	0.0001***	2339.1	1	0.0001***	3335.7	1	0.0001***
Criterion 6	Criterion 6	196.8	2	0.0001***	193.0	1	0.0001***	3.8	1	0.0516
Criterion 7	Criterion 7	10,804.2	2	0.0001***	3800.0	1	0.0001***	7004.1	1	0.0001***
Criterion 8	Criterion 8	956.2	2	0.0001***	877.6	1	0.0001***	78.5	1	0.0001***
Criterion 9	Criterion 9	7.1	2	0.0283*	6.1	1	0.0138*	1.1	1	0.3020

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$



**Fig. 5** Item characteristic curves of the diagnostic criteria demonstrating DIF between group 1 and group 2



**Fig. 6** Item information curves of the diagnostic criteria demonstrating DIF between group 1 and group 2

Referring to Table 4 and Fig. 5, the DIF analysis results indicated that group 2 respondents endorsed criteria 2, 3, 6, 7, 8 and 9 at significantly different baselines because  $p$ -values for total  $\chi^2(df = 2)$  were smaller than 0.05. Except criterion 2, criteria 3, 6, 7, 8 and 9 of group 2 demonstrated significantly steeper slopes than those of group 1. The  $p$ -values of  $\chi^2_a(df = 1)$  of those criteria with steeper slopes were smaller than 0.05. Integrating the DIF results and Fig. 5, it was found that those items could discriminate the latent traits (gambling disorder symptoms) more precisely for group 2 than for group 1 respondents. The results also illustrated that criterion 6 and criterion 9 embodied significant uniform DIF, and the  $p$ -values for  $\chi^2_{c|a}(df = 1)$  were larger than 0.05. On the other hand, criteria 2, 3, 7 and 8 demonstrated significant non-uniform DIFs, and the  $p$ -values for  $\chi^2_{c|a}(df = 1)$  were smaller than 0.01.

## 5 Discussion

Although CFA and IRT study latent variables (De Ayala, 2009; Kline, 2010), they offer us two different approaches to evaluate the scale, i.e. CFA provides us with particular factorial structure of the entire construct which a scale assesses (a top-down approach) while IRT evaluates an assessment on the item-by-item basis (a bottom-up approach). In a sense, CFA and IRT are deemed complementary to evaluate an assessment holistically.

Via CFA, the reliability and validity of the diagnostic criteria of gambling disorder of DSM-5 were examined. According to the aforementioned CFA results, the composite reliability ( $\rho$ ) was 0.87 which was larger than the threshold value of 0.70 (Fornell & Larcker, 1981; Raykov, 2009). The diagnostic criteria of gambling disorder were found to be a set of reliable assessment tools. The validity of the diagnostic criteria of gambling disorder was found to be appropriate either,  $\chi^2$  ( $df = 35$ ) = 521.13, RMSEA = 0.084, CFI = 0.95, GFI = 0.95. In accordance with the MIMIC-CFA results, a respondent reporting having gambling disorder or not could have a significant and positive contribution ( $\gamma = 0.94, p < 0.001$ ) to the latent variable of “gambling disorder”, i.e. a respondent reported experiencing and demonstrating four or more than four gambling disorder symptoms would be conceptualized to have gambling disorder.

At item level, as for group 1 (those reported having no gambling disorder), the item information curves of criteria 1, 2, 4 and 6 were relatively higher than other criterion. In addition, the item information curves of all the diagnostic criteria were negatively skewed, i.e. the means of the curves were larger than  $\theta = 0.00$ . It indicated that the highest probabilities of the respondents endorsing the items hinged upon those who rated themselves on the diagnostic criteria higher than the mean response when compared to the samples’ normative response. In other words, the diagnostic criteria were effective in discriminating those who experienced and demonstrated some gambling symptoms, yet under the threshold. As for group 2 (those reported having gambling disorder), the item information curves of criteria 5, 7 and 9 were relatively higher than other criteria. Moreover, the researchers had similar findings to those of group 1 in terms of skewness. As for group 2, the item information curves of all the diagnostic criteria were negatively skewed. The total information curves depicted in Fig. 6 indicated that the diagnostic criteria were effective in discriminating respondents with more severe gambling disorder.

Integrating the aforementioned points, the diagnostic criteria were sensitive to those with comparatively more gambling disorder symptoms. In clinical settings, particularly in clinical interviews, a therapist might first adopt criteria 5, 7 and 9 since they would serve as a screening tool effectively discriminating an individual with severe gambling disorder. If the individual reported “no” to criteria 5, 7 and 9, the therapist could continue the interview with criterion 2 first as it was found to have the highest item information function among criteria 1, 2, 4 and 6. Whenever the individual reported “no” to criterion 2, the therapist could move on with criteria 1, 4 and 6 correspondingly. If the individual reported “no” to the aforementioned

criteria, the remnants could be retained as the individual had already been asked for seven items. The individual would be diagnosed to be normal although the individual reported “yes” to criterion 3 and criterion 8. The aforementioned questioning procedure might serve as a quick screening test for normal population. With respect to an individual with gambling disorder, the individual could also undergo the aforementioned questioning procedure. Owing to the high item information functions of criteria 5, 7 and 9, it would probably be a reminder for a therapist of the client’s possible gambling disorder. Therefore, the therapist would better be more attentive to the gambling disorder-related information whenever the client endorsed criteria 5, 7 and 9.

With regard to the criterion demonstrating DIF, the item characteristic curves visualized in Fig. 5 illustrated that the respondents reporting having gambling disorder endorsed the diagnostic criteria of 6 and 9 at significantly higher baselines when compared to the respondent reporting not having gambling disorder. However, the respondents with gambling disorder endorsed the diagnostic criteria of 2, 3, 7 and 8 at a significantly lower baseline when compared to the respondents reporting not having gambling disorder. The respondents with gambling disorder endorsed the corresponding diagnostic criteria with significantly higher likelihood than those who reported no gambling disorder (group 1). As for criteria 3, 6, 7, 8 and 9 for group 2, as reflected by the item characteristic curves illustrated in Fig. 3, they were more discriminant to respondents with gambling disorder than to those who reported no gambling disorder. According to the item information curves depicted in Fig. 6, the respondents within gambling disorder endorsed criteria 3, 6, 7, 8 and 9 to provide more information than the respondents reporting not having gambling disorder did. As for criteria 2, 3, 7 and 8, non-uniform DIF appeared between respondents reporting having and not having gambling disorder. To elaborate, an individual with mild gambling disorder would be less possible than another individual without gambling behaviour to experience and demonstrate gambling disorder symptoms 2, 3, 7 and 8. Meanwhile, an individual with severe gambling disorder would be more prone to the aforementioned gambling disorder symptoms than an individual without gambling disorder. An individual with gambling disorder, regardless of the severity, would be more likely than another individual without gambling disorder to experience and demonstrate symptom 6 and symptom 9.

## 6 Conclusion and Implication

There are cultural differences in gambling behaviours across Western and Chinese cultures. DSM-5 is applied widely in Western context, and its diagnostic criteria for gambling disorder have never been studied in Hong Kong context. The current study examined the psychometric properties of the diagnostic criteria of gambling disorder of DSM-5 in Hong Kong context. MIMIC-CFA result indicated that the aforementioned diagnostic criteria were found to be a reliable and valid assessment

tool. IRT results illustrated that the aforementioned diagnostic criteria would be effective in screening individuals with gambling disorder. Meanwhile, they would be comparative less sensitive to individuals without gambling disorder. Although they would serve as a efficacious clinical screening tool for those who already have gambling disorder, they would not be an effective assessment tool for preventive purpose. They would be relatively insensitive to those who might be at risk, i.e. the total score is near but yet to reach the threshold. All in all, the diagnostic criteria of gambling disorder of DSM-5 were found to be reliable and valid in Hong Kong.

## 7 Limitations

Several limitations should be taken into account when evaluating the current study. First, the data collected in the current study were on the basis of self-report which was void of observations of behaviours. The sampling size ( $N = 1694$ ) suggested that the potential biased errors were present and generalization to other samples might be limited. The current study was fundamentally a cross-sectional survey in Chinese culture. The research design was not a longitudinal study investigating the causal effects among the variables. Hence, the causal relationships among the currently studied variables might not be valid. Further interpretations must be made carefully and modestly in the current study. In the future, a causal model of the studied phenomenon should be established which could more elaborately portray the mechanism for devising further therapeutic interventions. Furthermore, empirical researches should be conducted to investigate the effectiveness of the aforementioned interventions in terms of their impacts on the diagnostic criteria of gambling disorder of DSM-5.

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# Locus of Control and Sense of Happiness: A Mediating Role of Self-esteem?

Ivanna Shubina

**Abstract** This study recruited 182 participants (126 female, 56 male) to complete a survey consisting of three scales examining the relationship between self-esteem, happiness, and locus of control (LOC) among high school students in Kuwait. It is recognized that the relationship between self-esteem, happiness, locus of control is complex: Internal LOC is related to rather high self-esteem; self-esteem is a powerful and important psychological factor in mental health and well-being; the feeling of being empowered is associated with significant achievements and high self-esteem; and strong and appropriate self-esteem is correlated with more internal LOC. A plenty of various empirical studies results have been analyzed in order to establish theoretical basis for empirical study. Data were collected using Oxford Happiness Questionnaire, Rosenberg Self-Esteem Scale, and Locus of Control Scale (T. Petti). The purpose of this study is to investigate the mediating role of self-esteem, exploring the relationships between self-esteem and happiness, and self-esteem and LOC.

**Keywords** Self-esteem · Happiness · Locus of control · Mediator

## 1 Introduction

Positive psychology has demonstrated increasing interest in recent years (Seligman & Csikszentmihaly, 2000; Snyder & Lopez, 2002). In order to understand the positive aspects of psychological achievements, researchers have explored individual differences analyzing constructs such as self-esteem, happiness, self-efficacy, hope, optimism, life satisfaction, and positive affect. Those scientific concepts are examined by researchers independently within specific field, with only occasionally comparatively study the connections between them. That is why

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there are assumptions stating these constructs are to some degree truly conceptually and empirically distinct. Some theoretical models and definitions of happiness are definitely different from theoretical models and definitions of self-esteem, and the various models of locus of control are distinct from the various definitions of self-esteem and happiness. However, the fundamental empirical distinctions among the constructs are less clear, what makes it combinative analysis more challenging. For instance, to what level do happiness, locus of control and self-esteem overlap, relate or occur in cause-effect relationships, and do they have significantly different sets of correlates? The few studies that have examined such overlap clearly demonstrate that many of the constructs within positive psychology are strongly intercorrelate.

The theoretical and empirical studies in the last 20 years have indicated that self-esteem is a significant and powerful psychological factor in the quality of life, health, and well-being. It is identified that the feelings of being worthy and empowered are related to strong, high self-esteem which can result in positive changes such as more efforts to gain success, achievements, being hard-working, and tendency to have a better health status (Mann, Hosman, & Schaalma, et al., 2004). Howard Mumford Jones once said that “happiness...belongs to that category of words, the meaning of which everybody knows but the definition of which nobody can give” (Freedman, 1978 in Lyubomirsky, 2006).

The main objective of current study is to examine the relationship between all three concepts (happiness, locus of control, and self-esteem) from theoretical and empirical perspectives. In particular, this study addresses the following broad research questions:

- Is self-esteem just an index of global happiness?
- May happiness be possible or realizable without a healthy self-confidence and self-acceptance?
- To what extent does self-esteem influence on the level of happiness?
- Is high self-esteem a sufficient condition for happiness?
- Is self-esteem is a strong predictor of internal locus of control maintenance?
- Is high self-esteem related to internal LOC, while low self-esteem to external LOC?

## **2 Relationship Between the Basic Constructs**

In many empirical studies, researchers from different fields were working on examining the relationship between various variables significant for positive psychology, including self-esteem, well-being, feeling of control, need for achievement, personality, social support, and personal experience. The majority of studies were searching for correlation between mentioned variables. Collected data in this matter provided possibilities to create many assumptions related to the connection between self-esteem, happiness, optimism, mindfulness, locus of control, etc. However,

many studies provided controversial results, what makes difficult generalizing the relationship between those variables and creates many research questions for further studies.

In the following paragraphs, the most significant data attempting to describe the relationship between happiness and self-esteem, happiness and locus of control, happiness and self-esteem and locus of control are discussed. One of the milestone issues is the role of self-esteem in human being's life.

## ***2.1 Relationship Between Self-esteem and Happiness***

Intuitively, researchers associated happiness and self-esteem, considering them as inextricably linked through the life experience, personal achievements or failures, social support, etc. In everyday experience, happy individuals tend to consider themselves as a worth empowered people, while people who experience deficit of self-respect or self-worth consider themselves as unhappy. This assumption was proved in many empirical studies, revealing moderate to high correlations between measures of happiness and self-esteem (Campbell, 1990; Diener & Diener, 1999; Lyubomirsky & Lepper, 1999; Schimmack, Oishi, Furr, & Funder, 2004). Whereas few researchers would state that happiness and self-esteem should be considered as synonymous, self-esteem is often used as an indicator of psychological well-being or global happiness (Ryff, 1989).

Nonetheless, happiness and self-esteem are so intimately related that it is extremely difficult to disconnect them conceptually. Actually, happiness may not be recognized or achieved without a high but appropriate level of self-acceptance and self-confidence. Furthermore, Ryff (1989) deduced that the most iterative criterion for positive well-being is the individual's feeling of self-esteem or self-acceptance (Myers, 2002; Diener, 1999). On a contrary, happiness and self-esteem are considered as discriminable and distinct constructs. Albeit, some models conceptualized self-esteem as adaptive and crucial construct for happiness, they do not provide a congruent characterization of happiness and may be dissimilar to many of the individual's happy or unhappy experiences (Parducci, 1995). However, indicators such as a high income, a prestigious job, or a good marriage do not guarantee happiness (Diener, Suh, Lucas, & Smith, 1999), as well as high self-esteem is not an adequate condition for happiness. Consecutively, this approach may help justify why the relationship between self-esteem and life satisfaction (as a happiness index) fluctuates in collectivist versus individualist cultures (Diener & Diener, 1999). Additionally, Lucas, Diener, and Suh (1996) conducted a complex study aiming systematical analysis of the association between self-esteem and psychological well-being, applying multitrait-multimethod matrix analyses to demonstrate that life satisfaction is empirically recognizable from self-esteem (Diener & Diener, 1999).

Discussing the differentiation between happiness and self-esteem, a study by Hermans (1992) has to be analyzed. Hermans provides some insight into the nature of the distinction between the two constructs, underlining that although self-esteem

and happiness are positively correlated with each other, the correlation is not perfect. That is why some individuals have relatively low levels of happiness but relatively high levels of self-esteem (and vice versa).

Hermans' (1992) findings suggest that the difference between happiness and self-esteem might be related to the two fundamental interpersonal dimensions of agency and communion (Wiggins & Trapnell, 1996). Agency refers to individuation, with one end of the dimension representing submissiveness and the other end reflecting dominance and ambition. Communion refers to the affiliative nature of individual's behavioral patterns and motivations, where one end of the dimension represents a tendency to be hostile, aloof, and cold, while the other end reflects an orientation toward social acceptance and warmth (Wolfe, Lennox, & Cutler, 1986). Furthermore, these two core dimensions have consistently appeared in gender comparative research, including studies of gender differences in happiness, well-being, and self-esteem. Admittedly, Hermans' findings imply that self-esteem is aligned with agency, while happiness is aligned with communion.

Despite special attention paid to happiness and self-esteem among modern studies, there are only a few include analyses of self-esteem as a significant mediator in relationship to happiness. In this terms, extremely interesting was discovered in study by Baron and Kenny (1986), in which self-esteem and self-criticism are examined as mediator variables between parenting style and happiness. Unfortunately, not too many studies have been conducted on the relationships between self-esteem and happiness, what indicates the necessity of futher attempts to examine that relationship.

## ***2.2 Relationship Between Self-esteem and Locus of Control***

Basically, locus of control and self-esteem are contemplated as socially learned and self-developed life attitudes. Subsequently, internal locus of control is characterized as a belief that events are dependent on one's own permanent traits or behavior, while external locus of control is defined as a belief that outcomes are the result of luck, fate, chance, or control of powerful others or are unpredictable due to the complexity of situations (Rotter, 1990). Moreover, individuals with an internal locus of control consistently engage in adaptive and proactive behaviors (Rothbaum, Weisz, & Snyder, 1982).

In addition, Rotter (1990) advocated that this perception of personal control could be best conceptualized as the extent to which an individual develops the expectancy that one's behavior is associated with either external or internal reinforcements. Consequently, he argued that individuals with an internal locus of control were more likely to believe that they had control in most situations or influence on their own behavioral outcomes. On a contrary, Rotter advocated that individuals who are possessing an external locus of control tended to believe that situations were controlled by external factors.

Contrariwise, high self-esteem demonstrates strong association with internal locus of control, or in other words, the highly confident individual perceives that

own outcomes are determined by own actions (Whisman & Kwon, 1993). Additionally, person with high confidence level and control over own life is associated with the ability to adjust to repeated psychosocial stress, while individuals with low confidence and external locus of control create a relationship with continuous high cortisol stress responses (Kirschbaum, Bartussek, & Strasburger, 1992).

### ***2.3 Relationship Between Self-esteem, Happiness, and Locus of Control***

Judge and Bono (2001), Judge, Erez, Bono, & Thoreson, (2002) investigated the empirical overlap among self-esteem, locus of control, self-efficacy, and emotional stability, and they conclude that “these traits are indistinct measures of the same core trait,” which they refer to as core self-evaluations (Judge & Bono, 2001, p. 108; Judge et al., 2002). Similarly, Furr and Funder (1998) proved that measures of happiness, life satisfaction, depression, and self-esteem are significantly correlated with each other and laden on a single factor.

Consequently, acknowledging the significance of empirical overlap among the miscellaneous constructs related to positive psychology, researchers have recently admitted the need to explore the differences among those constructs. Subsequently, in a theoretical review of individual differences in happiness, Lyubomirsky (2001) declared that an important question for researchers to consider is whether the empirical findings in the happiness literature “reflect the role of chronic happiness, rather than that of self-esteem, optimism, extraversion, feeling of control, sensitivity to reward, or other individual difference constructs ... related to happiness” (p. 244).

Despite the recent attention paid to self-esteem, locus of control, and happiness, independently, both empirical and theoretical equivocations within each resource make many clear impossible predictions about the nature of their empirical distinction. Furthermore, in terms of theoretical framework, no model has reached consensus as a definitive theoretical approach for either locus of control, happiness, or self-esteem.

## **3 Methodology**

### ***3.1 Hypothesis***

This study examined the relationships between self-esteem, happiness, and locus of control, accenting on mediating effects of self-esteem.

H<sub>1</sub>: Self-esteem, happiness, and locus of control are significantly interrelated.

H<sub>2</sub>: Self-esteem is positively related to locus of control.

- H<sub>3</sub>: Self-esteem is positively related to happiness.
- H<sub>4</sub>: Gender has a significant influence on the relationships between self-esteem and happiness, self-esteem and locus of control.

### 3.2 Measures

Participants were asked to complete all of the following scales: Locus of Control Scale, Oxford Happiness Questionnaire, and Rosenberg Self-Esteem Scale.

To measure Locus of control, I used the self-rating scale developed by Terry Petti John test based on Rotter's original idea. Rotter (1966) devised a locus of control personality test to assess the extent to which an individual possesses internal or external reinforcement beliefs. The response format of this measure is a true or false scale. The 20 items of this test measure two types of locus of control: internal and external.

Feeling of happiness was measured using the Oxford Happiness Questionnaire (OHQ), a 29-item questionnaire, based on a seven-point rating scale from (7) agree through to (1) disagree. It has a test–retest reliability of 0.78 and a Cronbach's alpha coefficient of between 0.64 and 0.87. It has a reported validity of 0.43 with friend's ratings of happiness on a 10-point scale. It also correlates with positive affect, life satisfaction, and depression at  $r = 0.40\text{--}0.60$ . High scores indicate high state happiness.

To measure self-esteem, I used Rosenberg Self-Esteem Scale (Rosenberg 1965), a 10-item scale designed to measure adolescents' global feeling of self-worth or self-acceptance. It has claimed a test–retest reliability of 0.85. It rated on a four-point scale from (1) strongly agree through to (4) strongly disagree, for ten statements designed equally to be positive and negative. Interpretation: a higher score = External Locus of Control; a lower score = Internal Locus of Control. It is one of the most well-used measures to assess self-esteem because of the proven construct, concurrent, and predictive validity (Blascovich and Tomaka 1991). Rosenberg (1979) reported that the scale is correlated modestly with mood measures.

### 3.3 Participants

Data were collected among high school students of 18–19 years old in Kuwait. The survey was distributed to 221 students; subsequently, 182 usable replies were received.



### 3.4 Procedure

Participants were invited to participate in study on a voluntary basis. The questionnaires delivered to the participants were in English language. The whole process of answering took about 30 min to complete. There were no problems with neither understanding the purpose of survey nor instructions and questions of each scale.

## 4 Results

In this part, the most significant results are going to be presented, including descriptive statistics, correlation, partial correlation, and ANOVA. For statistical analysis, SPSS was applied. Table 1 shows the descriptive statistics on gender: 126 female and 56 male.

Table 2 presents descriptive statistics on the basic constructs, respectively, self-esteem, locus of control, and happiness, including mean and standard deviation. Based on the presented data, it is possible to have a general conclusion regarding the following gender differences:

**Table 1** Descriptive statistics of the main study

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Female	126	57.0	69.2	69.2
	Male	56	25.3	30.8	100.0
	Total	182	82.4	100.0	
Missing	System	39	17.6		
Total		221	100.0		

**Tables 2** Descriptive statistics for each of the measured construct with gender differentiation

Construct	Gender	Mean	Std. deviation	N
Self-esteem total	Female	20.03	3.974	126
	Male	18.59	3.855	56
	Total	19.59	3.983	182
LOC total	Female	60.87	11.209	126
	Male	60.89	15.554	56
	Total	60.88	12.660	182
Happiness—total	Female	4.152	0.5434	126
	Male	3.851	0.5882	56
	Total	4.059	0.5731	182

- There is no difference between groups in LOC (male group  $M = 60.89$ , female group  $M = 60.87$ ),
- there is a difference in sense of happiness—in male group, the level of happiness is lower (male group  $M = 3.851$ , female group  $M = 4.152$ ), and
- there is a difference in self-esteem—in male group, the level of happiness is lower (male group  $M = 18.59$ , female group  $M = 20.03$ ).

Table 3 demonstrates correlation results between self-esteem, locus of control, and happiness in two different gender groups.

The relationships between self-esteem, happiness, and locus of control were investigated using Pearson correlation coefficient. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity. The strong positive correlation was discovered in both female and male groups. Among women, the positive correlation is discovered between happiness and self-esteem ( $r = 0.389$ ,  $n = 126$ ,  $p < 0.01$ ), happiness and locus of control ( $r = 0.392$ ,  $n = 126$ ,  $p < 0.01$ ). In a male group of participants, self-esteem

**Table 3** Correlation of self-esteem, locus of control, and happiness among male and female

Gender			Self-esteem total	LOC total	Happiness—total
Female	Self-esteem total	Pearson correlation	1	0.167	0.389**
		Sig. (2-tailed)		0.061	0.000
		N	126	126	126
	LOC total	Pearson correlation	0.167	1	0.392**
		Sig. (2-tailed)	0.061		0.000
		N	126	126	126
	Happiness—total	Pearson correlation	0.389**	0.392**	1
		Sig. (2-tailed)	0.000	0.000	
		N	126	126	126
Male	Self-esteem total	Pearson correlation	1	0.525**	0.642**
		Sig. (2-tailed)		0.000	0.000
		N	56	56	56
	LOC total	Pearson Correlation	0.525**	1	0.477**
		Sig. (2-tailed)	0.000		0.000
		N	56	56	56
	Happiness—total	Pearson correlation	0.642**	0.477**	1
		Sig. (2-tailed)	0.000	0.000	
		N	56	56	56

\*\*Correlation is significant at the 0.01 level (two-tailed)

was positively correlated with locus of control ( $r = 0.525, n = 126, p < 0.01$ ) and happiness ( $r = 0.642, n = 126, p < 0.01$ ), locus of control with happiness ( $r = 0.477, n = 126, p < 0.01$ ).

To be able to answer the question of how much variance those constructs share, the coefficient of determination was calculated. In case with women group, self-esteem helps to explain nearly 15% of the variance in respondent’s scores on perceived happiness and locus of control, and locus of control explains nearly 15% of the variance in respondent’s scores on perceived happiness and self-esteem. In group of male participants, self-esteem allows to explain nearly 23% of the variance in respondent’s scores on perceived happiness and locus of control. Additionally, in male group, locus of control helps to explain nearly 42% of the variance in respondents’ scores on perceived happiness and self-esteem. Finally, happiness helps to explain nearly 28% of the variance in respondent’s scores on perceived self-esteem and locus of control.

Table 4 shows partial correlation between self-esteem, happiness, and locus of control investigating the role of each in controlling the relationships between the other two variables.

Partial correlation was used to explore the relationships between each pair of three basic constructs with controlling role of each of them over the other pair of

**Table 4** Partial correlation between self-esteem, happiness, and locus of control

Control Variables			LOC total	Happiness —total	Self-esteem total
-None- <sup>a</sup>	LOC total	Correlation	1.000	0.410	0.292
		Significance (2-tailed)	.	0.000	0.000
		df	0	180	180
	Happiness - total	Correlation	0.410	1.000	0.489
		Significance (2-tailed)	0.000	.	0.000
		df	180	0	180
	Self-esteem Total	Correlation	0.292	0.489	1.000
		Significance (2-tailed)	0.000	0.000	.
		df	180	180	0
Self-esteem total	LOC total	Correlation	1.000	0.320	
		Significance (2-tailed)	.	0.000	
		df	0	179	
	Happiness— total	Correlation	0.320	1.000	
		Significance (2-tailed)	0.000	.	
		df	179	0	

<sup>a</sup>Cells contain zero-order (Pearson) correlations

variables. There was a strong positive correlation between locus of control and happiness ( $r = 0.320, n = 182, p < 0.000$ ), self-esteem and happiness ( $r = 0.424, n = 182, p < 0.000$ ), and locus of control and happiness ( $r = 0.115, n = 182, p < 0.000$ ). An inspection of the zero-order correlation ( $r = 0.410, 0.489, 0.292$ , respectively) suggested that controlling for locus of control has very low effect on the strength of the relationship between happiness and self-esteem, while self-esteem has a moderate effect on the relationships between happiness and locus of control, and finally happiness has quite high effect on the relationships between self-esteem and locus of control.

In order to investigate the interrelation between self-esteem, happiness, and locus of control, hierarchical multiple regression was performed. Tables 5, 6 and 7 show the ANOVA results, where dependent variable is self-esteem, and the independent variables were happiness and LOC.

Table 5 shows model summary of the regression for measured variables. It shows that model as a whole explains 49.9% of variance (Pearson  $R = 0.499 \times 100\%$ ). Happiness and LOC explain additional 24.9% of variance ( $R^2 = 0.249 \times 100\%$ ) even when the effects of self-esteem are statistically controlled for.

Table 6 shows the relationship between dependent variable that is self-esteem and two independent variables that is happiness and locus of control (LOC). According to findings related to regression, residual value calculated. The results show that self-esteem depends on level of happiness, but LOC does not depend on happiness level (F:  $p$ -value  $< 0.05$ ). The hypothesis  $H_1$  accepted because of the significance of relationship between dependent and independent variables.

Table 7 shows the measurement ratio (B/Std. Error) of coefficient and standard error in the given data set (above table). It shows the level of each variable's contribution to the final equation. According to the findings of  $t$ -value for self-esteem found by calculating the B/Std. Error equation which is

**Table 5** Model summary<sup>b</sup>

Model	R	R <sup>2</sup>	Adjusted R <sup>2</sup>	Std. error of the estimate
1	0.499 <sup>a</sup>	0.249	0.241	3.471

<sup>a</sup>Predictors: (constant), happiness—total, LOC total

<sup>b</sup>Dependent variable: self-esteem total

**Table 6** ANOVA<sup>a</sup>

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	715.511	2	357.756	29.694	0.000 <sup>b</sup>
	Residual	2156.582	179	12.048		
	Total	2872.093	181			

<sup>a</sup>Dependent variable: self-esteem total

<sup>b</sup>Predictors: (constant), happiness—total, LOC total

**Table 7** Coefficients

Overall		B	Std. error	Beta	T	Significance
1	(Constant)	4.958	1.923		2.579	0.011
	LOC total	0.034	0.022	0.110	1.543	0.125
	Happiness—total	3.087	0.494	0.444	6.255	0.000

4.958/1.923 = 2.579, respectively, other values would be 1.543 for LOC and 6.255 for happiness. Only happiness is significant ( $0.000 < 0.005$ ); LOC is not significant ( $0.125 > 0.005$ ). The significance of measured variables is demonstrated as  $y = 4.958 + 0.034$  (LOC) + 3.087 (happiness). To sum up, there is only one variable that makes a statistically significant contribution—happiness, while LOC did not make a unique contribution.

## 5 Discussion

The purpose of this study was to examine the relationships between self-esteem, perceived happiness, and locus of control. The current research study can relate to other studies, which supports the relationships between three constructs. This study stands out from others in that it sought to examine the correlation between self-esteem and happiness, self-esteem and LOC among male and female in Kuwait, trying to identify whether self-esteem is playing a mediating role.

While significant results and correlations were found, limitations were present as well. One of the limitations of the study that may have affected the results was small sample of male participants, which did not allow for a full representation of all high school students. Additionally, the survey should include more demographic information, such as age, education profile, and family status for descriptive statistical purposes.

The first prediction was that self-esteem, happiness, and locus of control are significantly interrelated. The results showed that there was a statistically significant correlation between all three constructs: Those who reported higher self-esteem also reported higher sense of happiness rather internal LOC. However, stronger relationships are noticed between self-esteem and happiness in comparison with self-esteem and LOC. There is high correlation between happiness and LOC, as well as happiness and self-esteem. Results of previous research studies (e.g., Judge & Bono, 2001; Judge et al., 2002; Furr & Funder, 1998) investigated the empirical overlap among self-esteem, locus of control, and happiness and concluded that these constructs are significantly correlated with each other and combined in a single factor.

Another hypothesis that was presented prior to research was that self-esteem is positively related to locus of control. The results indicated a statistically significant relationship between self-esteem and LOC among male participants, where students reported having high self-esteem and rather internal or both internal and external

LOC. Results of other studies (e.g., Whisman & Kwon, 1993; Kirschbaum et al., 1992) demonstrated strong relationship between high self-esteem and internal locus of control, as well as person with high confidence level and control over own life is associated with the ability to adjust to repeated psychosocial stress. Alizadeh (2004) discovered a positive significant correlation between self-esteem and internal LOC, but no significant relationships between self-esteem and external locus of control. This hypothesis was proved partly. This could be because of society in Middle East has more gender-based differences.

Next prediction was that self-esteem is positively related to happiness. The results showed that there was a statistically significant correlation between self-esteem and happiness in both male and female groups. Results of previous studies (e.g., Argyle, 2001; Myers, 2002) showed that traits such as self-esteem and personal control were associated with happiness, what suggests considering these features as elements of happiness. Other similar studies (Hermans, 1992; Diener et al., 1999) conceptualized self-esteem as a component of overall satisfaction with life and sub-component of subjective well-being. The Oxford Happiness Inventory contains also self-esteem as the major dimensions of well-being (Argyle, 2001). This prediction was supported positively.

The last hypothesis was that gender has a significant influence on the relationships between self-esteem and happiness and between self-esteem and locus of control. Other studies (e.g., Heatherton, 1991; Luhtanen & Crocker, 1992) stated that self-esteem is indissoluble from social environment and influenced by cultural and social norms and values in which people are raised, and some people may experience collective self-esteem because they are tended to establish their self-esteem on their social identities. Furthermore, some studies (e.g., Hermans, 1992) showed that gender has differentiating influence in comparative research on happiness and self-esteem.

Discussion about the mediating role of self-esteem can be extended on theoretical and empirical background. A number of studies that have been discussed in this paper were analyzed the self-esteem as the dependent variable rather than the independent or classification one. Consequently, these studies assume that self-esteem can be temporarily affected. As a result, fluctuations in state of self-esteem are related to reliance on social judgments, increased sensitivity, and concern about how others view the self and even hostility and anger. Besides, those with a weak sense of self-esteem respond extremely favorable to positive feedback, while extremely protective to negative feedback. It could be said that social perception and judgments are extremely influential in such a small country like Kuwait, Middle East Region.

## 6 Conclusion

This study was an attempt to examine the currently most widespread research areas—happiness, self-esteem, and locus of control—and to find the possible answer to the question of the mediation or determination of self-esteem in relationship to happiness and locus of control. It was expected that there is a strong correlation between all three analyzed concepts with attributing a special mediating role to self-esteem.

Regardless the lack of consensus agreement in general model of happiness, it is commonly conceptualized in terms of pleasant affective experience that can appear as a relatively stable individual difference or as an emotional state. Similarly, no single model of self-esteem has been accepted, and none occurs to integrate self-esteem with happiness.

It is recognized that the relationships between locus of control, happiness, and self-esteem are complex. There are plenty of researches conducted on each of those variables separately but in relationship to some other variables like personality, job satisfaction, creativity, and mental health, which provided a background for the basic hypothesis of this study: Self-esteem performs as a mediator in relationship to happiness and locus of control. Analyzed data allowed to find answers for the research questions. Examined findings indicated that there are different relationships between mentioned constructs, among which the most significant are listed below:

- Self-esteem can be defined as an attitude or belief about own abilities and importance, as a global feeling of self-worth, as an indicator of involvement into significant groups and relationships, and as an indicator of psychological well-being or global happiness;
- self-esteem is considered as most iterative criteria for positive well-being, performing as adaptive and crucial construct for happiness; however, high self-esteem is not an adequate condition for happiness;
- self-esteem and happiness are positively correlated with each other, but that correlation is not perfect, meaning in reality some individuals have relatively high self-esteem but relatively low level of happiness;
- self-esteem demonstrates strong association with internal locus of control;
- significant correlation between internal locus of control and happiness might be influenced by other variables; and
- gender demonstrates significant differences in well-being, happiness, and self-esteem.

Discussed theories and analyzed data indicate important research areas; requiring focusing on formulation of research questions for the future studies is related to the following statements:

- are self-esteem dimensions (global, social, performance, and physical) make measurement of its role in mediating feeling happy and self-powerfulness more precise;

- to which extent personality and social context are variables influencing self-esteem, happiness, and LOC;
- to which extent locus of control is correlated with person's well-being, emotional happiness, and ability to cope with stress;
- if the difference between happiness and self-esteem can be strictly related to the two fundamental interpersonal dimensions of communion and agency, respectively.

To be able to state more precisely about mediating role of self-esteem, the further studies have to be conducted in a way that results will be applicable in a larger social practice with considering more variables influencing that role.

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# Factors That Influence the Training Transfer and Maintenance of Conflict Resolution Programs of Healthcare Training and Development Units: A Retrospective Study

Sonya Vandergoot, Aspa Sarris and Neil Kirby

**Abstract** Conflict resolution skills are important for all healthcare professionals. Conflict and miscommunication can have detrimental effects on decision-making, potentially impacting on patient-care, morbidity and mortality, making upskilling of health professionals' conflict resolution skills important. However, research suggests only around 10–15% of training knowledge and skills transfers to the workplace, making training a seemingly poor investment. Via a retrospective online survey, this study examined factors associated with the transfer and maintenance of conflict resolution skills of medical officers and healthcare professionals who undertook relevant training. The results of multivariable linear regression analyses showed that 77% of the variance was predicted for training transfer and 42% for training maintenance predominantly by individual (e.g. emotional intelligence and motivation) and organisational transfer climate factors (e.g. support and goal-setting cues). These results have implications for healthcare organisations in regards to how they motivate and support staff before and after training to increase transfer and maintenance of conflict resolution skills.

**Keywords** Transfer of learning · Conflict resolution · Motivation  
Emotional intelligence · Organisational transfer climate

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## 1 Introduction

Conflict resolution skills are important for all healthcare professionals as conflict and miscommunication in healthcare settings can have detrimental effects on decision-making, potentially impacting on patient-care, morbidity and mortality, thereby making it important to upskill health professionals' conflict resolution skills. For example, research of decisions to limit life-sustaining treatment in intensive care units found conflict in 78% of 102 consecutive cases, with 48% of cases identified as clinician–family conflict and 48% of cases identified as clinician–clinician conflict (Back & Arnold, 2005; Katz, 2007). Back and Arnold (2005) also cite an informal poll of physician executives who indicated that they spent “at least 20% of their time dealing with conflict” (p. 1375). Gilin Oore, Leiter and LeBlanc (2015) concur, stating that business managers and leaders in Canadian organisations spend an average of 7.5 h between direct interventions on, and worrying about, workplace conflict every week. On top of this, research suggests that workplace conflict is most likely underreported (Back & Arnold, 2005).

According to Gilin Oore et al. (2015), poorly handled workplace conflict is common and costly in both economic and social terms. Research has shown that teams with high relationship conflict tend to have greater staff turnover, absenteeism, work dissatisfaction and reactivity to job stressors, as well as lower team productivity, compared to teams with lower relationship conflict (Gilin Oore et al., 2015). In a review of conflict communication causes, costs, benefits and interventions in nursing, Brinkert (2010) listed several effects of conflict such as burnout (33% of intensive care nurses in France had severe burnout syndrome associated with conflict). The costs of nurse–physician conflict included medication errors, patient injuries and patient deaths. Other costs listed included the direct costs of litigation, lost management productivity, employee turnover, disability and worker compensation claims, regulatory fines, increased care expenditures to handle adverse patient outcomes and intentional damage to property. Indirect costs of conflict included individual emotional impairment and damage to team morale, costs to patients and increased incidence of disruptive behaviour by organisational personnel (Brinkert, 2010).

Conflict resolution training has the potential to improve the communication skills of healthcare staff; however, there is a lack of research evaluating the effectiveness of conflict resolution training in healthcare settings, including the extent to which skills learnt are transferred to the workplace (Lee et al., 2008). Transfer of learning is defined as the effective and continuing application of knowledge, skills and attitudes (KSA) learned or acquired from training to the workplace with subsequent generalisation and maintenance of these KSA (Baldwin & Ford, 1988). In health professionals' continuing education, transfer of learning is particularly important because of the risk to patient health due to preventable medical errors which account for up to 98,000 patient deaths and costs of \$17–\$29 billion per year in the USA alone (Gitonga, 2007). Yet several researchers

(e.g. Gitonga, 2007; Lee et al., 2008; Zweibel, Goldstein, Manwaring, & Marks, 2008) highlight that little is known about whether the conflict resolution skills taught are subsequently transferred to (i.e. utilised in) healthcare. Other transfer of learning studies quotes only a 10–15% return on investment in work performance of the billions of dollars spent worldwide on staff training and development (Baldwin & Ford, 1988; Gitonga, 2007; Kontoghiorghes, 2002), making training a seemingly poor investment.

Training effectiveness is not only about the training content and the quality of the training methods used (Ascher, 2013), but also relies on other factors such as the trainees' ability and motivation, and the organisational environment and transfer climate before, during and after training to support effective transfer of newly learnt knowledge and skills to the workplace (Baldwin & Ford, 1988; Chiaburu, Van Dam & Hutchins, 2010; Thayer & Teachout, 1995). Key factors that have been identified include trainee motivation, including intrinsic motivation, motivation-to-learn and motivation-to-transfer (Colquitt, LePine, & Noe, 2000; Noe & Schmitt, 1986; Sankey & Machin, 2014); self-efficacy (Gegenfurtner, Veermans, Festner, & Gruber, 2009); organisational commitment (Daffron & North, 2006); opportunity to use the skills learnt (Holton, Bates, & Ruona, 2000); and the organisational culture and climate that may support or inhibit the transfer of learning to the workplace (Chiaburu, Van Dam, & Hutchins, 2010; Holton, Bates, Seyler, & Carvalho, 1997; Thayer & Teachout, 1995). Ascher (2013) explains that the work environment and its transfer climate include the actions, situations or consequences that encourage or prevent the transfer of training KSA to the workplace. Holton et al. (1997) suggest that these are mediating factors between the organisational context and an individual's attitude towards their workplace, which then encourages or discourages the utilisation of new skills. Research suggests that healthcare organisational culture and climate may be part of the issue regarding how healthcare workers resolve conflict. For example, Zweibel et al. (2008) point out that systemic problems in healthcare settings, such as time and resource pressures, hierarchies within and between several healthcare professions, intergenerational differences in what knowledge and skills are deemed important, and physicians' preference for autonomy, are aspects of organisational culture and climate that all have the potential to increase conflict. Kaufman (2011) concurs and argues that conflict is inevitable due to these healthcare systemic issues. Hence a better understanding of how organisational culture and climate influence the transfer of newly acquired conflict resolution skills is needed.

One factor that has not been studied in relation to transfer of conflict resolution skills, yet is consistently found to be important and associated with these skills (Jordan & Troth, 2002), is emotional intelligence. Goleman (1995) defined emotional intelligence (EI) as the ability to be aware of, and engage with, one's own and others' emotions more constructively. Wong and Law (2002) outline different dimensions of EI: being able to appraise, express and regulate one's own emotions, appraise and recognise emotions in others, and being able to use emotions effectively and constructively. High EI allows people to engage in interpersonal interactions such as conflict more competently (Schreier, 2002). EI theorists suggest that

highly emotionally intelligent individuals will have superior conflict resolution skills, engage in greater collaboration and adopt a range of conflict resolution styles adaptively according to the situation compared to individuals with low emotional intelligence (Jordan & Troth, 2002). These findings are supported by a study by Ayoko, Callan and Härtel (2008) which found that teams that were less able to manage their emotions reported more conflict as well as higher conflict intensity. They also found that teams in conflict but with lower levels of team EI reported more destructive reactions to conflict. Some researchers have argued for the need to incorporate EI skills in conflict resolution training as a way of improving organisational interpersonal skills or improving transfer of conflict resolution skills (Dearborn, 2002; Jordan & Troth, 2002). However, the impact of EI on training transfer has not been examined despite many studies into EI and conflict management (refer to meta-analysis by Schlaerth, Ensari & Christian, 2013).

This retrospective study was conducted to examine the training transfer and maintenance of conflict resolution skills from training programs conducted by two Australian healthcare training and development units, targeting primarily nurses and medical registrars. The aim was to explore which individual, training and organisational factors influence the transfer and maintenance of conflict resolution skills in the context of healthcare. Based on the above research, it was hypothesised that:

1. Individual factors measured (i.e. self-efficacy, emotional intelligence, organisational commitment, intrinsic motivation, motivation-to-learn and motivation-to-transfer) will be positively associated with training transfer and maintenance;
2. The training factor *length of training* will be positively associated with training transfer and maintenance (i.e. as length/hours of training increases, transfer and maintenance levels will increase);
3. The training factor *time since training* will be negatively associated with training transfer and maintenance (i.e. as more time passes since training was completed, transfer and maintenance levels will decrease); and
4. Organisational climate factors measured such as *opportunity-to-use*, *organisational support*, *social cues* and *goal-setting cues* will be positively associated with training transfer and maintenance.

## 2 Method

### 2.1 Conflict Resolution Training Programs

Training programs on conflict resolution offered by two Australian healthcare training and development units were included in this retrospective study. The two training units offered training to different staff within the same Australian healthcare system: one targeted the medical profession (e.g. medical registrars) and the other targeted nurses, although allied health, administration and corporate

learners were able to access some programs. For clarity, the participants from the first unit will be referred to as *Medical* and those from the later as *Professions*.

Conflict resolution training length/duration varied amongst the conflict resolution training offered, from 2.5 h to five days, depending on whether it was a stand-alone conflict resolution training or a component of a larger program. The longer training courses (two to five days) tended to be programs that included a conflict resolution component; for example, one of the training programs included in the study was a five-day nursing leadership program which included a three-hour conflict resolution component.

Three training programs offered to registrars (*Medical* group) are included in this study, namely *Professional Development Program for Registrars (PDPR)* (2.5 h conflict resolution component within a two day program) ( $N = 111$ ); *Next Steps* (2.5 h conflict resolution component within a one day program) ( $N = 14$ ); and *Managing Workplace Conflict* (2.5 h conflict resolution program) ( $N = 13$ ). Note that the *Next Steps* program was only offered to medical officers and registrars who had completed the *PDPR*. Training programs included in this study that were offered to the *Professions* group are as follows: *Conflict resolution in the workplace* (1 day) ( $N = 36$ ), *Respond effectively to difficult and challenging behaviours* (3 h) ( $N = 95$ ), *Leadership and management for Registered Nurses-level 2* (three hours of four-day program) ( $N = 96$ ), *Leadership and management for Registered Nurses-level 3* (three hours of five-day program) ( $N = 20$ ) and *Enhancing positive team culture* (3 h) ( $N = 93$ ), all of which either concerned or had a component regarding conflict resolution.

## 2.2 Methodology

Staff who had completed the eligible training within the past three years were emailed by their respective training units on behalf of the researchers. They were asked to complete an online survey regarding the conflict resolution program/session they had attended. An information sheet explaining the study was included in correspondence. Consent was obtained as part of the online survey process. Email reminders regarding survey completion were sent twice following the original email. For the *Professions* group, on receiving feedback from the organisation regarding low staff usage of email, hardcopy surveys were posted out to all eligible participants with addresses on file.

## 2.3 Data Collection

**Participants.** Eligible participants were staff who had completed a conflict resolution training program or component as outlined above (*Medical*  $N = 133$  emailed from 138 cohort; *Professions*  $N = 328$  emailed from a cohort of 340; plus hardcopy

**Table 1** Descriptive statistics for independent categorical variables ( $N = 41$ )

Variables	Professions $N$ (%)	Medical $N$ (%)	Missing <sup>a</sup> $N$
<i>Gender</i>			
Female	25 (86.2)	5 (41.7)	0
Male	4 (13.8)	7 (58.3)	0
<i>Education</i>			
Bachelor degree or above	22 (75.9)	12 (100)	0
<i>Employment status</i>			
Full-time	21 (72.4)	10 (83.3)	0
Part-time	7 (24.1)	2 (16.7)	0
Other	1 (3.5)	0 (0)	0
<i>Support</i>			
• Yes	14 (53.9)	2 (18.2)	4
• No	12 (46.1)	9 (81.8)	
<i>Barriers</i>			
• Yes	9 (34.6)	5 (41.7)	3
• No	17 (65.4)	8 (58.3)	

<sup>a</sup>Data not supplied by participant(s)

Note These descriptive data relate only to quantitative data analyses

surveys posted  $N = 329$  from the cohort of 410 which included recently completed program attendees not emailed before; 81 participants did not have a postal address on file). A total of 64 learners (*Medical*:  $N = 18$ ; *Professions*:  $N = 46$ ) participated in the study; however, only 41 surveys (*Medical*:  $N = 12$ ; *Professions*:  $N = 29$ ) were able to be analysed quantifiably due to data omitted from surveys. Interestingly, 23 participants did not complete the item measures. Of the *Professions* group, 39 were nurses (61%), four were allied health professionals (6%), and two were administrative staff (3%), with one person of unknown profession (2%). Ages for the *Medical* group ( $N = 11$ ) ranged from 28 to 52 years old, with a mean age of 34.9 years (SD 6.93), whereas for the *Professions* group ( $N = 29$ ), age ranged from 24 to 65 years, with a mean age of 43.7 years (SD 11.6); Table 1 provides demographic information categorised by group for the quantitative data analyses ( $N = 41$ ).

The response rate was low at approximately 14% of those contacted successfully ( $N = 462$ ); plus a large proportion of these surveys were not completed fully (36%). This response rate was not unexpected as both units had advised prior to the surveys being sent to expect a low response rate on the basis of their previous general experience with staff surveys.

## 2.4 Materials

The survey (generated online through *SurveyMonkey*) asked questions in relation to the individual, their work role and the training, including demographic questions

(e.g. age, gender, education level); work role (i.e. job title and level, department); employment status (full-time, part-time, casual); geographical work location (metropolitan area, regional or rural); and conflict resolution training details, such as length of training (number of hours), date when attended, who training was organised by and reason for attending the training.

The survey consisted of several individual and organisational measures, namely:

- *New General Self-Efficacy Scale*: an eight-item measure developed by Chen, Gully and Eden (2001). The Cronbach's alpha coefficient in this study for the *Professions* group was 0.92 and for the *Medical* group was 0.93.
- *Wong and Law Emotional Intelligence Scale (WLEIS)*: a 16-item measure with four subscales, namely *self-emotion appraisal* (EI:SEA), *others' emotion appraisal* (EI:OEA), *use of emotion* (EI:UOE) and *self-regulation of emotion* (EI:ROE), developed by Wong and Law (2002). Each scale is comprised of four items. The Cronbach's alpha coefficient in this study for the subscales was as follows: *Professions* group was 0.91, 0.94, 0.82 and 0.92, respectively, and for the *Medical* group was 0.92, 0.76, 0.80 and 0.80, respectively.
- *Intrinsic motivation*: a three-item measure developed by Guay, Valler and Blanchard (2000). The Cronbach's alpha coefficient for the *Professions* group was 0.80 and for the *Medical* group was 0.86.
- *Motivation-to-learn*: a three-item measure adapted from Noe and Schmitt's (1986) eight-item measure. Cronbach's alpha coefficient for the *Professions* group was 0.84 and for the *Medical* group was 0.94.
- *Motivation-to-transfer*: a two-item measure adapted from Noe and Schmitt's (1986) eight-item measure. The Cronbach's alpha coefficient for the *Professions* group was 0.83 and for the *Medical* group was 0.94.
- *Organisational Commitment Questionnaire (OCQ)*: the short version of the OCQ with nine positively worded items, developed by Mowday, Steers and Porter (1979) was utilised. Mathieu and Zajac (1990) in their meta-analysis of research utilising the OCQ found that 80 studies reported an average internal consistency reliability of 0.882 (SD = 0.038). The Cronbach's alpha coefficient for this study for the *Professions* group was 0.84 and for the *Medical* group was 0.81.
- *Organisational Transfer Climate: Positive Work Environment* measure is comprised of three subscales; the subscale *Social Cues (OTC: Social cues)* was included. This is a 10-item measure developed by Thayer and Teachout (1995). An item example is *When staff return from training, supervisors encourage them to share what they've learned with other staff*. The Cronbach's alpha coefficient for this study for the *Professions* group was 0.95 and for the *Medical* group was 0.93.
- *Organisational Transfer Climate: Positive Work Environment* measure subscale *Goal-setting (OTC: goal-setting)* was utilised in this study. It is a six-item subscale, developed from Thayer and Teachout (1995). An example of an item is *Managers set goals for employees that encourage them to use new training*. The Cronbach's alpha coefficient for this study for the *Professions* group was 0.86 and for the *Medical* group was 0.79.



- *Opportunity-to-use* (OTC: opportunity-to-use): a five-item measure developed for this study, based on the work of Holton, Bates and Ruona (2000) and Thayer and Teachout (1995). An item example is *I consciously allocated time to practice new skills/strategies learnt in the conflict resolution training*. The Cronbach's alpha coefficient for this study for the *Professions* group was 0.72 and for the *Medical* group was 0.80.
- *General Training Climate Scale* subscale: *Organisational Support* (GTCS: *Org Support*) measure, with five items, was utilised in this study. It was developed by Tracey and Tews (2005). One example of the items is *There is a performance review and development system that ties recognition and rewards to use of newly acquired knowledge and skills*. In this study, the Cronbach's alpha coefficient for the *Professions* group was 0.81 and for the *Medical* group was 0.80.
- *Training transfer*, a five-item measure assessing participants' transfer of learning of conflict resolution KSA, adapted from Xiao's (1996) six-item measure. Two-item examples are *The quality of my conflict resolution skills has improved since attending the training* and *I have found it difficult to use what I learnt at the training in my workplace* (reverse scored). The Cronbach's alpha coefficient in this study averaged at 0.93 for the two groups (*Professions* 0.91 and *Medical* 0.95).
- *Training maintenance*, a four-item measure assessing participants' maintenance of their learning of conflict resolution KSA since attending the training, adapted from Xiao's (1996) training transfer measure. Examples of items included in the scale are *Since attending the conflict resolution training, I have been able to continue using the conflict resolution strategies I learnt* and *Since attending the conflict resolution training, I have returned to old ways of dealing with conflict* (reverse scored). Cronbach's alpha coefficient in this study averaged at 0.79 (*Professions* group was 0.63 and *Medical* was 0.95).

All measures utilised a seven-point Likert scale, with response options ranging from one (*strongly disagree*) to seven (*strongly agree*). There was an internal consistency across the scales in this study, with a Cronbach's alpha coefficient generally 0.7 or above, and hence, the measures can be considered reliable (Pallant, 2005). The survey also incorporated ten questions/comment sections asking participants about their motivation, reason for attending, examples of utilising their learning and of being able to maintain it, and if they received support or encountered any barriers, and examples thereof. These comments were included to elicit more comprehensive and holistic data, as Brown and McCracken (2009) stated this is more likely when both quantitative and qualitative research methods are utilised.

## 2.5 Ethical Considerations

Participants received information about the nature of the study which included that responses would be confidential and only group results would be reported.

The research project was approved by the healthcare organisation's Human Research Ethics Committee and endorsed by the University of Adelaide's Human Research Ethics Committee. Governance approval to proceed with the research project was also received from each of the relevant health organisational sites.

### 3 Results

#### 3.1 Data Analysis

All statistical analyses were conducted using the statistical software SAS 9.4 (SAS Institute Inc., Cary, NC, USA). Mean values and standard deviations, or appropriate frequencies, for all measures were calculated. Descriptive statistics (by group) for categorical independent variables are presented in Table 1 and for continuous independent variables are presented in Table 2. As shown in Table 2, variables that are not normally distributed (majority were negatively skewed) have the median and interquartile range (Q1, Q3) reported. Assumptions of a linear regression were found to be upheld for all linear regression models with the outcome variables mean training transfer and mean training maintenance.

For analysis of responses to the open-ended questions, a conventional content analysis approach, based on the method outlined by Hsieh and Shannon (2005), was used, by "systematic classification process of coding and identifying themes or patterns" (Hsieh & Shannon, 2005, p. 1278). Content analysis was conducted by the first author and consequently checked individually by the other authors, with agreement reached.

**Power.** In regard to detecting a difference between the two professional groups (*Professions* and *Medical*), there is power of 80% (where  $\alpha = 0.05$ ) to detect a clinically significant difference of 0.13 for the transfer variable and a clinically significant difference of 0.15 for the maintenance variable, between the two groups.

Quantitative results are reported first, followed by the themes identified from the content analysis of the comment sections elicited from the surveys. Table 1 shows the descriptive statistics for both groups and the independent categorical variables. Note that due to the small sample, not all demographic information is reported to avoid inadvertent identification of any participants.

Multivariable linear models were performed for the two dependent variables: transfer and maintenance. All individual factors with a  $P$  value  $< 0.2$  in a univariate model versus transfer (i.e. emotional intelligence: self-emotion appraisal (SEA), others' emotion appraisal (OEA) and self-regulation of emotions (ROE); motivation-to-learn; intrinsic motivation; and motivation-to-transfer) were included in an initial individual factor multivariable model. The professional variable (*Professions/Medical*) was included no matter what its  $P$  value, as an a priori variable. Backwards elimination was performed until all covariates had a

**Table 2** Descriptive statistics for continuous independent and dependent variables

Variables (mean)	Professions (N = 29)					Medical (N = 12)						
	N	Mean	Std Dev	Median	Interquartile range		N	Mean	Std Dev	Median	Interquartile range	
					Q1	Q3					Q1	Q3
Training transfer	27	4.95	1.23				10	5.08	1.10			
Training maintenance	27	4.91	0.95				10	4.90	1.37			
Length of training (hours)	28	5.27	1.84	6.00	3.50	6.00	12	1.42	0.97	1.00	1.00	1.00
Time since training (months)	28	9.73	5.55	10.00	5.00	13.0	12	16.53	9.03	17.54	10.17	20.00
Self-efficacy	29	6.12	0.67	6.10	5.90	6.60	11	6.05	0.69	6.00	5.80	6.50
EI:SEA	29	6.02	1.01	6.00	5.50	6.80	11	5.11	1.21	5.50	3.50	6.00
EI:UOE	29	5.99	0.79	6.00	5.30	6.80	11	4.99	1.01	5.00	4.80	6.00
EI-OEA	29	5.72	1.09	6.00	5.30	6.50	11	5.38	1.01	5.80	4.50	6.30
EI-ROE	29	6.01	0.89	6.00	5.50	7.00	11	5.48	0.91	5.30	5.00	6.00
Intrinsic motivation	29	6.17	0.68	6.00	6.00	6.70	11	5.98	0.82	6.30	5.30	6.30
Motivation-to-learn	29	6.23	0.68	6.30	6.00	6.70	11	6.20	0.76	6.30	6.00	7.00
Motivation-to-transfer	29	6.26	0.93	6.50	6.00	7.00	11	6.05	1.04	6.00	5.50	7.00
OCQ	29	5.96	0.78	6.10	5.20	6.40	11	5.26	0.89	5.20	4.80	6.00
OTC: social cues	29	4.91	1.24	5.10	4.10	5.90	11	4.75	1.23	4.80	4.30	5.70
OTC: goal-setting	29	4.45	1.05	4.50	4.00	5.20	10	4.59	0.95	4.45	3.70	5.70
OTC: opportunity-to-use	29	3.92	1.15	4.00	3.60	4.80	10	4.10	1.24	4.40	3.00	5.20
GTCS: Org.Support	28	4.49	1.15	4.60	4.10	5.30	10	4.88	1.14	4.80	4.40	6.00

*Note* Negatively skewed variables have the median and interquartile (Q1, Q3) range also reported

$P$  value  $< 0.2$ . This is Model 1 in Table 3: a final multivariable linear regression of the transfer variable versus individual factors.

Training factor variables (*time since training* and *training length*) were then added and backwards elimination performed again until  $P$  values  $< 0.2$ . This is Model 2 in Table 3: a final multivariable linear regression of the transfer variable versus individual and training factors. Note that the adjusted R<sup>2</sup> remained basically unchanged after these factors were added to the model. Organisational variables with  $P$  value  $< 0.2$  (i.e. *support*, *barrier*, organisational transfer climate measures of *social cues*, *goal-setting* and *opportunity-to-use*, and *General Training Climate Scale* measure of *organisational support*) were then added and backwards

**Table 3** Multivariable linear regression results: outcome training transfer versus three levels of predictors

Predictor variable	Estimate (95% CI)	$P$ value	Adjusted R <sup>2</sup>
Model 1—individual factors			0.5995
Study (Medical vs. Professions)	0.61 (0.02, 1.19)	0.0437	
EI:OEA (mean)	0.43 (0.14, 0.92)	0.0051	
EI:ROE (mean)	0.43 (0.12, 0.75)	0.0086	
Intrinsic motivation (mean)	-0.43 (0.11, 0.10)	0.1062	
Motivation-to-transfer (mean)	0.80 (0.45, 1.16)	<0.0001	
Model 2—individual and training factors			0.5983
Study (Medical vs. Professions)	0.76 (0.08, 1.45)	0.0291	
EI:OEA (mean)	0.42 (0.13, 0.71)	0.0062	
EI:ROE (mean)	0.46 (0.14, 0.79)	0.0063	
Intrinsic motivation(mean)	-0.42 (-0.95, 0.1)	0.1119	
Motivation-to-transfer (mean)	0.81 (0.45, 1.16)	<0.0001	
Time since training (months)	-0.02 (-0.06, 0.02)	0.3499	
Model 3—individual, training and organisational factors			0.7686
Study (Medical vs. Professions)	0.92 (0.36, 1.47)	0.0022	
EI:OEA (mean)	0.39 (0.16, 0.62)	0.0015	
EI:ROE (mean)	0.51 (0.25, 0.76)	0.0004	
Intrinsic motivation) (mean)	-0.53 (-0.94, -0.12)	0.0128	
Motivation-to-transfer (mean)	0.55 (0.24, 0.85)	0.0010	
Time since training (months)	-0.03 (-0.07, 0.00)	0.0587	
OTC: goal-setting (mean)	0.47 (0.23, 0.71)	0.0003	
Support (no vs. yes)	-0.52 (-0.97, -0.07)	0.0248	

elimination performed again until  $P$  values  $< 0.1$ . This is Model 3 in Table 3: a final, most parsimonious multivariable linear regression model of transfer versus individual, training and organisational factors. Adjusted  $R$  squared values are also shown for each model.

In regard to the final (third) model, there was a statistically significant association between training transfer and professional group, when controlling for the other individual, training and organisational factors within the final model (global  $P$  value = 0.0022). Comparing these professional groups, medical officers rated their training transfer (mean) almost one unit greater than those in the *Professions* group (estimate = 0.92, 95% confidence interval (CI): 0.36, 1.47). There was also a statistically significant association between training transfer and *goal-setting* when controlling for the other variables (e.g. individual, training and organisational factors and professional group) within the model (global  $P$  value = 0.0003). For every one unit increase in *goal-setting*, the mean training transfer variable increased by approximately half a unit (estimate = 0.47, 95% CI: 0.24, 0.71). The other predictor variables such as emotional intelligence (OEA and ROE) and motivation-to-transfer also had statistically significant associations with training transfer when controlling for the other variables in the model, as shown in Table 3. For example, there was a statistically significant association between training transfer (mean) and *support*, when controlling for the individual, training and organisational factors within the model (global  $P$  value = 0.0248). In this study, participants who stated they did not have support had a mean training transfer half a unit less than participants who stated they did have support (support (no vs yes) estimate = -0.52, 95% CI: -0.97, -0.07).

The same procedure was performed in regard to the dependent variable: training maintenance. The same individual, training and organisational factors except motivation-to-learn had  $P$  values  $< 0.2$ , as did employment status, and hence were included. Models 1, 2 and 3 presented in Table 4 are relevant to the dependent variable, maintenance, with adjusted  $R^2$  values shown for each model. Adjusted  $R^2$  ( $R^2$  modified for the number of the predictors included in the models) has been reported as it increases only if the new term improves the model more than would be expected than by chance alone (Pallant, 2005).

In regards to training maintenance, there was no statistically significant difference between the two professional groups. However, *goal-setting* and emotional intelligence were again found to have statistically significant associations, when controlling for the other variables (individual and organisational factors) within the model. For example, for every one unit increase in emotional intelligence of being able to appraise others' emotions (OEA), mean training maintenance increased by approximately half a unit (estimate = 0.45, 95% CI: 0.12, 0.77, global  $P$  value = 0.0082). In contrast, employment status and the organisational transfer climate variable of *social cues* had significant negative associations with training maintenance. For example, as shown in Table 4, when controlling for the individual and organisational factors within the final model (global  $P$  value = 0.0074), part-time participants rated their training maintenance one unit less than full-time participants (estimate = -1.01, 95% CI: -1.73, -0.23).

**Table 4** Multivariable linear regression results: outcome training maintenance versus three levels of predictors

Predictor variable	Estimate (95% CI)	P value	Adjusted R <sup>2</sup>
Model 1—individual factors			0.2563
Study group ( <i>Medical vs. Professions</i> )	0.32 (−0.40, 1.04)	0.3711	
EI:OEA (mean)	0.37 (0.01, 0.72)	0.0424	
EI:ROE (mean)	0.28 (−0.10, 0.66)	0.1411	
Motivation-to-transfer (mean)	0.23 (−0.11, 0.57)	0.1823	
Employment status (part-time vs. full-time)	−0.76 (−1.57, 0.04)	0.0604	
Model 2—individual and training factors			0.2609
Study group ( <i>Medical vs. Professions</i> )	0.54 (−0.29, 1.37)	0.1912	
EI:OEA (mean)	0.36 (0.01, 0.72)	0.0440	
EI:ROE (mean)	0.33 (−0.06, 0.71)	0.0966	
Motivation-to-transfer (mean)	0.23 (−0.11, 0.58)	0.1739	
Employment status (part-time vs. full-time)	−0.81 (−1.61, −0.00)	0.0489	
<i>Time since training</i> (months)	−0.03 (−0.08, 0.02)	0.2836	
Model 3—individual, training and organisational factors			0.4157
Study group ( <i>Medical vs. Professions</i> )	0.09 (−0.56, 0.74)	0.7856	
EI:OEA (mean)	0.45 (0.12, 0.77)	0.0082	
EI:ROE (mean)	0.44 (0.10, 0.78)	0.0131	
Employment status (part-time vs. full-time)	−1.01 (−1.73, −0.29)	0.0074	
OTC <i>social cues</i> (mean)	−0.51 (−0.94, −0.08)	0.0227	
OTC <i>goal-setting</i> (mean)	0.78 (0.31, 1.25)	0.0021	

In regard to the comment sections in the survey, several recurring themes emerged and these are shown in Table 5. Many comments outlined workplace conflict as being an important motivator or consideration in undertaking the training, with those who attended leadership or training for higher levels stating that conflict resolution skills were important skills needed in leadership and management.

## 4 Discussion

This is the first study of its kind to examine multiple individual and organisational transfer climate factors in relation to transfer and maintenance of conflict resolution skills in health care. The significant results of this study indicated that medical officers who had completed the training more recently and/or participants who rated their emotional intelligence (regarding *appraising others' emotions* and their *emotional self-regulation*) and motivation-to-transfer higher, and received more

**Table 5** Themes from survey comment sections

Questions	Main Themes
Reasons for attending training	1. Self-improvement and development ( $N = 9$ nurses and 9 MO) 2. Organisational processes or recommended ( $N = 11$ RN; 6 MO; and 3 AH) such as performance review and development discussions with their manager 3. Conflict issues at work ( $N = 5$ RN; 2 Adm and 1 AH) Examples included conflict with peers, MO and patients or their family. Other issues mentioned were low morale and “toxic environment”
Types of conflict examples reported	1. Staff- or team-related conflict/dispute examples given ( $N = 9$ RN; 3 MO; 1 Adm and 2 AH) 2. Patient- or their family-related disputes or conflict example given ( $N = 3$ RN) <i>Note: Though several stated they couldn't recall specific incidents or situations where they had used the conflict management skills (<math>N = 6</math> MO, 5 RN and 1 Adm), this may point to these people not consciously attempting to utilise the skills</i>
Ability to maintain conflict resolution skills	1. Using skills; many name particular skills and/or examples ( $N = 19$ RN; 6 MO; and 1 AH). Examples included were attentive listening skills, body language and emotional awareness 2. Haven't been able to maintain; haven't practiced or been able to practice ( $N = 1$ RN; 2 Adm; 4 MO and 1 AH) 3. Maintaining skills but difficulty of doing so/due to difficulty of situation/conflict; hard to maintain skills “take a deep breath” ( $N = 6$ RN and 1 MO)
Received support to transfer new skills (Total $N = 38$ )	1. Received support ( $N = 15$ RN and 2 MO)—examples included managers, HR, senior staff (nurse managers and nurse educators) and colleagues, multidisciplinary team 2. Did not receive support to transfer their training ( $N = 10$ RN, 1 Adm, 1 AH and 9 MO)
Encountered barriers to transfer new skills (Total $N = 39$ )	1. Did encounter barriers to transferring skills ( $N = 7$ RN; 5 MO and 2 AH); examples included “boss” and senior staff due to hierarchy and inequalities in power/power usage, “busyness” of work and lack of time/passage of time, colleagues, stressful work and increased change of staff, lack of resources (busy wards and lack of time to practice and lack of funding to train all staff. Another mentioned “favoritism” 2. Did not encounter barriers to transferring skills ( $N = 15$ )

(continued)

**Table 5** (continued)

Colleagues/others responded differently to them (Total $N = 33$ )	1. Responded they were treated differently in a positive manner ( $N = 7$ RN, 4 MO, 1 Adm and 1 AH); they thought they were treated with more respect; that others sought them out to help with conflict issues; or that team members were supportive and gave them feedback on their progress. Also that they were treated more seriously. They felt more confident 2. Responded they were treated differently in a negative manner ( $N = 2$ ), examples: that they were seen as a “trouble-maker” by not “letting it go” of issues and “rocking the boat”
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Legend: *MO* Medical Officers; *RN* Nurses; *AH* Allied Health professionals; *Adm* Administrative staff

*organisational support* and *goal-setting cues*, tended to rate their transfer of conflict resolution skills higher. Interestingly, intrinsic motivation was significantly negatively associated with training transfer, which may be due to conflict skills being seen as a necessary skill in the workplace, rather than an interesting one for its own sake. Though not all the individual factors measured in the survey were significant (e.g. self-efficacy, organisational commitment or motivation-to-learn), motivation-to-transfer was significantly positively associated with training transfer, supporting other research regarding motivation which has been consistently found to play a critical role at each stage of the transfer process (e.g. Kontoghiorghes, 2002; Gegenfurtner et al., 2009; Grossman & Salas, 2011; Sankey & Machin, 2014). Surprisingly, other than emotional intelligence (EI), no other individual measures were significant in regard to training maintenance.

This study also had mixed results regarding EI and training transfer and maintenance. Only two of the subscales of EI (*appraise others’ emotions* and *self-regulation of emotions*) were significantly and positively associated with both training transfer and maintenance. Though it was hypothesised that all four components of EI would be important in being able to transfer and maintain learning, it makes intuitive sense that people who are able to understand others’ emotions and regulate their own are more likely to be able to transfer and then maintain their conflict resolution skills from the training to their workplace. The other two EI subscales (*self-appraisal of emotions* and *use of own emotions*) may be less important aspects of EI in relation to conflict resolution skills, hence resulting in the nonsignificant outcome in this study. However the small sample also needs to be taken into consideration. This study appears to be the first to examine EI in relation to transference and maintenance of conflict resolution skills; however, there are ample studies linking EI to conflict resolution skills in general (e.g. Ayoko et al., 2008; Jordan & Troth, 2002; Schlaerth, Ensari & Christian, 2013; Shih & Susanto, 2010).



In relation to organisational climate factors such as *opportunity-to-use*, *organisational support*, *social cues* and *goal-setting cues* (e.g. cues by managers that encourage practice of skills), the hypothesis was partly supported, with *goal-setting cues* and *support* found to be significant in relation to training transfer and *social cues* and *goal-setting cues* significant in relation to maintenance. Those participants who perceived positive organisational *support* and/or *goal-setting cues* reported being able to transfer their conflict resolution skills more successfully, and those who perceived *social cues* and *goal-setting cues* reported being better able to maintain their skills than others in this study. These findings are supported by other studies regarding organisational climate factors (e.g. Kontoghiorghes, 2002; Thayer & Teachout, 1995; Xiao, 1996). Surprisingly, *social cues* were significantly negatively associated with training maintenance. This could possibly be due to *social cues* over time being perceived negatively, or even as harassing, if managers persist in following up on training maintenance efforts. Another possible explanation is that *social cues* lose influence over time with maintenance of skills.

Only the training factor, *time since training*, was significantly and negatively related to training transfer. The result is as it would be expected in that training transfer would be less likely to occur or change the further time passed by.

Results showed that medical officers reported higher training transfer than their counterparts in the *Professions* group which included nursing, allied health and administration professionals. Due to the small sample, however, this result should be interpreted with caution. The *Medical* group did attend training especially designed for and supported by their profession with medical leaders in attendance, perhaps enhancing the training experience and increasing the transfer potential or likelihood. In comparison, the training that the *Professionals* group attended included those of mixed professional groups which may have reduced participants' ability to speak frankly regarding workplace conflict. Due to the small sample and the large number of different programs included for the *Professionals* group in comparison with the *Medical* group, this finding needs further exploring to determine whether training transfer is enhanced when conflict resolution training occurs within homogeneous groups rather than mixed professional groups.

For transfer maintenance, the employment status of participants was a significant factor, with those who worked part-time reporting significantly lower maintenance of conflict resolution skills since completing the training than others in this study. This result is understandable given that less time spent at work reduces opportunities to practise and fine-tune conflict resolution skills. For example, Ascher (2013) found that the opportunity to apply and practice what was learned in training was rated as the highest predicting factor to the training transfer process, along with motivation to implement learning. Hence, part-time workers not only have less time and therefore opportunity to apply and practice conflict resolution skills, but also may be less motivated to do so over time.

This study has highlighted some of the influencing factors on training transfer and maintenance of conflict resolution skills in healthcare. Individual and organisational factors were both found to be important for training transfer. However, organisational climate factors may be more important when staff are attempting to

maintain new conflict resolution skills, as only the individual factor of emotional intelligence was found to be significant in relation to maintenance and has not been studied before in this context. This may help explain previous research quoting only a low percentage of return of investment regarding training expenditure (Baldwin & Ford, 1988; Gitonga, 2007; Kontoghiorghes, 2002) as transfer and maintenance of learning have traditionally been assumed to have the same, rather than different influencing factors. This would have important implications for organisations regarding ensuring long-term benefits from their training and development expenditure by investing more resources towards assisting staff to maintain new conflict resolution skills after training transfer. However, the relatively small sample in this study, spread over the different professions and training programs, require that these results be replicated with larger samples of each professional group to further explore these differences between transfer and maintenance. In regards to the differences found in training transfer between the two study groups, it would be ideal to compare mixed and homogeneous professional groups completing the same conflict resolution training. Further research regarding emotional intelligence and being able to transfer and maintain conflict resolution skills into practice is also needed to explore this relationship further.

With respect to training transfer and maintenance in organisations generally, the results of this study are consistent with Ascher's (2013) recommendations to improve organisations' transfer climate by providing staff with supportive processes and cues when they attempt to implement new skills in the workplace. This study found that both individual and organisational transfer climate factors were important in influencing and supporting people's endeavours to transfer and maintain new conflict resolution skills in healthcare. These results have implications for healthcare organisations in regard to how they motivate and support staff before and after training to increase transfer and maintenance of conflict resolution skills which are especially important in light of the potential detrimental effects conflict can have on health professionals' decision-making when providing patient-care.

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# An Assessment of the Sociocultural Evolution Among Selected Filipino Stay-at-Home Fathers (SAHFs): “Basis for Sustainable Plan”

Jonathan I. Arante

**Abstract** This study was conducted in Bgy. 50, 53, 54, 55, and 56 all comprising Zone 7 of the Sta. Clara District, Pasay City, with a total combined 314 households. Forty heads of the households were reported belonging to SAHFs registered in 2014 in their respective Zone Manager per Barangay. These 40 head of the households, who were identified as being a SAHF served as the main respondents for this study and answered the questionnaires along with undergoing the one-on-one interview with the researcher. The distributions of the participants are such: 8 SAHFs (Bgy.50), 10 SAHFs (Bgy.53), 8 SAHFs (Bgy.54), 7 SAHFs (Bgy.55), and 7 SAHFs (Bgy.56). Correlational analyses revealed that there is no significant relationship between marital satisfaction and paternal salience. The SAHFs’ overall mean score is 7.76 with a std. of 0.0608 entailing that the participants achieved an overall acceptance into the role of their wives and maintain a happy demeanor within their marriage. The participants’ levels of marital satisfaction and levels of paternal salience in terms of its significant relationship revealed a STD of 0.01323 which means that marital satisfaction does not influence paternal salience.

**Keywords** Stay-at-home fathers (SAHFs) • Marital satisfaction  
Paternal salience • Barangay level • Zone manager

## 1 Introduction

Societal and cultural changes relating to gender of caregivers over the past fifty years evolved, in spite of it, the “practices around motherhood in the West remain grounded in assumptions of mothering as biologically determined, instinctive and natural”. This predominant essentialist viewpoint means that the role of primary

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caregiver is still normatively defined as belonging to the female gender role. However, in the last thirty years, there has been a significant increase in the amount of men who have chosen to become the primary caregiver, thereby challenging the traditional gender role norms and expectations. Doucet (2007) states that in Canada, “stay-at-home fathers have increased 25% in the past ten years while stay at-home mothers have decreased by approximately the same figure” and reports that stay-at-home fathers make up 18% of all stay-at-home parents in the USA. In the UK, the Office of National Statistics showed that in 2007, there were 200,000 stay-at-home fathers in Great Britain—almost double the amount recorded in 1993. It seems pertinent to question, therefore: how do men experience the psychological discrepancy when they move away from traditional male roles and immerse themselves in one that has been traditionally viewed as women’s work, i.e., that of nurturing and raising children.

In similar form, the character of the Philippine society has changed during the past years. With it are the changes in the institution, both in structure and function. Like other institutions, the nature of the family and family life has also changed in response to the demands of new cultural conditions. Changes in the structures and functions of the family came as a result of industrialization, urbanization, democratic ideals, and religious views. Industrialization has brought about a great impact on the economic conditions of the country. Because production took place outside of the home, it dispersed the employment of the family members and thus weakened the family as an economic or working unit (p. 34). Industrialization has also affected traditional culture. The ideals of individualism and competition have spread and increased the number of women outside the home. Hence, one of the most important trends today is the increased number of wives working and leaving their husbands to take care of their family.

The October 2010 Philippine Labor Force Survey estimated a total of 5 million women laborers and unskilled workers and 6.7 million of their male counterpart. Women farmers, forestry workers, and fisherfolks were estimated at 839,000 compared to 5.1 million men in the same occupation group. Likewise, women government officials, corporate executives, managing proprietors, managers, and supervisors were estimated at 2.5 million while men in the same group were estimated at 2.4 million ([www.pcw.gov.ph](http://www.pcw.gov.ph)). Of the total 14.2 million employed women in October 2010, around 7.5 million (53.0%) were wage and salary workers; 3.9 million (27.7%) were self-employed without any paid employee; and around 327,000 (2.3%) were employer in own family-operated farm or business. As to the 22.3 million employed men, 12.3 million (55.0%) were wage and salary workers; 7.1 million (31.8%) were self-employed without any paid employee; and 1.1 million (4.8%) were employed in their own family-operated farm or business.

Based on the foregoing statements, a new breed of parental genre among “Stay-at-Home Fathers” is on the rise, especially as various sectors of the world experience a down trout in the fiscal aspect of their economy. In turn, the economic

down drought has lend itself a dilemma in which more households are now seeing fathers at the family mainstay while mothers are now becoming breadwinners. In reference to the above 2010 Labor Force Survey conducted and released by Department of Labor and Employment, the Philippines is not immune to the changing cultural paradigm shift happening across the world of now having mothers as being “breadwinners.” Yet, with the rise of this sweeping phenomenon, there has been dearth of available research among stay-at-home fathers within an Asian setting. In the Philippines, there is a dearth in both qualitative and quantitative studies, and studies which offer an understanding of how the process of SAHFs unfolds especially in the area of marital satisfaction and paternal salience. This study aims to assess the sociocultural evolution among selected Filipino stay-at-home fathers primarily in the area of marital satisfaction and paternal salience eventually providing a basis for psychosocial intervention.

### ***1.1 Emergence of Stay-at-Home Fathers***

The seeds of this trend date back to industrialization in the latter half of the nineteenth century, sometimes also referred to as the Victorian Era. Industrialization created the now-prevalent dualistic realms of home and paid work in developed countries, with women in charge of the former and men in charge of the latter. Goaded by a desire for equal citizenship with men and some control (e.g., legal, financial) over their own lives, women’s roles in the USA have been expanding into the public realm for over a century. The stereotype of women in charge of home and children persists. This overloading of job/career, family, and domestic duties is thought to contribute to the glass ceiling, in work/life balance and conflict literature. Much of this literature discusses the need for—work flexibility [for women] at all levels. Others discuss the need for men, as well as women, to be able to use flexible work schedules. There are some organizations which have flex options written into corporate policies, but the use of them by men is frequently frowned upon.

Stay-at-home fathers do not represent a movement, but are instead a relatively new trend concerning changes in the concepts of marriage, masculinity, and cultural norms of the male sex role. The implications envelop, not just many women’s drive to higher echelons in the workplace, but also the acceptance of men having more life options. If women are generally over-stretched between work and domestic/childrearing realms, then men are also stymied as they are stuffed into work-only life choices.

Stay-at-home fathers represent a group taking on an extreme counter-role in society. They offer the opportunity to study cultural acceptance, psychological well-being, and communication at important junctures. By understanding SAHDs better, we can also become more aware of issues affecting men’s role expansion in general. The 2006 U.S. Census Bureau Current Population Survey Report tracks

stay-at-home family groups, defined as—married-couple family groups with children under 15 where one parent is in the labor force all of the previous year and their spouse is out of the labor force for the entire year with the reason taking care of home and family.

Stay-at-home fathers, then, are husbands who have not worked in the past year to care for their home and children up to the age of 15. Other groups, including other branches of the U.S. Census Bureau and SAHD support group networks/websites, expand this definition to include any man who is the primary caregiver for his children. The Census Bureau (2004) refers to primary care as the situation in which the child spends the most time. This can include fathers who are full-time, part-time, or self-employed.

Stay-at-home fathers are a phenomenon in more countries than just the USA. They are becoming common in Canada, are emerging in China, exist in Japan and in South Korea, and constitute a tenacious trend in the UK. Muslim countries, however, do not look favorably on this role. U.S. Census Bureau Editor's Desk (TED) in 2005 shows childcare by father for 11.3 million children from birth to age six, with mother working 35 or more hours per week, is 25% or roughly 2.8 million.

In Great Britain, according to the Office of National Statistics in 2012, more than 200,000 British men look after the children as their female partners go out to work, more than ever before in this country. Looking more deeply into labor market figures, we can see that this is much more about unemployment than social change that women are still taking the lower-paid, part-time jobs that they were before, but there is a very large number of men with no job at all. It might well be the case that more men than ever are staying at home by choice, but that's not reflected in this data.

## ***1.2 Evolution of Stay-at-Home Fathers***

At beginning the twentieth century, British and American fathers were expressly interested in asserting standards of masculinity. Boys below the age of six were no longer dressed as little girls and toys aimed at masculine pursuits became popular purchases. Responding to the escalating women's rights movement and the impelling glamor of industrial fortunes, Boy Scouts, YMCA, Knights of King Arthur, Boone and Crocket Club, gyms and male athletic clubs, and similar male-oriented youth organizations were created to prepare boys for the rigors of life as a male adult. Established by Boer War hero, General Baden-Powell, Boy Scouts were introduced in Britain and then in the USA and internationally, as a method of reassertion of manly values of this time. Particularly in the USA, the cowboy was a prevalent and admirable male model of desired traits such as the ethical self-made man. A plethora of cowboy movies made in the USA during the 1950s and 60s and the Jedi knights of the Star Wars movie series in the 1980s shows the lingering love affair with the cowboy archetype.



Breadwinner became one of the most salient descriptors for American men. Weber's work in 1905 on the Protestant ethic showed how men were so focused on making money that it became their life's purpose. Tocqueville expressed the U.S. fascination with accumulating money as an important male trait, as the result of democratic societies: Among aristocratic nations, money reaches only to a few points on the vast circle of man's desires: In democracies, it seems to lead all. In an orderly and peaceable democracy like the USA, where men cannot enrich themselves by war, by public office, or by political confiscation, the love of wealth mainly drives them into business and manufactures.

After World War II, the USA experienced a period of prosperity. Magazines and the popular new entertainment medium of television shows such as *Father Knows Best* praised family life as verging on the sacred. Men were encouraged to be active fathers, albeit as a weekend occupation, because the main role extolled for men was breadwinner. Additionally, women were buttressed as essential and irreplaceable at home, especially in the care of their children.

By the 1970s, psychologists David and Brannon (1987) had distilled four primary components of the male sex role in the USA: (1) no sissy stuff and reject the feminine, (2) be a big wheel—economic success trumps all, (3) be a sturdy oak—the brawny independence inherited from the founding of the USA (4) give em hell—be aggressive risk-takers. Being a big wheel, or at least the breadwinner, is most central circle in the target of the salient male role adjectives and becomes the basis of the American role in his masculine identity so narrowly on the bread-winning role, since it occupies both physical physique and physical fitness as the central position in his life.

Gearson (1983) also noted the prevalence of the breadwinner stereotype among her interviewees in spite of a drastically changing culture in which the middle-class family is more often dual-income than the traditional one-income breadwinner. In the span of a generation, from the 1970s to the turn of the century, the daily life of American middle class has undergone a silent upheaval: Men who have reached adulthood in recent decades have confronted confusing circumstances. The stagnation of wages has undermined their capacity to support a family alone. Women's entry into the workplace has challenged their preeminence as breadwinners and workers. Other researchers in the 1990s have noticed a change in the defining elements of masculinity. Sensitive new age guy masculinity has also grown in popularity. Harris (1994), in a landmark study of over 500 men, found the theme of Nurturer: men [who] are gentle, supportive, warm, sensitive, and concerned about others' feelings, (p. 111) to be one of the dominant themes or ideals underscoring masculinity in the United States (p. 104).

SAHF's evolution can be summarized through the American poet and activist, Robert Bly, who strongly reflects his sentiment in his infamous book, *Iron John: A book about men* (1990). Bly takes a Jungian approach, arguing that men need to cut themselves off from the ideologies of the current culture and create their own

definitions of father and masculinity. He focuses on ancient stories as a guide and anchor for divesting the stifling standards of the current era.

### ***1.3 Present Day Themes About SAHF***

#### **1.3.1 SAHF Marital Satisfaction**

The most consistently found predictor of men's engagement with their children and satisfaction with parenting is the quality of the spousal relationship. Marital conflict, in contrast, often results in men's withdrawal from children and spouses, although this is sometimes more pronounced for daughters than for sons.

Most likely, it is a combination of heritable biases and reactivity to marital dynamics that influence paternal investment, but definitive answers must await research designs that assess social and genetic factors and their interaction. There is a positive correlation between marital quality and the following: levels of father involvement in child care responsibilities, the quality of the father-child relationship, the father's satisfaction in his own paternal role, and his competence as a parent.

These correlations indicate that the marital relationship is an important context for the quality of men's experiences as a father. Men are more likely to understand their role of being a father and a husband as a "package deal"—one contingent upon the other. Therefore, if marital conflict is high, fathers have a much more difficult time being involved with their children, which weakens the father-child relationship.

For example, inter-parental conflict was negatively related to quality fathering for single-earner Mexican-American families. Conversely, a strong parenting alliance was positively related to quality fathering. Thus, strengthening the inter-parental relationship that can support quality fathering.

The importance of the marital context considered, recent research indicates that for biological fathers regardless of their fathering status (residential, nonresidential, residential boyfriend, non-resident boyfriends, or non-resident friend), the fathers who had at least a romantic relationship with the mother were more involved with their children across types of involvement than those in no relationship, marital or otherwise.

Some research indicates that increased father involvement can have positive consequences for the marriage. For example, Snarey (2003) found that fathers who were involved in their children's lives were significantly more likely to enjoy a stable marriage at midlife. (Father's involvement accounted for 25% of the variance in the father's midlife marital success.) Other researchers have found a similar relationship between competent fathering behaviors and increased marital

satisfaction and marital stability in later life. Thus, overall, there is more evidence that paternal involvement has positive consequences for marriage than negative consequences.

### **1.3.2 Effects of Father's Absence on Child Development Outcomes**

Children, who live without their fathers, are, on average, more likely to have problems in school performance. For example, they are more likely to have lower scores on achievement tests, lower scores on intellectual ability and intelligence tests, have lower grade point averages, be academic underachievers working below grade level, have lower academic performance, have trouble-solving complex mathematical and puzzle tasks, or spend an average of 3.5 h less per week studying. They are more likely to drop out of school, twice as likely to repeat a grade, less likely to graduate from high school, more likely to complete fewer years of schooling, less likely to enroll in college, and more likely to be out of school and work or have poor labor attachments in their mid-20s.

Boys who live without their fathers consistently score lower on a variety of moral indexes, such as measures of internal moral judgment, guilt following transgressions, acceptance of blame, moral values, and rule conformity. Girls who live without their fathers are more likely to cheat, lie, and not feel sorry after misbehaving. Both boys and girls are less likely to be able to delay gratification, have poor impulse control over anger and sexual gratification, and have a weaker sense of right and wrong.

In father-absent homes, boys, on average, are more likely to be more unhappy, sad, depressed, dependent, and hyperactive. Girls who grow up in father-absent homes are, on average, more likely to become overly dependent and have internalizing problems such as anxiety and depression. For example, African-American daughters' perceptions of anger and alienation from fathers were related to greater emotional and behavioral problems for adolescents. In addition, a combination of low father contact and high levels of either anger or trust in the daughter-father relationship was related to particularly deleterious psychosocial outcomes for adolescent girls. Both boys and girls are more likely to develop disruptive or anxiety disorders, have conduct problems, suffer from psychological disorders, or commit suicide. However, father involvement partially mediates the effects of family structure on adolescent behavioral outcomes in that it reduced both the size and the significance of nearly all the statistically significant family structure effects on adolescent behavior suggesting that father involvement is a critical factor in predicting adolescent behavioral outcomes.

Children who live without their fathers are, on average, more likely to choose deviant peers, have trouble getting along with other children, be at higher risk for peer problems, and be more aggressive. Children who live without their fathers are, on average, at greater risk of being physically abused, of being harmed by physical neglect, or of suffering from emotional neglect.

Adolescents who live without their father are more likely to engage in greater and earlier sexual activity, are more likely to become pregnant as a teenager, or have a child outside of marriage. This elevated risk was not explained by familial, ecological, or personal disadvantages associated with father absence, and there was stronger and more consistent evidence of the effects of father absence on early sexual activity and teenage pregnancy than on other behavioral or mental health problems or academic achievement. More specifically, women whose parents separated between birth and six years old experienced twice the risk of early menstruation, more than four times the risk of early sexual intercourse, and two and a half times higher risk of early pregnancy when compared to women in intact families. Other research indicates similar trends.

Teens without fathers were twice as likely to be involved in early sexual activity and seven times more likely to get pregnant as an adolescent.

Likewise, early fatherhood, both during the teen years and early twenties, is much more likely to occur if young men did not grow up living with their own fathers. Young fathers were also less likely to be living with their children if their own fathers had not lived in residence with them throughout childhood. Overall, research indicates that being raised by a single mother raises the risk of teen pregnancy, marrying with less than a high school degree, and forming a marriage where both partners have less than a high school degree.

Children who live without their fathers are, on average, more likely to be poor with the US Bureau of the Census (2003) reporting that children in father-absent homes are five times more likely to be poor.

Overall, father absence has deleterious effects on a wide range of child development outcomes including health, social and emotional, and cognitive outcomes.

### **1.3.3 Benefits of Father Involvement for Fathers**

Men who are involved fathers feel more self-confident and effective as parents, find parenthood more satisfying, feel more intrinsically important to their child, and feel encouraged to be even more involved.

Spending time taking care of children provides fathers with opportunities to display affection and to nurture their children. Involved fathers are more likely to see their interactions with their children positively, be more attentive to their children's development, better understand, and be more accepting of their children,

and enjoy closer, richer father–child relationships. When fathers spend more time with their children, they are more likely to engage unsupportive interactions, regardless of negative mood.

Fathers who are involved in their children’s lives are more likely to exhibit greater psychosocial maturity, be more satisfied with their lives, feel less psychological distress and be more able to understand themselves, empathically understand others, and integrate their feelings in an ongoing way. Involved fathers report fewer accidental and premature deaths, less than average contact with the law, less substance abuse, fewer hospital admissions, and a greater sense of well-being overall (Pleck, 1997). Involved fathers are more likely to participate in the community, do more socializing, serve in civic or community leadership positions, and attend church more often.

Some evidence suggests that involved fathering is correlated with marital stability and is associated with marital satisfaction in midlife. Involved fathers are more likely to feel happily married ten or twenty years after the birth of their first child and be more connected to their family.

Overall, men who are involved fathers during early adulthood usually turn out to be good spouses, workers, and citizens at midlife. Despite some of the documented short-term costs of father involvement for men such as stress, increased work–family conflict, and decreased self-esteem, these costs do not appear to reduce overall satisfaction with parenthood. Long-term, high involvement has a modest, positive impact on occupational mobility, work success, career success, and the father’s societal generativity.

### 1.3.4 SAHFs Paternal Role Salience

One of the main areas in research on fatherhood focuses on parental identity (Mauer, Pleck, & Rane, 2001). Parental identity is to what degree an individual sees parenting behaviors as being important to themselves. Mauer (2001) examined parental identity in terms of how an individual’s spouse evaluates parental behaviors performed by that individual, which was termed partner’s reflected appraisals and how that individual perceives they are being evaluated by their spouse, which was termed perceived reflected appraisals. Mauer (2001) examined these evaluations in the context of traditional and non-traditional gender roles. For fathers, the traditional gender and parenting role was that of breadwinning, or working outside of the home and providing finances for the family. An important aspect of parental identity is a concept known as parental salience. Each individual has many different identities; these identities occupy positions on a hierarchy, with certain identities being more important than others. Parental salience is the commitment the individual has to their parental identity. When parental salience is high,

an individual will actually seek out situations that will allow them to act out their parental identity.

Bruce and Fox (1999) found that father role salience was positively correlated with father involvement, suggesting that men who were high on father role salience also placed their father identity high on their hierarchies of identities. Nonetheless, an area of research into fatherhood focuses on how involved the fathers are in direct, hands-on caretaking activities of their children. Wood and Repetti (2004) reported that gender and age of the children and mothers hours of employment outside of the home all factored into how much time fathers spent engaged in childcare activities. The higher the percentage of male children in the family and the older the youngest child was in the family, the more time spent by fathers in childcare activities.

In addition, the more hours the mother spent working outside of the home, the more time the father spent on childcare. Interestingly, fathers also engaged in more childcare activities on the weekends (Bureau of Labor Statistics, 2011), suggesting that when work was not a priority, as it is during the week, fathers were more involved with their children. Although many fathers spend less time with their children than mothers, research shows that children whose fathers engage in a high proportion of childcare have greater cognitive skills, better social adjustment, and less traditional attitudes about gender roles.

These children also have higher self-esteem, fewer behavioral problems, and less psychological distress. Interestingly, the more childcare fathers perform, the healthier they are. It would seem that father involvement in childcare is beneficial for both children and fathers.

Fathers' knowledge about child development is associated with positive engagement, though not time in routine care. Furthermore, numerous interventions designed to promote parenting skills among fathers have increased. In a recent example using a quasi-experimental, pretest-posttest design, traditional head-start parent involvement activities were adapted specifically for fathers. Fathers in the treatment group showed increased confidence in their parenting and those who received a high dosage of the intervention showed significant increases in engagement and accessibility, as well as increased support of their child's learning, in an 8-month follow-up.

One important limitation of most available studies of the association between positive paternal involvement and child outcomes is that maternal involvement is not taken into consideration. One longitudinal study conducted by National Statistics on Family and Home life in Great Britain published in 2002 yielded that positive paternal engagement was associated with lower frequency of later behavior problems among boys, as well as among children whom parents initially reported as difficult to raise, controlling maternal involvement. In a large sample, of British adolescents, positive engagement by fathers contributed significantly and independently to positive school attitudes. Taking this additional analysis into account, 10 of 14 studies controlling for maternal involvement and employing different source data thus found positive correlates of paternal involvement. Yeung, Duncan and Hill's (2000) longitudinal analysis using PSID found that fathers' attitudes,

church attendance, and risk avoidance when their children were young predicted their children's education, wage rate, and avoidance of non-marital births as young adults, with mothers' characteristics and behaviors as well as sociodemographic factors controlled.

There is very little discussion of Southeast Asian fathers' roles in the literature. Anecdotal writings describe Southeast Asian fathers as the head of the household, the chief provider to the family and child disciplinarian. Nguyen (1994) conducted an ethnographic study observing several villages in Laos which found that although mothers devoted more time caring for the children, fathers were the head of the household and made most decisions concerning the family's finances, children's health and schooling. Kibria's (1993) anthropological interviews in twelve immigrants Vietnamese households found that both men and women agreed that men assumed the primary breadwinning role in families. However, there is some evidence indicating that the roles and responsibilities of Southeast Asian fathers have changed after their post-migration resettlement. For example, Lynch and Richards (1997) used a qualitative approach to study ten families (six Cambodian and four Vietnamese) by examining the construct of family identity; they found that the primary breadwinner role, usually performed by the father, changed in the USA. Respondents in the study reported that economic hardship requires the breadwinner role to be divided between two parents and other family members, especially between parents and older children. There were even times that role reversals occurred in which the father stayed at home and the mother became the breadwinner. Xiong (2001) reported in his study with 10 Hmong families that role reversal in USA created more active participation of the father in their children's day-to-day activities than when he was the sole breadwinner of the family.

Evidence from intra-cultural and cross-cultural research also reveals how parents' work roles affect maternal and paternal involvement with children. For example, the AKA of Central Africa and the Batek of Malaysia exhibit egalitarian and parental relationships as well as similar and often shared work roles. AKA and Batek fathers are involved with their children both in their villages and homes, and in their work tasks, where children often work alongside their fathers. According to Hewlett (1992), the shared economic activities of AKA and Batek fathers and mothers lead to greater daily interaction between fathers and children. This interaction often leads to paternal familiarity with a broad range of children's needs, and thus increased opportunities to practice and master childrearing skills.

In the Philippines, the implications for Filipino parents' attributions are less explicit. Parents' beliefs are rooted, in part, in adults' conceptions of the nature of children. In a qualitative study on concepts of children and parenting, 74 mothers and 13 fathers expressed that children do not have a "mind of their own"; that is, they have yet to develop reason and an understanding of reality, are impulsive and demand immediate gratification, and possess a natural penchant for mischief. These beliefs legitimize parental authority and children's subservience. Indeed, if a child does grow up to be "good," then this is primarily attributed to proper discipline,

monitoring, and the teaching of values, according to Filipino mothers. In Durbrow's (2001) cross-national study of Filipino, American, and Caribbean mothers, only 26% of Filipino mothers believed that competence is inherent in the nature of the child (although this is more than the number of U.S. and Caribbean mothers who thought the same).

Although the discourse on Filipino sociocultural and family values has been largely consistent, recent demographic trends suggest that the Filipino family is changing. Increasing numbers of women in the labor force, single-parent homes, overseas migration, and other influences of globalization may portend a shift in parenting beliefs and practices. Medina (2001) observed that Filipino parents "are adapting gradually to the changing times by shifting their childrearing orientation from dependency to independence, from restrictiveness to permissiveness, from extreme control to autonomy, and from authoritarianism to liberalism and individuality." However, there are few empirical data to support this assertion, and the current study examines, in part, contemporary Filipino parents' cognitions.

### 1.3.5 SAHFs Subjective Well-Being

Men who embrace the stay-at-home dad role are carving a new niche in a culture that traditionally views masculinity in a hegemonic patriarchal fashion, one in which masculinity is largely defined by career and paycheck. This traditional tie of masculinity with finances and power also creates an inner dissonance for SAHDs, since they withdraw from the workforce as their primary function. Additionally, perceived social regard of SAHFs is lowest when compared to working fathers, working mothers, and stay-at-home moms (Brescoll & Uhlmann, 2005). Benjamin (1988) refers to the necessity of recognition from others to define self and that this negative reflection can create a social identity crisis.

Yet there are SAHFs, who have been in their role for more than a year, and who talk of not only how they enjoy the role, but also of altering career or work-from-home plans to accommodate their children's needs. These men are comfortable enough with their role to be interviewed on television or by newspaper reporters. These are men who have been able to establish a sense of well-being. This is an important hurdle, as one of three cornerstones to quality of life. In a utilitarian mindset, economic, social, and subjective (personal) well-being constitute the good life.

Establishing Subjective Well-Being (SWB) is foundational to sustaining the stay-at-home dad trend. It is a cornerstone over which individuals have considerable control. Diener argues that well-being is a unique answer for each individual—a sense of subjective well-being determined by—people's own evaluations of their own lives [as developed by the components of life satisfaction... satisfaction with important domains... positive affect... and low levels of negative affect (2000)].



Life satisfaction is a higher order of magnitude than satisfaction with important domains, because it is overall satisfaction. This is different from satisfaction of important domains, which is not so holistic. Diener posits that some people have a buoyant SWB; they adapt to changing circumstances faster than others due to their temperament, and by adjusting their goals and expectations.

Essentially, as the U.S. Census Data in 2004 points out in a national survey of more than 200 SAHFs and revealed that those who reported receiving support from their mate, family, and friends also experienced high levels of psychological well-being and relationship satisfaction. Fathers who said they felt confident about their parenting skills seemed much happier. Of those, the ones who encouraged their children to develop independence and who felt comfortable being nurturing and affectionate with the children expressed the highest degree of satisfaction.

Perhaps unsurprisingly, given Inglehart and Baker's work published in (2000), worldwide results showed higher subjective well-being in relation to fulfillment of needs (10–23% of total variance, globally, and for all needs taken together) while basic needs fulfillment (food and shelter), again globally, accounted for nearly two-thirds of that variance. It was the deeper levels of the investigation that illustrated some of the more dynamic aspects of Maslow's hierarchy, however. Life evaluations (on a scale of one to ten) were most strongly predicted by basic needs fulfillment (food and shelter) in comparison to the other needs, while positive feelings were most strongly predicted by respect and social needs.

Negative feelings, meanwhile, were best predicted by basic needs, respect, and autonomy. Adding income to these considerations more than halved the proportion of explained variance related to basic needs, and Tay and Diener wrote, "This implies that a substantial part of the variance between basic needs and life evaluations is attributable to income; higher income is associated with life evaluations in part through the fulfillment of basic needs."

Tay and Diener then explored whether the order of Maslow's pyramid (basic needs, safety, social, respect, mastery, and autonomy) was reflected by the data and found that basic and safety needs were tied to country-level conditions while psychological needs were more strongly related to individual-level conditions. While the construction of Maslow's hierarchy suggests the needs lower on the pyramid must be completed in full before satisfaction of the next need can begin, Tay and Diener's research showed instead a less precise and more dynamic fulfillment of needs. Although the basic structure of the pyramid, and an individual's progress through it in the fulfillment of needs, remained intact, Tay and Diener showed that in some cases, higher psychological needs were being fulfilled even though country-based basic needs had not been fully met (p. 361), thereby enabling people in poorer countries, where basic needs may go permanently unmet, to still fulfill higher needs such as respect. For the psychological needs, however, without consideration of the first-level basic needs, Maslow's pyramid held up, for the most part, but with longer acquisition times for the fulfillment of each need while ascending the hierarchy. "This suggests Maslow's ordering, in which the fulfillment of lower and higher psychosocial needs have a widening gap—lower needs are fulfilled faster relative to higher needs," they wrote.

## 2 Method

### Research Design

The researcher adopted the sequential exploratory design since it focuses on the quantitative and qualitative questions that call for real-life contextual understandings, multi-level perspectives, and cultural influences. Essentially, the researcher will utilize the quantitative data as basis for assessment, interpretation, and application of quantifiable results, such as levels of marital satisfaction and correlate with levels of subjective well-being among SAHFs. Thus, gathered data will serve as the cool cumulative analysis. While the qualitative approach through one-on-one interview will allow the researcher to gather deeper and more expansive viable results in the form of qualitative data.

### Participants and Sampling Procedure

This study was conducted in Bgy. 50, 53, 54, 55, and 56 all comprising the Zone 7 of the Sta. Clara District, Pasay City, with a total combined 314 households. Forty heads of the households were reported belonging to the SAHFs as reported by the Pasay City Social Welfare Department through the Pantawid Pamilyang Program registered in 2012 by the respective Zone Manager per Barangay. These 40 head of the households, who were identified as being a SAHF served as the main respondents for this study and answered the questionnaires along with undergoing the one-on-one interview with the researcher. The distributions of the participants are such: 8 SAHFs (Bgy.50), 10 SAHFs (Bgy.53), 8 SAHFs (Bgy.54), 7 SAHFs (Bgy.55), and 7 SAHFs (Bgy.56). The primary breadwinner for those 40 SAHFs is the wife whom 15 wives were reported as factory workers for RC Cola Pasay City Distribution Center in Bgy.50, 10 wives are employed as Street sweepers, 10 wives are employed as sales clerk in various stalls in the public market, and 5 wives are employed as part-time helpers. Like other districts in Pasay City, Sta. Clara district provides the following amenities for all its surrounding Barangays: Sta. Clara Parish Church, Pasay City General Hospital, Pasay City North High School, Efifanio Delos Santos Elementary School, Padre Burgos Elementary School, Pasay Public Market, Savemore Grocery Store, Puregold Grocery Store and along with various sari-sari stores and internet kiosks.

### Research Instruments

The following tests were administered in order to gather quantitative data from the participants: (Prior permission from the author of each test was given and secured for the use in this study before any administration.) Informed consent was also sought and given by each participant before answering any questions or instruments from the researcher.

**Marital Satisfaction** will be measured by the “Marriage Quiz” by Dr. Nathan Cobb which assesses a husband’s ability to handle conflict resolution within the marriage, views on partnership: sub-variables (Joint Decision Making, Couple

Identity, Mutual Influence), support: sub-variables (Standing Beside, Instrumental Help, Relationship Priority), and chemistry: sub-variables (Physical Intimacy, Romance, Conversation).

**Parental Salience** will be measured by the “Parental Stress Scale” by Dr. Judy Berry, which contains 18 items representing pleasure or positive themes of parenthood (emotional benefits, self-enrichment, personal development) and negative components (demands on resources, opportunity costs, and restrictions). Respondents are asked to agree or disagree with items in terms of their typical relationship with their child or children and to rate each item on a five-point scale. Higher scores on the scale indicate greater stress. Results of these tests will also be the basis for the “Subjective Well-Being” of each respondent.

The Parental Stress Scale demonstrated satisfactory levels of internal reliability (0.83), and test–retest reliability (0.81). The scale demonstrated satisfactory convergent validity with various measures of stress, emotion, and role satisfaction, including perceived stress, work/family stress, loneliness, anxiety, guilt, marital satisfaction, marital commitment, job satisfaction, and social support. Discriminant analyses demonstrated the ability of the scale to discriminate between parents of typically developing children and parents of children with both developmental and behavioral problems.

### 3 Results

#### Profile of the Participants

Table 1 presents the respondents’ age, number of years of marriage, educational attainment, number of children, presence of pre-school children, and length of being a stay-at-home father (SAHF).

**Age.** It can be seen that out of 40 participants; 25% of the respondents’ surveyed belonged to the 20–29 years old group which is also considered as the youngest age grouping. The breakdowns of the other age groups for the respondents are as follows: 30–39 years at 12%, 40–49 at 35% representing the largest age grouping for the respondents. 28% of the respondents belong to the age group of 50–59 years. This means that majority of the respondents are a lot older at the time of being surveyed as a stay-at-home father.

**Years of Marriage.** Based on the findings, the data shows that out of 40 participants; 3 participants or 7% belongs to couples who had been married for 1–3 years. These 3 participants happen to be the youngest SAHFs surveyed at the age of 21. Also, these 3 individuals also had at least one child whose age is at least 1–1½ years of age. Their wives belong to the group of Barangay sweepers, which became the reason why they opted to SAHF since they did not finished high school and have no formal education. Their family is also listed as the Pantawid Familya recipients of DSWD within their Barangay, which is contributing a meager monthly

**Table 1** Profile of the participants

Variable	Frequency	Percentage (%)		
<b>A. Age</b>				
20–29	10	25		
30–39	5	12		
40–49	14	35		
50–59	11	28		
Total	40	100		
<b>B. Years of marriage</b>				
1–3	3	7		
4–6	3	7		
7–10	5	13		
11–13	4	10		
14–17	8	20		
18–21	9	23		
22–25	5	13		
25+	3	7		
Total	40	100		
<b>C. Educational attainment</b>				
Grade School	1	2		
Junior High School	1	2		
Senior High School	9	23		
2 years College	15	38		
College Degree	14	35		
Total	40	100		
<b>D. Number of children</b>				
1–2	22	55		
3–4	10	25		
5–6	7	18		
7	1	2		
Total	40	100		
<b>E. Presence of pre-school</b>				
Children	Boys	Girls	Boys	Girls
Less than 1 year old	6	12	15	30
1 year–3 years old	16	8	45	20
	*Twin girls (1½ years old)			
<b>F. Length of being a SAHF</b>				
1–6 months	13	33		
7–11 months	9	22		
1–3 years	7	18		
4–6 years	3	7		

(continued)

**Table 1** (continued)

Variable	Frequency	Percentage (%)
7–9 years	3	7
10+ years	5	13
Total	40	100

income for the SAHFs. The other length of SAHFs marriages is also listed as follows: 3 participants or 7% reported being married 4–6 years, 5 participants or 13% also reported being married for 7–10 years, while 4 participants or 10% reported being married for 11–13 years. The highest number of participants belongs to the grouping of 14–17 years of marriage which are 8 participants or 20% and the grouping of 18–21 years of marriage being 9 participants or at 23%. The data means that more couples who have been married for more than 10 years report the highest number of recorded stay-at-home fathers.

**Educational Attainment.** As reflected in the data, the scores yielded that 2% of SAHFs was elementary graduate or was a junior high school graduate and 9 or 23% who actually completed high school. The highest numbers of respondents were actually 15 or 38% SAHFs who actually completed a 2-year college course while 14 or 35% SAHFs actually graduated from college and completed their degree. Due to the recent economic downturn, in spite of having a college degree was not even enough for them to be qualified for any job.

The corresponding one-on-one interview yielded also that there was skills mismatch between what the SAHFs achieved in their college degree to what the actual industry needed, which further complicated their ability to find employment parallel to their degree.

**Number of Children.** As gleaned from the data, majority of the respondents comprising 55% have 1–2 children and represented the highest frequency among the respondents reporting this number of children. During the corresponding one-on-one interview, it was later revealed that all the respondents are devout Catholics and adhered to family planning teachings of the Catholic Church which reflects the conservative number of having children. 25% of SAHFs reported having 3–4 children and 18% also reported having either 5 or 6 children. The lowest frequency of having 7 children was actually reported by only 1 SAHF.

**Presence of Pre-School Children.** As manifested in the data, it can be seen that 15% are boys and 30% are girls who are less than 1 year old as being the children of the SAHFs. The highest children were reported at 45% boys who belong to the 1–3 years old. There were also 20% children who are girls belonging to 1–3 years old. It was during the actual survey that it was learnt that one SAHF is caring for 1½-year-old twin girls. The results substantiate the different and difficult challenge that poses a SAHF caring for pre-school children.

**Length of Being a SAHF.** As indicated in the data, 33% of the respondents which is also the highest frequency reported having been only a SAHF at 1–6 months. In ranking order, 22% reported 7–11 months, 18% reported 1–3 years,

7% reported 4–6 years, and 7% also reported 7–9 years as being a SAHF. 13% signified that they had been a SAHF for more than a decade.

### Participants' Levels of Marital Satisfaction

Table 2 shows the mean, standard deviation, and interpretation of the SAHFs level of marital satisfaction in terms of partnership, support, and chemistry. Each participant is to rate their responses from a scale of: “1–2 Very Unhappy, 3–4 Unhappy, 5–6 Neutral, 7–8 Happy, and 9–10 Very Happy”. The gathered results yielded an overall mean score of 7.69 for the domain “*Partnership*” with a std. of 0.0577 and as its sub-variables as follows: **Joint decision making** with the mean of 7.72 this is the total averaged of all the SAHFs’ responses who chose being happy in their joint decision making abilities with their wives. It was reflected from the one-on-one interview that when it comes to major decisions, the husband still waits and values the responses of their wives. They often console each other in the evening when their children are asleep. **Couple identity** was also reported as being rated at 7 which is being happy by the SAHFs. SAHFs also reflected during the interview that in spite of their reversed roles that in each other, they draw strength and each one compliments the other. Sharing equal power through joint decision making and feeling complimentary to each other made the SAHFs rate 7 as their chosen response in regards to **mutual influence**. When added together, as a husband and wife, the SAHFs’ perception of their situation is that they are “Happy” as a “**Partnership**” in their marriage. An overall score of 7.80 with a std. 0.1802 is

**Table 2** Mean and standard deviation of the SAHFs levels of marital satisfaction

Level of marital satisfaction	Mean	Standard deviation	Interpretation of SAHFs
<i>Partnership</i>			
Joint decision making	7.72	0.1127	Happy
Couple identity	7.72	0.1127	Happy
Mutual influence	7.62	0.1086	Happy
Overall for partnership	7.69	0.0577	Happy
<i>Support</i>			
Standing beside	7.95	0.1979	Happy
Instrumental help	7.85	0.1875	Happy
Relationship priority	7.72	0.1127	Happy
Overall for support	7.80	0.1802	Happy
<i>Chemistry</i>			
Physical intimacy	7.82	0.1812	Happy
Romance	7.65	0.1097	Happy
Enrichment	7.90	0.1970	Happy
Overall for chemistry	7.79	0.1282	Happy
Overall (Partnership, Support, and Chemistry)	7.76	0.060828	Happy

considered as the highest being reported by the SAHFs is, “*Support*” as being “Happy.” **Standing Beside** yielded the highest mean of 7.95 which entails that they are together as one in facing the tough times ahead. One SAHF reflected how he appreciates his wife remaining strong for the family especially when he was laid off from work after having worked for the past 5 years. He cherished how his wife consoled him when he just felt desolate regarding his inability to not provide for his family. **Instrumental Help** also rated at a mean of 7.85, second highest within this domain. It entails how the SAHFs’ respondents value his wife’s contribution to the betterment of the family welfare. The SAHFs do not see his wife as a mere competition for employment but rather as a partner who is contributing to daily needs of the family, regardless if he was the one working or if it was his wife, as a sentiment expressed by one SAHF respondent. SAHFs recognize also how his wife puts the needs of their family ahead of their own. An endearing quality which a SAHF shared that made him answer 7 in the questionnaire because he was just happy with his wife’s herald **priority which is their relationship** and family. For the domain of “**Support**,” the SAHFs again yielded a Happy interpretation based on the above breakdown of mean average results in the three of its domains: standing beside, instrumental help, and relationship priority. In the twenty-first century, the evolution of chemistry as it pertains to man is now known as, “**Human Chemical Thermodynamics**” ([www.eoht.com](http://www.eoht.com)). Based on the Marriage quiz, it still utilizes the word “*Chemistry*”, the SAHFs who participated in this study manifested an overall rating of 7.79 mean with a 0.1282; it entails that their attraction to their wives had undergone a transcendental molecular reaffirmation rather than just mere physical infatuation, as the term Chemical Thermodynamics implies. **Physical intimacy** was operational defined in this study in terms of physical and sexual attraction to their partners. Respondents for this study indicated a rating of 7.82 which entails that there is a level of contentment and happy demeanor in regards to physical and sexual attraction to their wives. Several SAHFs indicated that they rated 7 on the questionnaire because as the months and years progresses in their marriage, their sense of fulfillment for their wives continues to increase with time. **Romance** or simply making time to be with each other was rated second under the domain of Chemistry with a mean of 7.65. As one SAHF was observed, he takes time everyday to bring his wife lunch at the RC Factory and utilizes this opportunity as a time to make her feel wanted and special. A rating of 7.90 being the highest under the domain of Chemistry was rated by the SAHFs for “enrichment.” The SAHFs manifested that the time spent to be together, even with just watching television at home and sitting next to each other gives a feeling of self-fulfillment for both of them leading to a happy rating of **enrichment**. As a whole, the domain for chemistry paves the way for the participants to give it an overall rating of Happy demeanor.

### Participants’ Levels of Paternal Salience

Table 3 shows the mean, standard deviation, and interpretation of the participants’ paternal salience. The results yielded a mean of 3.43 with a STD. of 0.3455 which means that the participants are basing their responses per question and/or per situation. It does not mean that they overall agree nor disagree that their being a SAHF is a stressful task. Rather, they based their responses per situation that arises and a level of maturity with acceptance precipitates. In turn, paternal salience becomes the dominant experiences of each SAHF by looking at their day-to-day experiences rather than basing their perceptions and feelings as a whole concept of being a SAHF. These are further substantiated during the one-on-one interview sessions with each SAHF. It is congruent with their yielded results of being happily satisfied with their marriage and that of their spouses’ role as a breadwinner.

### Significant Relationship Between Levels of Marital Satisfaction and Levels of Paternal Salience

Table 4 shows the mean, standard deviation, and interpretation of the participants’ levels of marital satisfaction and levels of paternal salience in terms of its significant relationship. The results revealed a STD of 0.01323 which means that marital satisfaction does not influence paternal salience.

It yields that the participants are satisfied with their marriage and the role of their wife as a breadwinner. SAHFs are also accepting of their role as “bread makers” rather than “breadwinners.” Several participants have responded that they value their wife as an individual and greatly acknowledge her being employed as a positive force within their family, thus rating the questionnaire given with a “Happy” and committed relationship. In terms of Standing by their wives, the respondents also shared that they are proud of their wives and see as a success for their own selves. Physical intimacy becomes a higher level of mutuality as they continue to find small ways such as watching television to be together. Their levels of intimacy are just not being satisfied sexually, but being gratified, together as a couple. Imparting good moral values becomes a rich ingredient in which the participants want to impart to their children as their own form of heritage and legacy. In all, the overall yielded results leads to a satisfaction within the SAHFs marriage.

**Table 3** Mean and standard deviation of the SAHFs levels of paternal salience

Levels of paternal salience	Mean	Standard deviation	Interpretation
	3.4375	0.345501	Undecided

**Table 4** Correlation of the SAHFs levels of marital satisfaction and levels of paternal salience

Relationship between levels of marital satisfaction and levels of paternal salience	df	f-ratio	r	Decision
	78	13.94640	0.01323	Accept null Hypothesis



The results also showed that when correlated, as the respondents rated a grade of 7–10 in their levels of marital satisfaction which is being happy, then the levels of paternal salience remains at a varied score of 3 which shows that they are not experiencing stress in their daily childrearing.

## **Lived Experiences Drawn from One-on-One Interviews with SAHFs**

### **Partnership and Marriage**

Participants of this study viewed marital satisfaction in terms of the partnership, support, and chemistry. The following were the responses of the participants in regard to viewpoints toward the main domain of partnership in relationship to his wife:

Definitely yes, I love my wife and I feel complete when I'm with her. I love her unconditionally. I enjoy spending my time with her. Even if we have work we will make a point that we go out watching movies or dining at a restaurant or just a walk with my wife. (SAHF 1)

We are happy, because my wife is very understanding. (SAHF 2)

Yes. As a couple, it is a duty to spend quality time. (SAHF 3)

Yes, I enjoy everything about my wife. Spending time with her is awesome. (SAHF 4)

We are happy, because my wife is very understanding. (SAHF 5)

Yes. I am enjoying my wife's way of being and I always enjoy spending time with her. (SAHF 6)

Every weekend I want to be with her because it is my one way to connect ourselves after a lot of doings. (SAHF 7)

Spending time with my wife makes me very happy. (SAHF 8)

As the evidence suggests, SAHFs participants reported that they were happy in their status as a married couple, especially in the area of partnership. Thus, fathers' perceived investments in their parental roles and actual levels of paternal involvement are moderated by mothers' beliefs about the role of the father.

### **Chemistry, Sexuality, and Marriage**

The respondents of the study expressed their opinions on being sexually attracted to their wives, as a form of intimacy through the following statements:

Of course it is, being intimate with your wife. (SAHF 1)

We satisfy each other, o.k. (SAHF 2)

Yes, I feel sexually attracted to my wife, because I really love her. (SAHF 3)

Of course, we are always satisfied. (SAHF 4)

Yes, when you love your wife and vice versa. (SAHF 5)

We find time to be with each other physically. (SAHF 6)

Yes, and there is a satisfaction after. (SAHF 7)

Yes, I find my wife beautiful and sexy. (SAHF 8)

As the evidence manifested, the SAHFs reported positive human chemical thermodynamics. The importance of the marital context considered, recent research indicates that for biological fathers regardless of their fathering status (residential, nonresidential, residential boyfriend, non-resident boyfriends, or non-resident friend), the fathers who had at least a romantic relationship with the mother were more involved with their children across types of involvement than those in no relationship, marital or otherwise.

### **Childrearing Practices and Paternal Salience**

As many stay-at-home mothers can attest, the days could drag on. The dad was not sure what they should be doing. Some talked of being overwhelmed at times and facing difficult moments when their babies were screaming and would not stop. At other times, they felt bored, sometimes stressed, sometimes alone and socially isolated.

Conversely, the stay-at-home fathers who participated in this study disputed the above statements by reporting positive experiences with their children, such as:

As a father and a dad it is my willingness for my children to grow and have an upbringing that bears good words and spiritual foundation. As a Catholic it is my duty to teach my son. (SAHF 1)

Yes, we teach our son good values. (SAHF 2)

As husband and wife for our kids we still teach them good values in life and we practice it in our home. (SAHF 3)

Yes, because I want them to grow up with a good values. (SAHF 4)

Yes. Family will always be the foundation of any individuals moral. (SAHF 5)

Yes, that can guide them when they have their own family. (SAHF 5)

Yes, we both teach what moral virtues we have, and we are always saying to them that they need to have good moral and right conduct for her to have a happy and peaceful life. (SAHF 6)

Not always, there are some characteristics that we don't want them to follow, i.e., making them to do/help out in house chores. (SAHF 7)

As the evidence concludes, SAHFs do not treat childrearing as a negative hindrance but rather a positive fulfilling experience in which he must actively partake as a parent. Infants of highly involved fathers, as measured by amount of interaction, including higher levels of play and caregiving activities, are more cognitively competent at 6 months and score higher on the Bayley Scales of Infant Development. By one year, they continue to have higher cognitive functioning, are better problem solvers as toddlers, and have higher IQ's by age three. When compared with mothers, fathers' talk with toddlers is characterized by more (e.g., "what," "where," etc.) questions, which require children to assume more communicative responsibility in the interaction. This encouraged toddlers to talk more, use more diverse vocabulary, and produce longer utterances when interacting with their fathers (Rowe, Cocker, & Pan, 2004).

## 4 Conclusion

Overall majority profile of the respondents are a lot older at the time of being surveyed as a stay-at-home father. The data means that more couples who have been married for more than 10 years report the highest number of recorded stay-at-home fathers. Most of the participants are in reality that due to economic constraints their number of children agrees with their financial life status. The SAHF who reported having seven children was observed having the biggest problem in terms of financial support since his youngest child is only 3 years of age and his wife is only a minimum wage earner at the nearby RC Cola factory. The amount of everyday stress in caring for these children is quite a challenge, especially for pre-school children. Yet, in spite of the daily rigors, SAHFs do not report this scenario as being a major struggle. Due to high work turnover, it was also decided that wives will now continue to work full-time while the fathers will be the one to assume the household daily responsibilities.

SAHFs report that they are reporting “Happy” with their marriage in terms of their spouses: partnership, support, and chemistry.

Participants reported that they either agree or disagree in terms of experiencing parental stress; rather their responses are based on per situation that arises and a level of maturity precipitates. In turn, paternal salience becomes the dominant experiences of each SAHF by looking at their day-to-day experiences rather than basing their perceptions and feelings as a whole concept of being a SAHF. These are further substantiated during the one-on-one interview sessions with each SAHF. It is congruent with their yielded results of being happily satisfied with their marriage and that of their spouses’ role as a breadwinner.

The participants are satisfied with their marriage and the role of their wife as a breadwinner. SAHFs are also accepting of their role as “bread makers” rather than “breadwinners.” The results also showed that when correlated, as the respondents rated a grade of 7–10 in their levels of marital satisfaction which is being happy, then the levels of paternal salience remain at a varied score of 3 which shows that they are not experiencing stress in their daily childrearing.

Live experiences drawn from one-on-one interviews with SAHFs indicate that “Psychosocial Interventions” will be needed to formulate as a support unit for the SAHFs as they continue to assume their everyday responsibilities.

## 5 Implications

This study has generated interesting insights and perspectives relative to the assessment of the socio-evolution among selected Filipino SAHFs. The participants had expressed their significant experiences being a SAHF. The quantitative and qualitative data of the respondents yielded positive results, yet to maintain its sustainability; however, there is a felt need to:

- Enhance the quality of marital satisfaction by offering joint activities between the couples as a “husband and wife.” Often when the wife comes home from work, their time at home now get preoccupied with catching up on the daily activities of their children. This can be done through the offering of the Modular Program in Commercial Cooking in which both husband and wife can participate.
- Create activities that will increase positive acceptance of the participants’ paternal role salience. Activities such as creating a support network for other SAHFs to assist each other if there is a need to do any babysitting to give a much-needed reprieve for those that have especially the presence of pre-school children. A much-needed program in the barangay levels.
- Conceptualize a program of intervention that will also help create positive regards to a child’s emotional well-being. One must not just realize the activities of the SAHF but also the live experiences that children goes through each day with their father.
- Offer a psychosocial intervention that will deepen the relationship of between the SAHF and his wife. A creative psychosocial intervention that will also enhance positive self-esteem for the husband and promote better childrearing practices. An innovative psychosocial intervention that will contain spirituality as a lesson for continual strengthening of the family life.
- Conceptualize, create, and implement psychosocial programs in which the Local Government Unit will mobilize its barangay to create support activities for each stay-at-home father.

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# Two Moms in a Home: Lived Experiences of Children with Same-Sex Parents

Lorita Ramirez Mendoza

**Abstract** This qualitative study aimed to provide a comprehensive overview of the experiences of children whose parents are of the same sex. The interview conducted to five (5) children and five (5) family members yielded significant and interesting revelations as to children’s lived experiences. The majority of the children view their families as happy families—atypical family headed by responsible parents. In terms of the primary participants’ feelings about their current parents, two extreme feelings—positive and negative feelings—were revealed. Moreover, children believed that they have intimate relationships with both parents and appear that each family member understands one another and the family setup in general. Children’s major challenges are related to their social lives, biological fathers and their relatives, and about the current parents, and the family structure itself. Lastly, factors as to why children are satisfied and dissatisfied with their “two moms”, advantages and disadvantages of having same-sex parents, and their learning’s and realizations were also reported. Practitioners in the counseling profession, most specifically guidance counselors, are hoped to derive inputs from this study on identifying areas where same-sex parented families can be better supported, particularly the children. Likewise, this could also serve as a benchmark in developing a guidance program intended for children raised by same-sex parents.

**Keywords** Family · Family structure · Same-sex parents · Children Parenting

## 1 Introduction

Family serves as an integral part of one’s growth and development. As a matter of fact, a number of studies have highlighted the importance and role of the family in different domains of life particularly among adolescents such as occupational

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aspirations (Eccles, Jodl, Malanchuk, Michael, & Sameroff, 2001), promotion of substance use (Jimenes-Iglesias, Garcia-Moya, Moreno, & Rivera, 2013), and aggression (Farrell & Pugh, 2012). The constant changes in the society made a great impact on everyone which excuses no one, not even the basic unit of its own—the family. The family should be abreast of different changes in order to survive the different challenges and demands that the society has to offer. With this, it will be able to serve its purpose and eventually help the society in general to become as effective and as productive as possible.

In addition, the changes in roles and responsibilities (Madlambayan, 2013) and family structure (Alderson & Boon, 2009; Rawsthorne, 2009) of the family members are just few of the major changes they need to face. Same-sex parented families in which both women or both men living together under one roof with the biological children of one half of the couple is another imperative and controversial transformation that needs to be addressed in this modern time. Most, if not all, of this family setup is composed of the biological children of one half of the couple from their previous heterosexual relationship (Gregory & Ray, 2001). The saddest part is that they are not fully acknowledged and accepted in different countries most especially in the Philippines (Punay, 2014).

In this non-traditional family structure, a number of concerns, issues, and challenges have been raised by members of the family who are very much affected in a variety of ways. Alderson and Boon (2009) reported that some of the challenges experienced by this kind of relationship are *homophobia, heterosexism, and economic disadvantage*. On the other hand, *enhanced emotional intimacy (e.g., enhanced sexual satisfaction), greater freedom and autonomy (e.g., greater sexual freedom), and more equal sharing of responsibilities* are the benefits that one can get out of this relationship. They also added that children in same-sex parented families may experience problems and advantages from being raised by the said parents. However, the researchers failed to identify these problems and advantages of being children of same-sex parented families. Furthermore, children from heterosexual families may experience *breakdown of relationships* between them and their biological mothers' new partners (Rawsthorne, 2009). As for the parents of these families, they are very much concerned with the unending prejudice and bullying that their children are experiencing. This drastic change in the lives of the children may be traumatic and leave a great impact on family relationships (De Vaus & Gray as cited in Rawsthorne, 2009).

Other researchers attempted to compare the experiences of children raised by same-sex parents and those who were raised by opposite-sex parents. Linville and O'Neil (n.d.) reported that various aspects such as emotional functioning, sexual orientation, stigmatisation, gender role behavior, behavioral adjustment, gender identity, learning, and grade point averages (GPAs) do not differ between the said groups. In some aspects, these results were supported by Crouch, Davis, McNair, Power, and Waters (2014), where no significant difference was found between same-sex attracted parents and opposite-sex attracted parents in terms of children's health and well-being. However, the experiences of the former in terms of stigmas related to parents' relationships have been highly evident. With this, children may

be affected as well in terms of their mental and emotional well-being. Additionally, Shechter, Schechter, Slone, and Lobel (2011) cross-examined children's adjustment (internalizing and externalizing behaviors), social behavior (aggressive behavior, prosocial-antisocial behavior, and loneliness) and perceived competence (cognitive competence, physical competence, maternal acceptance and peer acceptance) among four family types: single lesbian mother, two-mother lesbian families, single heterosexual mothers and two-parent heterosexual mothers. It was reported that no difference was found among the children's perceived competence across four family types. However, in terms of the main participants' externalizing behaviors (aggression and disruptive behaviors), a higher level was reported among children with single mothers. On the other hand, children with lesbian mothers reported lower levels of antisocial behavior and less feeling of loneliness as compared with children of heterosexual families. In fact, children in families headed by lesbian mothers reported less feeling of loneliness.

Furthermore, it is imperative to check the feelings, perspectives, and ideas of the family members regarding the family where they belong. In a lesbian-parented family, Brown et al. (2006) asked children as to how they define and describe their family. Surprising and interesting answers were gathered as they answered this simple yet meaningful question from the researcher. Some of them described family as "*idealized version of two loving and caring parents*", "*the one you see more often*", and "*normal family*". Various factors that contribute on how children defined their family were identified as follows: *social contact, biological genealogy, frequency of contact, family pets, and functional roles of being cared for and being loved, supported and respected by, and knowing and trusting friends or family*. It is important to note that children's failure to publicly introduce their family attribute to the fear of being bullied and teased and of homophobia. Surprisingly, children (aged 13–16) approaching the teenage years or the adolescence stage felt more awkward often as they deal with their parents' homosexuality. Another research revealed that children born from heterosexual family reacted positively with their mothers' sexual orientation (Burston, Golding, Golombok, Perry, & Setvens, 2003). This may be attributed to the children's negative idea about their heterosexual family. They cannot help themselves, however, from thinking what other people might say against them most especially toward their mothers who are actually attracted to the same sex. Bos, Deck, Gartell, Peyser, and Rodas (2012) surveyed adolescents with lesbian mothers in terms of their academic experiences, extracurricular activities, future goals, family interactions, role models, health problems, and overall being. When asked about their feelings toward their mothers, adolescents made use of the following words: *smart, loving, caring, fun, beautiful, powerful, and enjoy life*. They believed that their mothers become good models for them. One of the participants reiterated that his mothers *have wonderful character and strong sense of values* that he would try to imitate. Similarly, another participant revealed his desire to be like his parents someday once he reached the perfect time to have a family of his own. Some of them even admire their mothers for being *hardworking, accomplished, principled, wise, supportive, and helpful*. It was reported as well how much they appreciate their mothers since they taught



them to become open to/accepting of others. However, the foregoing positive feedback did not hide the feelings of some adolescents in the study who are not actually in favor with them. Some of them had misunderstandings with their mothers and described the mothers as *irrational*. Interestingly, most of the adolescents in the study did not hide the truth about their family setup from their friends. They are comfortable bringing their friends at home and inform them about their parents. The various perspectives of children toward their family and parents may be attributed to a number of factors. Gilbert (2003) pointed out that the combination of three major factors, namely *personal experiences*, *family forms we encounter or observe*, and *attitudes we hold* contribute to one's perception about family. One's perspectives need to be considered as they might influence individuals throughout their lives specifically in terms of decision making, interpersonal interaction, individual and family development, and relationships both inside and outside the family.

Despite the uniqueness of this family type, many still believe that it is not one's sexual orientation or parental sexual orientation nor the structure of the family itself qualified a person from being a responsible parent that might lead to a productive and functional family. Regnerus (2012) concluded that in being effective and good parents, one should not consider parents' sexual orientation. He believed, however, that families having same-sex parents might affect the reality of family experiences. Patterson, Russell, and Wainright (2004) firmly believed that it is the adolescent-parent relationships that really matters and not the family structure in terms of the adolescents' adjustments in different domains such as psychological well-being, self-esteem, anxiety, school outcomes, school connectedness, and grade point average (GPA). They also compared school and personal adjustment of offspring in families headed by opposite-sex and to those families headed by same-sex parents. They noted that these two groups did not differ significantly in terms of the adolescents' school and personal adjustment. In a more recent study conducted by Patterson and Wainright (2007), the comparison between adolescents living with same-sex parents from those who have opposite-sex parents in psychological adjustment (which includes depressive symptoms, anxiety, and, self-esteem), romantic attractions and behaviors, school adjustment were found with no difference. Even so, adolescents with same-sex parents were reported to be more connected at school than those living with opposite-sex parents. Other than this, they did not find anymore significant relationship between family type and other variables. The researchers even emphasized that the quality of adolescents' relationship with parents, and not the family type, was regarded as an important predictor of adolescents' psychological adjustment, substance use, school outcomes, family, and peer relations. Those adolescents who have positive relationships toward their parents reported of having higher self-esteem, fewer depressive symptoms, less use of alcohols and tobacco, less delinquent behavior, and more likely to have more friends in school. However, findings from Balen and Bos (2008) contradicted these findings as they examined stigmatisation, psychological adjustment, and proactive factors among children in planned lesbian families. They have reported that children who have lesbian or gay parents experienced stigmatisation, such as rejection

from peers and other people. This stigmatisation was associated with lower level of psychological well-being. Findings showed that the parent–child relationship did not actually moderate the negative association between stigmatisation and psychological adjustment, namely self-esteem, emotional symptoms, and hyperactivity. Even so, children’s contact with other children who happened to have the same family structure moderates the relationship between stigmatisation and self-esteem. It was further emphasized that rejection or stigmatisation could be the result of lower levels of social acceptance of homosexuality, same-sex marriage, and same-sex families. With this, stigmatisation may be more pronounced in other countries like the Philippines which are more conservative and not yet ready to welcome them with arms wide open.

To date, it is difficult to obtain accurate information on the experiences of children living with same-sex parents primarily because of fear of discrimination, prejudice, and violence. Likewise, they are not open with their sexual orientation as other people may not welcome them in the world they live in. Another reason for this is that they continue the pattern of living closeted/secretive lives. This kind of family setup is also unusual as compared to the traditional and ordinary families in the Philippines. It is also interesting to know how adolescents aged 10–22 (Collins, Coy, & Laursen, 1998) handle this kind of family setup given the fact that they are in the transition from childhood to adulthood. This critical stage of their lives also entails dramatic changes that are emotional, physical, and psychological in nature (Feldman, 2005). Furthermore, the contradiction and gap with the foregoing results, concerns, issues, and challenges led to the conceptualization of the present study about the experiences of children living with same-sex parents. It is now high time to unveil their experiences as they are the ones greatly affected by this family setup. This would also contribute to the existing body of knowledge and fill the major gap in the literature. It is hoped that through the help of the present study, other people will be enlightened regarding their experiences which, in turn, would help them to understand and eventually accept them.

To provide a comprehensive overview of the experiences of children living with same-sex parents was the main objective of the present study. Moreover, specific objectives set for in the present study were to: (1) explore children’s perception on their current family setup and their parents; (2) describe the relationship of children with their parents; (3) identify the challenges of children living with same-sex parents; (4) determine the factors associated with children’s satisfaction and dissatisfaction toward their parents; (5) identify the advantages and disadvantages of living with same-sex parents; and (6) identify the learning and realizations of children living with same-sex parents.

The limitations of the present study were the age range and number of participants in which only five adolescents aged 12–19 took part in the study. For this reason, the findings of the research cannot be generalized with other children of this family type and those in a different age group. Although the present study provides valuable insights on the lived experiences of children living with same-sex parents, follow-up research on this topic must be undertaken since the present study focuses on families headed by women same-sex couples. Also, the objectives of the present

study would have been better served if parents' sexual orientation and children's sexual orientation were taken into consideration. Finally, research instruments such as psychological tests were not utilized to measure other variables imperative to understand the lived experiences of the participants in the study.

## **2 Method**

### ***2.1 Research Design***

This is a qualitative study that utilized the phenomenological method to describe the experiences of children living with same-sex parents. This type of research further explains and puts meaning on the incidents in the lives of the participants (Adanza, Bermudo, & Rasonabe, 2009). To further acquire imperative and in-depth details of the participants' experiences, case study method was employed. This method is very much applicable since a small size of participants took part in the study. Lastly, triangulation method was utilized to increase trust on the validity of the participants' statements and/or to the gathered data. This method requires significant others and served as another source of information to meet the objectives of the study.

### ***2.2 Participants***

To identify the participants in the present study, the snowball sampling technique was used as a strategy. This technique is usually done by many researchers if the participants are hard to locate or are limited to a very small subgroup of the population. According to Best and Kahn (2006), this sampling is "*used to find subjects of interest from those who are most likely to be able to identify them* (p. 19)." The participants of the present study were children living with same-sex parents and were drawn through a referral from the researcher's friends, colleagues, students, and relatives. There were five participants who qualified for the study based on the set inclusion criteria: (1) the child is living with the same-sex parents for at least one (1) year; (2) he/she is 12 years old and above at the time of data collection; and (3) the child was born in the previous heterosexual relationship of one partner and is now being raised in the new, same-sex parented family of one of the biological parents.

The demographic profile of the main participants along with other information needed to acquire substantial analysis of the data is shown in Table 1.

**Table 1** Primary participants' demographic profile

	Wilma	Ivan	Sai	Kim	Mitch
Age	12	16	19	14	12
Sex	F	M	F	F	F
Highest educational attainment	Grade 7 (high school)	4th year (high school)	3rd year college	Grade 9 (high school)	Grade 7 (high school)
Number of siblings	3	3	Only child	8	Only child
Birth order	Youngest	Eldest	Only child	2nd to the eldest	Only child
Length of years living with same-sex parents	12 years (since birth)	16 years (since birth)	19 years (since birth)	5 years	12 years (since birth)

### 2.3 Data Collection

As part of the researcher's preparation before, during, and after the personal encounter with the participants, the following steps were taken religiously: (1) experts' validation of the interview guide; (2) scouting for participants; (3) rapport building, personal encounter, and interview with the participants; (4) transcription of the interview; and (5) verification of data.

### 2.4 Data Analysis

To further unearth and analyze the data gathered based on the reported experiences of children living with same-sex parents, case study and phenomenological analyses were applied. For the former, participants and significant others' answers from the given set of questions were presented following the sequence of the objectives of the study. Through this, the researcher was able to see in detail the participants' experiences along with other information necessary in understanding their experiences. On the other hand, to analyze the acquired phenomenological data from the interview, guidelines from Hycner's (1985) phenomenological analysis of interview data were adopted: (1) transcription; (2) bracketing and the phenomenological reduction; (3) listening to the interview as a sense of a whole; (4) delineating units of general meaning; (5) delineating units of meaning relevant to the research question; (6) determining the categories; (7) training independent judges to verify the appropriateness of units in relation to their categories; (8) eliminating redundancies; (9) clustering units of relevant meaning; and (10) outlining the framework

### 3 Findings and Discussion

The primary objective of this research is to provide a comprehensive overview of the experiences of children living with same-sex parents. Evidently, the interview conducted among the children and family members yielded significant and interesting revelations that in turn shed light on their lived experiences.

#### 3.1 Perception of Family Setup and with Parents

Children seem to have different views when asked to unveil their perception on their family and parents who are of the same sex. Some of them described their families as *happy, headed by responsible parents, and typical*. Despite the difference in family structure as compared to the traditional family (Corpus, Dela Cruz, & Tabotabo, 2011), they still believed that their family is a source of happiness though, sometimes, problems do occur within the family. This seems to agree with the finding that children in families headed by lesbian mothers reported less feelings of loneliness (Shechter, Schechter, Slone, & Lobel, 2011). The same-sex parents appear to be responsible enough as they provide for the needs of the family. Aside from the parents' sexual orientation, participants believed that their families are just like other families with heterosexual parents. This description of family was also noted in another study in which children explained that their parents are just like other heterosexual parents (Gregory & Ray, 2001). Also, one of the family members believed that her daughter does not see the feminine side of her partner and all family members do not treat her partner the way he really is. The limitations that the parents set for their children, the time they spend with them, and the arguments that persist in the family led the children to describe their families as a family with authoritarian parents, family with busy parents, and a chaotic family. Their views regarding their families such as 'normal' family and better family as compared with the previous family appear to agree with the previous studies (Brown et al., 2006; Burston et al., 2003). According to Burston et al. (2003), this comparison may be attributed to the child's negative idea about his previous family or heterosexual family.

Further, positive and negative feelings emerged when asked to describe children's feelings about their current parents. In terms of positive feelings, some of the children accepted their parents and got used to the family setup. One of them proudly confides how loving her parents are. Looking at the negative feelings, it was reported that some of the participants are still longing for the presence of the real father. The relationships of their parents seem to not be totally approved by some of them. One of the participants reported how sad and embarrassed she is about her mother's partner. This was also the observation of one family member on her sister (Kim) and added that she wanted to fix everything in the family. The participants' sadness and embarrassment about their mothers' partners are more

likely to agree with the study of Brown et al. (2006) where children (aged 13–16) approaching the teenage years or the adolescence stage felt more awkward often as they deal with their parents' homosexuality. The participants' various perceptions regarding their family and parents may be associated with their real-life experiences. Gilbert (2003) pointed out that the combination of three major factors, namely *personal experiences*, *family forms we encounter or observe*, and *attitudes we hold* contribute to one's perception about family. Positive experiences are more likely linked to positive feedback while negative feedbacks are basically rooted in negative experiences. The people that children with same-sex parents dealt with (Gregory & Ray, 2001) and the place they live in also served as contributing factors in terms of their experiences that may further affect their perspectives in life (Rawsthorne, 2009). Previous studies concluded that the positive relationship with their parents (Darling, et al., as cited in Bos et al., 2012), social contact, frequency of contact, functional roles of being cared for and being loved, the support and respect they gain are imperative elements to have a more favorable adolescent outcome (Brown et al., 2006). Since children's parents in the study were all women, it is interesting to know how children view and react to their family when parents are both men. In the Philippine setting, it seems that same-sex male parents are harder to locate and are limited in number. A family headed by both male parents might reveal additional insights regarding their experiences particularly their parenting styles, coping mechanisms, and sharing of roles and responsibilities. Likewise, children of this family type might also share something about their experiences that may or may not be related to the foregoing factors. Moreover, only one male child participated in the study. This participant revealed controversial and interesting experiences as a member of a family with same-sex (both female) parents. The findings of the current study would have been more prolific if additional male participants are included. It is highly recommended to conduct a follow-up study where other influential factors may be present such as participants' sexual orientation, age, and culture.

### **3.2 Relationship with Parents**

The majority of the participants claimed that their parents are performing their roles and responsibilities as parents. Despite the nature of family structure, family members still established intimate relationship with one another as they understand them and the family setup in general. Though strict discipline is evident to both parents, children still believed that the couple tried their best to understand children's activities and development. However, one of the participants made a clear distinction with regard to her relationship with her parents. It was revealed that the biological mother tends to acknowledge her child's perspective and ideas while her partner appears to be close-minded with the child's perspective. The family members or significant others also revealed another set of insights when it comes to the main participants' relationship with their parents. According to them, children

put high regard to parents and find them as loving and caring. Interestingly, the partners of the biological mothers seem to play the role of a real father as they hold authority in the family and provide the needs of family members. As parents, their authority has been acknowledged by the children which sometimes led to parenting and relationship conflict probably because of parents' strict discipline and being close-minded with the children's perspectives. The distinction between the biological mothers and their partners may be related to what Alampay and Jocson (2011) have concluded regarding the difference between mothers' and fathers' parenting attributions and attitudes. Accordingly, Filipino mothers have acquired more modern views in childrearing than fathers do. As the primary caregivers, the mothers are more exposed to the modern childrearing information that might be seen in the media, reading materials, and seminars conducted in the school or community. With this, the mothers are more open-minded and more likely to acknowledge their children's ideas and perspectives similar to what the biological mothers in the study have been doing. In addition, the foregoing findings might also indicate that parent-child relationship, and not one's sexual orientation, would make one as a responsible parent (Regnerus, 2012; Patterson & Wainright, 2007; Patterson, Russell, & Wainright, 2004). However, the conflict they experienced within the family particularly toward the mother's partner may be associated with what Rawsthorne (2009) has noted. Accordingly, children from heterosexual family may experience *breakdown of relationship* between them and the biological mothers' new partner. The transition from having heterosexual parents to same-sex parents may bring about traumatic experiences and leave great impact on family relationships (De Vaus & Gray, 2003 as cited in Rawsthorne, 2009). Parent-child conflicts or misunderstandings are more likely to happen as individuals move into and through the transition from childhood to adulthood. The said conflicts may be due to adolescents' abilities to rationalize things as well as their demands to be treated as adults (Berk, 2001). Another possible explanation of the foregoing experiences is the *Ecological Systems Theory* of Uri Bronfenbrenner (1994) which further explains the importance of environment and the impact of family relationships to one's development. The innermost layer or the microsystem which includes the family allows to influence a child in both direct and indirect ways. The behaviors of the family members might affect those of others (Berk, 2001). Having said that, children's relationships with their parents mirror the way they were treated by other people particularly their parents. In this regard, school guidance counselors may conduct counseling sessions to check children's current conditions and the impact of this in different areas of their lives. If deemed necessary, parents should be involved for the best interest of their children. A program that caters to individuals with this family setup might be established to serve as a support group which could also be of help in attending to the needs of the children along with their parents.

### 3.3 Challenges Encountered for Having Same-Sex Parents

Children's various challenges in different aspects of life for having same-sex parents such as challenges on the child's social life, child's biological father and his relatives, parent-child relationship, current parents and family structure, personal values, and parents' inability to have children of their own were revealed. Some of the children reported being teased by others primarily because of their parents' sexual orientation. Out of curiosity, other people threw many questions to the children and more likely put them in a dilemma. These problems are really not that new in this kind of setup. In fact, bullying or teasing and the difficult questions that need to be answered by the children become the primary concerns of homosexual parents and the children themselves (Gregory & Ray, 2001). In this family setup, the children are not only the ones who encountered negative incidents such as discrimination (UNDP & USAID, 2014) but also the parents themselves. In the Philippine setting, female homosexuals experienced discrimination particularly in the workplace (Camesa, 1995). Considerably, some of the participants, and as confirmed by other family members, look after their real father. Children are more likely to look forward to the presence of the real father as they attain awareness of the difference of their own family to others. Two of the participants were restricted to get close to their real father and relatives. This restriction might be attributed to their (mothers' partners) fears of losing their children. Since they also interact with other people, children cannot help but to compare their own family with others to the point that they envied other children for having traditional families. Surprisingly, one participant was not able to hide her desire to have younger siblings. But since parents are of the same sex, she is very much aware that having younger siblings will be impossible. It is important to note how children find ways to personally adjust to their family setup which sometimes led them to sacrifice their own values. It seems that children need to give up their own interest for the sake of their family. Filipino children are expected to observe their obligations to their families whereby some Filipino values like *utang na loob* (debt of gratitude) and *hiya* (shame) are incorporated (Alampay & Jocson, 2011). Furthermore, misunderstandings occur within the family, and the children are affected with this. One of the participants mentioned that she feels ashamed of her mother's partner primarily because of his behavior and treatment toward the family members. This misunderstanding toward the parents is also evident in the previous research (Bos et al., 2012). The conflict they experienced within the family particularly toward the mother's partner may be associated with what Rawsthorne (2009) has noted. Accordingly, children from heterosexual family may experience *breakdown of relationship* between them and the biological mothers' new partner. The transition from having heterosexual parents to same-sex parents may bring about traumatic experiences and leave great impact on family relationships (De Vaus & Gray, 2003 as cited in Rawsthorne, 2009). More so, the reported challenges of children from heterosexual family and currently living with same-sex parents might contribute to the body of knowledge since previous research failed to report this (Alderson & Boon, 2009).



### ***3.4 Factors that Led to the Children's Satisfaction and Dissatisfaction Toward Current Parents***

Another aspect in the lives of children with same-sex parents that calls for attention are the factors associated with their satisfaction and/or dissatisfaction toward their parents. The children themselves and the family members firmly believed that the quality time for the family and being responsible parents are the primary factors of the main participants' satisfaction toward their parents. Some of them reported that their parents never failed to exert an effort to understand the children and express unconditional love and care. It is important to note that the biological mother's happiness made one of the participants satisfied with his parents. One participant was brave enough to admit that he is gay. His parents' acceptance of his identity made him more satisfied with them. To be satisfied with the family, parents' sexual orientation does not really matter but rather their relationship with one another (Regnerus, 2012; Patterson & Wainright, 2007; Patterson, Russell, & Wainright, 2004). Same-sex parents are said to be as competent, nurturing, and loving as their heterosexual counterparts (Patterson, 2009 as cited in Pooley & Titlestad, 2014). Previous researchers also pointed out how satisfied children in a same-sex parented family as they are true with their roles and responsibilities as parents (Bos et al., 2012). Parents' equal sharing of responsibilities may also be a contributing factor in becoming responsible parents (Alderson & Boon, 2009).

Further, it was reported that parents' strict discipline, mother's partner behavior, limited knowledge about the child, and insensitive parents are the main factors why children are dissatisfied with their current parents. Other reported factors are divided time and attention toward the child, and irresponsible parents. On the other hand, family members only identified two main factors that led to children's dissatisfaction: limited knowledge about the real father and conflict in the family. Basically, parents hold the authority in the family. However, this need to be exercised with extra care as it might affect children in different ways. Failure to find ways to know their children more might be one reason why children are not satisfied with their parents at present. The Relationships Australia Queensland (2011) emphasized the importance of parents' role in securing love and care toward their children. It was noted that parents must exert an extra effort like reading parenting literature as it might be of help in understanding the development of their children. Also, the way parents discipline their children must be considered most especially in teaching them *mabuting asal* or positive social behavior. In the study conducted by De Leon (2012), *mabuting asal* or positive social behavior includes being (1) *polite and respectful especially to adults*, (2) *obedient*, (3) *caring toward their siblings*, (4) *helpful*, and (5) *generous*. To teach and discipline children regarding this, three types of methods were identified, namely physical, verbal, and cognitive methods. Although parents are very much aware that the first one is critical and must be used sparingly, it seems that physical method which includes spanking has been part of the Filipino culture as parents tried their best to become responsible. Many Filipino children of today experience physical punishment that

includes pinching and beating (Nakamura & Sanapo, 2011). Likewise, Filipino parents opted to embrace authoritarian attitude in childrearing in which parents have the authority in the family while their children should obey and conform to them (Alampay & Jocson, 2011). These might be attributed to one parent in the present study wherein she cannot help herself but to let her children experience corporal punishment in the process of teaching and discipline them. As the head of the family, the parents still have the final say as to what to do in the family even though sometimes they are not sensitive enough to the feelings and perspectives of their children. Steinberg (2001) pointed out that one possible reason of parent-child conflict is the adolescents' desire to be emotionally detached from parents as it is needed in searching for their own identity. Further, it seems that one of the participants is not satisfied with the information she got about her real father. Although this is just an observation of the biological mother, this is something that needs to be considered. Because of the complexity of the situation, the mother admitted that she did not give complete information about the biological father as it might ignite problems in the family. Since conflicts do arise within the family, the researcher of this study firmly believes that it is high time to call for a conference or an activity among parents to further discuss the nature and the developmental tasks of adolescents. Through this, the reported concerns related to conflicts or misunderstanding and lack of knowledge about children's development will be addressed.

### ***3.5 Advantages and Disadvantages of Living with Same-Sex Parents***

As another type of family, same-sex parented family has its own advantages and disadvantages. Two distinct advantages of having same-sex parents were reported by the family members and the children themselves: parent-child mutual understanding and responsible parents. In terms of the disadvantages of living with same-sex parents, children and significant others identified a number of points. Participants reported that parents' inability to have children of their own, parent's strict discipline and divided time with mother's partner are the primary disadvantages of having parents who are of the same sex. On the other hand, family members reported four (4) disadvantages: stigma from other people, parents' conflict, non-traditional family structure, and mother's partner misconduct. Previous studies reiterated that what matters most in a family is the relationship of each other and not the family structure itself (Regnerus, 2012; Patterson & Wainright, 2007; Patterson, Russell, & Wainright, 2004). For those family members whose relationship to parents are intact seem to be more satisfied than the ones who did not actually establish good or healthy relationship with each family member. This may be the reason why children in a same-sex parented family find their situation beneficial and/or not beneficial. Also, the stigma that children are experiencing because of family setup might contribute to their psychological being

(Balén & Bos, 2008) thus make them more vulnerable and realized the disadvantage of a member of same-sex parented family.

### ***3.6 Learning and Realizations in Being Children of Same-Sex Parents***

Finally, it is interesting to note the learning and realizations of children whose parents are of the same sex. These learning and realizations are related to their values, may it be personal or toward one's family, how they regard individuals like their parents, becoming assertive with one's rights, and to not imitate parents' relationship. As the primary carrier and transmitter of values (Palispis, 2005), the family along with the parents inculcate different values that may be helpful in children's growth and development. It is interesting to note how children learned to value their family despite its uniqueness in structure. Also, their parents' values are more likely contagious since children tend to adopt them and apply in daily living. However, one of the participants is determined not to be like her parents and learned to become assertive with her rights. Mother's partner failure to establish a good image and healthy relationship with the child might be one reason for having this realization. Also, the negative experiences that the child had contributed to this realization.

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# Reflections on the Therapeutic Journey: Uncovering the Layers

Divya Prasad, Anjali Gupta and Shabari Dutta

**Abstract** Personality disorders are present in approximately 9–14% of the general population. These behaviors are pervasive and emit distress and agony in a wide variety of life's areas, thus taking a call for a well-formulated therapeutic paradigm. Life carrying shades of interpersonal conflicts, impulsivity, heightened emotionality with underlying maladaptive perceptions often acts as a medium of distress for not only themselves but significant others as well. This in turn influences the therapeutic sessions with them. The present paper describes in detail the therapists' journey with patients with personality disorders, as to how their unrealistic demands, expectations, cognitive errors often color the therapeutic relationship. The paper further moves to describe the barriers especially to mention the personality characteristics, viz stubbornness, unwillingness to change, unrealistic expectation of instant improvement, and difficulty to openness. It acts as a hindrance further shifting the therapeutic goals, thus putting an abrupt end to the therapeutic journey. Issues of counter-transference including difficulty in handling manipulative behavior, therapists' own emotional burnout, and inability to handle the covert threats have also been mentioned. Thus, taking a cue from the barriers, urgent need is required to formulate practical evidence-based therapeutic interventions for such patients keeping in view the cultural settings.

**Keywords** Personality disorders · Therapy · Counter-transference

Personality disorder as pervasive and inflexible patterns of inner experience and distorted perceptions accounts for approximately one-third of the patients presenting in the mental health setting. Borderline personality disorder and antisocial

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personality outnumber all other categories. Newspapers, digital and other forms of media are flooded with incidences involving provocative behavior, intense anger outbursts, deceit, blackmail, all discreetly hinting toward personality distortions. These may have remained undiagnosed or passed off as major behavioral issue. People meeting diagnostic criteria for personality traits present themselves at mediation centers of family courts, reality shows on television, at criminal justice systems, often making headlines for exhibition of extreme behavior, for instance, altercation with a person of national importance and stalking leading media personality, forgery, coercive polygamous relationships, etc.

Characteristic features of PD usually emerge during adolescence or early adulthood, tend to remain stable over time, and often lead to serious distress or functional impairment for the individual. These behaviors are pervasive and cause distress and impairment across a range of personal, social, and occupational situations or in other important areas of individual functioning. Sharan (2010) in his review article found that the rates of personality disorder were higher in special populations such as university students, criminals, patients with substance use disorder, and patients who attempted suicide. Personality disorders when left undetected can cause difficulty in initiation and maintenance of treatment. Because the traits of PD tend to be stable over the time, these disorders have been considered not consistent with treatment; however, many treatment modalities including CBT, DBT, TFP, and medication are available. Intense anger outbursts, provoking reactions in others, being aggressive and manipulative, and using their charms as maneuvers for controlling others all act as hindrances to the therapeutic protocol. They leave the therapist feeling helpless, frustrated, and irritable. Patient's disordered personality often builds barriers in the therapists' mind, making interaction difficulty prone. The barriers interestingly are unavoidable often playing hide and seek, instilling fear, anxiety, and uncertainty of the outcome in the therapist.

Gunderson et al. (1989) evaluated reasons reported by patients who dropped out from treatment in a specialist program for PD. Dropouts had a less satisfactory therapeutic relationship; they felt more criticized by the staff, did not perceive that they were given enough support by their family, and appeared less motivated from the beginning of the treatment. Blount, King, and Menzies (2002) found that difficulties in changing dysfunctional coping mechanisms, external unfavorable circumstances like pressure from their family and problems with the staff as reasons for dropouts.

The present paper attempts to highlight the experiences and conclusions derived out of the journey with the patients with personality disorder reporting at our mental health setting named Nur Manzil Psychiatric Centre. This hospital has been a pioneer in mental health care since the 1950s, attracting patients from all corners of the Indian subcontinent. We encountered sizeable number of patients with maladaptive personality traits. Working with them using our preexisting therapeutic skills not only afforded us with greater understanding of the dynamics but also threw up with myriad of challenges. This work is an attempt to disseminate our experiences and gain newer insights from peers to overcome the bottlenecks in the therapeutic journey. The journey of obstacles is divided into four perspectives:

therapists' perspectives, patient reflection, caregiver/significant others, and dilemma with considerable overlap within four areas.

## 1 Therapists' Perspective

Many a time, personality disorders go undiagnosed or recognized as simple behavioral problems in the primary health care services. They are more often labeled as bipolar, schizoaffective, mixed anxiety depression, as these are more amenable to pharmacotherapy or simpler psychosocial therapies. On the contrary, professionals may become overwhelmed by the very name "PD," thus fuelling the lack of confidence to manage them. They may consider the treatment either unapproachable or may even avoid the patient.

Another hindering perception toward effective management is the failure to take a longitudinal perspective, thus paving way for a misdiagnosis.

Often, it has been observed that working with PD patients may turn out to be emotionally taxing and exhaustive. Thompson, Ramos, and Willett (2014) suggested that clients with APD present plausible arguments in order to convince professionals there is nothing wrong with them and that they are victims of circumstances. Evans (2011) found that therapists often fall into the trap of trusting the patient with ASPD and when they realize their manipulation; embarrassment, shame, and frustration shroud their mind often making room for negative feelings. These feeling states in turn determine poor treatment outcomes (NICE, 2010).

Low morale on the part of the therapists is experienced on account of the minimal change observed in the patient's behavior. Frustration emits and burnout feeling follows. Another interesting barrier that has surfaced from our experiences is the lack of openness, secrecy, and shades of manipulation. The early formative years of patient have been colored by faulty attachment styles, thus disabling the patient to open gates of information exposure (Norton, 1996).

## 2 Patient Reflection

One barrier toward effective management of PD is the personality itself. Typical personality characteristics are in themselves a major block in the effective management of PD. Emotional dysregulation of borderlines, on one end to callousness and stimulus seeking in antisocial personalities on the other, to intimacy problems and restricted expressions in anxious avoidant and dependent personalities all create difficulties not only in interpersonal but also in therapeutic relations. On frequent occasions, in the backdrop of faulty attachment, personality-disordered patients present with highly unrealistic expectation for the therapist. Either he or she would be placed on the pedestal of highest authority having the magical powers to solve all problems or be judged about their credentials. The patient would oscillate



between too good or too bad. In either circumstance, therapist experiences an obstacle and if conveyed to the patient, mistrust ensues.

Defense mechanisms, a pivotal feature of personality disorder, act as roadblocks in the therapeutic journey. Projection, denial, passive aggression, reaction formation, and dissociation to name a few make the smooth functioning of therapy difficult, in turn shifting the therapeutic goals. The manipulateness and attention-seeking characteristics interfere and increase susceptibility in violating boundaries in therapy. Patients often are seen as demanding, using conning and seduction to gain therapists' time and attention both. Subsequently, the formulated goals take a backseat while such covert behaviors demand immediate attention for proper handling.

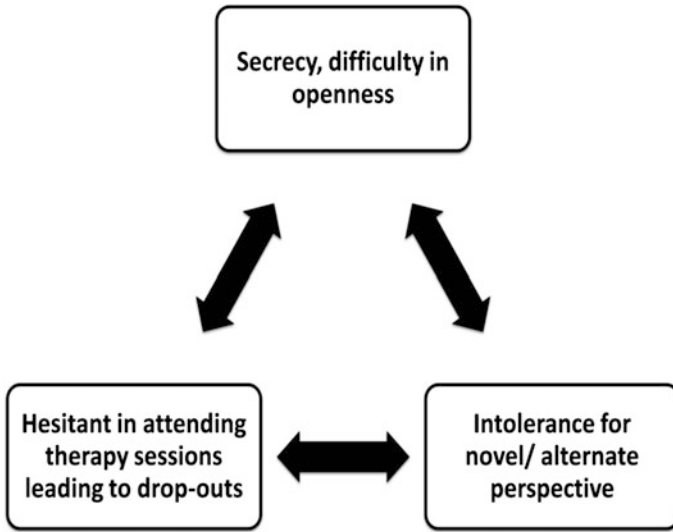
Taking a cue from the sheer difficult childhood, non-congenial family setting, insecure attachment, patients often conceal and deliberately withhold facts from the professionals. The resultant confusion in case formulation leaves the therapist perplexed.

Secrecy coupled with rigid cognitive styles promotes intolerance for novel or alternative perspectives and viewpoints, thereby obstructing the road to recovery. Emphatic reinforcement of self-reliance and autonomy in therapy invariably converts trust into mistrust. In both AVD and BPD, rejection sensitivity threshold (a tendency to expect others to evaluate the self in a negative light) results in outright rejection of adaptive and realistic strategies (Bowles & Meyer, 2008; Adyuk et al., 2008).

The very maladaptive aspects of personality, namely self-harm behavior, irrational anger, dissociation, excessive substance use, and treatment refusal, tend to induce tectonic shifts in the therapy. Intense fear of opening pages of one's life comprising of an abusive childhood, pain-fueled memories, failed relationships, divorce/death of parents to name a few onto the therapist (who is perceived as a threatening figure) is enough a barrier to seek continual help. The fear is primarily based on the past experiences, and reliving it in the therapy sessions is often misunderstood or perceived as intolerable by the patient leading to dropouts.

Levy, Meehan, Weber, Reynoso, and Clarkin (2005) suggested that individuals with an avoidant attachment pattern may be at risk for dropping out of treatment because they are not fully committed or attached with the therapist. They may perceive that psychotherapy may emotionally unravel them. In contrast, individuals with preoccupied attachment may drop out of treatment after perceived abandonment such as emergency cancellations, scheduled vacations, and even waiting for phone calls to be returned.

Mcaleavey, Castonguay, and Goldfried (2014) found 27.5% of patients reported fear of being exposed and associated emotional reactions as perceived barriers to treatment. Pessimism about therapy, for instance, taking cues from failures and disappointments with past therapy, colors the notions of the present times. Many a time, patient feels that his or her distress is not sufficiently understood or addressed. Patients report no substantial improvement or change in their fears and cognition; little do they realize that change lies in their hands. Lack of trust as identified by Martens (2004) in the therapeutic relationship as a contributing factor to poor

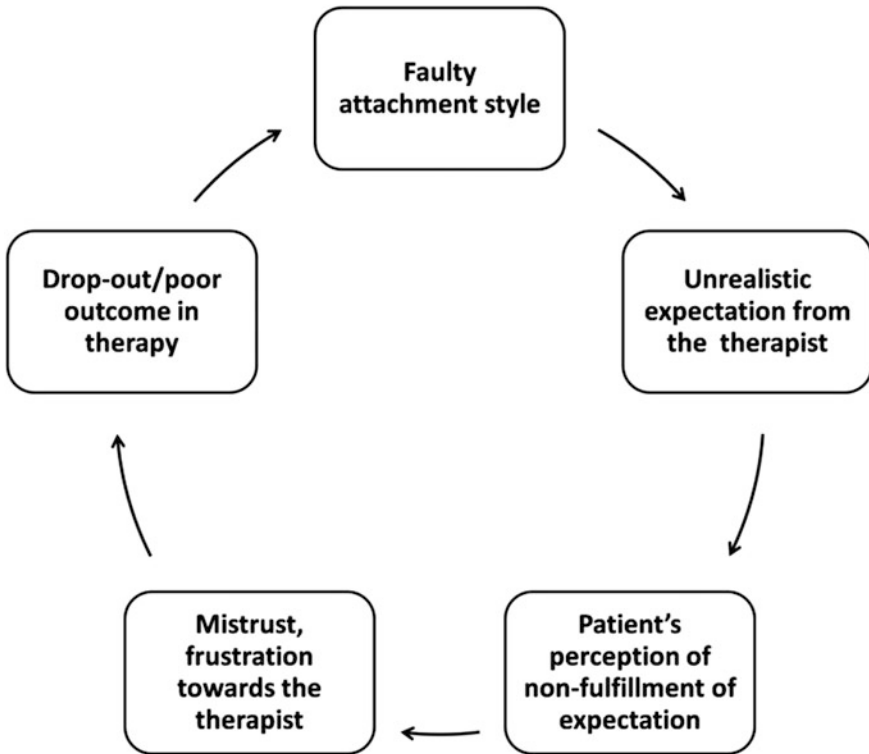


**Fig. 1** Diagram represents varying reasons for dropout from the therapy program

treatment outcomes especially in ASPD and maybe perpetuated by mutual distrust between clinician and client. This barrier contributes to the stigma of client with ASPD and increased therapeutic pessimism (Selkin, 2002). Thus, therapy which is assumed to be an intimate, emotionally charged, especially a nurturing relationship may get influenced by the transference factors. Bradley, Heim, and Westen (2005) reported various dimensions of transference that are correlated with adult attachment styles and PD clusters (Fig. 1) exhibits our observations during the therapy sessions.

### 3 Caregivers' Perspective

Family has a major role to play in treatment in India. Strong bonding, empathy, and trust are foundation stones for family ties. Thus, a close-knit family also serves an important function toward the rehabilitation of the patient. Unrealistic expectation toward psychotherapy lurks not only in the patient's mind but also in the caregiver as well. The thought of an "instant improvement" through a single session of counseling is often encountered in the mental health settings, discounting the fact that psychotherapy and counseling are a long-drawn process of unveiling and resolving conflicts. On other occasions, the parents and caregivers tend to violate the boundaries themselves by making frequent frantic calls for knowing the recovery status. Their own personality makeup serves as a barrier. In cases of BPD, the caregivers are themselves trapped in the FOG (fear, obligation, and guilt) cycle,



**Fig. 2** Diagram represents the cycle of events from faulty cohesion in therapy

getting overwhelmed about the slow progress in patient's behavior toward improvement (Fig. 2).

Probing questions about the patient's conflicts, inner thought, state of mind by the caregiver also compels the therapist to enter a state of dilemma to divulge the information or not. On the one end, divulging would mean breach of trust while on the other end, a necessary step to corroborate the facts. Dilemma in the form of what and how much to share still prevails.

We have also observed that parents/guardians' own interaction and communication styles with each other, conflicts, cognitive errors, pattern of anger expressions, and coping styles also influence the therapy session. Resorting to criticism-laden detailing of problems adds more mistrust to the already shaky therapy ties.

## 4 “Other” Dilemma

Apart from the above-mentioned pitfalls and barriers, there is yet another set of factors that cast a shadow of doubt on the treatment outcome. Paucity of trained professionals in the vicinity of patient’s residential setting serves as major setback. Geographical distance and non-availability of adequate transportation facility to therapy center come in the way of timely scheduling of appointment. Coupled with financial constraints, these factors not only add to the emotional burden of the personality-disordered patients and their caregivers but also pose as an impediment in gauging of appropriate and timely therapeutic progress.

## 5 Conclusion

Varying reflections emerge through our therapeutic journey. Firstly, either personality disorder appears masked or camouflaged by other symptoms and that personality traits get overlooked, leading to partial recovery.

Secondly, free association facilitates better understanding of the conflicts not only in the context of the various chapters of the patient’s life but also toward long-term resolution of the same.

Thirdly, it is pivotal to psychoeducate both the patient and caregiver about the defenses for maintenance of trusting therapeutic relationship. Need for openness not only clears clouds of doubt but also paves way for better recovery.

Last but not least, the therapist needs to engage in periodic reality check of his/her own problem-solving skills in order to strategically deal with this emotionally volatile population.

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# Self-Talk and Autonomy on Well-Structured Problem-Solving

Yuen Hung Katie Lam and Ruth De-Hui Zhou

**Abstract** This study is to investigate how autonomy and different pronominal person self-talk may affect people's performance of well-structured problems. A total of 111 (69 females and 42 males) young adults were randomly assigned to different groups of the 2 (autonomy-supportive vs. non-autonomy)  $\times$  3 (I self-talk, You self-talk, control group) experiment. In this study, we recorded the task accuracy, subjective interest, and intention (9-point Likert scale) toward the task-switching paradigm. Statistical results showed that participants turn to perform better in terms of accuracy in the You self-talk group than in the I self-talk group and control group. Inconsistent with previous findings, we also found that non-autonomy group showed statistically significant more interests in doing the task than the autonomy-supportive group. Related updated studies and the sensitivity to the hierarchical order in Chinese culture were used to explore the interesting findings and discuss the implications.

**Keywords** Autonomy · You self-talk · I self-talk · Intention · Problem-solving

## 1 Literature Review

The way people talk to themselves will have an unimaginable impact that affects problem-solving performance. For instance, people talk to themselves starting by using the first-person pronoun (I). Occasionally, they also talk to themselves as if they were talking to someone else starting by using second-person pronoun (YOU).

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Sometimes, they may talk to themselves without using any pronoun. This type of communication is called self-talk. Self-talk has several functions, and different formats of self-talk will have a correlated different effect on problem-solving performance. Hence, the types of self-talk's functions, self-talk-related empirical studies, as well as the influence of autonomy on problem-solving, are going to be illustrated in further detail below.

### ***1.1 Self-Talk and Communication***

Self-talk is inescapable and fundamental in daily life. Apart from self-motivational and instructional uses, one of the common usages is in self-organizing which helps self-performance (Hatzigeorgiadis, 2006; Hatzigeorgiadis, Zourbanos, Goltsios, & Theodorakis, 2008). Previous research found that more than 96% of people report having an ongoing inner dialogue, particularly covert in daily activity (Dolcos & Albarracín, 2014). For example, when people are reading this essay, calculating money, memorizing vocabulary, preparing for a public speech, or reminding the steps are all typical examples of using self-talk in daily life. That is to say, almost everyone has experienced self-talk and it is part of our life in which taken variety of forms to helping oneself handle different situations.

*Self-talk in Piaget's perspective.* Piaget's perspective tends to view self-talk as an indicator to indicate whether the children have the ability to distinguish subjective and objective. Piaget was the earliest cognitive developmental psychologist who described self-talk phenomenon as egocentric, which indicates children's inability to take the perspective of another person. He also proposed that self-talk is persisted throughout our lifetime. However, as time goes on, children gradually become able to consider others' perspectives and such inner speech declines and gradually replaced by socialized speech to communicate with other (Bivens & Berk, 1990). That is to say, although self-talk will gradually decline and replace by socialized speech throughout our lifetime, self-talk still exists in adults.

*Self-talk in Vygotsky perspective.* Another developmental psychologist Lev Vygotsky viewed self-talk as a helping role rather than an indicator. He observed children often take action accompany with narrating their actions out loud in which maybe no sound is made but the mouths keep moves. Therefore, he stated that self-talk can help self-regulation of cognitive and behavior as well as a transitional stage in the process of internalization (Alderson-Day & Fernyhough, 2015).

According to Lev Vygotsky, speech can be mainly treated and used in two functions which are used to communicate with others and used as communicating with the self. The function of self-talk is act as a self-monitoring system. People who speak out their thought loud when thinking, planning, directing and controlling behavior is an externalized self-monitoring system. Once people successfully control behavior under their self-directed verbal, overt self-talk diminishes, and turning into inner speech or verbal thought (Bivens & Berk, 1990).

## 1.2 *Problem-Solving*

Executive function includes planning, decision making, goal selecting, self-monitoring, self-evaluating, problem-solving, initiation, and self-awareness (Zoltan, 1996). Therefore, problem-solving can be viewed as one of the elements of executive function in which helps people self-regulating and control functions that direct and put in order of behavior. That is problem-solving can be defined as the application of skills, ideas, factual information, or related cognitive reasoning to achieve the solution to a problem or to reach a aimed performance. According to education psychologist, the problem can be divided into two types. One is called well-defined problem which involves a clear goal, instruction, solution strategy, and outcome is clear. On the other hand, poorly defined problem is involved unclear and confusing outcome, and unclear problem-solving strategy (Mubenwafor, 2015). Meanwhile, education psychologist further breakdowns the problem into another two different types including routine problem, which is a typical and simple question, and non-routine problem, which is more abstract and subjective reasoning to solve (Mubenwafor, 2015).

Problem-solving is a cognitive process that consists of four parts. First, problem-solving occurs in the problem solver's cognitive system and can only be presumed by problem solver's behavior. Second, problem-solving is a cognitive process which is represented in the problem solver's cognitive system. Third, problem-solving is directed that guided problem solver's goal. Fourth, problem-solving performance is individual which depends on the personal knowledge and skill (Mayer & Wittrock, 2009).

## 1.3 *Self-Talk and Problem-Solving*

There are different types of self-talk, including positive and negative thoughts of self-talk, and several self-talk-related empirical studies in college students and adulthood are going to be illustrated in more detail below.

*Positive and negative thoughts of self-talk.* Inner speech involves a mixture of negative, positive, and neutral thoughts. The types and the ways of language people choose to use when they talk to themselves has a big effect on self-value, energy level, outlook, relationship with others and performance (Alicia, 2015; Dagrou, Gauvin, & Halliwell, 1992; Judith, nd). There, a research found that 75% of our mental language is negative (as cited in Alicia, 2015), and those negative thoughts that people contain in their minds are anxiety and negative which are a reiteration of past event (Kamen, 2015). It is because attitude, feelings, and behavior are inter-related; once you keep on a negative viewpoint on circumstances, then your behaviors are going to act them out. This phenomenon is called a self-fulfilling prophecy.



No matter self-talk is in negative or positive thought, both types can help self-regulation. Self-talk in negative thought is dominated in most of our life and which can harm our mental health even leading to anxiety, stress, and depression (Alicia, 2015; Kamen, 2015). On the other hand, if people keep on using healthy, productive, and positive self-talk in daily life, self-regulation in cognitive and behavior will be improved. It is because the attention will be increased, verbal encoding will be strengthened, and planning ability will be bettered (Alderson-Day & Fernyhough, 2015; Bivens & Berk, 1990; Dolcos & Albarracín, 2014; Tod, Hardy, & Oliver, 2011).

*Self-talk-related empirical studies.* Study on self-talk function in adulthood has largely focused on the effect of verbal short-term memory and executive function (Alicia, 2015; Dagrou et al., 1992; Dolcos & Albarracín, 2014; Judith, nd; Puchalska-Wasył, 2014; Senay, Albarracín, & Noguchi, 2010). Research showed that adult use self-talk as a rehearsal tool in which verbal rehearsal can help to refresh the memory and lead to a better recall (Baddeley, 1992).

Also, most of the research has focused on cognitive flexibility through switching task and planning through tower task in regarding of executive function (Baddeley, Chincotta, & Adlam, 2001; Gilhooly, Wynn, Phillips, Logie, & Della Sala, 2002; Kraemer, Macrae, Green, & Kelley, 2005). Research suggested that self-talk has a beneficial effect on switching performance as the use of self-talk can help to prepare and transition between trials, but the effect only limited in the lack of explicit cues (Kraemer et al., 2005). For planning, there is less study supporting that self-talk takes a central role in adult task performance (Alderson-Day & Fernyhough, 2015). The tower performance is closely related to visuospatial rather than self-talk skill (Gilhooly et al., 2002). Tower task can initiate self-talk but largely require visual imagination within the visuospatial domain.

A meta-analysis study conducted by Hatzigeorgiadis et al. (2011) reported three types of self-talk, which have been mostly studied. They are instruction versus motivational self-talk cues, assigned versus self-selected, and internal/silent versus external/out loud (as cited in Puchalska-Wasył, 2014).

Other factors including the types of self-talk and mediators that affect performance have been studied including interrogative versus declarative self-talk (Puchalska-Wasył, 2014; Senay et al., 2010). Research from Puchalska-Wasył (2014) suggests that interrogative self-talk creates better performance than declarative self-talk, especially when a self-posed question about future behavior was answered in positive condition. It is because question about future may induce a sense of autonomous or thought about intrinsically motivated reasons in which helps to pursue a goal, leading a person to form intention and finally to perform the behavior out (Puchalska-Wasył, 2014).

The previous study also compares observed overt inner speech versus observed covert inner speech versus reported inner speech in different age groups (5–17) (Winsler & Naglieri, 2003). Overall, the research found that older children (16–17 years old) are more aware of their inner voice than younger children in terms of both observed covert inner speech and reported inner speech. At the same time, over self-talk is common among 5-year-olds and used lesser as children get older.

Also, a clear inverted U shape indicated that children in 9-year-olds are a peak in using partly covert but still observable self-talk. Research also found that there is no relation between verbal strategy be used and task performance, but they are positively associated with cover self-talk and performance (Winsler & Naglieri, 2003).

The previous studies also investigate self-talk in controlling or autonomy-supportive experimental condition (Oliver, Markland, Hardy, & Petherick, 2008). The result indicated that participants in an autonomy-supportive experimental condition are willing to spend more time on the task and reported significantly higher interest and lower tension than controlling condition. Participants in autonomy condition use more informative and less controlling self-talk. This study suggests that the type of social context does influence cognitive factors such as self-talk (Oliver et al., 2008).

Meanwhile, first-person self-talk versus second-person self-talk is being investigated (Dolcos & Albarracin, 2014). Result showed that second-person self-talk increased actual behavior performance and intention than using the first-person self-talk in which the effect was mediated by the participants' attitude toward the task. Also, research proposed that positive emotion and attitude would be triggered by second-person self-talk, and influence performance and intention (Dolcos & Albarracin, 2014).

A systematic review in 2011 about the relationship between self-talk and performance found that three types of self-talk including positive, instructional, and motivational self-talk had a beneficial effect on performance (Tod et al., 2011).

*Self-talk with two pronominal persons.* Research reported that second-person self-talk enhances actual behavior performance and intention to work than using the first person in which the effectiveness was mediated by participants' attitude toward the task (Dolcos & Albarracin, 2014). Research reported that positive appraisals from both self and significant others using second-person instruction and encouragements could have a strong influence on emotion, cognition, and performance (Alter et al., 2010). This can be explained by habituation and internalization. That is a repetition of a behavior in a consistent context reinforces a mental behavior association (Lally et al., 2010), and initial external encouragements may become internalized and develop to self-encouragements. Meanwhile, Smith and Lazarus (1993) found that second-person self-talk increased positive emotion and attitude and as a result influenced intention and performance. That is to say, second-person self-talk and positive attitude are interrelated to increase performance.

#### ***1.4 Purpose of This Study***

Previous research revealed that tasks involve choice are more enjoyable because the availability of choice will induce a feeling of success and confidence (Henry & Sniezek, 1993). Also, research supported that given choice produced dramatic increases in motivation and the depth of engagement in activity and lead to improve task performance as a result (Cordova & Lepper, 1996).

There is research replicated the autonomy on the administration field and found that there is a significant positive effect on the performance when given autonomy (Grünhagen, Wollan, Dada, & Watson, 2014). This is through inducing autonomy to the worker under human resource department to investigate the influence of such operational autonomy on the entrepreneurial orientation performance (Grünhagen et al., 2014). Research found that there is a significant positive effect on the entrepreneurial orientation performance under UK franchise systems.

The most extensive literature on self-talk is applying in sport and exercise psychology in Chinese context. Research has determined that self-talk is an effective strategy for helping to learn and enhance performance (Chroni, Perkos, & Theodorakis, 2007; Defrancesco & Burke, 1997; Kirkby, 1991; Wang, Huddleston, & Peng, 2003; Williams & Leffingwell, 1996). Also, research found that one of the top three skills used by the Chinese swimmers was positive self-talk (Wang et al., 2003). This result is consistent with the previous study that US and European athletes also have a high use of self-talk when facing competition (Defrancesco & Burke, 1997; Kirkby, 1991).

Despite the abundant study in self-talk, we are motivated by the following reasons to conduct this study.

First, few empirical studies support the significant performance effect of using second-person self-talk. Previous research found that people tend to favor using “You” self-talk in situation that requires explicit self-regulation and favor using “I” self-talk in situation that shares their feeling (Gammage, Hardy, & Hall, 2001; Oliver et al., 2008; Zell, Warriner, & Albarracin, 2012). However, only one empirical study that explores the performance effects of self-talk using the second-person pronoun in American adulthood age range (Dolcos & Albarracin, 2014).

Second, most researches are conducted in Western culture. It would be interesting to investigate the performance effect of using second-person self-talk under Chinese context. It is because the result of investigations performed with a student of one culture certainly cannot be generalized across cultures such as Hong Kong or Chinese context.

Third, the performance effects of self-talk using the second-person pronoun plus availability of autonomy condition have surprisingly never been demonstrated. Previous research found that second-person self-talk strengthens both performance and intentions, and these effects are mediated by positive attitudes (Dolcos & Albarracin, 2014). Another research showed that participant in autonomy experimental condition enhances the enjoyment of the task in which reflected in the greater use of positive emotion words than in controlling condition (Oliver et al., 2008). That is to say, given autonomy can induce positive attitudes. However, the influence of autonomy on the performance effects of self-talk using the two pronominal person’s self-talk has never been demonstrated.

**Research question.** Combined with the above research finding that using You self-talk produces better performance and intention, these results are mediated by the positive attitude in young adult age group (Dolcos & Albarracin, 2014), as well as the influence of autonomy on performance (Oliver et al., 2008). Hence, this

research attempted to investigate the influence of autonomy on the two pronominal person's self-talk on a completely different task, which is a switching task. In addition, can people's intention and performance for an upcoming activity be enhanced by giving freedom and using second-person self-talk?

**Hypothesis** There are altogether five hypotheses in this study:

Hypothesis 1: Participants will perform better on the second-person self-talk group than on the first-person self-talk group.

Hypothesis 2: Participants will increase intention for an upcoming activity on the second-person self-talk group than on the first-person self-talk group.

Hypothesis 3: Participants will perform better on autonomy group than on no autonomy group.

Hypothesis 4: Participants will increase intention for an upcoming activity on the autonomy group than on no autonomy group.

Hypothesis 5: There has interaction effect between first- and second- person self-talk and autonomy.

## 2 Method

This study was a 3 (pronominal person's self-talk)  $\times$  2 (autonomy) between-subject factorial design experiments. The pronominal person's self-talk with three levels (You, I, and no pronominal) and autonomy with two levels (multiple perceived choice and no perceived choice) were the two independent variables in this experiment. There were four dependent variables including task accuracy, the reaction time of switching task time cost (ms), subjective interest and intention (9-point Likert scale) toward the task.

### 2.1 Participants

A total of 111 (69 females and 42 males) local college student took part in the study. Their age were between 18 and 25 years old (mean = 20.76, SD = 1.759). All participants were randomly assigned to one of the six conditions in which lasted approximately 20–25 min. Thirty participants were eliminated for various reasons. Fifteen participants were excluded due to the changing of modified experimental design in priming task. Four participants were excluded as whose reported subjective interested feeling toward the task was more than two standard deviation above or below the group mean. Ten participants were excluded as they did not clearly read and understood all the instruction in switching task; as a result, they need to be verbally taught by experimenter and repeat measure performance immediately. Hence, there a total of 81 participants (53 females and 28 males) whose age are between 18 and 25 years old (mean = 20.68, SD = 1.772), and they were treated as a valid data and used in further analyses.

## 2.2 Materials

The experiment included two priming tasks: one autonomy manipulation, and two measurements.

*Priming task.* A situational problem-solving task was provided as one of the priming tasks. This task involved corresponding pronoun's instruction accompany with sound recording. Participants were required to tidy up a messy desk (see the left picture in Fig. 1) into a tidy desk (see the right picture in Fig. 1).

The situational problem-solving task has three versions in which using the related pronoun and assigned scenario. In "You" self-talk group, participants were instructed to imagine that they needed to teach young children to tidy up the desk because the children did not know how to finish it in a clear way. They needed to write down the steps that prepared to teach the children in a limited time and must use second-person pronoun in the sentence. All of the instructions in this situation were used second-person pronoun as well. In "I" self-talk group, however, participants were instructed to imagine that the messy desk belonged to himself/herself. They were responsible for tidy up the desk as similar as the nearby clear table that being presented as possible. They needed to write down the steps that they needed to tidy up. All of the instruction in this situation used first-person pronoun as well. In no pronominal person self-talk group, however, participants were instructed to imagine that the messy desk belonged to someone. Participants are invited to suggest a series of instruction for someone who can follow in order to tidy up the desk as similar as the nearby clear table that being presented as possible. Participants were required to write down the steps that they prepared to tidy up. All of the instruction did not mention specific requirement concerning person pronouns to be used.

Second, a set of switching task instruction presented in correlated person pronoun were another priming task. This was a set of instruction which used to teach the participant about how to play the following switching game. All of the above



**Fig. 1** Desk tidying-up task



Fig. 2 Instruction of switching game in “You” self-talk with autonomy-supportive group

instructions were provided in Chinese version with the corresponding pronoun, and the participants were instructed to read the guideline in mind (Fig. 2).

Most of the switching task’s instructions were identical in each pronominal person self-talk and autonomy condition. The only difference was the use of a pronoun (using You, I and no pronoun in the correlated group), and the use of “Please 請” will appear in the autonomy group.

*Autonomy-supportive group.* In order to manipulate choice for autonomy-supportive group, experimenter provided the participants a set of the task numbers for them to choose. The two sets of envelopes, which already marked 1, 2, and 3 in the cover, will be presented for participants to choose for inducing a sense of autonomy. Those envelopes were already put a randomly assigned pronoun and situational card inside for the participant to choose the corresponding pronoun and situation which will be used in the following task (Fig. 3).

The first set of the letter including three envelopes which hidden represents You, I, and no pronoun, respectively. The second set of the envelopes including two envelopes which hidden represents the type of situation. The participants would take for granted that they had a control what type of tasks that they would be given next. In fact, it was the experimenter who actually control which self-talk group would be assigned to in order to balance the identical numbers of participants in each group.

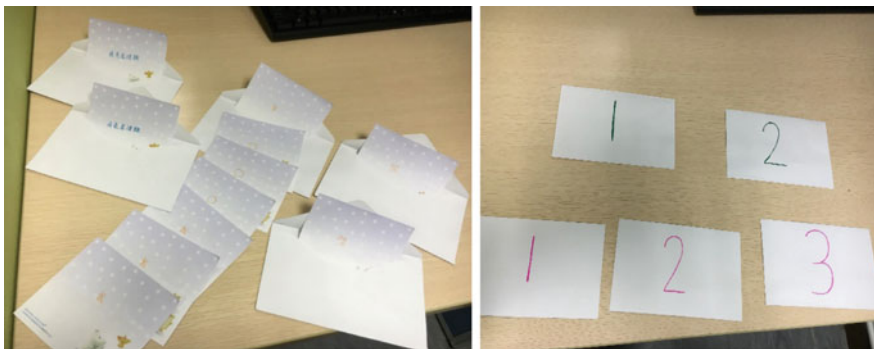


Fig. 3 Envelopes to provide choices for autonomy-supportive group



**Fig. 4** Multiple choices to be selected by the autonomy-supportive group

Second, the use of voice tone and instruction in autonomy-supportive group were different from no autonomy-supportive group. That is the strict tone will be applied in no choice group and polite voice tone will be applied in given choice group with the corresponding pronoun. Compared to polite voice tone, the strict tone will like ordering others to finish the task, and no “請” and “多謝你願意” appear. Most of the trials’ instruction and situational problem-solving instruction are same in each pronominal person self-talk and autonomy condition. However, the differences are the use of a pronoun (using You, I and no pronoun in the correlated group), and the use of “Please 請” will appear in the autonomy group.

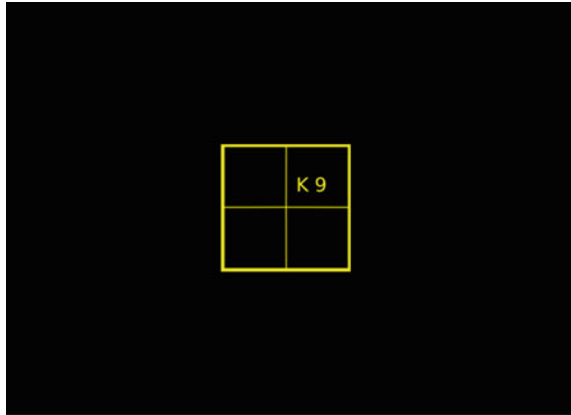
Third, different colors and types of pen were provided in each condition in order to induce a sense of autonomy. Detailed information is shown in Fig. 4.

Fourth, free to choose when they would like to stop in the priming task. That is participants in the autonomy-supportive group still keep writing the instruction or just skip it and moving to next task after the limited time.

**Measures.** First, a set of task-switching paradigms were used to measure the participant’s performance of task accuracy, reaction time (ms), and switching time cost (ms). Task-switching paradigm is a program which can be downloaded from the Psy Toolkit website to be used for a research purpose. Switching task requires participants to switch frequently among a small set of simple task. In this experiment, letter and number combination will be adopted to compare the respond time of switching time cost, and task accuracy of participant doing one task at the time and participant doing two tasks in rapid alternation. During the experiment, participants needed to respond to button presses to number and letter combinations. Participants only needed two keys (B and N). Participants needed to distinguish whether the combination (such as G6) appeared at the top or bottom of the screen first. If the combination appeared at the top of the screen, they only needed to respond to the letter. In this example is G. Then they needed to distinguish whether the letter is belong to consonant type (such as G, K, M, R) or vowel type (A, E, I, U). If the letter is belong to a consonant type, they needed to press B in respond; if



**Fig. 5** Task combination provided by task-switching paradigm program



the letter belongs to vowel type, they needed to press N in respond. However, if the combination (such K3) appeared at the bottom of the screen, they needed to respond to the number. In this example is 3. Then they need to distinguish whether the number belongs to an odd number or even number. If the number belongs to an odd number, they needed to press B in respond; if the number belongs to an even number, they needed to press N in respond. There were several rounds including a round just for the letter part (40 combinations in total), a round just for the number task (40 combinations in total), and a round of number and letter task (40 combinations in total). At the end of the tasks, participants would receive feedback about their respond time when they were just one task at the time (“pure blocks”), and switching time cost when they were doing two tasks mixed. Also, task accuracy will be recorded by experimenter separately (Fig. 5).

At the end of the task, respond time will be displayed in the screen and task accuracy will be collected by experimenter separately.

Second, an intention Likert scales for measure subjective interest and intention toward the task. Participant only needed to circle the suitable number which represented their subjective attitude toward the switching task.

### 2.3 Procedures

Informed consent was given to all participants so as to getting permission before starting the experiment. They were randomly assigned to either perceived choice (autonomy-supportive group) or no perceived choice (no autonomy not supportive group) condition. According to the correlated condition’s instruction, participant mainly needed to provide a serious of step advices and carefully read instruction which introduced switching task in correlated pronoun. Meanwhile, there were multiple choices to be selected and supportive attitude would be induced within the autonomy-supportive group. Either You, I, or no pronominal self- talk group would



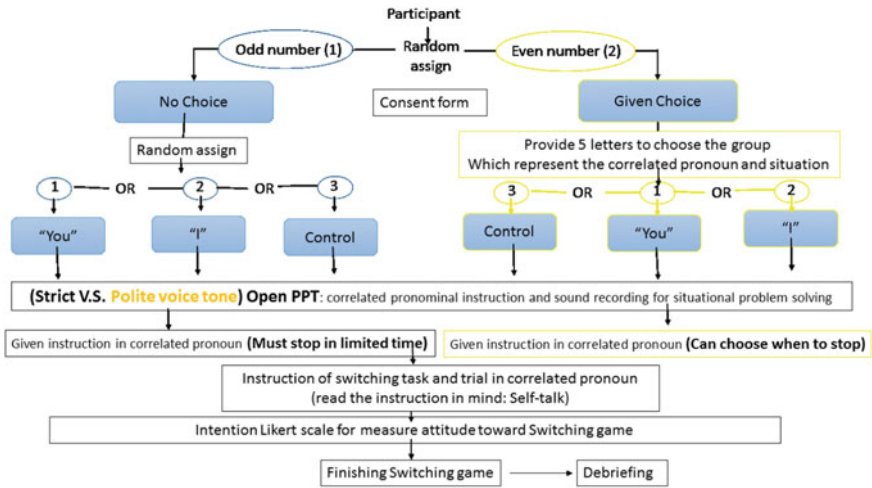


Fig. 6 Experiment procedures

be randomly assigned. Then participants finished intention Likert scale and played switching game. For more detail information, please refer to the below flowchart. During the experiment, environmental factors such as low voice level and independent environment would be controlled. Also, the implementation and instruction would be kept consistent in each experimental group by playing recording to instruct participant (Fig. 6).

### 2.4 Data Analyses

SPSS 16.0 was used to analyze the result. One-way ANOVA was conducted to evaluate the mean difference between the three groups of pronominal self-talk which are You, I and no pronominal and the mean difference between the two groups of autonomy on task performance as well as the interaction effect among independent variables. Also, Tukey’s post hoc procedure was conducted in order to determine which independent group did vary from other independent groups.

## 3 Result

As listed in Table 1, the one-way ANOVA did not show main significant difference which was found among pronominal self-talk and autonomy ( $F(2,75) = 0.222$ ;  $p > 0.05$ ).

The estimated pairwise comparison analysis revealed that there was a tendency of statistically significant differences between You and no pronominal self-talk (mean difference = 1.646;  $p < 0.05$ ). However, there was no statistically significant difference tendency in mean task accuracy between You and I self-talk (mean difference = 0.527;  $p > 0.05$ ) (Fig. 7).

Second, subjective interested feeling toward upcoming task being increased under no autonomy condition. An independent-sample  $t$  test comparing the mean scores of subjective interested feeling toward the following task under autonomy and no autonomy condition found a significant difference. There was a significant difference in the mean scores for autonomy ( $M = 5.79$ ,  $SD = 1.423$ ) and no autonomy ( $M = 6.44$ ,  $SD = 1.483$ ) conditions;  $t(79) = 2.013$ ,  $p = 0.048 < 0.05$ . According to Cohen's formula, the effect size is 0.41 which is belong to small (Fig. 8; Table 2).

## 4 Discussion

Our research shows that You self-talk type turns to be more efficient than I self-talk type in terms of task accuracy. Very unexpectedly, the subjective interesting feeling increased under no autonomy condition more than autonomy condition.

The first finding indicated that You self-talk yielded better task accuracy performance. The estimated pairwise comparison analysis revealed that there were statistically significant differences between You and no pronominal self-talk (mean difference = 1.646;  $p = 0.033 < 0.05$ ). It is half consistent with previous finding that using second-person self-talk in an unrelated domain increased anagram performance (Dolcos & Albarracin, 2014). It is half consistent as previous finding only compares using You self-talk and I self-talk but does not include no pronoun self-talk. As a result, that experiment only concluded that participants using You produces better performance than self-talk using I. Current study revealed that there were statistically significant differences in estimated tendency that task accuracy is between You and no pronominal self-talk. Also, the tendency revealed that You yielded better accuracy performance than I self-talk and No pronoun self-talk (tendency: You > I > No). Hence, it is still consistent with previous finding that using second-person perspective can increase self-regulation and better improve performance as a result (Dolcos & Albarracin, 2014; Kross et al., 2014).

The use of You better facilitates self-regulation which may be due to two reasons. First, people tend to model others' language usage in self-talk (Lantolf, 2006). From a sociogenetic perspective, it suggested that socialization is the beginning point which process meanings in the interpersonal dialogue and interaction, as time gone by, such dialogue and interaction pattern become personalized and internalized into self-regulation pattern (Clowes, 2007; Vygotsky, 1987). For example, care giver or significant other tends to using You in directing and encouraging other people (e.g., You need to listen carefully 你要留心D聆聽!, you can do it 你一定做到架!). In time, people become used to responding to instruction provided in the

**Table 1** Task performance under different types of self-talk and autonomy condition

Task	You		I		No pronominal		F value	P value	Autonomy supportive		No autonomy not supportive		F value	P value
	M	SD	M	SD	M	SD			M	SD	M	SD		
Task accuracy	38.593	0.537	38.067	0.54	36.948	0.537	2.45	0.093	37.748	0.431	37.991	0.447	0.153	0.697
Interest	6.385	0.282	5.792	0.284	6.132	0.282	1.107	0.336	5.786	0.226	6.419	0.235	3.764	0.056
Intention	6.67	0.294	6.35	0.294	6.626	0.293	0.349	0.706	6.437	0.235	6.661	0.244	0.44	0.509
Time cost	528.747	70.298	484.867	70.687	375.25	70.298	1.264	0.288	423.324	56.421	502.585	58.567	0.95	0.333

*M* Mean, *SD* Standard deviation error

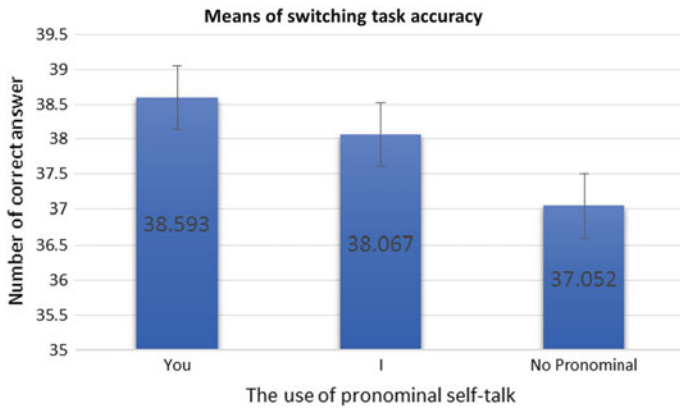


Fig. 7 Means of switching task accuracy

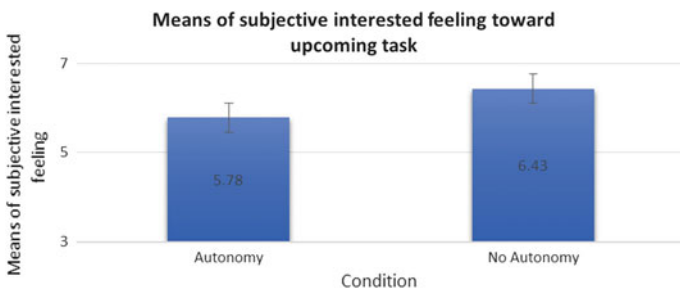


Fig. 8 Means of subjective interested feeling toward upcoming task

Table 2 Autonomy condition

	Autonomy supportive		No autonomy not supportive		t test	P value
	M	SD	M	SD		
Task accuracy	37.79	2.816	37.97	2.805	0.302	0.764
Interest	5.79	1.423	6.44	1.483	2.019	0.048*
Intention	6.43	1.417	6.67	1.562	0.719	0.474
Time cost	423.12	313.188	496.74	414.252	0.906	0.368

M Mean, SD Standard deviation, \* $p < 0.05$  statistically significant

second-person pronoun. Such internalization perspective is consistent with the habit theory and research finding (Gardner, de Bruijnn, & Lally, 2011). That is the initial external guidance associated with repeated behavioral respond which have been internalized in the second person. As a result, people will automatically activate that dialogue under similar situation so as to better self-direction and perform better performance.

Second, using self-person pronoun can adopt a broader perspective and gain a positive psychological feeling in social support. It is because using You self-talk is similar to talking to another person which may create a sort of social support without directly interaction with others. This is likely to create a motivating environment which enables oneself to produce encouragements (Jin, 2005, 2010). As a result, it is positively helping oneself self-regulation and produce better performance.

The second finding indicated that subjective interested feeling increase under no autonomy condition. This is inconsistent with previous findings. Previous research revealed that tasks involving choice are more enjoyable because the availability of choice will induce a feeling of success and confidence (Henry & Sniezek, 1993). Also, research supported that given choice produced dramatic increases in motivation and the depth of engagement in activity and lead to improve task performance as a result (Cordova & Lepper, 1996). However, current result indicated that subjective interested feeling toward upcoming task being increased under no autonomy condition. An independent-sample *t* test revealed that there was a significant difference in the mean scores for autonomy ( $M = 5.79$ ,  $SD = 1.423$ ) and no autonomy ( $M = 6.44$ ,  $SD = 1.483$ ) conditions;  $t(79) = 2.013$ ,  $p < 0.05$ . It is interesting to conclude this contradicted result. This could be caused by cultural differences.

Previous literature has indicated that Chinese people have a high degree of authoritarian personality (Hwang, 2012). Under Chinese authoritarian orientation, people tend to respecting and obeying those with high status (authority) are highly valued and emphasized in Chinese context. It speculated that when joining the experiment, participant unconsciously take a subordinated role who used to listen to the experimenter's (high status, authority figure) instruction. That is they are expecting participant must follow all procedures and step by step once they agree to join the experiment. Such habituation and expectation on participated in an experiment may affect their psychological condition when doing the task when under autonomy condition which contradiction to their usual expectation. When providing too much multiple selections to participant, they may feel lack of direction and out of their usual habituation, which may make them confused and worry about the consequence of their choice. As a result, it affects their subjective feeling toward the task.

## 5 Implication

According to previous research, they suggested that people prefer You self-talk when task involving action and in difficult situations requiring self-regulation (Gammage et al., 2001; Zell et al., 2012). For example, when involved in some fitness activities, peoples tend to take "You" perspective more frequently than I perspective. Meanwhile, current study also supports this finding that You self-talk yielded better task accuracy performance. Therefore, it suggests that it would be

better to use You self-talk than no pronoun self-talk when engaging in action and in difficult situations requiring self-regulation. For example, leader can try to adopt You-pronoun when deliver instructions (such as educating some breathing exercise) and encouraging statement in both psycho-education group and counseling session. It is because the use of You can induce a sense of broader perspective and gain a positive psychological feeling in social support when they internalized those instructions. Most importantly, using You statement and self-talk can result in several benefits which all supported by previous studies. Those benefit including self-regulation increased and more optimistic-oriented evaluation which have strong effect on affection, cognitive, and behavior performance (Kross et al., 2014).

Future work should examine the ways and strategy in using You self-talk for improving self-regulation, which are likely to be important for education, mental health management and work performance.

## 6 Limitations and Future Studies

This study has the following limitations. First, this study consists of small sample size. Each experimental group only contains 12–15 participants. ANOVA analyzed that result may being affected due to small sample size. Second, some environmental factors such as noise around may influence the performance of the participants as well. Third, fatigue effect may cause a decrease in performance of a task. A few participants reported that the priming task was too long. Therefore, participant feels bore or tired which affect the performance and result.

According to previous research finding that people prefer second-person self-talk when involving behaviors and in difficult situations requiring self-regulation (Gammage et al., 2001). However, people tend to select first-person self-talk when talking about personal feelings (e.g., “I like playing piano”) (Oliver et al., 2008). Therefore, it is worth to investigate whether there have any interaction effect or relationship in these variables. This study has suggested different research findings concerning autonomy. It would be very interesting to conduct cross-cultural study of self-talk in the future.

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# School Adjustment for Hong Kong Undergraduates: The Correlation Among Parental Acceptance-Rejection, Achievement Emotion, Academic Achievement and Self-esteem

Yuen-Man Cheung and Man-Tak Leung

**Abstract** The present research was conducted to investigate the correlation between school adjustments, parental acceptance-rejection, achievement emotion, academic achievement and self-esteem of university students in Hong Kong. The sample of the study consisted of 216 students by convenient sampling from universities in Hong Kong, to participate in completing 6 questionnaires. Confirmatory factor analysis and Cronbach's alpha were used to test the validity and evaluate the reliability of the questionnaires, respectively. Path analysis and structural equation modeling were used to analyze the data, whereas structural equation modeling was conducted to examine the relationship between school adjustment, achievement emotions and perceived competence. There were two main findings in this study. First, maternal neglect and paternal rejection predicted significantly school adjustment. Second, school adjustment acted as a predictor on achievement emotion, which achievement emotions influence the perceived competence. This result may be the first study to explore the inter-relationship among these three variables. Therefore, it provides a new theoretical framework for future university students' research. Educators can know more about how the school adjustment in university affects the achievement emotion and thus the students' perceived competence. This can help them to develop more programs or workshops for university students for the purpose of adjusting to the university.

**Keywords** Parental acceptance-rejection · School adjustment · Achievement emotions · Self-esteem

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# 1 Introduction

Understudy from different families would get distinctive parental acceptance and rejection. The maternal and paternal acceptance and rejection would give diverse consequences for children. It is intrigued to know would parental and maternal acceptance and rejection cause an alternate impact on student's school adjustment and inevitably giving an impact on achievement emotions and academic achievement. Likewise, adjusting to a new domain is the primary issue of entering the university, since they have to grow new associate connections and adjust to the learning style in university, and it may be a trouble for understudies to modify themselves and impact their achievement emotion in the long run. Therefore, it is interested to investigate the relationship between school adjustment and achievement emotions and academic achievement. Therefore, research concerning about the relation of parental acceptance-rejection, school adjustment, academic achievement and achievement emotion will be investigated.

## 1.1 Literature Review

### 1.1.1 Parental Acceptance-Rejection

Parental acceptance-rejection is a measurement on which all people can be placed because every human being has experienced more or less support in their childhood from their caregivers or significant others (Rohner, Khaleque, & Cournoyer, 2012; Rohner, 2010). Parental acceptance is at the positive end of the continuum, while the parental rejection is at the negative end of the continuum (Rohner & Khaleque, 2002). Parental acceptance refers to the warmth, affection, care, support or nurturance that children can understand through physical, verbal and typical practices in the association with parents or significant others. There are mainly four perspectives which are warmth/aggression, hostility/aggression, indifference/neglect and undifferentiated rejection, respectively. Parental rejection refers to the absence or withdrawal of the above support, love, care from the caregivers or significant others. Warmth/aggression is the physical and verbal encounters of care, support and love from parents. Hostility/aggression is the emotional feelings of anger which cultivates the nearness of hostility conduct. Indifference/neglect is the state that lack of patience and attention to the needs of an individual. Undifferentiated rejection refers to the individual's beliefs that parents or significant others do not care or love them (Rohner, 2004; Rohner et al., 2012).

### 1.1.2 School Adjustment

In general, adjustment refers to the changing or controlling a person's behaviors and conforming to the environment so as to develop a pleasant relationship with the existing environment (Lazarus, 1976; Kim, 2014). For school adjustment, it is one of the vital indicators of psychosocial outcomes during the school years into adulthood. Positive school adjustment predicts less behavioral issues, lower the chance of drug and alcohol abuse and better educational attainment in adulthood (Buckner, Mezzacappa, & Beardslee, 2009; Topitzes, Godes, Mersky, Ceglarek, & Reynolds, 2009; Pears, Kim, Capaldi, Kerr, & Fisher, 2013). Students who show positive school adjustment are likely to obtain a higher educational attainment in the future (Ou & Reynolds, 2008).

### 1.1.3 Achievement Emotion

Achievement emotion (also known as academic emotion or the control-value theory of achievement emotions) can influence a students' learning and their achievement (Villavicencio & Bernardo, 2013; Pekrun, Goetz, Frenzel, Barchfeld, & Perry, 2011). If the students find the learning is interesting, the willingness of paying more effort and time will be higher, while they would pay less attention if they find it is boring (Villavicencio & Bernardo, 2013). Achievement emotions are framed by Pekrun (1992) which is one of the components of the control-value theory of academic emotions. There are mainly two core types of achievement emotions which are positive emotions (enjoyment, hope and pride) and negative emotions (anger, anxiety and boredom), respectively (Pekrun et al., 2002).

### 1.1.4 Academic Achievement

In general, academic achievement can be known as the marker to the degree to which a student has effectively completed objectives that primarily made by school. Academic achievement has been underlined in China due to the profound established cultural values connecting education with the societal position and the financial ability (Quach, Epstein, Riley, Falconier, & Fang, 2015). The concept of perceived competence was investigated under the self-determination theory which aimed to measure how an individual viewed their own ability (Troum, 2010). Wong, Wiest and Cusick (2002) reported that perceived competence was a predictor of academic achievement, while a study reported a similar results that perceived competence was significantly related to academic achievement (Bouffard, Marcoux, Vezeau, & Bordeleau, 2003).

### **1.1.5 Self-esteem**

According to Rosenberg (1965), self-esteem is the positive or negative perception toward oneself which has been proved as a predictor of school adjustment. For example, a higher level of self-esteem has shown to be an essential factor of adolescent's personal development during the transition to university (Hickman, Bartholomae, & McKenry, 2000).

### **1.1.6 Parental Acceptance-Rejection and School Adjustment**

Passage into university can be a major phase of adolescent's development as they need to face different levels of changes such as independence and responsibility which have not been experienced before (Roberts, 1995; Langhinrichsen-Rohling, 1997). According to Rohner (2010), both maternal and paternal acceptances were correlated with the school adjustment for both boys and girls worldwide. Previous studies suggested that mother was playing a significant role during the transition to university (Moser, Paternite, & Dixon, 1996; Mounts, Valentiner, Anderson & Boswell, 2006), while Chen, Liu and Li (2000) indicated that paternal control significantly predicted children's school maladjustment. To a degree, there is a relation between parents and children's school adjustment. The example of parental acceptance-rejection can significantly impact student's school adjustment from the past studies. It is suggested that freshmen in university whose parents were divorced and receive less acceptance from parents, showing a lower level of school adjustment (Amato, 2001). Similar studies have shown that parental hostility and neglect have been revealed to be associated with adjustment problems (Dishion, 1990; Hart, DeWolf, Wozniak, & Burts, 1992). Therefore, it is expected that parental acceptance-rejection predicts school adjustment among undergraduates.

### **1.1.7 Parental Acceptance-Rejection and Achievement Emotion**

Considerable research has been examined the role of parenting toward the development of adolescents. During this stage, adolescents require less coaching but more emotional and acceptance from parents as opposed to accepting direction and rules (Katz & Hunter, 2007). A correlation between parental acceptance-rejection and emotional regulation has been found in the previous research. Dix and Meunier (2009) reported that hostile and harsh parent-child relationship leads to the problems of children's emotional dysregulation.

### **1.1.8 School Adjustment and Achievement Emotion**

Entering into university can be a challenge to adolescent in their personal development. Fail to adjust to a new environment could bring about various issues.

The typical indicators of maladjustment were loneliness, depression, unhappiness, dissatisfaction and stressed, which fail to adjust could cause emotional problems (Nightingale et al., 2013). A research proposed that emotion regulation knowledge and abilities were significantly important toward the school adaption, if they were not able to develop emotion regulation skills, and they were tend to experience problems in adapting to school (Lopes, Mestre, Guil, Kremenitzer, & Salovey, 2012). Furthermore, a research conducted in China revealed that there was a significant relationship between university student's school adjustment and achievement emotions (Su & Ma, 2009). Students who have better school adjustment, the more positive achievement emotions would obtain and they are interrelated and influence each other. Therefore, it is suggested that there is a strong association between school adjustment and emotions.

### **1.1.9 Achievement Emotion and Academic Achievement**

The evidence of the linkage between achievement emotions and academic achievement is quite limited. In general, Pekrun et al. (2011) showed that student's achievement emotions are predictor of academic performance. For positive achievement emotions, only the relationship of enjoyment and academic performance has been observed, and these studies revealed positive correlations between enjoyment and academic performance (Pekrun et al., 2002). For negative achievement emotions such as anger and shame, negative relationships with academic performance have been reported (Pekrun et al., 2002). Besides, for boredom and hopelessness, the findings implied that the relationship between academic performance and these emotions is negative (Pekrun, Elliot, & Maier, 2009; Pekrun et al., 2002).

## **2 Methodology**

### **2.1 Research Hypothesis**

Referring to the literature review, nine hypotheses are formed to show the result expectations.

H<sub>1</sub> = Maternal acceptance-rejection has a significant relationship with school adjustment ( $p = 0.05$ )

H<sub>2</sub> = Maternal acceptance-rejection has a significant relationship with achievement emotion ( $p = 0.05$ )

H<sub>3</sub> = Paternal acceptance-rejection has a significant relationship with school adjustment ( $p = 0.05$ )

H<sub>4</sub> = Paternal acceptance-rejection has a significant relationship with achievement emotion ( $p = 0.05$ )

H<sub>5</sub> = School adjustment has a significant relationship with academic achievement ( $p = 0.05$ )

H<sub>6</sub> = School adjustment has a significant relationship with achievement emotion ( $p = 0.05$ )

H<sub>7</sub> = Achievement emotion has a significant relationship with academic achievement ( $p = 0.05$ )

H<sub>8</sub> = School adjustment has a significant relationship with self-esteem ( $p = 0.05$ )

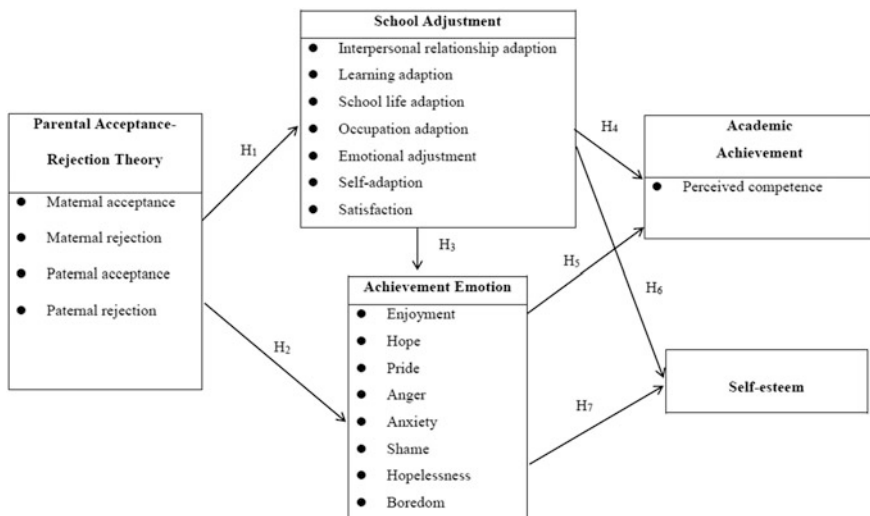
H<sub>9</sub> = Achievement emotion has a significant relationship with self-esteem ( $p = 0.05$ )

## 2.2 Proposed Framework

Based on the literature review, a theoretical framework of this study is generated and shown in Fig. 1.

## 2.3 Participants and Sampling Method

Two hundred and sixteen students (70 male and 146 female) who are studying in tertiary institution in Hong Kong were invited to participate in the study.



**Fig. 1** Proposed framework of the relationships between parental acceptance-rejection theory, school adjustment, achievement emotion and self-esteem in the present research

Convenience sampling was used to invite sample students from random universities. A consent from the study, concerning about the purpose, format and person in charge, is distributed to the participants. Six instruments with rating scale were included in the set of questionnaire.

### **2.3.1 Parental Acceptance-Rejection Questionnaire (PARQ)**

The short form of PARQ contains 24 items on the four subscales of (a) warmth/affection (sample item: "Says nice things about me"), (b) hostility/affection (sample item: "Hits me, even when I do not deserve it"), (c) indifference/neglect (sample item: "Pays no attention to me") and (d) undifferentiated rejection (sample item: "Seems to dislike me"). Participants were required to answer the items on a 4-point Likert scale (1 = almost always true to 4 = almost never true) in response to their perceptions toward mother's and father's actions to them (Rohner & Khaleque, 2005). The reliability of mother's PARQ is 0.87–0.97, while father's PARQ is 0.9–0.97 (Rohner, 2014).

### **2.3.2 School Adjustment Questionnaire**

The School Adjustment Questionnaire invented by Fong (2005) will be used to assess participants' school adjustment for their university school life. The form of School Adjustment Questionnaire contains 60 items on the seven subscales (a) interpersonal relationship adaption, (b) learning adaption, (c) school life adaption, (d) occupation adaption, (e) emotional adjustment, (f) self-adaption, (g) satisfaction, respectively. Participants were required to respond to the items on a 5-point Likert scale (1 = disagree to 5 = agree) according to their real situation from entering to the university until the present. The overall reliability is 0.91.

### **2.3.3 Achievement Emotion Scale**

A translated and adapted The Achievement Emotion Questionnaire will be used. This questionnaire originally constructed by Pekrun (2005) is used to assess participants' achievement emotions. The scale is composed of three dimensions which are class-related emotions, learning-related emotions and test-related emotions, respectively. In total, the scale contains 48 items on the eight subscales (a) enjoyment, (b) hope, (c) pride, (d) anger, (e) anxiety, (f) shame, (g) hopelessness and (h) boredom. Each subscale consists of six questions, while hope and shame aspects consist of five questions. Participants were required to respond to the items on a 5-point Likert scale (1 = totally disagree to 5 = totally agree), and the sum of all questions is the score of each subscale. The overall reliability is from 0.84 to 0.94.



### 2.3.4 Academic Achievement

The Perceived Competence for Learning Scale (PCS) will be adapted to measure participants' feelings of competence in learning in university. This scale is a 4-item scale with 7-point Likert scale (1 = not at all true to 7 = very true). The four items are related to four main aspects which are (a) confidence, (b) capability, (c) ability to achieve goals and (d) how well the individual responds to the challenge, respectively. Students' grade point average (GPA) will also be used to be the indicator of academic achievement by the self-report of participants.

### 2.3.5 Self-esteem

The self-esteem scale (Rosenberg, 1965) will be used to measure participants' self-esteem. It is one of the most widely used to measure self-esteem, and a translated Chinese version (Yeung, 1998) will be used in the present study. There are 10 items in total with a 4-point Likert scale (1 = strongly disagree to 4 = strongly agree). Average score will be calculated, and a high score indicates positive self-esteem. According to Yeung (1998), the mean score was 22.2 in Hong Kong which can be the indicator of determining high and low self-esteem in the present study. The reliability of the original English version was 0.83 (Grant-Vallone, Reid, Umali, & Pohlert, 2003), while the translated version was 0.80.

## 3 Results

### 3.1 *Descriptive Statistics and Correlational Analysis*

The mean, standard deviations, sample size and with the correlation between the twenty-five variables in this study are shown in Table 1. The mean for age is 20.3, and number of male is 70 and female is 146.

### 3.2 *Reliability Analysis*

In the pilot study, all the instruments have a satisfactory and good reliability, with the  $\alpha$  greater than or equal to 0.60. In the main study, all the instruments are good and reliable, for which the  $\alpha > 0.60$ , and the details are shown in Table 2. For Parental Acceptance-Rejection Questionnaire, the internal consistency of maternal acceptance-rejection is 0.560 with the internal consistencies of its four subscales being satisfactory. The internal consistency of paternal acceptance-rejection is 0.667 with the internal consistencies of its four subscales being satisfactory.

**Table 1** Descriptive statistics and correlations between different variables (N = 216)

	1	2	3	4	5	6	7	8	9	10	11	12
1 Maternal love/affection	-											
2 Maternal hostility	-0.579**	-										
3 Maternal indifference/neglect	-0.662**	0.590**	-									
4 Maternal undifferential rejection	-0.673**	0.781**	0.675**	-								
5 Paternal love/affection	0.422**	-0.396**	-0.330**	-0.333**	-							
6 Paternal hostility	-0.414**	0.624**	0.527**	0.536**	0.508**	-						
7 Paternal indifference/neglect	-0.312**	0.511**	0.491**	0.495**	-0.666**	0.623**	-					
8 Paternal indifference rejection	-0.465**	0.522**	0.541**	0.628**	-0.444**	0.763**	0.599**	-				
9 Interpersonal relational adaption	0.325**	-0.319**	-0.366**	-0.306**	-0.271**	-0.295**	-0.209**	-0.333**	-			
10 Interpersonal relational adaption	0.116	-0.165*	-0.242**	-0.137*	0.226**	-0.199**	-0.176**	-0.146*	0.503**	-		
11 School life adaption	0.314**	-0.222**	-0.387**	-0.358**	0.188**	-0.193**	-0.185**	-0.322**	0.562**	0.574**	-	
12 Occupational adaption	0.182**	-0.156*	-0.304**	-0.260**	0.139**	-0.175*	-0.211**	-0.271**	0.563**	0.617**	0.578**	-
13 Emotional adaption	0.362**	0.309**	0.332**	0.329**	0.382**	-0.213**	-0.272**	-0.270**	0.608**	0.475**	0.644**	0.449**
14 Self-adaption	0.244**	-0.258**	-0.279**	-0.275**	0.293**	-0.167**	-0.190**	-0.165**	0.572**	0.560**	0.654**	0.441**
15 Overall adaption	0.218**	-0.176**	-0.277**	-0.219**	0.255**	-0.197**	-0.186**	-0.269**	0.584**	0.607**	0.708**	0.524**
16 Enjoyment	0.022	-0.108	-0.011	-0.038	0.188**	-0.119	-0.122	-0.004	0.325**	0.683**	0.395**	0.288**
17 Hope	0.139*	-0.178**	-0.207**	-0.122	0.198**	-0.152*	-0.126	-0.097	0.362**	0.659**	0.492**	0.332**
18 Pride	0.185**	-0.009	-0.168**	-0.075	0.161*	-0.149**	-0.03	-0.116	0.266**	0.457**	0.293**	0.192**

(continued)

Table 1 (continued)

19 Anger	-0.324**	0.280**	0.383**	0.330**	-0.204**	0.294**	0.188**	0.354**	0.394**	-0.242**	-0.354**	-0.281**
20 Anxiety	-0.186**	0.239**	0.299**	0.323**	-0.194**	0.192**	0.260**	0.264**	-0.381**	-0.183**	-0.379**	-0.301**
21 Shame	-0.230**	0.303**	0.362**	0.296**	-0.260**	0.297**	0.309**	0.275**	-0.489**	-0.317**	-0.416**	-0.368**
22 Hopelessness	-0.289**	0.298**	0.414**	0.405**	-0.200**	0.346**	0.239**	0.427**	-0.523**	-0.431**	-0.582**	-0.472**
23 Boredom	-0.011	0.169*	0.246**	0.149*	0.228**	-0.183**	-0.204**	-0.134*	-0.383**	-0.579**	-0.394**	-0.377**
24 Perceived competence	0.133	-0.197**	-0.193**	-0.153*	0.218**	-0.013	-0.166**	-0.056	0.431**	0.621**	0.463**	0.345**
25 Self-esteem	0.403**	-0.352**	-0.470**	-0.408**	0.298**	-0.320**	-0.251**	-0.363**	0.602**	0.456**	0.640**	0.480**
<i>M</i>	2.7	1.8	1.9	1.6	2.5	1.7	2.1	1.6	3.3	3.1	3.3	3.2
<i>SD</i>	0.52	0.55	0.49	0.61	0.53	0.56	0.59	0.57	0.48	0.53	0.55	0.5
1 Maternal love/affection												
2 Maternal hostility												
3 Maternal indifference/neglect												
4 Maternal undifferentiated rejection												
5 Paternal love/affection												
6 Paternal hostility												
7 Paternal indifference/neglect												
8 Paternal indifference rejection												
9 Interpersonal relational adaption												

(continued)



**Table 2** Coefficient alphas of six questionnaires in main study

Scale	Cronbach's alpha ( $\alpha$ )
<i>Maternal acceptance-rejection</i>	
1. Love/affection	0.856
2. Hostility	0.788
3. Indifference/neglect	0.780
4. Undifferential rejection	0.848
<i>Paternal acceptance-rejection</i>	
5. Love/affection	0.847
6. Hostility	0.801
7. Indifference/neglect	0.813
8. Undifferential rejection	0.802
<i>School adjustment</i>	
9. Interpersonal relationship adaption	0.710
10. Learning adaption	0.782
11. School life adaption	0.719
12. Occupational adaption	0.672
13. Emotional adjustment	0.715
14. Self-adaption	0.784
15. Overall satisfaction	0.677
<i>Achievement emotion</i>	
16. Enjoyment	0.941
17. Hope	0.913
18. Pride	0.917
19. Anger	0.912
20. Anxiety	0.934
21. Shame	0.928
22. Hopelessness	0.951
23. Boredom	0.930
<i>Perceived competence</i>	
24. Perceived competence	0.947
<i>Self-esteem</i>	
25. Self-esteem	0.874

The internal consistency of school adjustment is 0.866 with the internal consistencies of its seven subscales being satisfactory. The internal consistency of achievement emotion is 0.896 with the internal consistencies of its eight subscales being satisfactory. The internal consistency of perceived competence is 0.947. For the self-esteem, the internal consistency is 0.874.

### 3.3 Confirmatory Factor Analysis

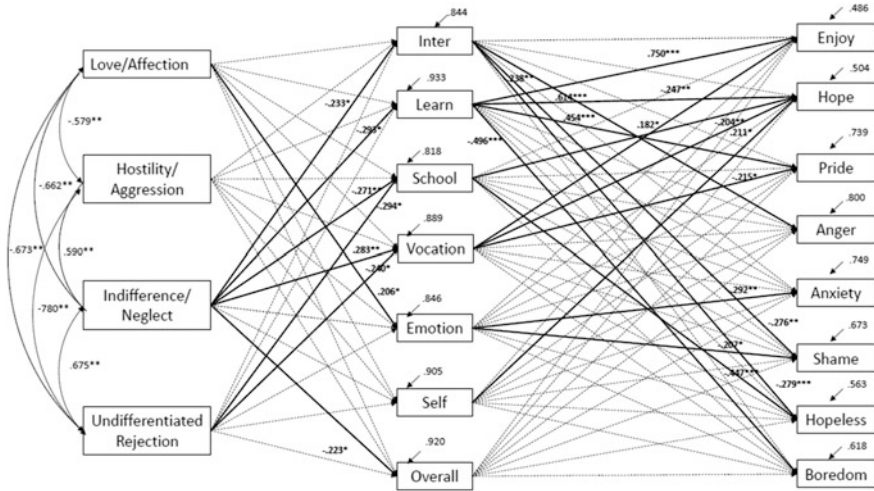
In this study, confirmatory factor analysis has been used to test the validity of the instruments by examining the interrelationship of the variables (Gorsuch, 1983). The detailed results of three instruments are shown in Table 7. For all scales, no parceling is needed. For achievement emotion scale and self-esteem scale, the CFI is greater than or equal to 0.95, the ratio between  $\chi^2/df$  is smaller than or equal to 4.09, and the RMSEA is smaller than or equal to 0.120, which indicate that the instruments are tested to be valid. For positive achievement emotion,  $\chi^2$  (132) = 540.56;  $\chi^2/df$  = 4.09; RMSEA = 0.120; CFI = 0.958; GFI = 0.779. For negative achievement emotion,  $\chi^2$  (395) = 1273.83;  $\chi^2/df$  = 3.22; RMSEA = 0.102; CFI = 0.962; GFI = 0.693. For self-esteem,  $\chi^2$  (34) = 109.28;  $\chi^2/df$  = 3.21; RMSEA = 0.101; CFI = 0.961; GFI = 0.910 (Table 3).

## 4 Path Analysis of Maternal Acceptance-Rejection, School Adjustment and Achievement Emotions

Path analyses are conducted by using LISREL. Figure 2 indicates relationships between maternal acceptance-rejection, school adjustment and achievement emotions. The result revealed that maternal love/affection was a significant positive predictor of emotional adjustment ( $\beta = 0.20$ ,  $p < 0.05$ ). There were no significant relationships between the remaining indicators of school adjustment. The result revealed that there were no significant relationships between maternal hostility/aggression and the indicators of school adjustment. Moreover, it discovered that maternal indifference/neglect was a significant positive indicator of interpersonal relationship adjustment ( $\beta = -0.23$ ,  $p < 0.05$ ), learning adjustment ( $\beta = -0.29$ ,  $p < 0.01$ ), school adjustment ( $\beta = -0.27$ ,  $p < 0.01$ ), vocational adjustment ( $\beta = -0.28$ ,  $p < 0.01$ ) and overall satisfaction ( $\beta = -0.22$ ,  $p < 0.05$ ). There were no significant relationships between maternal indifference/neglect and the remaining indicators of school adjustment. The result also revealed that maternal undifferentiated rejection was a significant positive predictor of school adjustment ( $\beta = -0.29$ ,  $p < 0.05$ ) and vocational adjustment ( $\beta = -0.24$ ,  $p < 0.05$ ). There were no significant relationships between maternal undifferentiated rejection and the remaining indicators of school adjustment.

**Table 3** Goodness-of-fit index

Scales	df	$\chi^2$	$\chi^2/df$	GFI	CFI	RMSEA
AE (positive)	132	540.561	4.095	0.779	0.958	0.120
AE (negative)	395	1273.830	3.224	0.693	0.962	0.102
SES	34	109.282	3.214	0.910	0.961	0.101

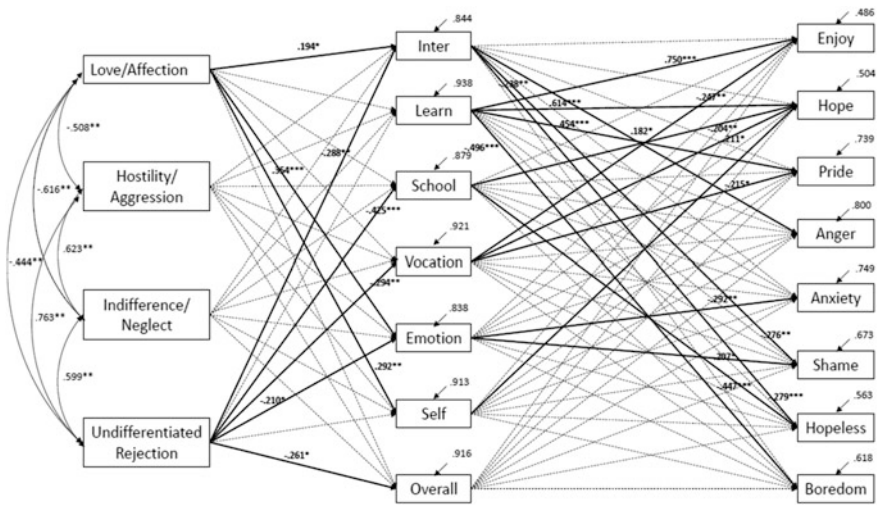


**Fig. 2** The path model showing the effects of maternal acceptance-rejection, school adjustment and achievement emotion. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Moreover, the result indicated that interpersonal relationship adjustment was positive predictor of anger ( $\beta = -0.23, p < 0.01$ ), shame ( $\beta = -0.27, p < 0.01$ ) and hopeless ( $\beta = -0.27, p < 0.001$ ). For the learning adjustment, it was a positive predictor of enjoyment ( $\beta = 0.75, p < 0.001$ ), hope ( $\beta = 0.61, p < 0.001$ ), pride ( $\beta = 0.45, p < 0.001$ ) and boredom ( $\beta = -0.49, p < 0.001$ ) for the school adjustment, and it was a positive predictor of hope ( $\beta = 0.18, p < 0.05$ ) and hopeless ( $\beta = -0.44, p < 0.001$ ). For the vocational adjustment, it was a positive predictor of enjoyment ( $\beta = -0.24, p < 0.01$ ), hope ( $\beta = -0.20, p < 0.01$ ) and pride ( $\beta = -0.21, p < 0.05$ ). The emotional adjustment was a positive predictor of anxiety ( $\beta = -0.29, p < 0.01$ ) and shame ( $\beta = -0.20, p < 0.05$ ). For the self-adjustment, it was the positive indicator of hope ( $\beta = -0.21, p < 0.05$ ), while the overall satisfaction was the positive indicator of hopeless ( $\beta = -0.17, p < 0.05$ ).

### 5 Path Analysis of Paternal Acceptance-Rejection, School Adjustment and Achievement Emotions

Another path model between paternal acceptance-rejection, school adjustment and achievement emotions has been examined and shown in Fig. 3. The result revealed that paternal love/affection was a significant positive indicator of interpersonal relationship adjustment ( $\beta = 0.19, p < 0.05$ ), emotional adjustment ( $\beta = 0.35, p < 0.001$ ) and self-adjustment ( $\beta = 0.29, p < 0.01$ ), while there was no significant relationship between paternal love/affection and the remaining indicators of school



**Fig. 3** The path model showing the effects of paternal acceptance-rejection, school adjustment and achievement emotion. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

adjustment. As for the paternal hostility/aggression and paternal indifference/neglect, there were no significant relationships between these two factors and all indicators of school adjustment. For the undifferentiated rejection, it was a significant positive predictor of interpersonal relationship adjustment ( $\beta = -0.28$ ,  $p < 0.01$ ), school adjustment ( $\beta = -0.42$ ,  $p < 0.001$ ), vocational adjustment ( $\beta = -0.29$ ,  $p < 0.01$ ), emotional adjustment ( $\beta = -0.21$ ,  $p < 0.05$ ) and overall satisfaction ( $\beta = -0.26$ ,  $p < 0.05$ ).

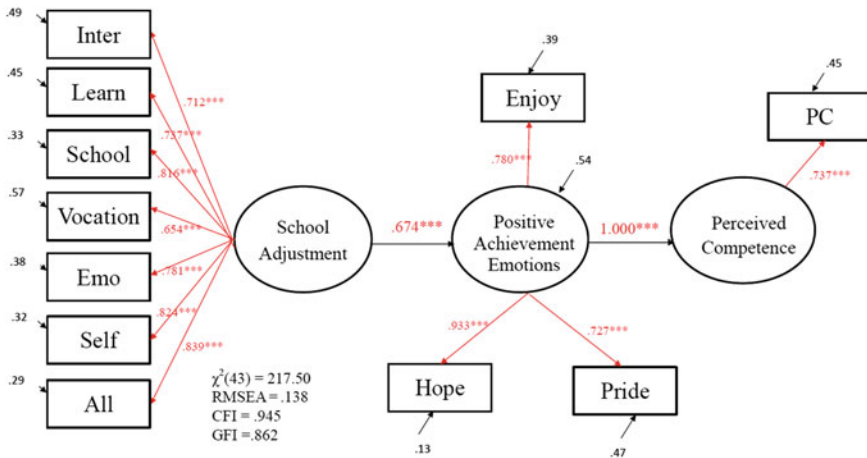
For the achievement emotions, as shown in Fig. 3, the result revealed that hope ( $\beta = 0.36$ ,  $p < 0.001$ ), shame ( $\beta = -0.31$ ,  $p < 0.001$ ) and hopeless ( $\beta = -0.21$ ,  $p < 0.01$ ) were significant indicators of self-esteem, while there were no significant relationships between other achievement emotions and self-esteem.

### 5.1 SEM with School Adjustment, Positive Achievement Emotions and Perceived Competence

The structural model for this study is shown in Fig. 4. This model is used to show the relationships between the three latent variables, including school adjustment, positive achievement emotion and perceived competence, to their observed variable/indicators. The goodness-of-fit indices for this structural model are satisfactory, which the  $\chi^2(43) = 217.50$ ; the Chi-square ratio  $\chi^2/df = 2.05$ ; GFI = 0.86; CFI = 0.94; RMSEA = 0.13.

School adjustment has seven indicators, including interpersonal relationship, learning, school, vocational, emotional, self-adjustment and overall satisfaction.





**Fig. 4** The structural model of the relationships between school adjustment, positive achievement emotions and perceived competence. Note: Inter = Interpersonal; Learn = Learning; School = School; Vocation = Vocational; Emo = Emotional; Self = Self-adjustment; All = Overall; Enjoy = Enjoyment; Hope = Hope; Pride = Pride; PC = Perceived Competence; RMSEA = Root Mean Square Error of Approximation; GFI = Goodness of Fit Index; CFI = Comparative Fit Index, \* $p < .05$ . \*\* $p < .01$ , \*\*\* $p < .001$

School adjustment is significantly related to all seven indicators, which are interpersonal relationship ( $\beta = 0.71, p < 0.001$ ), learning ( $\beta = 0.73, p < 0.001$ ), school ( $\beta = 0.81, p < 0.001$ ), vocational ( $\beta = 0.65, p < 0.001$ ), emotional ( $\beta = 0.78, p < 0.001$ ), self-adjustment ( $\beta = 0.82, p < 0.001$ ) and overall satisfaction ( $\beta = 0.83, p < 0.001$ ).

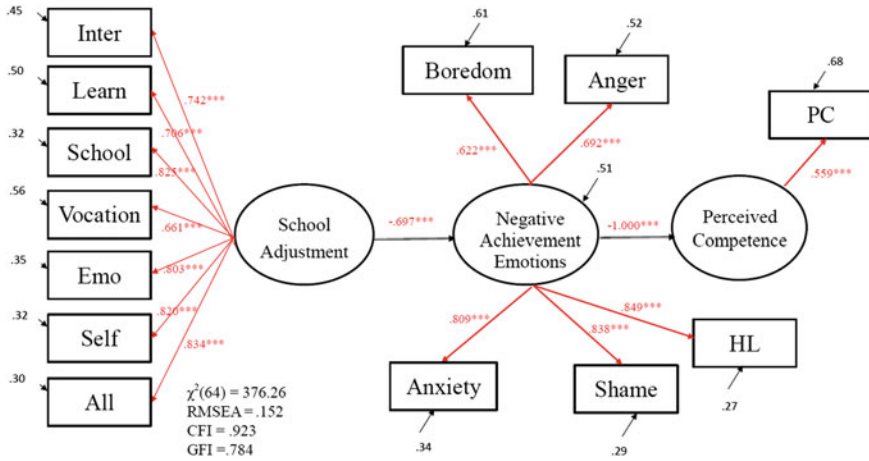
Positive achievement emotions include 3 observed variables, including enjoyment, hope and pride. Positive achievement emotions are significantly correlated to the 3 observed variables, which are enjoyment ( $\beta = 0.78, p < 0.001$ ), hope ( $\beta = 0.93, p < 0.001$ ) and pride ( $\beta = 0.72, p < 0.001$ ).

Perceived competence have 1 observed variables and it is significantly related to the indicators, which perceived competence ( $\beta = 0.73, p < 0.001$ ).

As for the latent variables, three of the latent variables are significantly correlated, with  $p < 0.001$ . School adjustment was positively related to positive achievement emotions ( $\beta = 0.67, p < 0.001$ ), whereas positive achievement emotions would positively and significantly give rise to perceived competence ( $\beta = 1.00, p < 0.001$ ).

### 5.2 SEM with School Adjustment, Negative Achievement Emotions and Perceived Competence

The structural model for this study is shown in Fig. 5. This model is used to show the relationships between the three latent variables, including school adjustment,



**Fig. 5** The structural model of the relationships between school adjustment, negative achievement emotions and perceived competence. Note: Inter = Interpersonal; Learn = Learning; School = School; Vocation = Vocational; Emo = Emotional; Self = Self-adjustment; All = Overall; HL = Hopeless; PC = Perceived Competence; RMSEA = Root Mean Square Error of Approximation; GFI = Goodness of Fit Index; CFI = Comparative Fit Index, \* $p < .05$ . \*\* $p < .01$ , \*\*\* $p < .001$

negative achievement emotion and perceived competence, to their observed variable/indicators. The goodness-of-fit indices for this structural model are satisfactory, which the  $\chi^2(64) = 376.26$ ; the Chi-square ratio  $\chi^2/df = 5.87$ ; GFI = 0.78; CFI = 0.92; RMSEA = 0.15.

School adjustment has seven indicators, including interpersonal relationship, learning, school, vocational, emotional, self-adjustment and overall satisfaction. School adjustment is significantly related to all seven indicators, which are interpersonal relationship ( $\beta = 0.74, p < 0.001$ ), learning ( $\beta = 0.70, p < 0.001$ ), school ( $\beta = 0.82, p < 0.001$ ), vocational ( $\beta = 0.66, p < 0.001$ ), emotional ( $\beta = 0.80, p < 0.001$ ), self-adjustment ( $\beta = 0.82, p < 0.001$ ) and overall satisfaction ( $\beta = 0.83, p < 0.001$ ).

Negative achievement emotions include 5 observed variables, including anger, anxiety, shame, hopeless and boredom. Negative achievement emotions are significantly correlated to the 5 observed variables, which are anger ( $\beta = 0.69, p < 0.001$ ), anxiety ( $\beta = 0.80, p < 0.001$ ), shame ( $\beta = 0.83, p < 0.001$ ), hopeless ( $\beta = 0.84, p < 0.001$ ) and boredom ( $\beta = 0.62, p < 0.001$ ).

Perceived competence have 1 observed variables and it is significantly related to the indicators, which perceived competence ( $\beta = 0.55, p < 0.001$ ).

As for the latent variables, three of the latent variables are significantly correlated, with  $p < 0.001$ . School adjustment was negatively related to negative achievement emotions ( $\beta = -0.69, p < 0.001$ ), whereas negative achievement emotions would positively and significantly give rise to perceived competence ( $\beta = -1.00, p < 0.001$ ).

## 6 Discussion

### 6.1 *The Relationship Between Parental Acceptance-Rejection and School Adjustment*

Based on the descriptive statistics, only maternal indifference/neglect is negatively significantly related to interpersonal relationship adjustment, learning adjustment, school adjustment, vocational adjustment and overall adjustment, and paternal rejection was negatively related to interpersonal relationship adjustment, school adjustment, vocational adjustment and emotional adjustment. These two subcategories are having strong relationship with the subcategories of school adjustment. The results are consistent with the hypotheses. Due to the limited research on paternal acceptance-rejection, it could be explained by using parental rejection.

According to the past studies, parental neglecting has been found to be associated with children's maladaptive and incompetent behaviors such as aggression and other adjustment problems (Dishion, 1990; Hart, DeWolf, Wozniak, & Burts, 1992; Chen, Rubin, & Li, 1997), in which the present study is consistent with the past studies. However, maternal love has been found to have positive influences on children's social and cognitive developments and, in turn, strengthen the ability of their adjustment in the past study (Chen et al., 1997). In the present study, maternal love did not have a significant relationship toward school adjustment which is inconsistent with the past study.

Moreover, past studies revealed that children who had the experiences of parental neglect were having a higher risk of a number of problematic developmental health such as learning problems and peer rejection (Egeland, Sroufe, & Erickson, 1983; Erickson & Egeland, 2002; Petersen, Joseph, & Feit, 2014). Thus, it can be implied that parental neglect may increase the difficulty in adjusting in interpersonal relationship, emotion and learning when entering the university. Also, rejected children have been found to have higher chances of experiencing negative peer treatment. They were usually lower in the school participation and having adjustment problem. Eventually, they desired to avoid school and report their loneliness at school (Buhs & Ladd, 2001). Based on the past and present studies, parental acceptance-rejection can be identified as playing a role in students' school adjustment, causing both positive and negative influences.

### 6.2 *The Relationship Between School Adjustment, Achievement Emotions and Perceived Competence*

For the relationship between school adjustment, achievement emotions and perceived competence, some significant relationships were discovered and consistent with literature and hypotheses. In the present study, interpersonal relationship adjustment, learning adjustment, school adjustment and emotional adjustment are

negatively significant to negative achievement emotions; learning adjustment, school adjustment and self-adjustment are positively significant to positive achievement emotions.

According to the past studies, maladjustment to the university may result in adjustment problems in which students may exhibit negative emotional symptoms (Nyamayaro & Saravanan, 2013). Besides, there were positive relationships between school adjustment and positive achievement emotions, while negative relationships were found between school adjustment and negative achievement emotions in a Chinese study (Ko, 2014). The present study is consistent with the past studies. According to the Control-Value theory proposed by Pekrun, pride, shame, and anger are assumed to be control-dependent, in which activated by causal attributions of success and failure suggesting that the self, other persons or situational factors (Pekrun, Frenzel, Goetz & Perry, 2011). For pride and shame, they are posited to be induced by the attributions of success and failure to the self (Pekrun et al., 2011). In the present study, learning and emotional adjustment are related to the self, causing the appearance of pride and shame. Those who were unable to control and adjust their self-emotion in the university are easier to feel shame since emotions are mainly related to the self. Moreover, as learning is related to the students' hard work, if the students had a successful learning adjustment in the university, he or she may have a higher chance to feel pride. For anger, it is posited to be induced by the attributions to other persons (Pekrun et al., 2011). In the present study, interpersonal relationship adjustment predicted anger. As entering the university, making of new friends and modifying the existing relationships are the requirements for all students (Parker, Summerfeldt, Hogan, & Majeski, 2004). If the students fail in meeting and adjusting to the demands of entering the university, they may have a higher chance of experiencing anger. Boredom is aroused and instigated by the non-valued activities and academic settings (Pekrun et al., 2011). In the present study learning adjustment predicted boredom. For example, if the students had the difficulty in adjusting in the university, he or she may find or think learning is useless; in turn, boredom may produce.

Besides, positive achievement emotions are posited to be a multiplicative function of perceived controllability and positive values of activities or outcomes (Pekrun et al., 2011). If the students had successful school adjustment in the university, he or she may be more interested in studying, implying that a positive values and attitude toward university activities, in turn, may induce positive achievement emotions. On the other hand, according to Pekrun, control-related beliefs and value-related beliefs such as the self-concept of ability and personal interests are assumed to influence the appraisals and result in positive achievement emotions (Pekrun et al., 2011). It indicated that students were having uncertainties toward their ability to meet the challenges and demands. Thus, if they doubt themselves, the chance of inducing negative achievement emotions is higher, while students who believe in self-ability may have better school adjustment and predict positive achievement emotions.

According to the resource allocation model, both positive and negative emotions consume cognitive resources by focusing the attention on the object of emotions.

Once the person paid attention, fewer resources are available for the task completion, in which, can have negative implications for the performance (Pekrun & Stephens, 2010). For example, failure in school adjustment higher the chance of the appearance of negative achievement emotions, which may distract students' attention away from the academic in the university. Besides, mood can enhance the mood-congruent memory process. Positive mood could facilitate the retrieval of positive self and task-related information, while negative mood could facilitate the retrieval of negative information (Levine & Burgess, 1997; Pekrun & Stephens, 2010). For example, students who are successful in school adjustment would have positive achievement emotions. Thus, this can foster their self-recognition and motivate them to finish their study in the university. Since they have positive achievement emotions, positive self and task-related information can be obtained. It may in turn higher the positive influence toward their perceived competence in the university such as believing in them, more confidence to meet the obstacles and challenges in the future.

### ***6.3 The Relationship Between Achievement Emotions and Self-esteem***

For the relationship between achievement emotions and self-esteem, some significant relationships were resulted and consistent with previous studies. In the present study, hope, shame and hopelessness are significant to self-esteem. According to the literature, shame was particularly tied to self-esteem (Borwn & Marashall, 2001; Ward, 2014), which were consistent with the present study. From the findings of the past and present, students who are experiencing high levels of shame in the university are more likely to obtain a lower self-esteem. Moreover, the previous studies revealed that hope and self-esteem correlated with each other (Heaven & Ciarrochi, 2008), implying that the change in the level of hope could change the level of self-esteem, while the level of self-esteem could change the level of hope. Therefore, the students who have a higher-level hope could make a change toward his or her self-esteem in dealing with the challenges in the university.

## **7 Conclusion**

The present study has contributed to provide two main findings, including the effects of maternal neglect and paternal reject to school adjustment. Furthermore, the model between the three variables, in which achievement emotions would induce by school adjustment and influence the perceived competence. There are some limitations in the present research. The sample size is not enough, which the sample size is  $N = 215$ . The critical N for confirmative factor analysis is relatively

low. This caused the RMSEA and GFI may not be most accurate enough or best fitted to indicate the validity of the instruments. Moreover, since the questionnaires were distributed by convenient sampling, the distribution of participants from different universities was unequal. Thus, low in generalization is resulted. Also, the ratio between the male and female participants was not equal. It may affect the result.

As mentioned before, there is only one predictor predicting achievement emotions, and further studies can develop models on other predictors such as coping style, including both emotion-focused and problem-focused coping. Researchers can test investigate about the relationship between school adjustment, coping styles and achievement emotions. On the other hand, since the parental acceptance-rejection did not show a strong relationship with school adjustment, researchers can explore the relationship of attachment style or parent–child relationship.

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# Theoretical Components of Workplace Safety Climate and Their Implications for Practice

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**Abstract** Management safety commitment is an important theoretical factor in safety climate measurement and research; however, the influence of co-workers has received less attention. This study investigated whether co-worker safety attitudes and behaviours contributed explanatory variance to associations with burnout or whether management attitudes and behaviours primarily determine this association. Hospitality employees ( $N = 111$ ) completed safety climate, psychosocial safety climate (PSC), and burnout measures. Results showed safety climate was significantly correlated with personal, work and customer-related burnout. Multiple regressions showed co-worker factors did not add predictive capacity for burnout above management factors, although did for determining whether workers experienced customer-related burnout. Results were compared to findings for Disability Support Workers where co-worker factors added predictive capacity above management factors for burnout. Findings suggested worker and manager safety-related attitudes and behaviours are important theoretical components of safety climate, but their relative influence varies according to the safety climate measure used and organisational structure.

**Keywords** Organisational psychology · Psychosocial safety · Burnout  
Safety climate

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## 1 Introduction

### 1.1 *Work Safety in Australia*

There are significant economic costs associated with poor physical and psychological health at work. Work injuries not only directly affect employees, but they also indirectly affect employers, workers compensation insurers and administrators due to the associated financial costs (Guthrie, Ciccarelli, & Babic, 2010). Economic costs of workplace injury to the Australian economy were estimated at \$61.8 billion for the 2012–13 financial year (Safe Work Australia, 2015). According to the Australian Compensation Statistics 2011–12, the Health and Community services industry made the largest number of serious claims, at 19,060. This was followed by the manufacturing industry, with 16,670 serious claims, and construction at 12,485.

Psychological injury costs arising from workplace stress for organisations and the broader economy are also substantial (Safe Work Australia, 2013). Work-related mental stress claims are the most expensive form of workers' compensation claim because of the length of the absence from work that is typical of these claims. A study by an Australian private health insurance company reported that in 2008, the total cost of work-related mental stress to the Australian economy was \$14.81 billion; the direct cost to employers alone in stress-related absenteeism was \$10.11 billion (Medibank Private, 2008). It was noted that these figures would be higher if they included the hidden costs associated with re-staffing and re-training that result from high staff turnover caused by stress.

Statistics like these indicate that work safety, including psychological health, ought to be an important concern for all organisations. Thus, being able to predict and prevent an accident or injury, whether physical or psychological, is of particular importance.

### 1.2 *Safety Climate*

In recent years, interest in the concept of safety climate and its utility in predicting organisational safety performance has increased. Contributing to this interest has been research demonstrating that organisational safety climate is related to the number of workplace accidents in a variety of occupational settings, including chemical plants (e.g. Hofmann & Stetzer, 1996), manufacturing (Clarke, 2006), construction (e.g. Dodobbeleer & Beland, 1991; Nielsen & Mikkelsen, 2007; Siu, Phillips, & Leung, 2004), and offshore environments (e.g. Cox & Cheyne, 2000; Flin, Mearns, Gordon, & Fleming, 1996). As such, a variety of safety climate surveys have been created and are commonly used in organisations. This has been associated with a movement away from safety measures based on retrospective data ("lag indicators") such as fatalities, lost time, accident rates and incidents,

towards “leading indicators” such as safety audits or measurements of safety climate. These predictive measures enable organisations to monitor their safety conditions, which may reduce the need for an accident to occur in order to identify safety weaknesses and to make improvements. Furthermore, a safety climate survey costs an organisation far less money than proactive preventions such as a safety audits, although they cannot entirely replace other diagnostic tools (Siu et al., 2004).

Safety climate, as first conceptualised by Zohar (1980), was defined as “a summary of molar perceptions that employees share about their work environments. It is a frame of reference for guiding appropriate and adaptive task behaviours” (p. 96). Since its conception, a number of different definitions for safety climate have arisen. Griffin and Neal (2000) argue that safety climate is employees’ perceptions of the policies, procedures, and practices relating to safety. However, others have proposed broader definitions in which safety climate encompasses a wider range of components, including attitudes towards safety (e.g. Mearns, Whitaker, & Flin, 2003). Despite differences in definition, the fundamental assumptions of safety climate are the same. Safety climate is a multi-dimensional construct that influences the safety behaviour of workers at the individual, group, and organisational level. Furthermore, it provides a snapshot of the current state of safety in an organisation at a distinct point in time while recognising that it is a dynamic process that changes over time (Cheyne, Cox, Oliver, & Tomas, 1998; Griffin & Neal, 2000; Guldenmund, 2000).

Zohar (1980) conceptualised safety climate as an antecedent of workplace injuries. It is thought that the influence of perceptions of workplace safety policies, procedures and practices on injuries is mediated via their direct effects on behaviour-outcome expectancies, which consequently affect safety behaviour and performance (Christian, Bradley, Wallace, & Burke, 2009; Clarke, 2006; Guldenmund, 2000). Christian et al. (2009) found group safety climate had the strongest association with accidents and injuries through meta-analytic correlations and path analysis results. This process occurs because safety climate acts as a frame of reference for the behaviour and attitudes of employees. As such, safety climate guides normative safety behaviour. For example, an organisation that encourages and rewards safety provides a clear message to employees that working safely is a suitable organisational behaviour and as such employees of this organisation will consider working safely to be the norm. On the other hand, an organisation that prioritises production over safety and does not reward safety behaviour sends a message to employees that working safely is not a priority. This organisation is more likely to have workplace accidents. Models of accident causation have provided support for this interpretation (Tomas, Melia, & Oliver, 1999).

### ***1.3 Safety Climate and Worker Well-being***

In addition to demonstrating the relationship between safety climate and work injuries, the relationship between a positive safety climate and reduced workplace

stress has also been highlighted in the literature (Oliver, Cheyne, Tomas, & Cox, 2002; Siu et al., 2004). As such, safety climate is an important construct to examine in an organisation as the consequences of a negative safety climate extend beyond that of accidents and includes influences on worker well-being. In particular, jobs that are characterised by high role demands (e.g. role overload and role conflict) are thought to foster the perception that production is prioritised over safety, which could lead to a negative safety climate (Clarke, 2010). Clarke and Cooper (2004) argue that safety climate predicts employees' general health, which in turn predicts workplace accidents. According to this model, a negative safety climate leads to increased occupational stress, which reduces physical and psychological well-being. This leaves employees more susceptible to accidents and injuries. Hofmann and Stetzer (1996) found that a perception of high role overload was predictive of a greater likelihood to cut-corners and demonstrate unsafe behaviours. Siu, Phillips, and Leung (2004) concluded that the reason for this increase was that employees with a perceived high level of work pressure focused on completing their tasks and less on the safety of their work procedures. The question still remains whether causation can go both ways; for example, that stress from role conflict leads to a negative safety climate which in turn creates greater stress, both of which lead to increased risk of stress effects and accidents.

#### *1.4 Measuring Safety Climate*

As yet there is no consensus as to which factors comprise the construct of safety climate (Guldenmund, 2000). Often researchers have created industry-specific measures (e.g. Flin et al., 2000), which have led to very different numbers and types of factors in safety climate measures. Flin et al. (2000) concluded that management commitment to safety, safety systems, risk, work pressure, and competence, were the most common safety climate factors in the literature. However, despite these being the most common factors, there is no evidence to suggest that they comprise the best factors of the safety climate construct in terms of its relationship to work accidents, or that some of these dimensions even represent safety climate at all (Beus et al., 2010). The factor with the most consensus in the literature is management commitment to safety, which has been seen as a fundamental factor in safety climate research (Brown & Holmes, 1986; Cox & Cheyne, 2000; Dedobbeleer & Beland, 1991). Therefore, it is widely acknowledged that the degree to which managers are viewed as setting safety as a priority in an organisation will significantly influence employees' perceptions of the importance of safety (Clarke, 2010).

Less widely researched, and of particular focus in the current study, is the influence of co-workers in determining a safety climate within an organisation. Co-worker influences may be less researched due to the more limited focus on health care and human service work, where co-worker interactions and decision making may be more influential in terms of safety-related behaviour,

compared with less interactive and individualised work settings, as in manufacturing. Becker (1992) found from research with 30 organisations that individuals feel more committed to their co-workers than to their supervisors, managers, or the organisation itself. Andriessen (1978) found that when groups in the construction industry are well coordinated in their work there are less misunderstandings and accidents. This is attributed to the group atmosphere that promotes the development of positive safety norms. When this occurs members of an organisation are supported to work safely by approval of their peers and colleagues. Alternatively, if an employee is perceived to look “childish” or “not tough enough” for following safety regulations by their co-workers, they may be easily motivated to work less safely or to take risks. Therefore, it can be argued that co-workers may be highly influential on someone’s motivation to work safely (Andriessen, 1978). Thus, the attitudes and norms of co-workers may be an influential factor in relation to safety climate, despite the limited research that has examined this perspective.

It is important to note that the factors relevant to work safety climate may vary from one type of work to another. For example, workers who work by themselves are not going to have a work safety climate that is influenced by co-worker behaviour. The importance of work attitudes may also depend on the extent to which workers are required to make decisions for themselves or together. For example, in human service work employees are given far more autonomy to make decisions both individually and with co-workers than in manufacturing, where employees generally follow established procedures or the directions of their supervisors. In recent years, there have been changes in the way people work, with an increase in human service industries, meaning more people work in groups and have to make decisions with co-workers than previously (Industry Employment Projections Report, 2016). As such, to the extent that human services increase and manufacturing industries decrease in the future, co-worker influences are likely to become more important for more jobs. This may also be evident in virtual organisations to the extent that people who are not together physically nevertheless have to make decisions together that may affect work safety.

### ***1.5 Comparison of Two Approaches to Measuring Safety Climate***

Kines et al. (2011) developed the Nordic Safety Climate Questionnaire (NOSACQ-50) for measuring safety climate, covering dimensions based on organisational and safety climate, psychological theory, previous empirical research, and empirical results acquired through developing the measure. The NOSACQ-50 measures seven safety climate dimensions, including respondents’ perceptions of both the management level (management safety priority, commitment, and competence; management safety empowerment; and management safety justice) and the co-worker level (workers’ safety commitment; workers’ safety

priority and risk non-acceptance; safety communication, learning, and trust in co-worker safety competence; and workers' trust in the efficacy of safety systems). The use of different dimensions allows diagnosis of the overall safety climate of an organisation and also specific areas of concern. Kines et al. (2011) concluded that the questionnaire should evaluate the safety climate of both the management and workgroup policies separately based on previous studies, including that of Dodobbeler and Beland (1991) who indicated that safety climate measures should cover management and workgroup conditions. The NOSACQ-50 has been developed and tested in a number of employment sectors, including the construction industry, the food industry, and the health care context (Kines et al., 2011).

Although the NOSACQ-50 provides a comprehensive assessment of relevant manager and co-worker attitudes and behaviours related to safety in the workplace, a problem associated with this comprehensive assessment is the length of the survey; it includes 50 items and requires considerable time to be completed. This makes it difficult to include in a survey of safety-related issues that may be designed to assess the relationship between the safety climate and measures of other individual or organisational factors that may also take some time to complete.

In the current study, the NOSACQ-50 safety climate measure was compared with Hall, Dollard, and Coward's (2010) Psychosocial Safety Climate (PSC-12) scale. The PSC-12 reflects the "communicated management position about the value and priority of worker psychological health and safety in the workplace" (Hall et al., 2010, p. 356). The PSC-12 scale includes 12 items measuring the factor of Psychosocial Safety Climate (PSC) and includes only management level items. This is because Hall et al. (2010) consider PSC to be largely driven by management values and beliefs, and a "top down" phenomenon set by the organisation's management. The PSC-12 has been developed and tested with a wide range of occupations, including managers, associate professionals, tradespersons, clerical or sales workers, and labourers (Hall et al., 2010).

The PSC-12 scale provides a much shorter and hence a more user acceptable measure of safety climate; however, the shortness is obtained by not having any scales related to co-workers on the assumption that their attitudes and behaviours add no further safety climate information. The scale also has no subdomains and only provides an overall measure of PSC, which limits its use for identifying particular areas of safety concern. Another problem with assessing particular areas of safety concern is that some of the questions in the scale cover more than one issue and are quite complex. Hall et al. (2010) made note of this concern and indicated that the scale had a Flesch-Kincaid Grade level of 10.5, which is higher than the recommended score of 7.0–8.0 levels that an average eighth-grader student could understand. This makes it difficult to include in a survey designed to measure the safety climate of organisations with higher levels of international workers, or workers with lower levels of education.

In a previous study carried out by the authors of this study, results obtained through multiple regression analysis indicated that the co-worker section of the NOSCAQ-50 did add variance above that of management for burnout scores of Disability Support Workers who worked in a human service organisation providing

residential care for people with disabilities in community-based houses. Disability Support Workers generally work in small groups in dispersed settings with limited direct supervision from supervisors or managers and as such, co-worker safety attitudes and behaviours are likely to be important for work safety in an organisation with this structure. The current study aimed to investigate whether this finding would be replicated with a more typical organisational structure in which workers are in closer contact with supervisors or management.

## ***1.6 Current Study***

The aim of this study was to investigate the concept of Workplace Safety Climate in terms of which of its key components affect aspects of work-related stress. In particular, the study aimed to determine whether co-worker attitudes and behaviours contribute additional explanatory variance to the association with key work-related stress indicators or whether, as suggested in some studies, management attitudes and behaviours either wholly or primarily determine associations of this kind. Giving participants both the NOSACQ-50 and PSC-12 scales would test this association and determine which measure performed best.

Participants in this study consisted of hospitality workers from a large entertainment and hospitality organisation. This organisation was chosen to test the two safety climate questionnaires as workers in the organisation are required to interact with co-workers and with customers but also with supervisors and managers. If, as assumed by the NOSACQ-50, both manager and co-worker safety climate dimensions are important predictors of safety-related outcomes such as workplace stress, then it would be expected that co-worker dimensions would contribute additional variance to that provided by the manager dimensions. However, if as assumed by the PSC-12, manager influenced safety climate is all that is important in determining such outcomes, then the co-worker dimensions would not contribute additional variance, and the PSC-12 should explain the same amount of variance as all the dimensions of the NOSACQ-50. It was hypothesised that the co-worker safety climate dimensions in the NOSACQ-50 would add additional predictive capacity above that of the management dimensions, and as such provide a more comprehensive understanding of the factors influencing safety climate than would the PSC-12.

In the current study, the safety climate related outcome measure used was the Copenhagen Burnout Inventory (CBI). The CBI assesses personal, work-related and customer-related burnout (Kristensen, Borritz, Villadsen, & Christensen, 2005). It defines burnout as the “attribution of [physical and emotional] fatigue and exhaustion to specific domains or spheres in the person’s life” (Kristensen et al., 2005, p. 197). As such, the CBI is organised into three distinct types of burnout. The first is personal burnout, which refers to the degree of exhaustion experienced by individuals in a generic sense. Work-related burnout refers to the degree of physical and psychological exhaustion perceived by individuals as related to their

work. Lastly, customer-related burnout refers to the degree of physical and psychological exhaustion perceived by an individual as related to their work with customers. It was hypothesised that safety climate, as measured by the NOSACQ-50 and PSC-12, would be correlated with this measure of health and well-being, including personal burnout, work-related burnout, and customer-related burnout.

## **2 Method**

### **2.1 Participants**

Participants were 111 employees from a large entertainment and hospitality organisation. Of the 111 employees, there were 58.6% females and 41.4% males. The participant mean age was 35.6 years ( $SD = 10.84$ ). Mean employment length was 7.29 years ( $SD = 8.43$ ). The percentage of participants born in Australia was 79.3%. Most participants worked full-time (48.6%) with others working part-time (30.6%) or casually (19.8%). Median hours worked per fortnight were 60 ( $SD = 23.16$ ). One third of participants had University degrees (33.3%), 28.8% had certificates, 27% had graduated from secondary school, and 10.8% had diplomas.

### **2.2 Measures**

Responses for this investigation were drawn from a larger questionnaire used by the authors in an ongoing safety-related study of Disability Support Workers. The parts of that questionnaire used in the present study included demographics (e.g. age, gender, country of birth), employment characteristics (e.g. length of service, hours worked per fortnight), burnout (the CBI) and work safety climate perceptions (the NOSACQ-50). An additional work safety climate measure used in the present study but not in the ongoing Disability Support Worker study was the PSC-12. Additionally, although not provided in the published versions of these questionnaires, participants were provided with opportunities to record qualitative comments to elaborate on or qualify responses in each of them. In the following sections, the structure and properties of these measures are described.

#### **2.2.1 Burnout**

Burnout was assessed using the Copenhagen Burnout Inventory (CBI; Kristensen, Borritz, Villadsen, & Christensen, 2005). The CBI comprises three subscales. Central to the CBI is the association between burnout and physical and psychological fatigue and exhaustion. CBI subscale structure reflects attribution of



exhaustion to specific life domains. The personal burnout subscale (six items) assesses exhaustion regardless of occupational status (e.g. “How often do you feel tired?”). The work-related burnout (seven items) and customer-related burnout (six items) subscales measure the extent exhaustion is perceived as related to work or customers, respectively (e.g. “Is your work emotionally exhausting?” and “Do you find it hard to work with customers?”). Item responses are rated on a 5-point scale (0 = never/almost never or to a very low degree, 25 = not often or to a low degree, 50 = sometimes or somewhat, 75 = often or to a high degree and 100 = always or to a very high degree). Higher scores represent more symptoms of burnout, with the mean of 50 or greater considered as indicating burnout. The normative sample comprised 1914 human service sector workers.

### **2.2.2 Psychosocial Safety Climate**

PSC was measured using the Psychosocial Safety Climate (PSC-12) Scale (Hall, Dollard, & Coward, 2010). The PSC-12 comprises 12 questions all phrased positively. The PSC-12 does not have any subscales and includes items such as “In my workplace senior management acts quickly to correct problems/issues that affect employees’ psychological health” and “In my organisation, the prevention of stress involves all levels of the organisation”. The PSC-12 uses a 5-point scale of strongly disagree, disagree, neither agree or disagree, agree, and strongly agree. Higher scores represent a better psychosocial safety climate.

### **2.2.3 Safety Climate**

Safety climate was measured using the Nordic Occupational Safety Climate Questionnaire (NOSACQ-50; Kines et al., 2011) which includes 50 items phrased positively or negatively across seven climate dimensions. Three scales concern the perceptions of safety at the level of management and four scales relate to the work-unit level. The three management level dimensions include Management safety priority, commitment and competence (e.g. “Management encourages employees here to work in accordance with safety rules—even when the work schedule is tight”), Management safety empowerment (e.g. “Management strives to design safety routines that are meaningful and actually work”), and Management safety justice (e.g. “Management collects accurate information in accident investigations”). The four work-unit level dimensions include Workers’ safety commitment (e.g. “We who work here try hard together to achieve a high level of safety”), Workers’ safety priority and risk non-acceptance (e.g. “We who work here regard risks as unavoidable”), Peer safety communication, learning, and trust in co-workers’ safety competence (e.g. “We who work here try to find a solution if someone points out a safety problem”), and Workers’ trust in the efficacy of safety systems (e.g. “We who work here consider that a good safety representative plays an important role in preventing accidents”). Items are rated on a 4-point scale of

strongly disagree, disagree, agree, and strongly agree. Scores for these dimensions are obtained by summing items (with reverse scoring for negatively worded items) and dividing by the number of items in the dimension to provide an average score that can be considered in terms of the above criteria. The normative sample consisted of 3853 health care sector workers. Mean scores of 3.30 or more out of 4 indicate a good safety climate for maintaining and continuing safety development; 3.00–3.30 reflect a fairly good safety with a slight need for improvement indicated; 2.70–2.99 suggest a fairly low perceived safety with need for improvement; and scores below 2.70 indicate a low safety climate with a great need for improvement.

### **2.3 Procedures**

A pilot study was conducted with the Health and Safety Specialist and two employees (two females, one male) from the entertainment and hospitality organisation. The results indicated that the questionnaires were easy to understand and all questions were considered appropriate. The time required to complete the survey was approximately 20 minutes. At the request of the pilot trial participants, a time bar was added to the survey to allow participants to know how much of the questionnaire they have left to complete. One other modification was the addition of a question before the customer-related burnout questions which asked, “How often in your work are you required to interact with customers?” This question was added because some employees never work with customers. Those answering that they never interact with customers were instructed not to answer the customer burnout questions.

The final procedure involved information of the project and a web link to the survey being distributed to all employees by email by the Health and Safety Specialist in the Human Resources department at the organisation. Participants were informed that participation was voluntary that their responses would be confidential and only group results would be reported. They were also informed that participants would be included in a draw for a gift voucher to encourage participation. Completing and submitting the survey was taken as consent to participate in the research.

## **3 Results**

### ***3.1 Comparisons Between the Current Sample and Norm Groups***

It can be seen in Fig. 1 that all mean dimension scores for the entertainment and hospitality organisation were in the fairly good safety climate range and that for some dimensions they were close to the good safety climate range. It can also be

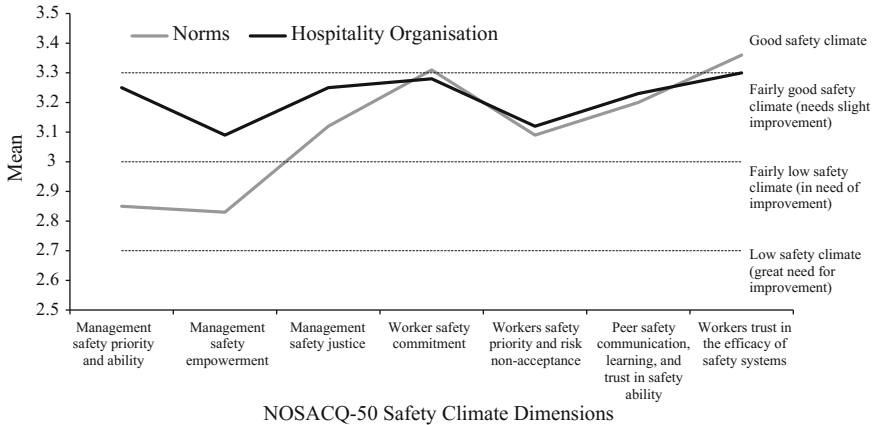


Fig. 1 NOSACQ-50 safety climate dimension mean scores in comparison to the norms

seen that these mean scores were higher for all the management dimensions than for the norm group and that the pattern of scores was very similar between the co-worker dimensions and the norm groups. The two lowest dimension scores for the organisation also correspond to the two lowest domain scores for the norms; namely, for management safety empowerment and for workers’ safety priority and risk non-acceptance.

Table 1 provides the descriptive statistics for the NOSACQ-50, PSC-12 and CBI measures. It can be seen that both measures possessed adequate reliability for subsequent analyses with alphas ranging from 0.72 to 0.96. Table 1 also shows the *t*-values derived from comparisons with the normative samples. Compared to the NOSACQ-50 normative samples the employees of the large entertainment and hospitality organisation reported significantly higher perceived safety climate for all three of the management dimensions but not for any of the four co-worker dimensions.

As indicated in Table 1, personal burnout levels of the current sample were significantly higher than the norms. Work-related burnout was slightly higher and customer-related burnout was slightly lower than the norms but neither difference was significant. However, the current sample was consistent with the normative data in that personal burnout was the highest and customer-related burnout was the lowest amongst the three types of burnout.

### 3.2 Safety Climate, Psychosocial Safety Climate and Worker Health and Well-being

Table 2 provides correlations between measures. All correlations were significant and consistent with predictions. Personal, work-related and customer-related

**Table 1** Descriptive and reliability statistics for the NOSACQ-50, PSC-12 and CBI for employees of the large entertainment and hospitality organisation ( $N = 111$ ) and comparisons to normative samples

Scales	Hospitality sample					Normative sample		
	Range	Mean	SD	$\alpha$	CI	Mean	SD	$t$ value
<i>NOSACQ-50</i>								
Management safety priority and ability	1.78–4.00	3.25	0.47	0.87	0.83–0.91	2.85	0.58	0.40***
Management safety empowerment	2.00–4.00	3.09	0.50	0.85	0.81–0.89	2.83	0.55	0.26***
Management safety justice	1.93–4.00	3.25	0.50	0.90	0.86–0.93	3.12	0.50	0.13**
Worker safety commitment	2.33–4.00	3.28	0.43	0.72	0.63–0.80	3.31	0.47	-0.03
Workers safety priority and risk non-acceptance	1.86–4.00	3.12	0.44	0.75	0.68–0.82	3.09	0.51	0.03
Peer safety communication, learning, and trust in safety ability	2.13–4.00	3.23	0.44	0.88	0.84–0.91	3.20	0.44	0.03
Workers trust in the efficacy of safety systems	1.71–4.00	3.30	0.46	0.88	0.84–0.91	3.36	0.44	-0.06
PSC-12	1.17–5.00	3.33	0.92	0.96	0.95–0.97			
<i>Copenhagen burnout inventory</i>								
Personal burnout	0–91.67	43.54	20.01	0.90	0.86–0.92	35.9	16.5	7.64***
Work-related burnout	0–96.43	36.87	21.66	0.91	0.89–0.94	33.0	17.7	3.87
Customer-related burnout	0–91.67	26.98	22.84	0.91	0.88–0.94	30.9	17.6	-3.92

\*\* $p < 0.01$  \*\*\* $p < 0.001$

Note  $\alpha$  = Cronbach’s alpha; CI = 95% confidence intervals;  $df = 110$

burnout were all significantly correlated with each other, consistent with norm group correlations between the measures, meaning increased personal burnout is associated with increased work-related burnout and customer-related burnout and vice versa.

Correlations between the PSC-12 scale and the NOSACQ-50 dimensions with the measures of burnout were all significant indicating that higher scores on the workplace safety climate measures were associated with lower levels of personal, work-related and customer-related burnout. It can also be seen in Table 2 that the correlations between the NOSACQ-50 and the personal burnout measures were generally similar with the equivalent correlations for the PSC-12, but they were lower in all cases for work-related burnout and higher in all cases for the

**Table 2** Correlation matrix for the Copenhagen Burnout Inventory, PSC-12, and NOSACQ-50 scores

Scales	1	2	3	4
1. CBI personal burnout	–			
2. CBI work-related burnout	0.73***	–		
3. CBI customer-related burnout	0.60***	0.56***	–	
4. PSC-12 scale	-0.46***	-0.47***	-0.39***	–
5. NOSACQ management safety priority and ability	-0.46***	-0.38***	-0.54***	0.54***
6. NOSACQ management safety empowerment	-0.44***	-0.41***	-0.52***	0.52***
7. NOSACQ management safety justice	-0.44***	-0.35***	-0.47***	0.50***
8. NOSACQ worker safety commitment	-0.33***	-0.25**	-0.42***	0.39***
9. NOSACQ workers safety priority and risk non-acceptance	-0.46***	-0.32**	-0.51***	0.37***
10. NOSACQ peer safety communication, learning, and trust in safety ability	-0.42***	-0.36***	-0.44***	0.57***
11. NOSACQ workers trust in the efficacy of safety systems	-0.35***	-0.27**	-0.47***	0.38***

\*\* $p < 0.01$  \*\*\* $p < 0.001$

customer-related burnout. These results suggest that the two safety climate measures may predict different aspects of burnout.

With respect to the NOSACQ-50, significant negative correlations were obtained with all burnout measures, although the magnitude was generally lower for work-related burnout, particularly with workers’ safety commitment, workers’ safety priority and risk non-acceptance, and workers’ trust in the efficacy of safety systems. Findings suggest burnout was associated with less favourable safety climate perceptions, although it is possible the lower ratings on some of the co-worker safety climate dimensions may mean that managers play a larger role in work-related burnout than co-workers.

Comparing the correlations between the NOSACQ-50 and the PSC-12, it can be seen, as expected, that the PSC-12—which measures management-related safety—correlated more highly with the management dimensions than with three of the four co-workers dimensions of the NOSACQ-50.

### 3.3 Safety Climate Measurement

Table 3 provides correlations between each of the dimensions in the NOSACQ-50. Correlations between the management dimensions were all very high and significant, ranging from 0.76 to 0.81. This suggests that worker perceptions of management dimensions were largely measuring very similar sources of variance.

**Table 3** Correlation matrix the NOSACQ-50 dimension scores

NOSACQ-50 dimensions	1	2	3	4	5	6
1. Management safety priority and ability	–					
2. Management safety empowerment	0.79***	–				
3. Management safety justice	0.81***	0.76***	–			
4. Workers' safety commitment	0.68***	0.63***	0.66***	–		
5. Workers' safety priority and risk non-acceptance	0.74***	0.70***	0.69***	0.62***	–	
6. Peer safety communication, learning, and trust in safety ability	0.71***	0.73***	0.74***	0.73***	0.70***	–
7. Workers' trust in efficacy of safety systems	0.59***	0.59***	0.60***	0.69***	0.69***	0.73***

\*\*\* $p < 0.001$

In contrast, there was larger variability in the significant correlations between the co-worker dimensions, ranging from 0.62 to 0.73, suggesting that workers were more variable in their perceptions of safety amongst their co-workers. This could reflect greater awareness of the part of workers concerning their own attitudes and behaviours towards different aspects of safety. These results suggest that the four co-worker dimensions were important in the NOSCAQ-50 as each dimension was adding additional information to the questionnaire.

To understand the importance of measuring both manager and co-worker safety attitudes and behaviours, multiple regression analyses were performed to establish the extent to which the co-worker dimensions were important predictors of health and well-being for the workers. As can be seen in Table 4, the variance explained in the management dimensions (step 1) ranged from 17% for work-related burnout to 31% for customer-related burnout. Management safety priority and ability demonstrated a significant main effect for customer-related burnout but not personal or work-related burnout. Management safety empowerment and management safety justice did not have significant main effects with any of the well-being measures. The addition of the co-worker safety climate dimensions at step 2 explained 1–3% of additional variance, with no significant  $R^2$  changes and no significant effects demonstrated. These regression results show that co-worker safety attitudes and behaviours, as assessed by workers, were not important additional predictors of well-being for employees in the large entertainment and hospitality organisation, suggesting that the measurement of safety climate for occupational groups such as these only requires consideration of management attitudes and behaviours.

Further multiple regression analyses were performed to establish the extent to which the co-worker dimensions were important predictors for being assessed as

**Table 4** Results of multiple regression analysis (unstandardised coefficients) to test the extent that NOSACQ-50 management and co-worker dimension scores predicted worker well-being (using the CBI)

Variables	Work-related burnout	Personal burnout	Customer-related burnout
Step 1 R <sup>2</sup>	0.17***	0.23***	0.31***
Management safety priority and ability	-0.72	-9.97	-19.27*
Management safety empowerment	-11.46	-6.71	-8.76
Management safety justice	0.75	-3.73	3.97
Step 2 R <sup>2</sup> /Δ R <sup>2</sup>	0.18**/0.01	0.24***/0.01	0.34***/0.03
Management safety priority and ability	-9.60	-7.47	-17.72
Management safety empowerment	-10.50	-4.35	-7.89
Management safety justice	2.06	-2.07	4.80
Workers' safety commitment	4.99	2.30	-1.84
Workers' safety priority and risk non-acceptance	4.12	-7.01	-3.26
Peer safety communication, learning and trust in co-worker safety competence	-9.53	-4.15	8.50
Workers' trust in the efficacy of safety systems	0.81	0.42	-10.36

\**p* < 0.05 \*\**p* < 0.01 \*\*\**p* < 0.001

burnt out or not (i.e. obtaining scores of 50 or above or below 50, respectively, on CBI measures). Forty-seven workers that were considered to be experiencing personal burnout, 32 were considered to be experiencing work-related burnout and 13 were considered to be experiencing customer-related burnout. As can be seen in Table 5, the variance explained in the management dimensions (step 1) ranged from 6% for work-related burnout to 27% for customer-related burnout. No main effects were demonstrated with any of the well-being measures. The addition of the co-worker safety climate dimensions for burnout at step 2 explained 2–20% of additional variance, with significant R<sup>2</sup> changes for customer-related burnout. Workers safety commitment, workers' safety priority and risk non-acceptance, peer safety communication and workers' trust in the efficacy of safety systems were significant predictors of experiencing customer-related burnout in addition to the variance explained by the management dimensions. These regression results show that co-worker safety attitudes and behaviours are important predictors of whether workers are experiencing customer-related burnout in addition to what is predicted by management dimensions, suggesting that the prediction of workers at risk of customer-related burnout requires consideration of co-worker safety attitudes and behaviours as well as management safety attitudes and behaviours.

**Table 5** Results of multiple regression analysis (unstandardised coefficients) to test the extent that NOSACQ-50 management and worker dimension scores predicted worker well-being for workers considered to be experiencing burn out (using the CBI)

Variables	Work-related burnout	Personal burnout	Customer-related burnout
Step 1 R <sup>2</sup>	0.06	0.16***	0.27**
Management safety priority and ability	-0.10	-0.36	-0.11
Management safety empowerment	-0.13	-0.03	-0.21
Management safety justice	0.00	-0.03	-0.20
Step 2 R <sup>2</sup> /Δ R <sup>2</sup>	0.08/0.03	0.18**/ 0.02	0.47**/0.20*
Management safety priority and ability	-0.13	-0.38	-0.26
Management safety empowerment	-0.11	-0.01	-0.39
Management safety justice	0.05	-0.03	-15
Workers' safety commitment	-0.02	0.19	-0.44*
Workers' safety priority and risk non-acceptance	0.14	-0.07	0.43*
Peer safety communication, learning, and trust in co-worker safety competence	-0.29	-0.14	0.60*
Workers' trust in the efficacy of safety systems	0.15	0.05	-0.37*

\* $p < 0.05$  \*\* $p < 0.01$  \*\*\* $p < 0.001$

## 4 Discussion

The aim of this study was to investigate the concept of Workplace Safety Climate in terms of its key components affecting aspects of work-related safety. This study focused, in particular, on the importance of co-worker attitudes and behaviours in explaining additional variance with key work-related indicators above that of management attitudes and behaviours. It was hypothesised that (a) safety climate, as measured by the NOSACQ-50 and PSC-12, would be correlated with measures of health and well-being, as measured by the CBI and (b) that the co-worker safety climate dimensions in the NOSACQ-50 would add additional predictive capacity above that of the management dimensions for workers in the large entertainment and hospitality organisation, and as such provide a more comprehensive understanding of the factors influencing safety climate than would the PSC-12.

### 4.1 Safety Climate, Psychosocial Safety Climate and Worker Health and Well-being

The hypothesis that safety climate, as measured by the NOSACQ-50 and PSC-12, would be correlated with measures of health and well-being was supported.



This is consistent with the findings of Oliver et al. (2002) and Siu et al. (2004), both of whom reported a relationship between a positive safety climate and reduced workplace stress. The PSC-12 was significantly and negatively correlated with personal burnout, work-related burnout, and customer-related burnout, indicating that the higher the perceived PSC the lower the levels of worker burnout. Customer-related burnout had the weakest correlation with PSC. As PSC reflects managements' behaviours and attitudes to working safely, it is understandable that customer-related burnout would be the lowest as management is less involved in relations between workers and customers. Nonetheless, there were aspects of work that respondents reported in their qualitative comments that indicated management behaviour did contribute to customer-related stress when working with customers, for example when management made decisions in relation to changes to promotional offers made to customers without consulting staff. The NOSACQ-50 was more strongly correlated with customer-related burnout than was the PSC-12, suggesting the NOSACQ-50 identified elements of workplace safety attitudes and behaviours that were relevant to customer-related burnout that were not as effectively measured by the PSC-12, for example, the extent to which co-workers support each other in their work which includes their work with customers.

The NOSACQ-50 was significantly and negatively correlated with the three areas of burnout. Personal and customer-related burnout were significantly correlated with the seven dimensions. Though work-related burnout also correlated significantly with all seven of the NOSACQ-50, the magnitude of the correlations was higher for the three management dimensions and the peer safety communication, learning, and trust in safety ability dimension than was the case for the other three co-worker dimensions. It is therefore possible that management behaviours and attitudes had a larger effect on work-related stress than co-workers in this organisation.

The three management dimensions of the NOSACQ-50 were very highly and significantly correlated with each other. These results may accurately reflect a more general attitude of management towards safety issues that influences all their safety-related behaviours, but it may also reflect a more general positive or negative bias on the part of workers towards all aspects of management and safety. In contrast, there was greater variability in the correlations between the four co-worker dimensions of the scale. This could reflect greater awareness of the part of workers concerning their own attitudes and behaviours towards different aspects of safety. Future research would be needed to assess the extent to which the opposite effects would occur with managers and supervisors completing the questionnaire; that is, more variability amongst their scores for the management dimensions of which they may be more aware than for the co-worker dimensions.

## **4.2 *The Importance of Co-workers in Safety Climate Measurement***

The hypothesis that the co-worker safety climate dimensions in the NOSACQ-50 would add additional predictive capacity above that of the management dimensions was not supported with respect to degree of personal, work or customer-related burnout measured by the CBI for this organisation. This is inconsistent with the results of a previous study conducted by the same authors involving Disability Support Workers, in which the co-worker section of the NOSACQ-50 did add variance above that of management dimensions on their own. These findings suggests that the relative influence of safety-related attitudes and behaviours of managers and co-workers may vary depending on the structure of the organisation since Disability Support Workers work in community housing in more isolated environments that are associated with less control and on-the-job support from supervisors and managers. In contrast, the large entertainment and hospitality organisation in the present study is an organisation in which workers are generally working in close proximity to their managers on the same site. This finding may support the use of the PSC-12 scale as an adequate measure of safety climate in organisations with this type of organisational structure, which considers safety to be a “top down” phenomenon determined by the organisation’s management. The PSC-12 has been developed with a wide range of occupations; however, the structures of the organisations that the scale was based on are not clear. If participants worked for organisations with similar structures to that investigated in this study where managers and co-workers are in close proximity, it would explain why the scale has been developed to only focus on management’s attitudes and behaviours. Future research on safety climate measures needs to consider the type of structure of the organisation being assessed, particularly with respect to the working relationship between managers and workers.

The co-worker section of the NOSACQ-50 was found to add predictive capacity above that of management for predicting which employees were considered as experiencing customer-related burnout, defined as being at or above a score of 50 on the burnout scale. As such, the co-worker sections of the NOSACQ-50 were found to be important in identifying factors that predicted whether employees are likely to be above a stress level of particular concern in regards to customers. The multiple regression results indicate that this could not be done with just the management dimensions of the scale, thus supporting the inclusion of the co-worker dimensions in the NOSACQ-50 for measuring safety climate for practical purposes even with an organisational structure in which managers and workers work together in the same physical environment. This result suggests that the relative influence of management and co-worker behaviours and attitudes with respect to work safety also depends on the type of work safety measure used.

A limitation of this study was the use of one dependent variable. The CBI was chosen because it is well established and there was evidence in the literature to indicate that workplace safety climate is related to worker burnout. The use of other

dependent variables related to work safety would have provided a more comprehensive assessment on the importance of the co-worker sections of the NOSCAQ-50. However, results from the three measures of burnout provided by the CBI did suggest that co-worker safety climate factors may have more of less influence depending on the type of work safety measure being predicted. The use of the CBI as the only dependent variable in this study was partly determined by the fact that with the two measures of safety climate the survey was already a reasonable size for workers to complete.

### **4.3 *Future Research***

More research is needed to determine whether measures of work safety climate should include both management and co-worker behaviours and attitudes in relation to work safety. Important issues to consider in such research include consideration of different types of organisations, such as human service and manufacturing organisations and, in particular, organisations having different structural relationships between managers and workers. There is also a need to investigate the extent to which management and co-worker work safety climate factors relate to different types of work safety variables, and to different ways of measuring those variables. In the present study, co-worker safety climate factors did not add variance in relation to the degree of customer burnout but did add variance to what may be a more important measure for practical purposes, and that is whether workers were considered as experiencing customer burnout or not.

## **5 Conclusions**

The results of this study did not find support for the hypothesis that the co-worker safety climate dimensions would add predictive capacity above that of management in a large entertainment and hospitality organisation. However, this study did find that co-worker safety climate dimensions could add predictive capacity above that of management for whether workers were assessed as burnt out or not according to a criterion used for the CBI. This could be an important practical outcome of using both the management and co-worker safety climate dimensions to the extent that workers assessed as burnt out are found to be more likely to be involved in negative safety outcomes such as accidents and stress claims.

A major difference between the current study and a previous study using two of the same safety climate and burnout measures was the structure of the organisations in which the research was conducted. In the large entertainment and hospitality organisation in this study the workers were generally in close proximity to their managers on the same site and the relative influence of co-worker safety climate dimensions was less than in another human service organisation involving work in

community housing in more isolated environments, where there was less control and on-the-job support from supervisors and managers. These findings suggest that the relative influence of safety-related attitudes and behaviours of managers and co-workers may vary depending on the structure of the organisation.

An important driver for understanding the relative influence of manager and co-worker dimensions for the structure of the concept of work safety climate is the changing nature of work over the last decade that includes more human service organisations with co-workers working more directly with each other in teams and with customers. This trend is likely to continue to increase in the future, with health care and social assistance projected to be the largest areas of employment growth. Accordingly, there is a need to determine the structure of work safety climate in terms of its important dimensions if work safety climate measures are to be used most effectively and efficiently to maximise work safety in organisations.

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# Interaction of Psychological Contract Violation and Emotional Labour: Recovery of Organizational Trust and Job Satisfaction

Noriko Okabe

**Abstract** This study investigates the hypotheses that Asian flight attendants' emotional labour aspects moderate the decreasing propensity of organizational trust and satisfaction in circumstances where the Psychological Contract Violation (PCV) is perceived. A questionnaire survey was administered to 413 Asian flight attendants. A 5-point Likert-type scale was employed to assess the aspects of PCV and emotional labour. Approximately 500 questionnaires were randomly distributed to flight attendants at an Asian airport, confidentiality of the data was explained, and then they were asked to complete the questionnaire. The research findings, mean, S.D., Cronbach's alpha and correlations for variables used in this study are shown. Then, multiple hierarchical regression is used to test the hypotheses. The results show that some emotional aspects (emotional delivery and surface acting) significantly recover the decreasing propensity of organizational trust and satisfaction in the stressful circumstances where emotional labour perceives PCV.

**Keywords** Psychological Contract Violation • Emotional labour  
Asian airline • Flight attendants • Trust • Satisfaction

## 1 Introduction

### 1.1 Research Background

#### 1.1.1 Competitive Airline Industry and Emotional Labour

Downsizing, cost reduction, layoffs and early retirement programs are recent trends in the airline industry. Low-cost carrier (LCC) has brought a new business model in the industry and it is very successful today. LCC accounted for 27% of the total

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seats flown globally in 2016, up from 19% a decade ago (IATA Economics' Chart of the week, 24 February 2017). Organizations, under pressure to make rapid and constant changes, have had to alter employment relationships and the psychological contract that underlie them (Robinson, 1996). Thus, traditional airlines have had to reduce costs and the fact might gradually lead to alter operations and work practices and employment relationships. Moreover, today's aviation industry is a 24 hours a day/7 days a week operation that produces a variety of challenges for flight attendants, including extended duty periods, highly variable schedules, frequent time zone changes and increased passenger load (Avers, King, Nesthus, Thomas and Banks, 2009). Thus, the workplace became more complex and stressful for employees.

Furthermore, as information technology has advanced, certain operational jobs were substituted by self-serving and automation machines. Under such an environment and strong pressure to be competitive, many companies have been obliged to alter their organizational structure and human resource relationships. The traditional contract of long-term job security in return for hard work and loyalty may no longer be valid (Sims, 1994), and employees and employer alike are now reconsidering their mutual obligation (Robinson, 1996).

Customer service employees are indispensable for many organizations, particularly airlines, as they serve as a fundamental type of interface connecting the organization with customers. The importance of customer service employees' emotions, which is also referred to as "emotional labour", has long been part of organizational behaviour since Hochschild published *The Managed Heart* in 1983. Hochschild (1983) observed the flight attendants recruiting, training and job; moreover, he interviewed and described their management process of emotions in the service. Emotional labour refers to the process by which workers are expected to manage their feelings in accordance with organizationally defined rules and guidelines (Wharton, 2009). Emotional labour is potentially good because no customer wants to deal with a surly waitress, a crabby bank clerk or a flight attendant who avoids eye contact to avoid getting a request (Hochschild, 1983).

### **1.1.2 Employees and Psychological Contract Violation (PCV)**

In previous studies on the Psychological Contract Violation (PCV), researchers have found that most employees have experienced some measure of PCV by their employers. For example, Robinson and Rousseau (1994) reported that 54.8% of MBA graduates are perceived PCV violators, while Conway and Briner (2002) suggested an even higher percentage of violation in their study using a daily diary method with 69% of the participants who are managers from the bank, reporting at least one broken promise over the 10-day period. Thus, PCV is relatively common. In addition, PCV is associated with a variety of negative outcomes (Turnley & Feldman, 2000), such as decreasing propensities of trust, job satisfaction, job performance, increasing intention to quit, neglect of in-role job duties and organizational citizenship behaviours. Though previous research has shown that for

PCV with negative outcomes, little work has focused on how individual factors alleviate such a negative impact of PCV on outcomes in the complex and stressful workplace.

### **1.1.3 Purpose of the Present Study**

The present study focuses on how emotional labour recovers organizational trust and job satisfaction when employees perceive PCV. The fieldwork was practiced and investigated flight attendants working for an Asian airline, in which organizational stress seems to be occurring because of intensified competition worldwide and employees may perceive PCV. Hypotheses were tested whether emotional labour aspects moderate the propensity of reducing trust towards the employer and job satisfaction. This study focused on three emotional variables (affective delivery, surface acting and deep acting) and examined emotional variables to moderate the negative impact of PCV on trust towards employers as well as job satisfaction.

## ***1.2 Literature Review***

### **1.2.1 Psychological Contract Violation (PCV)**

#### Contracts

Organizations and employees are typically connected through a contract, which can be considered a type of interface. Contracts are a ubiquitous and necessary feature of the organization and serve to bind together individuals and organizations, and regulate their behaviour, making it possible to achieve the organizational goal (Robinson, Kraatz, & Rousseau, 1994). Contracts are a necessary component of employment relationships (Robinson et al., 1994).

#### Psychological Contracts

Psychological contracts refer to employees' perceptions of what they owe to their employers and what their employers owe to them (Robinson, 1996). The psychological contract held by an employee consists of beliefs about the reciprocal obligation between that employee and his organization (Morrison & Robinson, 1997). Thus, psychological contracts are individual beliefs in a reciprocal obligation between the individual and the organization (Rousseau, 1989).



## Feeling of Anger: Psychological Contract Violation (PCV)

The psychological contract is unwritten, and employees and employers may hold a different view of the content of the psychological contract (Coyle-Shapiro & Kessler, 2000). PCV refers to the feelings of anger and betrayal that are often experienced when an employee believes that the organization has failed to fulfil one or more psychological contract obligations (Morrison & Robinson, 1997). The outcomes arise from the perception of PCV include reduced organizational trust, reduced job satisfaction, decreased feeling of obligation to one's employer, reduced willingness to participate in organizational citizenship behaviours, decreased work performance and increased turnover (e.g., Robinson et al., 1994; Robinson & Morrison, 1995).

### 1.2.2 Emotional Labour

#### Emotional Regulation

Emotional regulation provides a very useful guiding framework for emotional labour. Emotional regulation is defined as “the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions” (Gross, 1998). The emotional regulation requires the employees to display the organizationally desired emotion (Zapf, Vogt, Seifert, Mertini, & Isic, 1999) and induce or suppress feelings to sustain the outward countenance that produces the proper state of mind in others (Hochschild, 1983). For example, flight attendants are expected to act cheerful and friendly (Ashforth & Humphrey, 1993) and must put on a smile dealing with customers, because it is part of the job (Barsade & Gibson, 2007).

#### Display Rule

Emotional display for organizational purposes has been referred to as “display rules” (Ekman & Friesen, 1975). Display rules are the standards of behaviour that indicate not only which emotions are appropriate in a given situation, but also how those emotions should be conveyed or publicly expressed (Ekman, 1973). For example, flight attendants are encouraged to smile, while lawyers use an aggressive and angry tone to encourage compliance in adversaries (Pierce, 1996).

#### Affective Delivery

Affective delivery, or expressing positive emotions in service interactions, promotes customer satisfaction (Grandey, 2003). “Employee affective delivery” refers to an employee's “act of expressing socially desired emotions during service transaction” (Ashforth & Tomiuk, 2000) and an affective service delivery is perceived as

friendly and warm, which is related to desirable outcomes (Bettencourt, Gwinner, & Meuter, 2001). The affective tone of service encounters is an important aspect of service quality (Parasuraman, Zeithaml, & Berry, 1985). A key factor of good affective delivery is the perceived authenticity of affective display (Ashforth & Tomiuk, 2000).

## Emotional Strategies

*Surface Acting.* Engaging in surface acting, or antecedent-focused emotion regulation, is desirable for organizations so that customers always see cheerful expressions, even when employees may feel differently (Rafaeli & Sutton, 1987). Surface acting is an emotional strategy in which employees modify their behavioural displays without changing their inner feelings and employees conform to the rules to keep their job, not to help the customer or organization (Grandey, 2003). Surface acting requires effortful suppression of genuine emotion and expression of the appropriate emotion (Johnson & Spector, 2007); thus, engaging in surface acting entails experiencing emotional dissonance or the tension felt when expressions and feelings diverge (Hochschild, 1983).

*Deep acting.* Engaging in deep acting through reappraisal or self-talk has been called a “good faith” type of emotional labour because it shows that the employee has goodwill towards the organization (Rafaeli & Sutton, 1987). When engaging in deep acting, an actor attempts to modify their feelings to match the required display (Grandey, 2003). The intent, then, is to seem authentic to the audience. The actor employing deep acting may try until he or she feels comfortable with the modified feeling. These actors may then consider the perceived PCV as an authentic feeling.

## 1.3 Research Hypotheses

### 1.3.1 Outcome of PCV and Emotional Labour

#### Trust

PCV decreases trust (Robinson et al., 1994). Generally, when an employer breaks a basic rule in the working relationship, it results in a decrease in trust. Trust influences coordination and control at both the institutional and interpersonal levels of organizations. If an employer reneges on a promise, their integrity will be called into question. A trust may also be lost in an employer’s motive because a violation signal that an employer’s original motive to build and maintain a mutually beneficial relationship has changed or was false to begin with (Robinson et al., 1994). It is not the exception to the relationship of emotional labours. Therefore, I propose the following hypothesis:

**Hypothesis 1** Psychological Contract Violation perceived by emotional labours is negatively associated with **trust** towards their employer.

Job Satisfaction

Job satisfaction is a measure of the employee’s evaluation of the job and has often been used as a proxy for employee well-being at work (Grandy, 2000). When employees encounter a contract violation, their satisfaction with both the job and the organization itself can decline (Robinson et al., 1994). It may become very difficult for an employee to be motivated to perform, and obtain satisfaction from, doing the job when the employee can no longer rely on the promised inducement (Porter & Lawler, 1968). Therefore, I propose the following hypothesis:

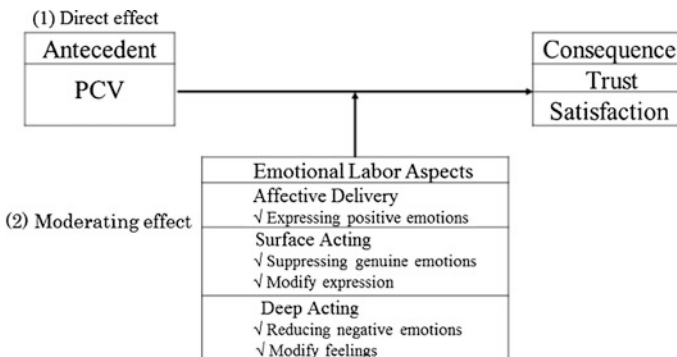
**Hypothesis 2** Psychological Contract Violation perceived by emotional labours is negatively associated with their **job satisfaction**.

**1.3.2 Interaction of PCV and Emotional Labour**

Figure 1 shows the conceptual model of the moderating effects of emotional labour on the relation between PCV and its consequences (trust and satisfaction). Figure 2 shows the conceptual model and hypotheses on the relation between PCV and its consequences.

Recovery of Damaged Trust and Satisfaction by Affective Delivery

PCV decrease trust (Robinson et al., 1994) can undermine several trust basics within a business relationship, such as beliefs regarding the other’s integrity, motives and intentions, behavioural consistency, openness and discreetness



**Fig. 1** Conceptual model of the moderating effects of emotional labour on the relation between Psychological Contract Violation (PCV) and its consequences

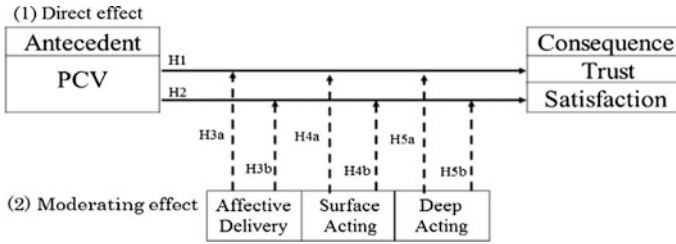


Fig. 2 Hypotheses on the relations between PCV and its consequences

(Gabarro & Athos, 1976). On the other hand, more recent work has pointed that trust also involves emotion (Schoorman, Mayer, & David, 2007) and some exemplary work has been done to understand trust violation and repair (e.g., Lewicki & Bunker, 1996; Morrison & Robinson, 1997; Robinson, 1996). Therefore, I propose the following hypothesis:

**Hypothesis 3a Affective delivery** practiced by emotional labours moderates the negative relationship between PCV and their **trust** towards their employer.

Flight attendants, or emotional labours, are required to convey affective delivery, which is expressing positive emotions (e.g., friendliness, warmth). The previous empirical evidence indicated that employee affective delivery can influence customer satisfaction (Tsai & Huang, 2002). I suggest that, though PCV has a negative influence on satisfaction, such a negative influence may be moderated by working practice with affective delivery. Therefore, I propose the following hypothesis:

**Hypothesis 3b Affective delivery** practiced by emotional labours moderates the negative relationship between PCV and their **job satisfaction**.

#### Recovery of Damaged Trust and Satisfaction by Surface Acting

It is likely that surface acting occurs in response to work events rather than to general rules (Grandey, Tam, & Brauburger, 2002). Though PCV has negative influence on job satisfaction, such a negative influence may be moderated by working practice with surface acting. Therefore, I propose the following hypotheses:

**Hypothesis 4a Surface acting** practiced by emotional labours moderates the negative relationships between PCV and their **trust** towards the employer.

**Hypothesis 4b Surface acting** practiced by emotional labours moderates the negative relationships between PCV and their **job satisfaction**.

## Recovery of Damaged Trust and Satisfaction by Deep Acting

Engaging in deep acting through reappraisal or self-talk has been called a “good faith” type of emotional labour because it shows that the employee has goodwill towards the organization (Rafaeli & Sutton, 1987). When engaging in deep acting, an actor attempts to modify their feelings to match the required display (Grandey, 2003). The intent, then, is to seem authentic to the audience. The actor employing deep acting may try until he or she feels comfortable with the modified feeling. These actors may then consider the perceived PCV as an authentic feeling. Therefore, I propose the following hypotheses:

**Hypothesis 5a Deep acting** practiced by emotional labours recovers the negative relationships between PCV and their **trust** towards the employer.

**Hypothesis 5b Deep acting** practiced by emotional labours recovers the negative relationships between PCV and their **job satisfaction**.

## 2 Methods

### 2.1 *Participants and Procedures*

A questionnaire survey was administered to 413 flight attendants (78% female; mean age  $\pm$  standard deviation (S.D.) at the end of the study,  $31 \pm 1.12$  years; mean work experience,  $10 \pm 1.91$  years) working for an Asian airline. I randomly distributed approximately 500 questionnaires to flight attendants at an Asian airport and explained the purpose of the survey and the anonymity and confidentiality of the data. I then asked the participants to complete the questionnaire and return it to the researcher by post. A total of 413 valid questionnaires was received, resulting in a valid response rate of approximately 82.6%.

### 2.2 *Measures*

A 5-point Likert response scale was employed to assess the aspects of the psychological contract, organizational stress and emotional labour, with 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree, unless otherwise noted. The items on each scale were presented in random order. A measurement model of all multi-item measures was subjected to confirmatory factor analysis to assess the convergent and discriminant validity of all constructs. The mean, S.D., and reliability (Cronbach's  $\alpha$ ) of each scale are presented in Table 1.

**Table 1** Descriptive statistics, reliability and intercorrelation

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1 Gender <sup>a</sup>	0.78	0.42														
2 Tenure <sup>b</sup>	2.78	1.91	0.05													
3 Age <sup>c</sup>	3.08	1.12	0.01	0.80 <sup>**</sup>												
<i>Variables in the psychological contract context</i>																
4 PCV	3.09	0.85	-0.07	0.04	-0.04	(0.83)										
5 Trust	2.85	0.69	-0.04	0.05	0.12 <sup>*</sup>	-0.52 <sup>**</sup>	(0.85)									
6 Satisfaction	3.66	0.72	-0.07	0.11 <sup>*</sup>	0.11 <sup>*</sup>	-0.45 <sup>**</sup>	0.56 <sup>**</sup>	(0.82)								
7 Careerism orientation	2.60	0.75	-0.06	-0.20 <sup>**</sup>	-0.14 <sup>**</sup>	0.09	-0.09	-0.16 <sup>**</sup>	(0.84)							
8 Job performance	4.26	0.55	0.02	-0.01	0.06	0.06	0.02	0.01	0.03	(0.81)						
<i>Variables in the organizational stress context</i>																
9 Role conflict	3.64	0.68	0.03	0.01	-0.07	0.06	-0.09	-0.11 <sup>*</sup>	0.07	-0.11 <sup>*</sup>	(0.79)					
10 Role ambiguity	1.78	0.51	0.02	0.00	-0.03	0.06	-0.13 <sup>*</sup>	-0.11 <sup>*</sup>	0.07	-0.39 <sup>**</sup>	0.26 <sup>**</sup>	(0.80)				
11 Emotional exhaustion	3.81	0.80	0.09 <sup>*</sup>	-0.16 <sup>**</sup>	-0.21 <sup>**</sup>	0.04	-0.06	-0.11 <sup>*</sup>	0.14 <sup>**</sup>	-0.17 <sup>**</sup>	0.57	0.29 <sup>**</sup>	(0.82)			
<i>Variables in the emotional labour context</i>																
12 Surface acting	4.17	0.63	-0.02	-0.10 <sup>*</sup>	-0.09	0.01	-0.01	-0.01	0.09	0.01	0.27 <sup>**</sup>	0.08	0.30 <sup>**</sup>	(0.81)		
13 Deep acting	3.83	0.79	0.09	-0.01	-0.15	0.05	0.02	0.03	0.07	0.18 <sup>**</sup>	0.19 <sup>**</sup>	0.03	0.36 <sup>**</sup>	0.21 <sup>**</sup>	(0.82)	
14 Affective delivery	4.53	0.17	-0.04	-0.08	-0.05	0.03	0.02	-0.01	0.09	0.18 <sup>**</sup>	-0.03	-0.12 <sup>*</sup>	-0.07	-0.02	0.07	(0.83)

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .  $N = 413$

<sup>a</sup>Gender: coded as Male = 0, Female = 1

<sup>b</sup>Job tenure: coded as 1 = 0-5 years, 2 = 6-10 years, 3 = 11-15 years, 4 = 16-20 years, 5 = 21-25 years, 6 = 26-30 years, 7 = more than 30 years

<sup>c</sup>Age: coded as 1 = less than 20, 2 = 21-30, 3 = 31-40, 4 = 41-50, 5 = 51-60, 6 = more than 60

<sup>d</sup>Reliability represent Cronbach's alpha coefficients in parentheses along the diagonal

### 2.2.1 Psychological Contract Violation (PCV) Scale (Robinson et al., 1994)

Two items assessed PCV ( $\alpha = 0.83$ ). Respondents were asked to rate the following items: “How well has your company fulfilled the promised obligations that they owe you? (reverse score)” and “Has your company ever failed to meet an obligation that was promised to you?”

### 2.2.2 Trust-Related Scale (Gabarro et al., 1976; Robison et al., 1994)

The following seven items assessed trust ( $\alpha = 0.85$ ): “I am not sure I fully trust my employer (reverse score)”, “My employer is open and upfront with me”, “I believe my employer has high integrity”, “In general, I believe my employer’s motives and intentions are good”, “My employer is not always honest and truthful (reverse score)”, “I do not think my employer treats me fairly (reverse score)” and “I can expect my employer to treat me in a consistent and predictable fashion”.

### 2.2.3 Satisfaction (Robison et al., 1994)

Two items assessed employees’ satisfaction ( $\alpha = 0.82$ ) with both work and the organization: “Working for the company is very satisfying to me” and “I am satisfied with my job”.

### 2.2.4 Emotional Labour Scale (Brotheridge & Lee, 2003)

*Surface acting* was assessed using the following four items ( $\alpha = 0.81$ ): “How often do you put on an act in order to deal with passengers in an appropriate way?”, “How often do you fake a good mood when interacting with passengers?”, “How often do you put on a ‘show’ or ‘performance’ when interacting with passengers?” and “How often do you just pretend to have the emotions you need to display for your job?”. I used the modified items to adapt the situation for flight attendants.

*Deep acting* was assessed using the following three items ( $\alpha = 0.82$ ): “How often do you work hard to feel the emotions that you need to show to passengers?”, “How often do you make an effort to actually feel the emotions that you need to display towards passengers?” and “How often do you try to actually experience the emotions you must show to passengers?”. I used the modified items to adapt the situation for flight attendants.

### 2.2.5 Affective Delivery

Affective delivery ( $\alpha = 0.83$ ) was assessed using the following three items presented by McLelln, Schmit, Amundson and Blake (1998): “You look sincere when dealing with passengers.”, “The passengers seem to like interacting with you.” and “You show friendliness and warmth to most passengers.”. I used the modified items to adapt for flight attendants.

### 2.2.6 Control Variables

Several additional variables were controlled in the analyses to eliminate alternative explanations.

Careerism Orientation Scale (Robinson et al., 1994)

PCV may have different impacts on employees with different careerism motives. The five items assessed careerism orientation ( $\alpha = 0.84$ ): “I took this job as a stepping stone to a better job with another organization”, “I expect to work for a variety of different organizations in my career”, “I do not expect to change organizations often in my career (reverse score)”, “There are many career opportunities I expect to explore after I leave my present employer” and “I am really looking for an organization to spend my entire career with (reverse score)”.

Self-estimated Job Performance

Self-estimated job performance was assessed using two items ( $\alpha = 0.81$ ) from Williams and Anderson (1991) and one item based on a measure of service worker performance presented by Brown, Mowen, Donovan and Licata (2002). These items were slightly modified to adapt to the work characteristics of flight attendants: To what extent do you agree or disagree with the following statement? “You perform your tasks and roles that are expected of you”, “You adequately complete all duties assigned to you” and “Your overall performance compared to all other colleagues”. These items were modified to adapt to the work characteristics for flight attendants.

Emotional Exhaustion

Emotional work could be stressful and sometimes lead the employees to emotional exhaustion, even burnout and quit the job (Cordes & Dougherty, 1993; Hochschild, 1983). Emotional exhaustion ( $\alpha = 0.82$ ) was assessed using the following four



items derived from the bases of emotional exhaustion identified by Pines and Aronson (1988): “How often do you feel tired?”, “How often do you feel wiped out?”, “How often do you feel run down?” and “How often do you feel exhausted at your job?”.

#### Role Conflict (Rizzo et al. 1970)

The role theory indicates that role conflict is generated from the violation of two classical principals; the chain-of-command principle and the unity-of-command principle. Role conflict causes decreased individual satisfaction and decreased organizational effectiveness (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964). Role conflict was assessed using the following selected five items ( $\alpha = 0.79$ ) from Rizzo et al. 1970): “How often do you have to do things that should be done differently?”, “How often do you work under incompatible policies and guidelines?”, “How often do you receive an assignment without the manpower to complete it?”, “How often do you receive incompatible requests from two or more people?” and “How often do you have to work under vague directives or orders?”.

#### Role Ambiguity (Rizzo et al. 1970)

Role ambiguity is generated from a lack of the necessary information available for a given organizational position (Kahn et al., 1964). Role ambiguity was assessed using the following selected five items ( $\alpha = 0.80$ ): To what extent do you agree or disagree with the following statement?, “You feel certain about how much authority you have (reverse score)”, “You have clear and planned goals and objectives for your job (reverse score)”, “You know that you divided your time properly (reverse score)”, “You know what your responsibilities are (reverse score)” and “You know exactly what is expected of you (reverse score)”.

### **2.3 Data Analysis**

The collected data were analysed with IBM SPSS Statistics 24. The descriptive statistics, Cronbach’s alpha and intercorrelations were calculated. Then, hierarchical moderated analyses were conducted to test the study hypotheses. The hypothesized relationships were also examined using structural equation modelling with IBM SPSS AMOS 24.

### 3 Results

#### 3.1 Descriptive Statistics

Table 1 presents the means, standard deviations, correlations and Cronbach's reliability coefficients of the measures. All the scales demonstrated good internal consistency reliability, where an alpha ranging from 0.70 to 0.95 is considered acceptable (Tavakol & Dennick, 2011). The two dependent variables (trust and satisfaction) were reasonably independent, with high correlation ( $r = 0.56$ ,  $p < 0.01$ ). The level of PCV perceived by employees ranged moderate, with a mean of 3.09 on the 5-point Likert response scale. Of the 413 respondents, six respondents (1.5%) reported their very strong perception of PCV, 71 respondents (17.2%) reported their strong perception of PCV, 198 respondents (48%) reported that they cannot say either way, 113 respondents (27.3%) reported their little perception of PCV, and 25 respondents (6.1%) reported that they did not perceive PCV at all.

**Hypotheses 1 and 2** suggested that PCV perceived by emotional labours would impact on organizational trust and job satisfaction. As predicted by Hypothesis 1, PCV perceived by emotional labours was negatively associated with their trust ( $r = -0.52$ ,  $p < 0.01$ ). As predicted by Hypothesis 2, PCV perceived by emotional labours was negatively associated with their job satisfaction ( $r = -0.45$ ,  $p < 0.01$ ). Hence, both Hypothesis 1 and Hypothesis 2 were supported.

#### 3.2 Hierarchical Modulated Regression Analysis

**Hypotheses 3a, 3b, 4a, 4b, 5a and 5b** posited that emotional labour aspects (affective delivery, surface acting and deep acting) would moderate the relationship both between PCV and trust and between PCV and satisfaction. Those hypotheses were tested using a hierarchical moderated regression, also using the moderator concept outlined by Baron and Kenny (1986).

**In the 1st step**, all the control variables of gender, tenure, age and additional controlled variables were inserted into the regression equation to eliminate alternative explanations; three independent variables concerning psychological contract context (PCV, careerism orientation and self-evaluated job performance) and three independent variables concerning organizational stress context (role conflict, role ambiguity and emotional exhaustion) were also included.

**In the 2nd step**, the independent variables of three emotional labour aspects (affective delivery, surface acting and deep acting) were inserted into the regression equation. The results of the hierarchical regression analyses and examining the impacts of the interaction between PCV and emotional labour aspects (affective delivery, surface acting and deep acting) are presented in Table 2.

**Table 2** Summary of hierarchical regression analysis: interactions of Psychological Contract Violation (PCV) and emotional labour aspects (affective delivery, surface acting and deep acting)

Independent variables	Dependent variables														
	Trust					Satisfaction									
	(Step 1)	(Step 2)	(Step 3)	(Step 4)	(Step 5)	(Step 1)	(Step 2)	(Step 3)	(Step 4)	(Step 5)					
Step 1 (controls variables)															
Gender	-0.08*	-0.09**	-0.08*	-0.09**	-0.09**	-0.11**	-0.11***	-0.11**	-0.12**	-0.11**	-0.11**	-0.12**	-0.11**	-0.11**	-0.11**
Tenure	0.00	-0.00	-0.00	0.01	-0.01	0.17**	0.16**	0.16**	0.19**	0.16**	0.16**	0.19**	0.16**	0.17**	0.17**
Age	0.10	0.11	0.10	0.09	0.10	-0.06	-0.06	-0.06	-0.09	-0.07	-0.07	-0.09	-0.07	-0.07	-0.07
PCV	-0.51***	-0.52**	-0.85***	-0.93***	-0.59**	-0.46***	-0.46***	-0.46***	-1.23***	-0.65***	-0.65***	-1.23***	-0.65***	-0.54***	-0.54***
Careerism orientation	-0.03	-0.03	-0.03	-0.03	-0.03	-0.09**	-0.09**	-0.09**	-0.10**	-0.09**	-0.09**	-0.10**	-0.09**	-0.09**	-0.09**
Job performance	-0.05	-0.07	-0.08	-0.07	-0.07	-0.05	-0.07	-0.05	-0.07	-0.08	-0.08	-0.07	-0.08	-0.08	-0.08
Role conflict	-0.05	-0.05	-0.05	-0.05	-0.05	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06
Role ami jury	-0.11**	-0.11**	-0.11**	-0.19**	-0.11**	-0.08*	-0.08*	-0.08*	-0.09*	-0.08*	-0.08*	-0.09*	-0.08*	-0.09*	-0.09*
Emotional exhaustion	0.05	0.02	0.01	0.02	0.02	-0.01	-0.06	-0.01	-0.05	-0.06	-0.06	-0.05	-0.06	-0.05	-0.05
Step 2 (emotional labours)															
Surface acting		0.01	-0.00	-0.22	0.01		0.03		-0.39**	0.03		-0.39**	0.03		0.03
Deep acting		0.07	0.07	0.08	0.02		0.11**		0.12**	0.10**		0.12**	0.05		0.05
Affective delivery		0.00	-0.12*	0.00	0.00		-0.02		-0.02	-0.08		-0.02	-0.02		-0.02
PCV × Affective delivery			0.36**							0.20					
F	19.12***	14.53***	13.87***			15.40***	12.11**			11.29**					
Adjusted R-square	0.284	0.283	0.289			0.239	0.244			0.245					

(continued)

Table 2 (continued)

		Dependent variables									
		Trust					Satisfaction				
Change in adjusted R-square			0.001	0.006					0.005	0.001	
Step 4 Interaction (2)	PCV × Surface acting				0.47						0.88**
F					13.56****						11.79****
Adjusted R-square					0.284						0.254
Change in adjusted R-square					0.001						0.010
Step 5 Interaction (3)	PCV × Deep acting						0.09				0.10
F							13.39****				11.16****
Adjusted R-square							0.281				0.243
Change in adjusted R-square							-0.002				-0.001

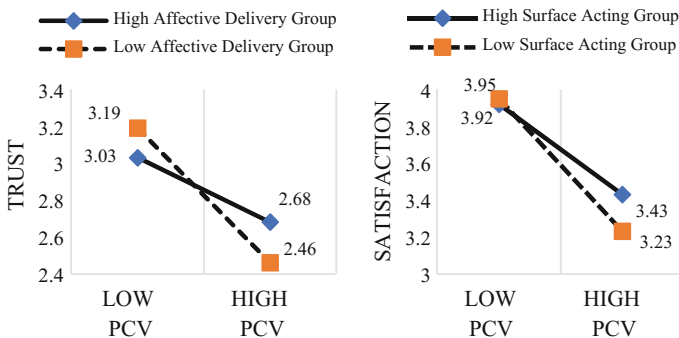
Standardized regression coefficients are reported. \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , \*\*\*\* $p < 0.0001$

**Interaction effects.** Hypothesis 3a proposed that affective delivery practiced by emotional labours moderates the negative relationship between PCV and their **trust** towards employers. From Table 2, when the interaction term (1) (PCV × affective delivery) was inserted into the equation in step 3 (trust is the dependent variable), the interaction was significant,  $F(1,409) = 13.87$  ( $p < 0.001$ ). Moreover, though PCV remained a significant predictor with negative beta in the 1st step, when the interaction term (1) (PCV × affective delivery) was inserted into the equation in step 3, significantly positive beta appeared,  $F(1,409) = 13.87$  ( $p < 0.001$ ),  $B = 0.36$ ,  $p < 0.01$ ), supporting Hypothesis 3a.

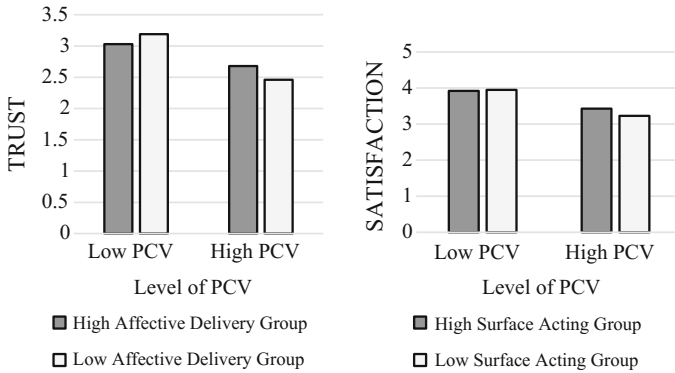
Figure 3 (left) shows the plotting graph of this interacting effect of PCV and affective delivery on trust, and Fig. 4 (left) shows the same effects in a bar graph. To identify an interaction, while the difference between high- and low-affective delivery for low PCV group is 0.16 (low-affective delivery group received a higher score than the high-affective delivery group), the difference between high- and low-affective delivery for high PCV group is 0.22 (high-affective delivery group received a higher score). On the other hand, when the dependent variable was satisfaction, the interaction term (1) (PCV × affective delivery) was not significant; therefore, Hypothesis 3b was not supported.

Hypothesis 4a proposed that surface acting moderates the negative relationship between PCV and emotional labours' trust towards employers. Hypothesis 4a was not supported as the interaction between PCV and surface acting was not significant, when trust was the dependent variable. On the other hand, Hypothesis 4b, which proposed that surface acting moderates the negative relationship between PCV and satisfaction, was supported as the interaction was significant,  $F(1,409) = 11.79$ ,  $p < 0.001$ .

Figure 3 (right) shows the plotting graphs of this interacting effects of PCV and surface acting on satisfaction, and Fig. 4 (right) shows the same effects PCV in a bar graph. To identify an interaction, while the difference between high- and



**Fig. 3** Plotting graphs of the interaction effects of PCV and affective delivery on trust (left) and PCV and surface acting on satisfaction (right)



**Fig. 4** Effects of level of PCV and affective delivery on TRUST (left) and effects of level of PCV and surface acting on satisfaction (right)

low-surface acting for the low PCV group is 0.03 (there is not much difference in scores between the low-surface acting group and the high-surface acting group), the difference between the high- and low-surface acting for the high PCV group is significantly observed (0.20) (high-surface acting group received a higher score). Neither Hypothesis 5a nor Hypothesis 5b were supported as proposed since the interactions between PCV and deep acting were not significant, when the dependent variables were trust or satisfaction.

### 3.3 Structural Equation Modelling

The hypothesized relationships (Hypothesis 3a and Hypothesis 4b) were also examined using structural equation modelling, using the model outlined by Baron and Kenny (1986). Tests were conducted to see whether the moderated models fit significantly.

Figure 5 displays the path diagram which has three causal paths: the predictor (PCV:  $-0.79^{***}$ ), the moderator (affective delivery:  $-0.08$ ) and the interaction (PCV  $\times$  affective delivery:  $0.35^{***}$ ) that feed into the outcome (trust). The result shows the predictive recovery of trust by the interaction effect of PCV and affective delivery. Similarly, Fig. 6 displays the path diagram has three causal paths: the predictor (PCV:  $-0.74^{***}$ ), the moderator (surface acting:  $-0.20$ ) and the interaction (PCV  $\times$  surface acting:  $0.40^{***}$ ) that feed into the outcome (satisfaction). The results show the predictive recovery of satisfaction by the interaction effect of PCV and surface acting.

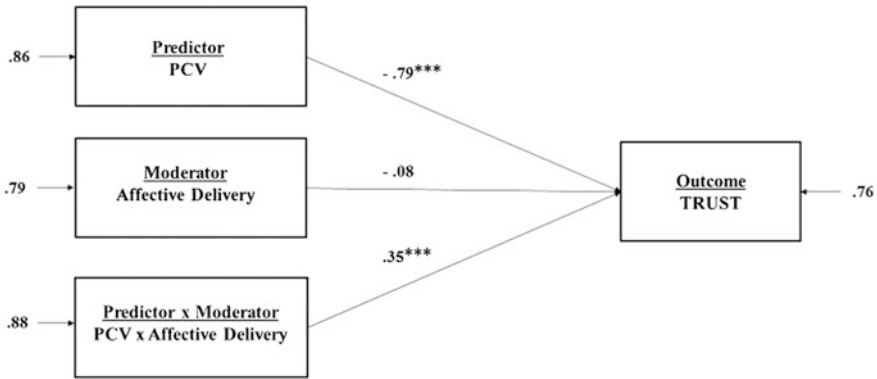


Fig. 5 Path diagrams showing the predictive recovery of trust by the interaction effect of PCV and affective delivery. \*\*\* $p < 001$

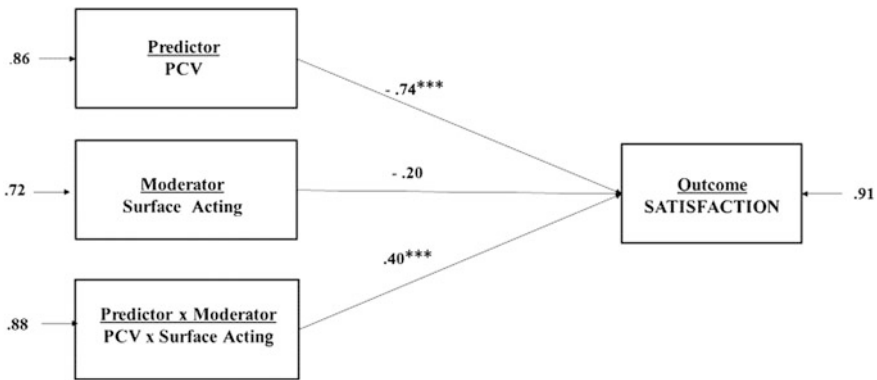


Fig. 6 Path diagrams showing the predictive recovery of satisfaction by the interaction effect of PCV and surface acting. \*\*\* $p < 0.001$

## 4 Discussion and Practical Implications

### 4.1 Discussion

This study examined whether emotional labour aspects recover the decreasing propensity of trust and satisfaction in the workplace, where emotional labours, or flight attendants, may perceive PCV in the workplace. The finding of this study extended the previous research and contributed to the literature.

First, affective delivery, which is expressing positive emotions in service interactions, moderates the decreasing propensity on trust towards employers. Williams (2001) has pointed out that affective responses influence how people evaluate their level of trust in another party (e.g., employer). While PCV has negative impact on

trust, the findings of the study showed that such a negative impact would be recovered by working practice with affective delivery.

Second, surface acting, which is suppressing genuine emotion in service interactions, moderates the decreasing propensity on satisfaction. While some previous research indicates that the use of surface acting to accord with the emotional display rules is associated with burnout, the findings of this study suggested that, when employees perceive PCV, practicing surface acting recovers the damaged job satisfaction. Particularly, in the complex industry where the employees must do a lot of work in a short time, or when dealing with emergencies, performing with surface acting seems to reduce the mental burden of emotional workers and help in pursuing their duties.

## ***4.2 Practical Implications***

While the literature indicated that PCV involves the extreme emotional states such as anger and betrayal, the negative emotion can be recovered by practicing emotional labour aspects. The working practice with affective delivery recovers the damaged faith in the company, and the working practice with surface acting recovers the damaged job satisfaction. Though some research indicates that surface acting to accord with the emotional display rules is associated with burnout, the findings of this study suggest that, for the emotional labourers who work in the complex industry or in emergencies, surface acting recovers lost job satisfaction.

# **5 Limitation and Future Research Direction**

## ***5.1 Limitation***

The cross-sectional design and use of only self-evaluated responses of emotional labourers might be considered as limitations of this study. However, self-reports of these variables provide accurate measurement, because it would be difficult for a co-worker or supervisor to accurately estimate whether another individual perceives, for example, PCV and practices surface acting. Nonetheless, the present study clarified that affective delivery recovers the negative effects of PCV on trust, and surface acting recovers the negative effects of PCV on satisfaction.



## 5.2 *Future Research Direction*

Concerning the cross-sectional nature of this study, future research should be explored in different organization of the different area or in the different culture where the different level of PCV, emotional labour and the outcomes would be assessed so that the influences, the interaction and the antecedent/consequential relationships could be compared. Another future research direction could be exploring the competence of emotional labour or emotional interaction with other individuals could be fostered in the mind of professionals so that it could give an impact on the organizational management as well as the human resources management in the global and complex business world.

## 6 **Conclusion**

Competition among companies worldwide has been intensified. In addition, according to the advances in the IT system, many companies have introduced self-serving machines and automated systems into operations and other service processes. On the other hand, many companies, paradoxically, focus on proving their customers with an excellent service experience.

Affect permeates an organization and is present in the interdependent relationships we hold with bosses, team members and subordinates (Barsade et al., 2007). Affective processes (more commonly known as emotions) lurk behind political behaviour and animate employees' decisions and leadership, and strong affective feelings are present at any time employees confront work issues and their organizational performance (Barsade et al., 2007). The effect in the organization creates companies' culture, influences employees' work behaviour and routine and fosters competent employees and/or emotional labours. Thus, affective delivery in the organization is important. Moreover, customer service employees with high emotional competence can provide customers an excellent service experience. Emotional competence reveals a more expansive view of emotions in institutional theory, where emotions are central to the constitution of people as competent actors and lend reality and passionate identification to an institution (Voronov & Weber, 2016).

Some previous research shows that deep acting, or authenticity, would have more impact than surface acting to establish employee–customer relationships since deep acting would have more meaning for the social exchange. Surface acting requires effortful suppression of genuine emotion and expression of the appropriate emotion (Johnson & Spector, 2007); thus, engaging in surface acting entails experiencing emotional dissonance or the tension felt when expressions and feelings diverge (Hochschild, 1983). On the other hand, the finding of this study shows, when emotional labours happen to perceive PCV in the workplace, practicing surface acting could recover the decreasing propensity of job satisfaction. Working

with surface acting in the busy and complex workplace could modify a genuine feeling (PCV) so that a negative feeling could be diverted by surface acting. Being required to be friendly to customers may make a monotonous job more fun, or may allow self-expression that is enjoyable for employees (Ashforth & Tomiuk, 2000; Tolich, 1993). No longer is there a “one size fits all” way to measure work-related effects, such as using general attitudinal measures such as job satisfaction (Barsade et al., 2007). Thus, affective delivery and emotional competence become meaningful for emotional labours as well as organizations more than before.

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# Translating into Practice the Recommendations of a Safety Climate Theory-Based Evaluation of Services Provided by Disability Support Workers

Julia Harries, Jerry Ford and Neil Kirby

**Abstract** Disability support workers (DSWs) psychosocial work safety was evaluated using a work safety climate measure that included two theoretical components: perceptions of management and co-worker safety behaviours and attitudes. Based on findings, recommendations were identified to improve DSW safety, with seven recommendations translated into practice. Intervention outcomes varied from organisation-wide to limited worksite implementation. An 18-month post-intervention safety climate evaluation with 129 DSWs and 20 interviews showed DSWs were significantly less concerned about psychosocial safety hazards, with no differences for physical safety hazards. DSWs viewed management safety attitudes and behaviours slightly more favourably. Repeated health and well-being measures showed fewer DSWs experiencing burnout, more DSWs with health scores at or above norms and fewer at risk of depression. Post-intervention findings suggest the work safety climate measure with manager and co-worker attitudes components can be used with management efforts to address workers' safety concerns and positively impact safety perceptions and well-being.

**Keywords** Organisational psychology · Psychosocial safety · Burnout  
Work safety climate

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## 1 Introduction

This study involved a follow-up of psychosocial-related aspects of work safety for disability support workers (DSWs) working for an Australian disability organisation, following an earlier investigation and subsequent translation into practice of seven work safety interventions. The initial investigation into DSW work safety (DSW safety study 1) was undertaken at the organisation's request and aimed to identify factors contributing to high rates of DSW compensation claims and safety incident reports. Whereas most claims involved musculoskeletal injuries that were experienced by DSWs associated with their manual handling duties, of concern for the organisation were the increasing numbers of psychological or mental stress incidents that were being reported by DSWs. The most commonly reported mechanism of the mental stress safety incidents was exposure to workplace or occupational violence, an event that carries the risk of assault-related physical injury claims and also mental stress or psychological injury claims, which are generally recognised as the most expensive form of workers' compensation claims (Safe Work Australia, 2013a). Other causes of the mental stress safety incidents reported by DSWs included work pressure and work-related harassment and/or workplace bullying (Kirby et al., 2014).

Surveys and interviews were used in the first investigation to determine the organisational factors impacting DSW psychosocial well-being and work safety, and in particular to understand the relationship between DSW assessments of their health and well-being and DSW ratings of their work conditions and safety in the organisation (Kirby et al., 2014). Health and well-being findings for the DSWs were consistent with findings in the literature for staff working in disability support roles (e.g. Lin et al., 2009; White, Edwards, & Townsend-White, 2006). Estimates in the literature of the number of staff working in disability services who experience stress levels indicative of mental health concerns range from 25 to 40% (Hatton et al., 1999; Kozak, Kersten, Schillmoeller, & Neinhaus, 2013; Robertson et al., 2005). Although not all DSWs involved in the first DSW safety study were experiencing health and well-being concerns, when group results were considered, the DSW workforce sample were found to be experiencing significantly more personal and work-related burnout and had poorer physical and mental health than the normative samples of the instruments used (Harries, Ng, Wilson, Kirby, & Ford, 2015; Kirby et al., 2014).

Impaired psychological well-being related to work has been widely reported in the literature to be associated with detrimental consequences for workers and thus for their employers. Worker consequences can include adverse outcomes for their physical health (e.g. fatigue, headaches, cardiovascular disease, lowered immunity and risk of developing musculoskeletal disorders) (Blewett, Shaw, LaMontagne, & Dollard, 2006; Devereux, Rydstedt, Kelly, Weston, & Buckle, 2004; Hauke, Flintrop, Brun, & Rugulies, 2011; Way, 2012), mental health (e.g. anxiety, depression, sleep disturbances and suicide) (Blewett et al., 2006; Chan & Huak, 2004; Stavroula Leka, 2010) and behaviour (e.g. accident proneness, increased work errors, reduced motivation, drug and/or alcohol abuse, violence) (Blewett et al., 2006; Quick, Horn, & Quick, 1987). These physical, mental and behavioural

worker impairments have been shown to be related to diminished work performance and increased work safety concerns for employers (e.g. high absenteeism and/or turnover, increased accidents and work errors) (Dollard, Winefield, & Winefield, 2001; Harnois & Gabriel, 2000; Pfeffer, 2010). Furthermore, research has shown that those workers suffering burnout are more likely to engage in unsafe work behaviours (Nahrgang, Morgeson, & Hofmann, 2011) and that worker psychological distress is predictive of accident rates (Siu, Phillips, & Leung, 2004).

In the initial study of DSW safety, a measure of safety climate was included in the survey to investigate the relationship between health and well-being and work safety performance for DSWs. The safety climate of an organisation is considered to represent the collective view of workplace safety—which is influenced by recent safety events—and has been shown to be related to, and a leading indicator of safety incidents and accidents (Nahrgang et al., 2011) and to workplace stress (Oliver, Cheyne, Tomas, & Cox, 2002; Siu et al., 2004). The safety climate measure used in the DSW safety study, the Nordic Occupational Safety Climate Questionnaire (NOSACQ-50; Kines et al., 2011), differs from other measures of safety climate in that it incorporates questions to capture respondents perceptions of both management and co-worker (workgroup) safety attitudes and behaviours. This contrasts with other safety climate measures in which only perceptions of management safety attitudes and behaviours are assessed, as safety is considered to be a “top down” phenomenon determined by the organisation’s management (e.g. the Psychosocial Safety Climate measure developed by Hall, Dollard, & Coward, 2010).

The association reported in the literature between workplace stress and the work safety climate was confirmed in the first DSW safety study, with DSW burnout associated with less favourable safety climate perceptions, and aspects of both management and co-worker safety attitudes and behaviours were found to be relevant (Harries et al., 2015; Kirby et al., 2014). DSW work conditions were considered an important factor in the significant finding between the co-worker safety climate dimensions and DSW health and well-being. The DSWs working for the organisation largely worked in dispersed community-based settings with a small workgroup of co-workers. In these work conditions, they generally received less direct supervision or support from management than was the case when disability support services were provided in institutional settings, suggesting that the influence of co-workers was likely to be more relevant.

In order to understand the relevance of support from superiors and co-workers as well as other work conditions in terms of their impact on DSW well-being and safety performance, a work conditions measure was also included in the survey. Findings from the work condition measure were used to contribute to recommendations regarding effective job redesign strategies to minimise worker ill-health and to promote environments that actively enhance positive worker well-being (Verhoeven, Maes, Kraaij, & Joekes, 2003). Findings of the first DSW safety study revealed an association between poorer health and well-being and less favourable perceptions by DSWs of their work conditions. For example, study findings showed higher burnout was associated with higher job demands and role conflict but lower job control, support and role clarity (Harries et al., 2015).

Furthermore, significant correlations were obtained between work conditions and well-being measures with the work safety climate measure utilised. Although causation could not be determined from correlations obtained in the safety study—with many and reciprocal causal links likely—the results suggested that work conditions and work stress findings have important implications for safety outcomes for DSWs.

Findings of this first DSW safety study, and particularly those of the safety climate measure, identified a range of causal factors and related organisational issues that were considered to be contributing to DSW workplace injuries (Kirby et al., 2014). These findings and consultations with key stakeholders (e.g. managers, supervisors, DSWs, health and safety representatives, union representatives and training personnel) were used to compile a series of strategic recommendations designed to prevent safety hazards and to improve DSWs' physical and emotional safety and well-being. Recommendations were grouped into five major areas: to cultivate a positive organisational culture that overtly acknowledges and respects DSW work safety; to develop the social capital and competency of work teams; to ensure DSWs have the information, training and support required to perform their jobs effectively; to enhance safety communication, monitoring and reporting systems; and to ensure work environments minimise the risk of DSW injuries. The subsequent study (DSW safety study 2) reported here translated seven of the safety recommendations into practice, with the effectiveness evaluated using the same survey as utilised in the first DSW safety study approximately 18 months after the first survey period.

The choice of the work safety interventions to translate into practice was guided by specific criteria. In particular, they addressed major areas of safety concern identified by stakeholders; there was wide consensus amongst stakeholders regarding the safety benefit of the intervention; the implementation of the interventions was considered feasible within the time frame available (i.e. approximately 9 months); and no additional financial resources beyond existing levels available to the organisation were required. The final criterion for the safety interventions was that they should involve upstream controls to address safety hazards that were either primary (preventative) or secondary (injury limitation) safety controls rather than focusing on tertiary or rehabilitative interventions that address the worker at the level of illness (e.g. use of employee assistance programs).

Factors previously reported in the literature as important for organisational change were used to facilitate the implementation of the safety interventions in the organisation. Research indicates that senior management involvement is critical to successful change in organisations (Alimo-Metcalfe & Alban-Metcalfe, 2010). In particular, communication from management about the reasons for, and process of change is required. Management also needs to build a coalition of suitably motivated and capable leaders, and be visibly and actively engaged in the change process. The use of "champions of change" is also recommended to facilitate organisational changes. These change advocates participate in the strategy-making process during the change and act as driving forces for the change, ensure resources are allocated to achieve changes and work to unblock barriers to change (Ginsberg & Abrahamson, 1991). Employee empowerment and engagement is also considered



critical to the process of successful change. The research literature provides support for the positive relationship between empowerment and the achievement of work-related outcomes (Maynard, Gilson, & Mathieu, 2012) and for the mediating effect of worker empowerment on burnout (Lee et al., 2013). Participatory approaches utilising employee and health and safety committee input have been shown to be effective elements of interventions designed to address work stress.

The seven work safety interventions that were translated into practice in DSW safety study 2 are shown in Table 1. As can be seen, most were considered to be primary level controls that aimed to proactively prevent harm or risks. The interventions were drawn from all of the major recommendation areas described previously except the final area associated with work environments.

During the second DSW safety study, the progress of these interventions was monitored by the authors using interviews with key stakeholders. At the completion of this study, the relative maturity of the interventions was established in interviews using a method adapted from a system of business process models (Van Looy, 2014)

**Table 1** Work safety interventions translated into practice in DSW safety study 2

Safety intervention and purpose	Intervention description	Control level
<b>1. Personnel selection procedures</b> Recruit DSWs with required job skills, emotional capacity and personal characteristics	Use of psychological tests at the point of DSW recruitment	Primary
<b>2. Workforce safety communication</b> Improve safety communication and cultivate a positive organisational culture that overtly acknowledges safety importance	Trial methods for safety communication for a dispersed workforce	Primary
<b>3. Safety and handover information</b> Improve the handover of client and safety-related information and improve communication between DSWs	Develop a consistent safety and handover folder for all worksites	Primary
<b>4. Communication and team training</b> Develop the social capital and effectiveness of teams and reduce conflict between DSWs	Introduce communication and teamwork training for DSWs	Primary
<b>5. Localised staff replacement system</b> Ensure replacement DSWs deployed to worksites have the necessary expertise and are known to co-workers and clients	Develop a staff replacement system to ensure familiar teams of co-workers/replacement co-workers for worksites	Primary
<b>6. Well-being checks</b> Ensure DSW well-being following safety incidents	Develop a brief debriefing format to check on DSW well-being after safety incidents	Secondary
<b>7. Safety monitoring and reporting</b> Enhance safety reporting and monitoring systems	Develop a safety report format for managers that includes safety trends for proactive risk management	Secondary

**Table 2** Level of safety intervention maturity at study completion

Maturity level	Safety interventions
1. <b>Conceptual process</b> (i.e. intervention concept identified; work required to develop concept before work-unit level trials)	<ul style="list-style-type: none"> <li>• Localised staff replacement system</li> <li>• Communication &amp; team training</li> </ul>
2. <b>Structured process</b> (i.e. basic process developed; trialled at work unit level; refinement required for organisation-wide implementation)	<ul style="list-style-type: none"> <li>• Safety and handover folder</li> </ul>
3. <b>Standardised process</b> (i.e. standardised process developed; ready for integration as an organisation-wide methodology)	<ul style="list-style-type: none"> <li>• Safety monitoring and reporting</li> <li>• well-being checks</li> <li>• Workforce safety communication</li> </ul>
4. <b>Managed process</b> (i.e. detailed processes exist; implemented across the organisation; measures of output quality being collected)	<ul style="list-style-type: none"> <li>• Personnel selection procedures</li> </ul>
5. <b>Optimised process</b> (i.e. continuing organisational processes enabled by collecting quantitative feedback and innovation to achieve best practice)	

for determining the maturity of new businesses. Table 2 shows the maturity levels utilised and the maturity of the interventions at the completion of the study. As can be seen, the interventions progressed to different stages of maturity following implementation, with a number determined to be close to progressing to the next level of maturity at the completion of the study.

The findings reported here involve a post-intervention evaluation undertaken with DSWs at the end of the second study, with findings compared to those of DSWs who participated in the DSW safety study 1 (approximately 18 months earlier). The purpose of this post-intervention evaluation was to determine the extent to which DSW well-being, safety performance and safety climate had altered since the commencement of DSW safety study 1 and following the implementation of the safety interventions.

## 2 Method

### 2.1 Participants and Procedure

All DSWs working for the Australian disability organisation (approximately 1415 DSWs) were invited to participate in each safety study by participating in an interview and/or completing a survey. Invitations were sent to DSWs at their home addresses in study 1 and distributed to worksites in study 2. Information provided to the DSWs included information about the research and a letter of support from the Director responsible for the accommodation service operations outlining senior management support for the research and explaining that surveys and interviews

**Table 3** Participant demographics for the survey data for the two DSW safety studies

	DSW safety study 1 ( <i>n</i> = 99)	DSW safety study 2 ( <i>n</i> = 129)	DSW workforce (approx. 1415)
<i>Gender</i>			
Males	51%	46%	39%
Females	49%	54%	61%
Mean age (SD)	48.35 years (10.6)	48.02 years (11.1)	45.5 years
Mean length of service (SD)	8.96 years (8.5)	9.75 years (9.4)	8.5 years

could be undertaken in work time. Participants were also informed that participation was voluntary, that their responses would be confidential and only group results would be reported.

The DSWs involved in the studies were employed to work within the organisation's accommodation support services and had daily responsibilities for providing person centred supports (e.g. for personal care, behaviour, health and medical, and other lifestyle needs) to maximise the independence and quality of life of adults with disabilities. The demographics of each DSW survey sample are shown in Table 3. As can be seen, for each study there were proportionally more males in the DSW samples than in the organisation's workforce and the mean age was slightly older.

In the second DSW safety study, a small sub-sample of 20 DSWs (11 females and 9 males) were interviewed about work safety and changes to work safety that had been observed. These DSWs had indicated on their returned consent form that they were willing to be interviewed. The questions used in interviews were as follows:

1. What has, and continues to work well with respect to safety for DSWs?
2. What are the major contributors to safety risks for DSWs?
3. Are you aware of any changes that have occurred with respect to work safety for DSWs over the past 12–18 months?

## 2.2 Measures

Responses for this investigation were drawn from a larger questionnaire compiled by the authors to examine work safety and to collect information regarding demographics (e.g. age, gender), employment characteristics (e.g. length of service), job satisfaction and safety perceptions. Four standardised measures were included in this study: measures of burnout, physical and mental health, bullying and/or harassment and safety climate. Additionally, the authors developed questions designed to address specific safety concerns associated with working as a DSW. Throughout the questionnaire, DSWs were provided with opportunities to record qualitative comments to elaborate on or qualify responses.

*Burnout* was assessed using the Copenhagen Burnout Inventory (CBI; Kristensen, Borritz, Villadsen, & Christensen, 2005). The CBI comprises three subscales. Central to the CBI is the association between burnout and physical and psychological fatigue and exhaustion. CBI subscale structure reflects attribution of exhaustion to specific life domains. The personal burnout subscale (six items) assesses exhaustion regardless of occupational status. The work-related burnout (seven items) and client-related burnout (six items) subscales measure the extent exhaustion is perceived as related to work or clients, respectively. Item responses are rated on a 5-point scale (0 = *never/almost never* or *to a very low degree* to 100 = *always* or *to a very high degree*). Higher scores represent more burnout, with the mean of 50 or greater considered as indicating burnout. The normative sample comprised 1914 human service sector workers.

*Physical and mental health* was assessed using the SF-8 health survey (Ware, Kosinski, Dewey, & Gandek, 2001). The SF-8 is a self-report survey that looks at the extent to which individuals are currently able to perform their normal or usual behaviours and activities. It has a norm-based scoring system and provides a Physical Health Component Summary score and a Mental Health Component Summary score. Higher scores on the Physical and Mental Health Component Summary scores indicate better health, with scores above and below 50 interpreted as above or below the average for the general US population with comparable norms available for the Australian population (Crouchley, 2007).

*Bullying and/or harassment* was measured using a subscale from the General Nordic Questionnaire for Psychological and Social Factors at Work (QPS Nordic; Dallner et al., 2000; Lindstrom et al., 2000). The normative sample consisted of 2010 participants from public services, health sectors and production. The bullying and/or harassment subscale includes two items that examine worker experiences of bullying and observations of others being bullied. The definition of bullying used in the QPS Nordic to establish the norms involves only downward bullying (i.e. involving superiors bullying subordinates), whereas the relevant Australian government safety authority uses a definition that includes non-directional bullying. Consequently, the authors used the QPS Nordic measure but with bullying defined “*as repeated and unreasonable behaviour directed towards a worker or group of workers that creates a risk to health and safety*” (Safe Work Australia, 2013b).

*Safety climate* was measured using the Nordic Occupational Safety Climate Questionnaire (NOSACQ-50; Kines et al., 2011) which includes 50 items phrased positively or negatively. The NOSACQ-50 includes seven safety climate dimensions, including three management and four work-unit level dimensions. The three management level dimensions include management safety priority, commitment and competence (e.g. “Management encourages employees here to work in accordance with safety rules—even when the work schedule is tight”), management safety empowerment (e.g. “Management strives to design safety routines that are meaningful and actually work”) and management safety justice (e.g. “Management collects accurate information in accident investigations”). The four work-unit (or co-worker) level dimensions include workers’ safety commitment (e.g. “We who work here try hard together to achieve a high level of safety”), workers’ safety

priority and risk non-acceptance (e.g. “We who work here regard risks as unavoidable”—negatively scored item), peer safety communication, learning and trust in co-workers’ safety competence (e.g. “We who work here try to find a solution if someone points out a safety problem”), and workers’ trust in the efficacy of safety systems (e.g. “We who work here consider that a good safety representative plays an important role in preventing accidents”).

NOSACQ-50 uses a 4-point scale (i.e. *strongly disagree, disagree, agree and strongly agree*). The normative sample consisted of 3853 healthcare sector workers. Scores of 3.30 or more indicate a good safety climate for maintaining and continuing safety development; 3.00 to 3.30 reflect a fairly good safety with a slight need for improvement indicated; 2.70 to 2.99 suggest a fairly low perceived safety with need for improvement; and scores below 2.70 indicate a low safety climate with a great need for improvement.

*Safety hazard perceptions* were assessed using questions that asked DSWs to indicate how frequently they felt unsafe at work due to 22 workplace hazards related to working as a DSW. These questions included 12 questions related to physical hazards in the workplace (e.g. safety risks in the internal or external work environment; risks associated with use of hazardous substances; manual handling risks; risk of slipping, tripping or falling) and 10 questions related to psychosocial hazards in the workplace (e.g. client aggression; bullying; lack of support in workplace). These questions were rated using a 5-point scale (i.e. *1 = never or almost never, 2 = not often, 3 = sometimes, 4 = often, 5 = always*).

### 2.3 Ethics

Approval to conduct this evaluation was obtained from the Human Research Ethics Committees of the University of Adelaide and the participating organisation.

## 3 Results

Table 4 provides the descriptive statistics for well-being measures used in the survey for each of the DSW samples with the instrument norms where applicable. It can be seen that the mean burnout scores for the second safety study all differed significantly from the norm means, with the personal and work-related burnout means significantly poorer than the norms whereas client-related burnout was significantly better than the norms. This pattern of results remained the same as in the first DSW safety study. When the number of DSWs who were considered to be experiencing burnout (i.e. have a score of 50 or more) was examined, an improvement was evident in the second DSW sample when compared to the first study, although improvements were not significant. DSWs considered to be experiencing burnout included: personal burnout study 1 = 41.4%, study 2 = 35.2%; work-related burnout study

1 = 33.3%, study 2 = 31.0%; and client-related burnout study 1 = 15.3%, study 2 = 11.6%. In the first study, 49.5% of DSWs were experiencing burnout in at least one domain compared to 40.3% in the second study.

When the SF-8 scores are examined, it can be seen in Table 4 that for both DSW studies, the mean mental health component scores were significantly poorer than the norms. Although there was an improvement in the mental health component scores from study 1 to study 2, the mean difference was not significant. The SF-8 mental health component score can also be used as a preliminary screener to identify respondents who are at risk of depression, although it is not considered a diagnostic measure. Risk of depression findings for the two DSW samples showed an improvement, with 32% of DSWs considered to be at risk of depression in study 1 compared to 25% in study 2. However, the number of DSWs at risk of depression remained significantly higher than the SF-8 norms.

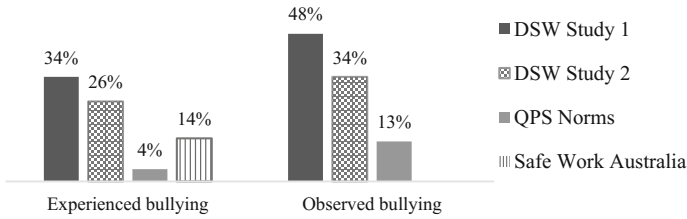
Findings from the two items in the QPS Nordic bullying and/or harassment subscale are shown in Fig. 1. Compared to the norms (which represent downwards bullying only) and the percentage reported for Australian workers (which represents non-directional bullying) (Safe Work Australia, 2013b), DSWs in both samples reported experiencing and witnessing significantly more bullying. While each sample reported higher levels of bullying than the norms, there was a decrease in experienced and witnessed bullying between the first and second safety study, with the percentage of DSWs reporting that they witnessed bullying significantly lower in the second study than was the case in the first.

Table 5 provides the descriptive statistics for the safety measures used in the survey for each of the DSW samples with the instrument norms where applicable.

**Table 4** Descriptive statistics for the Copenhagen Burnout Inventory and SF-8 health survey and comparisons to the normative samples

Scales	DSW safety study 1 (n = 99)		DSW safety study 2 (n = 129)		Normative sample
	Range	Mean (SD)	Range	Mean (SD)	Mean (SD)
<i>Copenhagen Burnout Inventory</i>					
Personal burnout	8.33–100	45.77** (20.7)	0–100	43.08** (17.7)	35.9 (16.5)
Work-related burnout	3.57–100	41.28** (22.2)	3.57– 89.29	37.51* (20.1)	33.0 (17.7)
Client-related burnout	0–95.83	26.13* (20.8)	0–83.33	22.45** (19.2)	30.9 (17.6)
<i>SF-8 health survey</i>					
Physical health component score	23.81– 61.26	48.13 (9.3)	23.27– 63.72	48.78 (8.7)	50 (10)
Mental health component scores	17.43 –61.88	45.95** (11.4)	11.35 –61.69	48.03* (10.6)	50 (10)

\*p < 0.05, \*\*p < 0.01 (compared with the normative sample)



**Fig. 1** Percentage of DSWs in each safety study who reported they had experienced or witnessed bullying in the workplace compared to the QPS norms and percentage reported by SafeWork Australia

As can be seen in Table 5, in both studies, the means for the safety climate dimensions differed significantly from those of the norm group for one management dimension (management safety justice) and all four of the work-group or co-worker safety climate dimensions. On all three of the management dimensions, there were mean improvements in the second study from the first, whereas only one of the four

**Table 5** Descriptive statistics for the NOSACQ-50 and safety hazard survey questions and comparisons to the normative samples

Scales	DSW safety study 1 (n = 99)		DSW safety study 2 (n = 129)		Normative sample
	Range	Mean (SD)	Range	Mean (SD)	Mean (SD)
<i>NOSACQ-50</i>					
Management safety priority and ability	1.33–4.00	2.83 (0.59)	1.00–4.00	2.87 (0.55)	2.85 (0.58)
Management safety empowerment	1.29–4.00	2.71 (0.62)	1.00–4.00	2.77 (0.55)	2.83 (0.55)
Management safety justice	1.00–4.00	2.74** (0.67)	1.00–4.00	2.80** (0.55)	3.12 (0.50)
Worker safety commitment	2.00–4.00	3.11** (0.48)	1.83–4.00	3.09** (0.39)	3.31 (0.47)
Workers safety priority & risk non-acceptance	1.43–4.00	2.85** (0.52)	1.28–4.00	2.87** (0.52)	3.09 (0.51)
Peer safety communication, learning and trust in safety ability	1.50–4.00	3.05* (0.54)	1.25–4.00	3.03** (0.45)	3.20 (0.44)
Workers trust in the efficacy of safety systems	1.71–4.00	3.15** (0.47)	1.00–4.00	3.10** (0.46)	3.36 (0.44)
<i>Safety hazards</i>					
Physical hazards	1.00–3.83	2.11 (0.67)	1.00–4.00	1.99 (0.67)	–
Psychosocial hazards	1.00–4.30	2.47 (0.81)	1.00–4.56	2.20 (0.81)	–

\*p < 0.05, \*\*p < 0.01 (compared with the normative sample)

co-worker safety climate dimensions improved. With respect to concerns about specific safety hazards, it can be seen in Table 5 that in both study samples, the DSWs were generally more frequently concerned about psychosocial safety hazards than physical hazards. It can also be seen that the DSWs were less concerned about both types of hazards in the second sample than the first; however, only the difference for the psychosocial hazards was significant [ $t(221) = 2.46, p = 0.014$ ].

Findings from interviews were used to determine DSW perspectives on effective safety initiatives used by the organisation and factors that remained as contributors to safety concerns. In interviews, DSWs identified 18 areas that were considered to be effective safety initiatives. Thirteen of these initiatives were reported by more than 50% of those interviewed. The top initiatives mentioned by 70% or more of the respondents included: workplace emergency plans, organisational safety policies, safe operating procedures (e.g. manual handling, use of hazardous substances), vehicle safety (e.g. vehicles in good condition, safety barriers) and the safety incident reporting system. The least frequently reported safety initiative was that the workplace was stress-free (reported by 23% of DSWs).

In response to the question about major contributors to safety risks for DSWs, the DSWs identified 18 areas of concern. Most safety concerns (61%) were mentioned by 5% or fewer of the DSWs interviewed. Those above this level were mentioned by between 6 and 15% of DSWs and included: bullying or other co-worker conflicts, lack of adequately trained staff, lack of support in the workplace, aspects of the internal and/or external physical environment, lack of adequate staff training, high job demands, working with clients with challenging behaviours and other staff-related issues (e.g. stress associated with working with unfamiliar replacement DSWs). Most safety risks identified by DSWs related to psychosocial aspects of the work situation rather than physical risks.

DSWs were also asked about any changes they may have observed over the preceding 18 months. Responses from DSWs included improvements and deteriorations. The improvements that were reported were grouped under seven headings, including: improved follow-up for DSWs following safety incidents, more overt commitment from management towards safety, changes to staffing procedures (e.g. use of psychological testing in new DSW recruitment), greater focus on safety procedures, improvements in safety communication, environmental safety improvements and training. Deteriorations reported by DSWs were grouped under eight headings, including: problems with equipment or aspects of the work environment, inadequate safety follow-up and communication, bullying and workplace conflicts, issues associated with the staff daily replacement system, lack of management support, aspects of their work conditions (e.g. lack of job rotation), clients with challenging behaviours and lack of adequately skilled staff. These findings supported the DSW study 1 findings that suggested that the causal influences of safety risks for DSWs were complex with specific factors or combinations of factors relevant for different work circumstances and environments, as indicated by the factors identified as improving by some DSWs also being reported as having deteriorated by others, for example, follow-up after safety incidents and safety communication. These findings



may also reflect the incomplete penetration across the organisation of the implemented safety interventions at the time of this evaluation.

## 4 Discussion

This project aimed to translate into practice selected work safety recommendations for disability support workers (DSWs) compiled from DSW safety study 1. The implemented interventions selected were chosen according to the specific criteria that there was wide consensus about possible safety benefit and likely impact, they could be implemented in a short time period (approximately 9 months), required no additional financial resources, and focused on upstream safety controls. The implementation of these interventions was undertaken with a strong commitment from the organisation's management and involved a cooperative process with the direct involvement of the organisation's management, thus demonstrating the organisation's commitment to improving the health and safety outcomes for DSWs.

The research findings in DSW safety study 1 suggested there were multiple factors associated with the psychosocial work safety hazards impacting DSWs and that the causal influences were often complex, with specific factors or combinations of factors relevant for particular work circumstances and in different environments. Consequently, to address these hazards multiple safety intervention approaches were required, seven of which were trialled in this research. The underlying focus of these interventions included the cultivation of a positive safety climate that overtly acknowledges and respects DSW work safety; the development of the social capital and competency of work teams; ensuring DSWs have the information required to perform their jobs effectively; and the enhancement of safety communication, monitoring and reporting systems. At the completion of the DSW safety study 2, the implemented interventions had reached variable levels of maturity.

As the time available to translate safety recommendations into practice was limited this meant that some interventions remained as pilot implementations at various worksites. Consequently, it was not anticipated that broad reaching work safety climate and organisational health and safety impacts would be evident in the post-intervention evaluation. Yet the post-intervention findings did show improvements when compared to findings for a DSW sample surveyed in the first safety study, although the DSW health and well-being outcomes generally remained poorer than norm groups. When compared to the first DSW sample, favourable health and well-being outcomes included fewer DSWs experiencing high levels of personal and work-related burnout, more DSWs who had physical and mental health scores indicating better health, and fewer DSWs at risk of experiencing depression.

A further favourable trend noted from the first to the second safety study involved significantly lower levels of bullying observed in the workplace in study 2 along with fewer DSWs reporting being bullied. Although reported levels of bullying remained significantly higher than the norms, the improvements in the results support further

efforts to continue with the communication and team training and localised staff training interventions. Both of these interventions aimed to develop effective teams and improve co-worker relationships, and each remained at relatively immature levels of development at the conclusion of this post-intervention evaluation.

The different levels of maturity achieved for each of the interventions were related to a number of factors (e.g. conflicting demands for resources, scale of the intervention). Nonetheless, the interview findings suggested that the seven safety interventions remained relevant for addressing DSW work safety. This was highlighted by the types of safety risks that DSW identified, many of which the interventions had been designed to address (e.g. follow-up for workers following safety incidents) and also in the improvements reported by some DSWs that related directly to the implementation of particular interventions (e.g. improved safety communication). Communication is identified in the literature as an important contributor to a positive organisational safety climate (British Standards Institution, 2011) and was central to several of the safety interventions trialled (e.g. communicating with the workforce about safety initiatives, handover transfer of critical client-related safety information, provision of safety statistics to communicate safety hazards and progress with managers, and well-being checks following incidents). DSWs' reports of improved communication from management as a safety improvement that occurred over the period of the research and improvements in the safety climate from study 1 underscore the role of communication in work safety improvements.

The findings reported here provide support for the utility of a measure of safety climate when attempting to identify work safety issues, solutions to those issues (based on providing opportunities for suggested improvements) and for implementing and monitoring safety-related changes in organisations. The NOSACQ-50 used in this study provided a useful profile of DSW perceptions of the safety behaviours and attitudes of both management and co-workers, relative to those of a norm group, which enabled the targeting of safety interventions designed to address areas of safety concerns raised. The post-intervention use of the same measure provided an indication of the extent to which the interventions had been effective at addressing the safety behaviours and attitudes identified by DSWs in the first study. Post-intervention survey findings showed slight mean improvements for all three management factors in the organisational safety climate but for only one of the co-worker factors when compared to the results of the first safety study. The fact that none of the work safety climate improvements was significant is not surprising given the relatively short time frame of the study and the fact that as a general measure of management and co-worker attitudes and behaviours it might be expected to take some time before changes in the work safety climate become apparent. Nevertheless, the slightly more favourable view of management in regard to how management prioritises and responds to safety concerns, the fair treatment of workers involved in incidents, and worker safety empowerment, were all consistent with the underlying focus of implemented interventions for which the most progress was made; for example, these included the interventions implemented to improve safety communication with the workforce and the intervention involving the use of well-being Checks for DSWs who were exposed to safety incidents.

Importantly, the safety climate findings in the second study identified areas of safety concern that remained a priority. For example, the mean score for the co-worker safety climate dimension associated with peer safety communication, learning and trust in safety ability was little changed from study 1 to study 2 and remained in the NOSACQ-50 score range considered to indicate “fairly good safety with a slight need for improvement”. Examples of the types of safety behaviours and attitudes in the dimension include “*We who work here feel safe when working together*”, “*We who work here have great trust in each other’s ability to ensure safety*” and “*We who work here can talk freely and openly about safety*”. These aspects of co-worker safety were key drivers behind the recommendations associated with the need for communication and team training and the development of a localised staff replacement system that ensures the deployment of replacement staff with the appropriate expertise and familiarity with co-workers and clients at particular worksites. These were the two safety interventions that matured the least during the period of this study, and the safety climate findings suggest that improvements associated with this co-worker safety dimension remain necessary.

## 5 Summary

Although there were no significant improvements in the safety climate, the findings did provide preliminary support for the effectiveness of the seven safety interventions, which largely targeted psychosocial safety concerns of the organisation’s DSW workforce. In particular, DSWs in the second study were significantly less likely to be concerned about psychosocial safety hazards than the DSWs surveyed for the first safety study, with no differences evident with regard to physical safety hazards. The health and well-being measures in the second study also showed fewer DSWs experiencing burnout, more DSWs with health scores at or above norms and fewer at risk of depression.

The findings of this study support an approach to implementing safety-related changes that incorporate the use of normed surveys to benchmark and monitor progress; stakeholder interviews to establish consensus for possible changes and identifying potential facilitators and/or inhibitors; and the use of external consultants to assist with navigating, monitoring and sustaining changes. In particular, the findings highlight the usefulness of a measure of safety climate that includes perceptions of both management and co-worker safety behaviours to identify safety issues, obtain suggestions for improvements and to regularly monitor the safety issues and the impact of changes.

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# Ups and Downs as Indonesian College Students: Risk and Protective Factors for Psychological Distress

**Dra. Sugiarti, Lavenda Geshica, Dito A. Prabowo, Ade Rachmawati, Anindita Alkarisya and Vira A. Mulyaningrum**

**Abstract** The recent study aimed to investigate potential risk and protective factors for psychological distress among Indonesian college students. A total of 1024 students from various colleges in Indonesia completed online and offline self-report questionnaires assessing the variables of interest, such as psychological distress (Hopkins Symptom Checklist-25), family functioning (Family Assessment Device), personality traits (Big Five Inventory-44), optimism (Life Orientation Test-Revised), resilience (Connor-Davidson Resilience Scale), and perceived social support (Social Provisions Scale). The results indicated negative and significant relationship between family functioning (communication and affective involvement dimensions), personality traits (extraversion and conscientiousness), optimism, resilience, perceived social support, and psychological distress. It also indicated positive and significant relationship between neuroticism personality trait and psychological distress. These findings suggested that family functioning (communication and affective involvement dimensions), personality traits (extraversion and conscientiousness), optimism, resilience, and perceived social support can be protective factors for psychological distress, meanwhile neuroticism personality trait can be risk factor for psychological distress.

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**Keywords** Family functioning • Optimism • Perceived social support  
Personality traits • Psychological distress • Resilience

## 1 Introduction

It is widely accepted that suicide is a global phenomenon indicating mental health emergency. World Health Organization (2016) estimates over 800,000 people die due to suicide every year. Moreover, suicide is the second leading cause of death among young adults aged 15–29 years old. In Indonesia, the national suicide rate among young adults aged 15–29 is 3.9 per 100,000 people (WHO, 2016). The high rate of suicide impacts on raising awareness on the importance of suicide prevention program. In consequence, today suicide prevention has become an integral part of Mental Health Action Plan of the World Health Organization which aims to reduce the rate of suicide by 10% in 2020 (WHO, 2016).

Before undertaking suicide prevention program, it is important to identify factors that contribute to suicide. Although suicide is a complex phenomenon, the current studies show that suicide is determined by the interaction between several factors inducing psychological distress, such as biological, psychological, environmental, social, and cultural factor. These factors are evidently increasing the risk of death caused by suicide (WHO, 2016) since suicide is the worst form of psychological distress (Eskin et al., 2016).

Lazarus and Folkman (1984, p. 19) defined psychological distress as “A particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being.” The demands from the environment are called as stressor. According to Lazarus and Folkman (1984), psychological distress results from people’s interpretation and explanations of their circumstances.

Each of the developmental stages has its own risk of psychological distress. However, college students who are in the emerging adult developmental stage, have the highest risk of psychological distress compared to other populations (Curtis, 2010). It transpires because college students experiencing the age of instability due to heterogeneous transitions, such as transition from high school to college and transition from adolescence to early adulthood (Curtis, 2010; Arnett, 2013). These transitions cause college students suffer from loneliness, isolation, and identity loss (Curtis, 2010). In addition, college students nowadays have higher risk of psychological distress compared to college students in 15–20 years ago due to rising college tuition fees that lead to financial problem, raising demand for success, and having difficulty to get a job in highly competitive employment market (Sharkin, 2013).

Even though college students face several problems and pressures, in fact not all college students experience high psychological distress. It is because there are a number of internal factors that may contribute to individual differences in experience of psychological distress, such as family functioning, personality traits, optimism, resilience, and perceived social support.

### ***1.1 Family Functioning***

Social support from significant other plays an important role in reducing the risk of psychological distress (Mirowsky & Ross, 2003). Beach et al. (in Cumsile & Epstein, 1994) also explained that intimate relationship is adequate to reduce the risk of depression. Furthermore, availability of social support from significant others may help individuals to be more confident and be able to control themselves. According to Mirowsky and Ross (2003), family is the closest significant other whom may be able to give social support during psychological distress period. In other words, a functional family can be a protective factor for psychological distress.

According to McMaster Model of Family Functioning, family functioning was described as structural property and organization from a group of family and interaction pattern between family members so that it can be differentiated between healthy families and unhealthy families (Epstein, Baldwin, & Bishop, 1983). In accordance with McMaster Model of Family functioning, there are several dimensions of family functioning; they are problem solving, communication, roles, affective responsiveness, affective involvement, and behavior control.

### ***1.2 Personality Traits***

Personality traits play an important role affecting psychological distress, therefore personality traits have repeatedly been a variable of interest in studies pertaining to mental health problems (Shaheen, Jahan, & Shaheen, 2014). According to Costa, Terracciano, and McCrae (2003, p. 23), personality traits refer to “*Dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings, and actions.*” Personality traits predispose individual’s perception and interpretation in experience of psychological distress (Wenzel & Beck, 2008). In other words, individual’s perception toward stressor is determined by personality traits.

In accordance with Costa, Terracciano, and McCrae (2003) five-factor model (FFM), there are five broad dimensions of psychological distress (i.e., extraversion, openness, agreeableness, conscientiousness, and neuroticism). FFM gives immense information with each dimension characterizing a subset of individual characteristic independently.



Extraversion dimension describes both quantity and quality in interpersonal relationship, need for social stimulation, and capacity to joy and emotional fulfillment. Individuals with high extraversion tend to seek interaction with others. They are also affectionate, delighted, optimistic, and talk active. Unlike individuals with high extraversion, individuals with low extraversion tend to be reserved, independent, and not likely to interact with others. Nevertheless, it does not mean that low extraversion identical with unhappiness and pessimistic. Individuals with low extraversion also experience positive emotion as same as individual with high extraversion do, but they express it in different ways (Costa & McCrae, 1994).

Agreeableness indicates the kind of interpersonal interaction in continuum from compassion to antagonism. Individuals with high agreeableness are willing to help each other, selfless forgiving, friendly, and obedient. Otherwise, individuals with low agreeableness are tough-minded, cynical, manipulative, uncooperative, and spiteful (Costa & McCrae, 1994).

Conscientiousness dimension emphasizes on the level of motivation, control, and self-disciplined. Individuals with high conscientiousness tend to be dutiful, ambitious, and sometimes to the point of being “workaholic.” So that individuals scoring high on conscientiousness would be reliable, hard-working, and neat. While individual with low conscientiousness, in comparison, tends to be aimless, having low ambition, unreliable, and more likely to giving up when they are given challenging assignment (Costa & McCrae, 1994).

Neuroticism refers to chronic emotional instability and difficulty in adapting to circumstances. Individuals with high neuroticism tend to be anxious, temperamental, having unrealistic ideas, and having low frustration tolerance. These characteristics make individuals with high neuroticism are more likely to suffer from psychological distress than individuals with low neuroticism. It is caused individuals with low neuroticism have some characteristics that can be protective factors toward psychological distress, such as tend to be patient, satisfied with themselves, and having emotional stability (Costa & McCrae, 1994).

Openness dimension is tendency to be imaginative, unconventional, individualistic, creative, curious, and divergent thinker. In addition, individuals with high openness also feel their emotions deeply and intensely. Otherwise, individuals who score low on openness tend to be more conventional, conservative, dogmatic, and having less ability to understand a complex idea (Costa & McCrae, 1994).

### ***1.3 Optimism***

Optimism can minimize the negative impacts on psychological distress (Carver & Scheier; Carver, Scheier, & Segerstrom in Besser & Zeigler-Hill, 2014). Individuals with high level of optimism are expected to have lower level of psychological

distress (Besser & Zeigler-Hill, 2014). According to Scheier and Carver (1985), optimism refers to the tendency to believe positive outcome. Scheier, Carver, and Segerstrom (2010) defined optimism as a variable giving individual differences in reflected positive expectations toward future. Srivastava and Angelo (2009) also defined optimism as a tendency to get positive outcomes. Gillham, Shatte, Reivich, and Seligman (2001) described optimism as a tendency to expect the best possible outcomes. Hence, it can be concluded that optimism is a tendency to expect positive outcomes in the future.

Carver and Scheier (2005) explained that individual with high optimism tends to expect positive outcomes; whereas, individual with low optimism tends to believe that negative outcomes will happen in the future. High-level optimism makes individuals tend to believe that positive outcomes will occur in spite of the problems faced nowadays. The doubt toward future makes individuals with low-level optimism are more likely to experience negative feelings, such as anxiety, guilt, anger, sadness, and hopelessness (Carver & Scheier in Scheier, Carver, & Bridges, 2001).

#### ***1.4 Resilience***

The relevance between psychological distress and resilience begins with its definition. Based on Richardson, Neiger, Jensen, and Kumpfer (1990), resilience defined as “The process of coping with disruptive, stressful, or challenging life events in a way that provides the individual with additional protective and coping skills than prior to the disruption the result from the event.” From the further explanation given in their journal, resilience viewed as process from being challenged in distressful situation, to be able to surpass the adversity, thus resilience exists due to distress. From the process described by Richardson et al. (1990), the outcome from the process involving person and environment qualities divided as four type; where *resilient reintegration* categorized as the type when an individual with adversity recognized his/her strength and surpass it, also manage to prevent prospective distressful situations.

Empirical basis that supported the idea has been developed in many settings throughout the resilience research. Bacchi and Licinio (2016) and McGillivray and Pidgeon (2015) found from studies with student population reveal that there was significant negative correlation between resilience and psychological distress. The same conclusion revealed in a meta-analysis research by Mortazavi and Yarollahi (2015) who studied several Iranian researches involving the variables in the country demographics. Based on the significant conclusion, the existence of high resilience in an individual correlated with low psychological distress.

## 1.5 *Perceived Social Support*

One of the biggest challenges that young adults face nowadays is interpersonal relationship problem. It is a result of unfulfilled need for developing intense interpersonal relationship with others. Individuals who have less intense interpersonal relationship tend to suffer from loneliness and isolation. Consequently, social support is exceptionally important especially for young adults. Lee, Detels, Rotheram-Borus, and Duan (2007) defined social support as individuals' perception about the availability of people who can make them feel loved, cared, and respected.

In connection with psychological distress, Waldinger (2015) explained that individuals with proper social relationship with their friend, family, or community tend to have better mental health. Moreover, individuals with proper social support also tend to be happier and having higher life expectancy. In addition, Pervin and Ferdowshi (2016) conducted a survey and found that loneliness (lack of social support) correlated positively with suicidal thoughts. In other words, individuals who feel lonely carry a high risk of suicidal thoughts or even suicidal attempt.

## 2 *Methods*

### 2.1 *Respondents*

Respondents comprised of 1024 students (297 males, 727 females) from various colleges in Indonesia. The convenience sample technique was used for collecting data. The average age was 20.13 years old, with a range from 18 to 25 years old. Regarding level of education, 41 respondents were pursuing a vocational degree, 967 respondents were pursuing a bachelor's degree, and 16 respondents were pursuing a master's degree. All respondents were Indonesian citizen and be able to use Bahasa Indonesia both verbal and written.

### 2.2 *Measures*

***Psychological Distress.*** Psychological distress was measured by Hopkins Symptom Checklist (HSCL-25). It is a screening tool designed to detect symptoms of anxiety and depression. HSCL-25 consisted of 25 items. Each item is rated by 4-point Likert scale on continuum of not at all (1) to extremely (4). The Cronbach's alpha reliability of HSCL-25 was 0.913.

***Family Functioning.*** Family functioning was measured by Family Assessment Device (FAD). It is abbreviated from 53-item to 44-item version. FAD measures seven dimensions of family functioning. Six dimensions of FAD measure

dimensions in McMaster Model of Family Functioning (i.e., problem solving, communication, roles, behavior control, affective involvement, and affective responsiveness) and another measures general functioning. Each item is rated by 4-point Likert scale on continuum of strongly disagree (1) to strongly agree (5). The Cronbach's alpha reliability was ranged from 0.331 (roles), 0.589 (behavior control), 0.623 (problem solving), 0.623 (communication), 0.639 (affective involvement), 0.675 (affective responsiveness), 0.639 (affective involvement), and 0.863 (general functioning).

**Personality Traits.** Personality traits were measured by Big Five Inventory-44 (BFI-44). It measures five dimensions of personality, namely extraversion, agreeableness, conscientiousness, neuroticism, and openness. This inventory consists of 44 items. Each item is rated by 5-point Likert scale on the continuum of strongly disagree (1) to strongly agree (5). The Cronbach's alpha reliability of BFI-44 scales was ranged from 0.614 (agreeableness), 0.723 (openness), 0.773 (conscientiousness), 0.810 (extraversion), and 0.815 (neuroticism).

**Optimism.** Optimism was measured by Life Orientation Test-Revised (LOT-R) developed by Scheier, Carver, and Bridges (1994). It is unidimensional inventory consisted of 10 items, 3 items measure optimism (favorable items), 3 items measure pessimism (unfavorable items), and 4 items served as fillers. Each item is rated by 6-point Likert scale on the continuum of strongly disagree (1) to strongly agree (6). The Cronbach's alpha reliability of LOT-R was 0.622.

**Resilience.** Resilience was measured by Connor-Davidson Resilience Scale (CD-RISC 10). It is abbreviated from 25-item to 10-item version by Campbell-Sills dan Stein (2007). CD-RISC 10 measured five dimensions of resiliency, namely hardiness, support/purpose, faith, persistence, and cross-loading (Campbell-Sills & Stein, 2007). Each item is rated by 5-point Likert scale on continuum of not true at all (1) to true nearly all the time (5). The Cronbach's alpha reliability of CD-RISC 10 was 0.853.

**Perceived Social Support.** Perceived social support was measured by Social Provisions Scale (SPS). It measures six aspects of family functioning, namely guidance, reliable alliance, reassurance of worth, attachment, social integration, and opportunity if nurturance. This inventory consists of 24 items. Each item is rated by 4-point Likert scale on continuum of strongly disagree (1) to strongly agree (4). The Cronbach's alpha reliability of PSP scales was ranged from 0.530 to 0.775 and the overall reliability was 0.91.

### 2.3 Procedure

Respondents were recruited using online questionnaire (Google form) and conventional questionnaire booklet (using paper and pencil). This questionnaire included some background information about the aims of the study, informed consent, respondents' demographic profile, and six inventories measured variables of interest, such as psychological distress, family functioning, personality traits,

optimism, resilience, and perceived social support. All respondents participated in conventional questionnaire were rewarded a pen and a notebook. Whereas respondents participated in online questionnaire were rewarded a chance to get IDR 100,000 mobile recharge (7.5 US\$) for the five luckiest respondents.

### 3 Results

#### 3.1 Respondents Characteristics

According to Table 1, respondents in the recent study were 1024 college students from various colleges in Indonesia. A total of 553 conventional questionnaires were given to respondents, but 186 questionnaires were not be filled completely. Meanwhile, 5 of 662 data from online questionnaire could not be used due to discrepancy between respondents and characteristics required in the recent study.

**Table 1** Respondents' characteristic in the recent study ( $n = 1024$ )

Characteristics	F	%	Characteristics	F	%
<i>Sex</i>			<i>Age</i>		
1. Male	297	29.00	1. 18 years old	123	12.00
2. Female	727	71.00	2. 19 years old	210	20.50
			3. 20 years old	294	28.70
			4. 21 years old	266	26.00
			5. 22 years old	100	9.80
			6. 23 years old	12	1.20
			7. 24 years old	11	1.10
			8. 25 years old	8	0.80
<i>Marital status</i>			<i>Ethnicity</i>		
1. Single	1015	99.10	1. Bataknese	72	7.03
2. Married	9	0.90	2. Minangese	77	7.52
			3. Banteneese	23	2.25
			4. Betawinese	39	3.81
			5. Sundanese	177	17.29
			6. Javanese	463	45.21
			7. Chinese-Indonesian	35	3.42
			8. Others	138	13.48
<i>Education level</i>			<i>Socioeconomic status</i>		
1. Vocational	41	4.00	1. Low	224	21.90
2. Bachelor	967	94.40	2. Middle	416	40.60
3. Master	16	1.67	3. High	384	37.50
<i>Parents' marital status</i>			<i>Birth order</i>		
1. Married	892	87.10	1. First-born	187	18.30
2. Divorced	53	5.20	2. Middle child	334	32.60
3. Widowed	79	7.70	3. Last-born	284	27.70
			4. Only child	219	21.40

Respondents' age ranged from 19 to 25 years old, with a mean age of 20.13 years old ( $SD = 1.34$ ). Respondents consisted of 297 males (29%) and 727 females (71%). The majority of respondents reported being single (99.10%). In regard to ethnicity, the majority of respondents identified themselves as Javanese (45.21%). In terms of education level, the majority of respondents were pursuing a bachelor's degree (94.40%). Regarding socioeconomic status, majority of respondents identified themselves as middle class (40.60%). The majority of respondents' parents' current marital status were married (81.7%). In terms of birth order, the majority of respondents were middle children.

### 3.2 Correlational Analyses of Psychological Distress on the Variables of Interest

Partial correlation was used to examine correlation between family functioning and psychological distress. Table 2 shows significant negative correlation between communication and psychological distress ( $r = -0.114$ ,  $n = 1024$ ,  $p < 0.01$ , two tailed), and significant negative correlation between affective involvement and psychological distress ( $r = -0.074$ ,  $n = 1024$ ,  $p < 0.01$ , two tailed).

Partial correlation was used to examine correlation between personality traits and psychological distress. Table 3 shows significant negative correlation between extraversion personality trait and psychological distress ( $r = -0.086$ ,  $n = 1024$ ,  $p < 0.01$ , two tailed), and significant negative correlation between conscientiousness personality trait and psychological distress ( $r = -0.107$ ,  $n = 1024$ ,  $p < 0.01$ ,

**Table 2** Partial correlation of psychological distress on family functioning

Family functioning	Psychological distress ( $r$ )	Sig.
Problem solving	0.049	0.120
Communication	-0.114	0.000**
Roles	-0.023	0.470
Affective responsiveness	-0.023	0.465
Affective involvement	-0.074	0.018**
Behavior control	-0.040	0.205

**Table 3** Partial correlation of psychological distress on personality traits

Personality traits	Psychological distress ( $r$ )	Sig.
Extraversion	-0.086	0.006**
Agreeableness	0.024	0.448
Conscientiousness	-0.107	0.001**
Neuroticism	0.437	0.000**
Openness	0.057	0.068

**Table 4** Pearson correlation of psychological distress on optimism

Variable	Psychological distress ( <i>r</i> )	Sig.
Optimism	-0.303	0.000**

**Table 5** Pearson correlation of psychological distress on resilience

Variable	Psychological distress ( <i>r</i> )	Sig.
Resilience	-0.244	0.000**

**Table 6** Pearson correlation of psychological distress on perceived social support

Variable	Psychological distress ( <i>r</i> )	Sig.
Perceived social support	-0.270	0.000**

two tailed). Significant positive correlation was shown in correlation between neuroticism personality trait and psychological distress ( $r = 0.437$ ,  $n = 1024$ ,  $p < 0.01$ , two tailed).

Pearson correlation was used to examine correlation between optimism and psychological distress. Table 4 shows significant negative correlation between optimism and psychological distress ( $r = -0.303$ ,  $n = 1024$ ,  $p < 0.01$ , two tailed).

Pearson correlation was used to examine correlation between resilience and psychological distress. Table 5 shows significant negative correlation between resilience and psychological distress ( $r = -0.244$ ,  $n = 1024$ ,  $p < 0.01$ , two tailed).

Pearson correlation was used to examine correlation between perceived social support and psychological distress. Table 6 shows significant negative correlation between perceived social support and psychological distress ( $r = -0.270$ ,  $n = 1024$ ,  $p < 0.01$ , two tailed).

## 4 Discussion

The objective of the recent study was to investigate potential risk and protective factors for psychological distress among Indonesian college students. The result indicated negative and significant relationship between family functioning (communication and affective involvement dimensions), personality traits (extraversion and conscientiousness), optimism, resilience, perceived social support, and psychological distress. It also indicated positive and significant relationship between neuroticism personality trait and psychological distress. These findings are supported by previous study.

Hovey and Seligman (2007) found that individuals who have proper family support experience less anxiety and depression as compared to those who lack of family support. Moreover, Taylor (2008) explained that individuals will feel loved, respected, and cared if they have proper family support. Therefore, family support plays an important role as protective factor for psychological distress.

Earlier study conducted by Shaheen, Jahan, and Shaheen (2014) also showed that extraversion and conscientiousness had significant negative correlation toward psychological distress; meanwhile, neuroticism had significant positive correlation. However, in openness and agreeableness personality traits, the recent study showed different results. Shaheen, Jahan, and Shaheen (2014) found that openness and agreeableness correlated negatively toward psychological distress, whereas the recent study proves that openness and agreeableness did not correlate significantly toward psychological distress. These findings were supported by numerous previous studies which proved that these traits did not correlate significantly toward psychological distress if they were not mediated by other variables (Bekker, Zee, Lewig, & Dollard, 2006; Karsten et al., 2012).

Individuals with high extraversion tend to use rational problem-solving strategy and seek social support. These characteristics make individuals with high extraversion have lower risk of psychological distress (Shaheen, Jahan, & Shaheen, 2014). High-conscientiousness individuals are characterized by hard-working, well-organized, and self-discipline (Costa & McCrae, 1994). These characteristics make individuals with high conscientiousness more adaptive in their daily life, so that individuals with high conscientiousness tend to have lower level of psychological distress. Neurotic individuals are more prone to negative emotions, such as anger, sadness, anxiety, and self-doubt (Shaheen, Jahan, & Shaheen, 2014). It means that those individuals who scored high on neuroticism significantly have higher risk of psychological distress.

It was also clear from the results that there was significant negative correlation between optimism and psychological distress. It means that those individuals who scored high on optimism significantly experience less psychological distress. It is supported by previous study conducted by Besser and Zeigler-Hill (2014) proved optimism helps individuals to reappraise negative situations and makes them more positive than before (Carver, Scheier, & Weintraub; Scheier & Carver in Besser & Zeigler-Hill, 2014). Individuals with high-level optimism believe that they are able to get positive outcomes (Scheier & Carver, 1985). Scheier, Carver, and Segerstorm (2010) also found that individuals with high-level optimism tend to find the best way to cope with stressful situation, therefore optimism can be protective factor toward psychological distress.

The significant result of the study shared typical conclusion from previous studies with student population, such as Bacchi and Licinio (2016) and McGillivray and Pidgeon (2015). It is assumed that individuals with high resilience have the qualities to minimize the distress impact. However, the low relationship coefficient does not imply the cohesive and essential relationship between psychological distress and resilience in the resilience theory by Richardson et al. (1990). This result raised assumptions that although individuals have the qualities to prevent upcoming adversity, distress may experience by him/her. The coefficient also shows that resilience process is not instant, and individuals can have both distress and resilience while prevent the impact.

Earlier studies conducted by Vungkhanching et al. (2016) and Friedlander (2007) also showed that there was significant negative correlation between



perceived social support and psychological distress. It is assumed that individuals with high social support believe that they have people who can help them when they are experiencing psychological distress. Otherwise, individuals with low social support tend to perceive that they are unable to overcome psychological distress because they are lack of proper resources. In consequence, perceived social support can be a protective factor toward psychological distress.

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# Parental Support to Develop Entrepreneurial Characteristics in Teenagers: Views on Self and Spouse

Jenny Lukito Setiawan

**Abstract** The aim of this study was to investigate the differences between fathers and mothers in their views on self and spouse in support given to develop entrepreneurial characteristics in teenage children. The study was conducted among 40 fathers and 77 mothers with children in the age of junior and senior high school. Results showed that there was a significant difference between views on self and spouse among mothers,  $t(76) = 4.08$ ,  $p < 0.001$ . Mothers believed that they gave higher support than their spouse in developing entrepreneurial characteristics in their children. In the group of fathers, there was no significant difference between views on self and spouse,  $t(39) = 0.48$ ,  $p > 0.05$ . These findings suggest that mothers and fathers have different views on self and spouse. Mothers tend to view themselves as more supportive than their spouse. On the other hand, fathers do not see themselves as more supportive or less supportive than their spouse.

**Keywords** Entrepreneurial characteristics • Parental support • Self Spouse • Teenagers

## 1 Introduction

Entrepreneurship education has become a hot topic over the last few years. Entrepreneurship education has also been offered in many universities and some primary and secondary schools in Indonesia. This demonstrates the increase in the awareness of the importance of entrepreneurship in Indonesian education system. The advancement of the education system, which pays more attention to entrepreneurship, also indicates that the skills of entrepreneurship are very important for younger generation.

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It can be argued that entrepreneurship education is needed to develop not only the skills of entrepreneurship but also personal characteristics. Setiawan (2008) contended that knowledge and skills of entrepreneurship alone are not enough. Individuals need to have entrepreneurial spirit and characteristics to actualize the knowledge and skills. In line with this, Vega et al. (2016) mentioned that entrepreneurial system of education that fosters creativity and innovation needs to be boosted at all educational levels. This means that education system must focus on developing not only the skills but also psychological characteristics as an entrepreneur or entrepreneurial characteristics, such as creativity and innovation.

Having reviewed literature on entrepreneurship from Bolton and Thompson (2004), Morris (1998), Hisrich et al. (2005), and Kirby (2003), Setiawan (2008) found that entrepreneurship is greatly related to certain personal characteristics. She summarized the personal characteristics of an entrepreneur, which include high achievement motivation, perseverance and determination, ability to take calculated risks, creative and innovative, independence or autonomy, and ability to accept and manage changes. Therefore, entrepreneurship education should also focus on the development of these personal characteristics.

Confirming the argument above, Chell (2008) declared that entrepreneurial personality is a result of social construction. Chell maintained that social learning and tacit knowledge are important mechanisms of social construction. Included in social learning is observation of others' behavior. As teenage children do interact not only with teachers and peers but also with parents, therefore the process of social construction of entrepreneurial characteristics in teenagers is also influenced by parents. Consequently, the efforts of developing entrepreneurial characteristics have also become the responsibility of parents, not only educational institutions (Setiawan, 2008).

Building entrepreneurial personal characteristics—high achievement motivation, perseverance and determination, ability to take calculated risks, creative and innovative, independence or autonomy, and ability to accept and manage changes—is not only carried out in entrepreneurship projects like what is done in school. As entrepreneurial personality is the result of social construction (Chell, 2008), entrepreneurial characteristics can also be developed through daily challenges that children face in their lives. Parental support given to children in facing their daily responsibilities and challenges should be directed to foster the development of the entrepreneurial characteristics. Both emotional and instrumental support provided by parents should be directed to generate entrepreneurial personal characteristics.

As parents are an important environment to develop personal characteristics of their children, consistency of both parents (father and mother) is strongly needed. Both father and mother should have the same direction in raising their children. In other words, co-parenting becomes important. Co-parenting refers to coordination between husband and wife in their shared responsibility of bringing up their children (Cordova, 2009).

Sense of we-ness between father and mother, feelings toward partner, and engagement of both father and mother in parenting are important components of co-parenting, in addition to division of child care responsibilities (Cordova, 2009).

Therefore, father's positive feelings toward mother and mother's positive feelings toward father in their roles as a parent are important to build good co-parenting relationships. These positive feelings will also lead to a stronger sense of we-ness between father and mother.

It can be argued that positive feelings toward spouse in their role as a parent are influenced by one's view toward the degree of spouse's involvement and the actual practice of involvement in parenting daily activities. When the spouse is viewed as less engaged or engaged in the wrong way, individuals will have negative feelings toward their spouse. This also will lead to conflicts in the relationship.

Compared to studies on parental involvement and support in teenage children, studies on parental involvement and support in young children are more popular. Fewer studies focused on parental involvement in teenagers. In fact, parenting young children is different from parenting teenagers. Therefore, studies investigating parental involvement in teenagers need to be done. In parallel with this, Phares et al. (2009) recommended more studies of adolescence in order to explore more developmentally appropriate parenting for children in this life stage.

Little is known about the support parents give to their offspring in regard to developing entrepreneurial characteristics. Past studies have often focused on mother and father involvement in general parenting responsibility, such as school work, discipline, daily care, and fun activities (Phares et al., 2009). As reviewed earlier, entrepreneurial personal characteristics are built through emotional and instrumental support in facing daily life challenges. Thus, studies on parental support to promote entrepreneurial personal characteristics in young generation are suggested.

The aim of the current study was to compare fathers and mothers' views on self and spouse in relation to support given to develop entrepreneurial characteristics in their teenage children. Specific research questions are as follows:

- (a) Are there any differences between fathers' view on self and mothers' view on self in regard to support given to develop entrepreneurial characteristics in teenage children?
- (b) Are there any differences between fathers' view on spouse and mothers' view on spouse in regard to support given to develop entrepreneurial characteristics in teenage children?
- (c) Are there any differences between view on self and view on spouse in regard to support given to develop entrepreneurial characteristics in teenage children across all parents?
- (d) Are there any differences between fathers' view on self and view on spouse in regard to support given to develop entrepreneurial characteristics in teenage children?
- (e) Are there any differences between mothers' view on self and view on spouse in regard to support given to develop entrepreneurial characteristics in teenage children?

The separation of father subjects and mother subjects was conducted to assess possible gender influence between fathers and mothers. This method allowed the researcher to get fathers’ report on their own involvement and their spouse’s involvement, as past research often focused on mothers’ report alone. This current study was a part of the larger research project entitled “The development of parental support model based on marital relationships to develop entrepreneurial self-efficacy.”

In regard to studies on father involvement, Coley and Morris (2002) as well as Mikelson (2008) emphasized the importance of data collection efforts which involve father respondents, not only mother respondents. This will prevent the researcher from coming to biased conclusions of fathers’ involvement due to the dependence on mothers’ report.

## 2 Method

### 2.1 Sample

The participants of this study consisted of 117 married individuals (40 fathers and 77 mothers). All participants are Indonesians, living in Surabaya, the second-largest city of Indonesia, and surrounding areas. The respondents had teenage children in junior and senior high school. The average age of respondents was 44.43 years. The average length of marriage was 19.27 years. The details of demographic distribution are presented in Tables 1 and 2.

**Table 1** Mean of age and marriage length

	All respondents	Father respondents	Mother respondents
Mean of age	44.43	46.43	43.38
Mean of marriage length	19.27	18.42	19.71

**Table 2** Working status of respondents and spouses

Respondents	Working status	Self (%)	Spouse (%)
Father respondents	Full time	90	46.2
	Part time	5	20.5
	Not working	5	33.3
Mother respondents	Full time	43.4	84.5
	Part time	25	14.1
	Not working	31.6	1.4

## 2.2 Measurement

Parental support scale was constructed to measure the parental support given for the development of children’s entrepreneurial characteristics. The items measuring the support were constructed based on two types of support (emotional and instrumental support) to develop six entrepreneurial characteristics, including high achievement motivation, perseverance and determination, ability to take calculated risks, creative and innovative, independence or autonomy, and ability to accept and manage changes. The sample of the items are “encouraging our child to get higher achievement than before” and “discussing with our child to stimulate unusual problem solving.”

Respondents were asked to rate the frequency of support they gave to their children in developing entrepreneurial characteristics. They were also asked to rate the frequency of support their spouse gave to their children. They were asked to rate from 1 (never) to 5 (always). The total number of items was 24, consisting of 12 items for measuring their view toward their own support and 12 items for measuring their view toward spouse’s support.

Reliability testing using Cronbach’s alpha showed that both parental support scales were reliable. The Cronbach’s alpha coefficient of parental support scale (view on self) was 0.890. The Cronbach’s alpha coefficient of parental support scale (view on spouse) was 0.914.

## 3 Results and Discussion

Fathers’ view on self and mothers’ view on self in regard to support given to develop entrepreneurial characteristics in teenage children are presented in Table 3. As seen in Table 3, both fathers and mothers rated themselves above 4. This means that both fathers and mothers view themselves as often providing support for their teenage children to develop entrepreneurial characteristics. The t-test analysis showed that there was no significant difference in view on self between fathers and mothers.

Similarly, fathers’ view on spouse and mothers’ view on spouse in regard to support given to develop entrepreneurial characteristics in teenage children are presented in Table 3. Both fathers and mothers rated their spouse above 4. This

**Table 3** Comparisons of fathers’ and mothers’ view on self and spouse in regard to support to develop entrepreneurial characteristics in teenage children

Concept to measure	Mean fathers	Mean mothers	t-value	p-value
View on self	4.27 (0.67)	4.42 (0.53)	-1.33	0.186
View on spouse	4.25 (0.67)	4.12 (0.80)	0.86	0.392

Note Standard deviations in parentheses

means that both fathers and mothers perceive their spouse as often providing support for their teenage children to develop entrepreneurial characteristics. Comparison test between fathers and mothers in their view of spouse using t-test showed no significant difference. In summary, there was no significant difference between fathers and mothers in both view on self and view on spouse.

Table 4 shows the comparisons of views on self and views on spouse in three different groups of respondents. As shown in Table 4, mothers' view on self was significantly higher than view on spouse. This means that mothers regarded themselves as providing more support to their teenage children in developing entrepreneurial characteristics. In the group of fathers, the comparisons showed no significant difference. As mothers comprised 65.8% of the total respondents, there was also a significant difference in the comparison of view on self and view on spouse in the group of all parents.

Table 5 shows the comparisons of views on self and views on spouse in various groups of mothers.

As shown in Table 5, both working mothers and not working mothers regarded themselves as providing more support to their teenage children in developing entrepreneurial characteristics than their spouse. Mothers with higher education history and mothers with no higher education history also consistently regarded themselves as providing more support to their teenage children in developing entrepreneurial characteristics than their spouse. This means in general mothers viewed their husband as lower than themselves in supporting the development of entrepreneurial characteristics in their teenage children.

**Table 4** Comparisons of view on self and view on spouse in regard to support to develop entrepreneurial characteristics in teenage children

Group of respondents	Mean view on self	Mean view on spouse	<i>Matched pairs t-value</i>	<i>p-value</i>
All parents	4.37 (0.58)	4.16 (0.76)	3.92	0.000 <sup>a</sup>
Fathers	4.27 (0.67)	4.25 (0.67)	0.48	0.636
Mothers	4.42 (0.53)	4.12 (0.80)	4.08	0.000 <sup>a</sup>

Note Standard deviations in parentheses

<sup>a</sup> $p < 0.001$

**Table 5** Comparisons of view on self and view on spouse in various groups of mothers

Group of respondents	Mean view on self	Mean view on spouse	<i>Matched pairs t-value</i>	<i>p-value</i>
Working mothers	4.43 (0.50)	4.13 (0.82)	3.066	0.003 <sup>a</sup>
Not working mothers	4.42 (0.58)	4.11 (0.80)	2.88	0.009 <sup>a</sup>
Mothers with higher education history	4.39 (0.52)	4.06 (0.84)	3.11	0.003 <sup>a</sup>
Mothers with no higher education history	4.48 (0.54)	4.23 (0.73)	3.091	0.005 <sup>a</sup>

Note Standard deviations in parentheses

<sup>a</sup> $p < 0.01$



Having looked through the study results, there are two possibilities to explain the results. Firstly, fathers tend to be less involved in supporting their teenage children in developing entrepreneurial characteristics, but they are unaware of it. Although there was no significant difference in view on self between fathers and mothers, the mean score of mothers tended to be higher than the mean score of fathers (see Table 3). This possibility is supported by the previous study of Phares et al. (2009), which found a significant difference between the mean hours of involvement of fathers and mothers. The study showed that fathers spend less total number of hours to have direct interaction weekday, direct interaction weekend day, accessibility weekday, and accessibility weekend day. Phares et al. maintained that families with adolescents also show a significant discrepancy between fathers' and mothers' involvement with their children.

Fathers' less support to their teenage children may be related to some reasons. Fathers may hold a traditional belief that every matter related to the child is the mother's responsibility. Therefore, parenting is the role of mothers. Fathers may see themselves as solely having responsibility as the breadwinner in the family. On the other side, fathers' less support may also be aggravated by mothers' condescending attitude. McBride and Rane (1998) found that mothers' emotional appraisal of spouse's parenting is one of the predictors of father involvement. This means that mother's negative attitude toward spouse's parenting inhibits father involvement. In line with that, Cordova (2009) explained that co-parenting becomes a challenge when one of the parents feel his/herself as more expert in parenting, thus inhibiting the spouse to get further involved. Looking at the context of study in Indonesia, where the traditional parenting values are still adopted, it is possible that mothers view themselves as more proficient in dealing with their children.

Secondly, fathers may have already been involved in giving support in developing entrepreneurial characteristics, yet fail to be recognized or acknowledged by their spouse. Previous studies also showed that mothers tend to underestimate fathers' involvement in their children's matters (Mikelson, 2008). Mothers' failure to recognize or acknowledge fathers' involvement may be caused by the differences of standard and ways of supporting. Mothers may develop a higher standard of support than fathers, and mothers may evaluate fathers using their own standard of evaluation.

Higher standard imposed by mothers was also shown in the study by Phares et al. (2009). In their study, Phares et al. (2009) found that mothers' satisfaction was related to higher fathers' responsibility in all four domains, including school work, discipline, daily care, and fun activities; whereas fathers' satisfaction was related to fathers' responsibility in only two domains, including area of discipline and fun activities. A study by Coley and Morris (2002) also suggested that mothers have higher standards or expectations of fathers' contribution in parenting. This discrepancy of expectations and ways of supporting will lead to mothers' negative feelings toward fathers. Therefore, parents (father and mother) should build good communication and discussion on parenting to reach an agreement on the ways of supporting their teenage children.

## 4 Implications and Limitations of the Study

The results showed that mothers rated their spouse lower than they rated themselves in regard to support given to develop entrepreneurial characteristics in their offspring. Stemming from this result, dream sharing of the goal of parenting, communication, and coordination between both parents is encouraged. Mothers who commonly have a higher standard of parenting need to share their expectations to their spouse. Mothers also need to convey spouse's ways of parenting which do not fit their ideal. Similarly, fathers who may have different beliefs and values should also share their views. Thus, they can reach mutual understanding and agreements. The mutual understanding and agreements will help both mothers and fathers to appreciate what their spouse does to their children. Additionally, mothers and fathers can work as a team and build the sense of we-ness. This good parenting alliance is very important in building entrepreneurial personal characteristics in children.

There are some limitations of the current study. Firstly, the sample included in this study was married individuals. They were husbands and wives, but they were not in the same marriage. Thus, mothers' view of spouse in this study is not comparable with fathers' view of self. Similarly, fathers' view of spouse in this study is not comparable with mothers' view of self. The use of matched pairs which represent fathers and mothers who have the same biological child as conducted in the study of Coley and Morris (2002) will make the comparisons possible.

Another additional limitation in the study is related to the indirect data of support given to children. The current study examined the views of parents and spouse which may not really represent the real support received or felt by the teenage children. Exploring the view of teenage children as the recipient of support may help to reduce the possibility of bias from mothers and fathers. This is what Phares et al. (2009) suggested in their study.

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# Imaging Capability, Absorption, Anxiety, Positive and Negative Affect: A Guided Imagery Intervention

Shanmukha Priya Vemu and Geeta Sunkarapalli

**Abstract** The purpose of this study was to examine the relationship between Absorption, the factors of imaging capability, i.e., Vividness of Visual Imagery and Visual Imagery Control, Trait anxiety and the differences in State Anxiety, State Positive Affect and State Negative Affect after the provision of a Guided Imagery intervention. The study was conducted on 30 female final year undergraduates, and an intervention based research model was implemented. The Vividness of Visual Imagery Questionnaire (Marks in Br J Psychol 64:17–24, 1973), Test of Visual Imagery Control (Gordon in Br J Psychol Gen Sect 39(3):156–167, 1949) and Tellegen Absorption Scale (Tellegen and Atkinson in J Abnorm Psychol 83(3):268, 1974) were administered to the participants to assess their imaging capability and their tendency towards absorption. A guided imagery track from the Academy of Guided Imagery was utilised for the intervention. The State-Trait Anxiety Inventory (Spielberger and Gorsuch in State-trait anxiety inventory for adults: manual, instrument, and scoring guide. Mind Garden, Incorporated, 1983) and The Positive and Negative Affect Schedule (Watson et al., in J Abnorm Psychol 97(3):346, 1988) were also employed.

**Keywords** Visual imagery · Absorption · Guided imagery · Anxiety

## 1 Introduction

College life is characterised by inevitable stress. Students face a combination of anxiety-inducing factors such as making difficult career choices, peer and parental pressure, feelings of incompetence and the lack of motivation to learn. These factors

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impact them and can lead to consequences such as depression, anxiety, stress, risky sexual behaviour, substance abuse, physical illness and in extreme cases, suicidal ideation.

Studies conducted in the United Kingdom showed that the prevalence of mental illnesses or psychological problems within the student population is as high as 40% with the most common problems being depression or anxiety. Research in other parts of the world has also recognised a significant amount of stress among undergraduate students (Ibrahim, Dania, Lamis, Ahd, & Asali, 2013; Teh, Ngo, bintiZulkiffii, Vellasamy, & Suresh, 2015). A study conducted by Mohan (2015) concentrates on the environmental sources of stress in students' lives and has revealed that high expectations from teachers and pressure from parents are the biggest sources of stress followed by family factors such as lack of parental support and financial factors like insufficient funds to pay for higher education. Studies which have compared gender and stress showed significant differences in the level of stress in both genders, with females exhibiting higher stress levels when compared to males (Baum & Grunberg, 1991; Waghachavare, Dhumale, Kadam, & Gore, 2013). Females are also more likely to view their stress negatively than men (Brazelton, Greene, & Gynther, 1996) and are more prone to reporting their stress as unacceptable (Campbell, Svenson, & Jarvis, 1992). In studies which investigated the interaction between gender and STAI scores, females scored significantly higher in terms of anxiety (Bekker & van Mens-Verhulst, 2007; Hishinuma, Miyamoto, Nishimura, & Nahulu, 2000; Misra & McKean, 2000). To get a wholesome understanding of the features of stress in undergraduate students, it is essential to study the behavioural responses or the coping strategies used by students to deal with anxiety. Three general strategies or styles of coping with stressful situations have been identified by Kohn, Hay, & Legere (1994), which are: (a) problem-focused coping, directed at remedying a threatening or harmful external situation; (b) emotion-focused coping including ventilating, managing, or relieving one's emotional response to such a situation; and (c) avoidance-focused coping which involves attempts to remove oneself mentally or even physically from threatening or damaging situations. Avoidance focused coping has been shown to be positively correlated with higher frequency and a higher degree of stress. There is, however, no significant correlation between emotion-focused coping, problem-focused coping and higher levels and frequency of stress (Dwyer & Cummings, 2001). To help students in effectively managing the enormous amount of stress that they have to face in their life, interventions like yoga, meditation, guided imagery, etc., can be provided as they will improve mood and will reduce tendencies of avoidance-focused coping. Guided imagery, one of the recently invented methods of relaxation is a beneficial technique used to alleviate stress. It is a mind-body intervention which helps concentrate the mind on positive images in an attempt to reduce pain and anxiety. It has a plethora of benefits which include reduced stress, lower levels of blood pressure and increased relaxation. It is also used to help students achieve their goals by helping them visualise their plans. However, the effectiveness of a guided imagery intervention varies from one individual to another, and the factors on which its success is dependent have not yet

been ascertained. To ensure that the receiver of the intervention derives maximum benefits from the intervention, these factors have to be determined.

Richardson (2013) states that mental imagery refers to “(1) all those quasi-sensory or quasi-perceptual experiences of which we are self-consciously aware, and which exist for us in the absence of those stimulus conditions that are known to produce their genuine sensory or perceptual counterparts, and which (4) may be expected to have different consequences from their sensory or perceptual counterparts.” The ability to successfully generate mental imagery depends on the factors of vividness of visual imagery and visual imagery control. Vividness of visual imagery is defined as a construct expressing the self-rated degree of richness, amount of detail (resolution), and clarity of a mental image, as compared to the experience of actual seeing (D’Angiulli & Reeves, 2007). There have been studies which have already established an association between vividness of visual imagery and relaxation during guided imagery interventions (Walker et al., 1999; Watanabe, Fukuda, & Shirakawa, 2005; Watanabe, Fukuda, Hara, & Maeda, 2006). These studies have showcased that there is a significant difference in the degree of reduction of stress in people who experience vivid imagery and those who don’t, with people having higher vividness of visual imagery ability showing higher rates of relaxation after the provision of the intervention. However, the capacity to visualise vivid images is not the sole factor of imaging ability, and therefore the role of visual imagery control in the process of relaxation through guided imagery techniques must be considered. This view can be further supported by Richardson’s (1977) stance that research on imagery must always study both aspects of imaging ability. Childers, Houston, & Heckler, (1985) defined imagery control as the individual’s ability to self-generate a mental image and to perform certain manipulations, such as mental rotation. Many personality characteristics are studied in relation with controllability. For example, Gordon (1949) distinguished participants by their imaging style which may be either autonomous imagery or controlled imagery.

Other factors such as a person’s disposition and motivation towards participation in guided imagery interventions also play a significant role in the degree of relaxation that they experience after the intervention. Techniques like guided imagery require experiential involvement and the ability to be “immersed” in activities, “captured” by feelings, “absorbed” in imagery and dreams, “riveted” by interactions with others, and so on. The participant should be motivated and capable of engaging in images constructed during the intervention so that it can lead to complex psychological states. In the absence of such a trait, the participant will not be able to benefit from the intervention fully. High rates of absorption evince such an ability. Absorption is defined as an “openness to absorbing and self-altering experiences” (Tellegen & Atkinson, 1974). Individuals with low absorption capabilities find it difficult to break away from structure through imaginal strategies and to indulge in creatively demanding activities. In contrast, people with high-absorption capabilities tend to adopt an experiential mode of functioning, characterized by the readiness to experience attentional objects for their own sake and to fully elaborate their meaning outside the context of instrumental plans, goals

and performance calibration (Wild, Kuiken, & Schopffiocher, 1995) and therefore are better at immersing in imaginal processes. This theory can be further proven by a study conducted by Glisky, Tataryn, Tobias, Kihlstrom, & McConkey (1991) in which it was indicated that the scores on the Tellegen absorption scale were most closely associated with the subscales of the Coan and McCrae-Costa's openness measures that related to aesthetic sensitivity, unusual perceptions and associations, fantasy and dreams, unconventional views of reality, and awareness of inner feelings. Absorption and imaging ability may, therefore, be regarded as conducive to relaxation during guided imagery interventions.

Previous studies on relaxation techniques like progressive muscle relaxation, spontaneous cognitive strategies and mindfulness (Chaves & Brown, 1987; Mascioli, 2014; Rasid & Parish, 1998) have utilised state anxiety measures to observe immediate changes in anxiety levels after the provision of an intervention session because of their sensitivity to differences in stress. State anxiety has been defined as an unpleasant emotional response while coping with threatening or dangerous situations (Spielberger & Gorsuch, 1983), which includes cognitive appraisal of threat as a precursor for its appearance (Lazarus, 1991). Spielberger, Sydeman, Owen, & Marsh (1999) characterized trait anxiety as a general disposition to experience transient states of anxiety. State anxiety was chosen as a variable in this study because of its potential to assess anxiety at any given point of time. Trait anxiety was included, to examine the prevalence of anxiety as a disposition in students and also to investigate its impact on state anxiety levels.

Along with aiding in anxiety reduction, guided imagery is also used as a mood enhancing technique and therefore the measurement of affect is essential. The two dominant dimensions of emotional experience are positive and negative affect. positive affect reflects the extent to which a person feels enthusiastic, active, and alert. High positive affect is a state of high energy, full concentration, and pleasurable engagement, whereas low positive affect is characterized by sadness and lethargy (Jorm, 2001). A study conducted on 254 undergraduate students indicated a significant positive correlation between grit, positive affect, happiness and life satisfaction (Singh & Jha, 2008). Positive affect has also been identified as negatively correlated with depression (Watson, Clark, & Carey, 1988a). In contrast, negative affect is a general dimension of subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness, with low negative affect being a state of calmness and serenity (Watson, Clark, & Tellegen, 1988b). Previous research has indicated that negative affect broadly correlates with depression and anxiety and acts as a general predictor of psychiatric disorders (Watson & Clark, 1984; Watson et al., 1988a, b). With regard to the relationship between positive affect and negative affect, it has been proven that there is a significant negative

correlation between state positive affect and state negative affect but zero correlation between trait positive affect and trait negative affect (Diener, Larsen, & Emmons, 1984; Schmukle, Egloff, & Burns, 2002; Watson & Clark, 1997; Watson et al., 1988a, b).

The present study thus aims to discern the relationship between imaging capabilities, absorption and the alleviation of state anxiety and negative affect and the boost in positive affect after a guided imagery intervention. This assumption can be supported by previously conducted investigations according to which vividness of visual imagery has a significant influence on the relaxation experienced by the participants after the provision of guided imagery interventions (Watanabe et al., 2006). The existence of significant levels of positive correlation between vividness of visual imagery and visual imagery control may indicate the latter's relationship with the relaxation experienced by participants in the guided imagery intervention. Absorption has been used to study the relationship between people's personality and dispositions and relaxation experienced in therapeutic interventions. State anxiety, state positive affect and state negative affect have been used in previous research because of their sensitivity to even the slightest changes in anxiety, positive and negative affect (Chaves & Brown, 1987; Mascioli, 2014; Rasid & Parish, 1998) and thus the combination of these three will indicate the success of the intervention.

### ***1.1 Research Questions***

1. Is there any difference in the levels of state anxiety, state positive affect and state negative affect after the provision of the guided imagery intervention?
2. Is there any relationship between vividness of visual imagery, visual imagery control, absorption and the differences in state anxiety, state positive affect and state negative affect pre and post intervention?

### ***1.2 Objectives***

1. To examine whether guided imagery reduces levels of state anxiety and state negative affect and improves state positive affect post intervention.
2. To investigate if there is a relationship between vividness of visual imagery, visual imagery control, absorption and the differences in state anxiety, state positive affect and state negative affect pre and post intervention.

### ***1.3 Hypotheses***

- H1. There will be a significant decrease in state anxiety after the provision of the guided imagery intervention.



- H2. There will be a significant increase in state positive affect after the provision of the guided imagery intervention.
- H3. There will be a significant decrease in state negative affect after the provision of the guided imagery intervention.
- H4. There will exist a significant correlation between vividness of visual imagery and difference in state anxiety pre and post the intervention.
- H5. There will exist a significant correlation between vividness of visual imagery and difference in state positive affect pre and post the intervention.
- H6. There will exist a significant correlation between vividness of visual imagery and difference in state negative affect pre and post the intervention.
- H7. There will exist a significant correlation between visual imagery control and difference in state anxiety pre and post the intervention.
- H8. There will exist a significant correlation between visual imagery control and difference in state positive affect pre and post the intervention.
- H9. There will exist a significant correlation between visual imagery control and difference in state negative affect pre and post the intervention.
- H10. There will exist a significant correlation between absorption and difference in state anxiety pre and post the intervention.
- H11. There will exist a significant correlation between absorption and difference in state positive affect pre and post the intervention.
- H12. There will exist a significant correlation between absorption and difference in state negative affect pre and post the intervention.
- H13. There will be a significant correlation between vividness of visual imagery and visual imagery control.
- H14. There will be a significant correlation between Vividness of visual imagery and absorption.
- H15. There will be a significant correlation between visual imagery control and absorption.
- H16. There will exist a significant correlation between trait anxiety and difference in state anxiety pre and post the intervention.
- H17. There will exist a significant correlation between trait anxiety and difference in positive affect pre and post the intervention.
- H18. There will exist a significant correlation between trait anxiety and difference in negative affect pre and post the intervention.
- H19. There will exist a significant correlation between vividness of visual imagery and trait anxiety.
- H20. There will exist a significant correlation between visual imagery control and trait anxiety.
- H21. There will exist a significant correlation between absorption and trait anxiety.
- H22. There will exist a significant correlation between the differences of the pre and post intervention scores of state anxiety and state positive affect.

H23. There will exist a significant correlation between the differences of the pre and post intervention scores of state anxiety and state negative affect.

H24. There will exist a significant correlation between the differences of the pre and post intervention scores of state positive affect and state negative affect.

## **2 Method**

### ***2.1 Research Design***

The present study is a quantitative study which has employed absorption and the factors of imaging capability, i.e., vividness of visual imagery and visual imagery control, and trait anxiety as its independent variables and state anxiety, state positive affect and state negative affect as its dependent variables. It adopted a pre-test, post-test quasi experimental design and a correlational design. A within group design was implemented to observe the changes in the anxiety, positive affect and negative affect levels before and after the conduction of the intervention. The statistical procedures that were utilized for data analysis include paired *t*-test and correlation. Paired *t*-test was used to compute the differences in state anxiety, positive affect and negative affect pre and post the intervention and correlation helped ascertain the relationship between the variables.

### ***2.2 Sample***

Thirty female final year undergraduate students from St. Francis College for Women, Hyderabad were selected to be a part of the sample.

- **Inclusion Criteria:**

- Age range of the subjects: 19–22 years
- Educational Qualifications: Pursuing final year of under graduation
- Gender: Female

- **Exclusion Criteria:**

- Students lacking proficiency in English
- Students who were unwilling to participate in all the three sessions.

### ***2.3 Instruments***

- **Information Schedule**

The participants were required to sign an informed consent form and provide certain personal information including age, residence, religion, family related details (family type, family size and living arrangements), physical health status

of the respondent and her family members, mental health status of the respondent and her family members and a checklist of adverse experiences that the respondent might have undergone.

- **Vividness of Visual Imagery Questionnaire (VVIQ):**

Constructed by David Marks, this self-report inventory was published in 1973 and was designed to assess the participant's ability to visualise images vividly. It is a valid and reliable psychometric measure with a mean alpha coefficient of  $r = 0.89$  as reviewed by McKelvie (1995). The VVIQ consists of 16 items which are divided into four groups consisting of four items each. The participant is asked to visualise the images either with eyes closed/opened and has to rate the vividness of the visual images on a 5 point Likert scale with a score of 1 indicating a 'Perfectly clear image which is as vivid as real seeing' and a score of 5 indicating "No image at all".

- **Test of Visual Imagery Control (TVIC):**

The Test of Visual Imagery Control is used to evaluate an individual's capability to control and manipulate a visual image. It was originally developed by Gordon in 1949. This measure has been widely used in research studies and has a test-retest coefficient of  $r = 0.84$  over a three-week interval (McKelvie & Gingras, 1974) and internal consistency estimates of  $r = 0.77$  to  $r = 0.84$  (Hiscock, 1978). Initially, the test consisted of 11 items and was administered orally. Richardson in 1969 added a 12th item to the instrument and suggested the use of written rather than oral instructions. The 5 point Likert scale version of the scale was used in this study with a score of 1 indicating that it is "Very Easy" to manipulate the images and a score of 5 indicating that it is "Very Hard" to manipulate the images.

- **Tellegen Absorption Scale:**

The Tellegen Absorption Scale is a paper-and-pencil test which was devised by the American psychologist Auke Tellegen along with Gilbert Atkinson in 1974. It measures the personality trait of Absorption which refers to a person's disposition to get absorbed in their mental imagery, particularly fantasy. The scale has high levels of internal reliability ( $r = 0.88$ ) and also high test-retest reliability ( $r = 0.91$ ). One's absorption ability is measured by 34 true/false self-report items by assigning a value of 1 to all the "True" items and a value of 0 to all the "False" items.

- **State-Trait Anxiety Inventory (Form Y) (STAI):**

It is a commonly used measure of anxiety which was created by Charles Spielberger, R. L. Gorsuch, and R. E. Lushene in 1983 based on the state-trait distinction proposed by Raymond Cattell in 1961. The form Y version of the scale was used in this study. Considerable evidence supports the strength of the psychometric properties of the scale. Its internal consistency is reported to range from 0.86 to 0.95 and the test-retest reliability coefficients have ranged from 0.65 to 0.75 over a 2-month interval. The scale consists of 20 state anxiety items and 20 trait anxiety items. The state anxiety items are measured on the basis of a 4-point Likert scale with a value of 1 indicating "Not at all" and a value of 4

indicating “Very much so”. 10 of the 20 items are anxiety present items and are reverse scored and the rest are anxiety absent items which are direct scored. The trait anxiety scale of STAI also consists of 20 items with 11 anxiety present items which are directly scored and 9 anxiety absent items which are reverse scored. The items, like the state anxiety scale are assessed on a 4-point Likert scale with a score of 1 representing “Almost Never” and a score of 4 representing “Almost Always”.

- **Positive and Negative Affect Schedule (PANAS):**

The PANAS is a test of general affective states. It was constructed by Dr. David Watson and Dr. Lee Anna Clark in 1988. The measure comprises of two mood scales i.e., Positive affect and Negative affect. It can be used to ascertain both the state and trait positive and negative affect. For the purposes of this study, the instrument was used to compute the state positive and state negative affect of the participants. The PANAS consists of a total of 20 items, each affect scale containing 10 items. The scores of both the scales are measured with the help of a 5-point Likert scale. A value of 1 represents “Not at all” or “Very Slightly” and a value of 5 represents “Extremely”.

- **Guided Imagery Tracks:**

Two tracks from a Guided Imagery Audio CD titled “Stress free Moments” were used to conduct the intervention. The Audio was created and narrated by Dr. David Bresler from the Academy of Guided Imagery. The first track called “Release Worries” focused on creating an imaginary, magic trash can which could collect all of the mind’s fears, concerns, anxieties and worries and either de-juice (the emotional aspect of the worries is removed so that the person can address his worries but not get emotionally affected), filter (all the worries and fears are filtered so that only those worries which are significant are retained) or freeze (pause the worries till such time when the person gathers enough emotional strength to address them again) them. The second track called “The Sanctuary” concentrated on creating a safe place in the participants’ minds which is devoid of distress and which they can visit whenever they feel the slightest amount of anxiety. The duration of both the tracks put together was 20 min.

### 3 Procedure

The self-report inventories and the tracks that had to be utilized for the intervention were identified and chosen according to the requirements of the study after which preparations were made for data collection. Two sets of questionnaires were prepared. The first set included the informed consent form, the information schedule, Tellegen’s absorption scale, the vividness of visual imagery questionnaire, the trait anxiety questionnaire and the test of visual imagery control. The second set contained the state anxiety questionnaire and the positive affect and negative affect schedule. Final year undergraduate students from St. Francis College for Women

were contacted and were informed about the study. They were made aware of the fact that they had to take part in 3 sessions of an intervention with each session lasting for a period of 45 min. Students who agreed to participate were given the first set of questionnaires. The very next day, after the collection of the 1st set of questionnaires, the intervention process was initiated. The students were given the second set of questionnaires which included the state anxiety questionnaire and the positive and negative affect schedule and were asked to fill it. 10 min were given to fill both the forms. After all the students completed the questionnaires, the students were urged to pay attention to and follow the instructions given by the narrator of the track. Upon ensuring that the participants understood the procedure, the tracks were played. The duration of the tracks was 20 min after which the students were given another set of the same questionnaires i.e., the State anxiety questionnaire and positive and negative affect schedule. This process was repeated for two consecutive sessions and the collected data was analyzed.

#### **4 Intervention Procedure**

The students were called into a quiet room for the intervention and a rapport was established with them so that they could feel comfortable. The State anxiety questionnaire and the state version of the positive and negative affect schedule (PANAS) were administered to them which took them about 15 min to complete. The students were then asked to listen to an audio track and follow the instructions given by the narrator. The guided imagery track lasted for a period of 20 min after which the state anxiety questionnaire and the PANAS were re-administered. This process was repeated for two more sessions, with each session lasting for a period of 45 min. The sessions were scheduled onto three consecutive days.

#### **5 Statistical Analysis of the Data**

The means of the pre and post intervention scores were computed and a paired—*t* test was conducted on them to check if there is a significant difference in the anxiety, positive affect and negative affect levels, before and after the intervention. Pearson's product moment correlation was also conducted to study the relationship between the variables.

## 6 Results

The results exhibited by Table 1 show that there exist significant differences in the levels of state anxiety, state positive affect and state negative affect pre and post the intervention ( $p < 0.001$ ). There is a considerable reduction in the levels of state anxiety and state negative affect after the provision of the guided imagery intervention. There is also a marked improvement in state positive affect post the intervention.

The results in Table 2 show that there is a significant positive correlation between vividness of visual imagery and visual imagery control ( $r = 0.75, p < 0.01$ ), vividness of visual imagery and absorption ( $r = 0.43, p < 0.05$ ) and visual imagery control and absorption ( $r = 0.40, p < 0.05$ ). There exists significant negative correlation between increase in positive affect and vividness of visual imagery ( $r = -0.39, p < 0.05$ ) which would mean that participants with higher ability to vividly visualise mental imagery experienced lesser increase in positive affect post the intervention. A significant positive correlation was found between trait anxiety and decrease in negative affect ( $r = 0.63, p < 0.01$ ) which would mean that there was a greater decrease in negative affect after the provision of the intervention in participants exhibiting higher levels of trait anxiety. Decrease in state anxiety post intervention significantly and positively correlates with increase in positive affect ( $r = 0.39, p < 0.05$ ) and also with decrease in negative affect ( $r = 0.64, p < 0.01$ ). This indicates that participants who experienced greater decrease in state anxiety after the intervention also experienced greater decrease in negative affect and a greater increase in positive affect.

**Table 1** Showing results of the paired samples *t*-test of the pre and post intervention scores of state anxiety, state positive affect and state negative affect

	Pre-intervention mean	Post-intervention mean	Difference of means	Standard deviation	<i>t</i> -value
Difference in pre and post-intervention scores of state anxiety	39.89	28.09	11.800	4.334	14.912***
Difference in pre and post-intervention scores of state positive affect	34.06	37.44	3.389	4.532	4.096***
Difference in pre and post-intervention scores of state negative affect	14.91	12.11	2.800	3.312	4.630***

\*\*\* $p < 0.001$

**Table 2** Showing results of the correlation between vividness of visual imagery, visual imagery control, absorption, trait anxiety and the differences in means of state anxiety, state positive affect and state negative affect

	Vividness of visual imagery	Visual imagery control	Absorption	Trait anxiety	Difference in state anxiety	Difference in positive affect	Difference in negative affect
Vividness of visual imagery	–	0.75**	0.43*	–0.19	0.03	–0.39*	0.09
Visual imagery control		–	0.40*	–0.02	0.22	–0.28	0.31
Absorption			–	–0.23	0.26	–0.14	0.14
Trait anxiety				–	0.21	0.26	0.63**
Difference in state anxietyz					–	0.39*	0.64**
Difference in positive affect						–	0.21
Difference in negative affect							–

\* $p < 0.05$

\*\* $p < 0.01$

The results of the first session in Table 3 show that there exists a significant negative correlation between trait anxiety and decrease in state anxiety ( $r = -0.43$ ,  $p < 0.05$ ), a significant negative correlation between vividness of visual imagery and increase in positive affect ( $r = -0.53$ ,  $p < 0.01$ ) and a significant positive correlation between trait anxiety and decrease in negative affect ( $r = 0.51$ ,  $p < 0.01$ ). The results of the second session indicate a positive correlation between trait anxiety and decrease in state anxiety ( $r = 0.47$ ,  $p < 0.01$ ) and trait anxiety and decrease in negative affect ( $r = 0.50$ ,  $p < 0.01$ ). The results of the third session do not display any significant correlation.

Figure 1 shows that there was a significant decrease in state anxiety after the provision of the guided imagery intervention during all the three sessions. The pre-intervention score for state anxiety during the first session was 46.83 which was reduced to 27.67. During the second session, the pre-intervention score was 37.4 and the post-intervention score was 27.93. The participants experienced a mean pre-intervention score of 35.43 during the first session and a mean post-intervention score of 28.67.

Figure 2 shows that there was a significant improvement in state positive affect after the provision of the guided imagery intervention during all the three sessions. The participants received a mean pre-intervention score of 35.5 which increased to 38.9 after the intervention. During the second session, the pre-intervention score

**Table 3** Showing results of the correlation between vividness of visual imagery, visual imagery control, absorption, trait anxiety and the differences in state anxiety, state positive affect and state negative affect for all three sessions

	Differences		Vividness of visual imagery	Visual imagery control	Absorption	Trait anxiety
1st session	State anxiety	Pearson's correlation coefficient	-0.05	0.00	0.15	-0.43*
	Positive affect	Pearson's correlation coefficient	-0.53**	-0.29	-0.21	0.16
	Negative affect	Pearson's correlation coefficient	0.18	0.18	-0.24	0.51**
2nd session	State anxiety	Pearson's correlation coefficient	0.04	0.19	0.19	0.47**
	Positive affect	Pearson's correlation coefficient	-0.26	-0.27	0.05	0.20
	Negative affect	Pearson's correlation coefficient	0.19	0.27	0.32	0.5**
3rd session	State anxiety	Pearson's correlation coefficient	0.07	0.12	-0.1	0.30
	Positive affect	Pearson's correlation coefficient	0.01	-0.01	-0.13	0.22
	Negative affect	Pearson's correlation coefficient	0.17	0.20	0.19	0.31

\* $p < 0.05$ \*\* $p < 0.01$ 

was 33.13 and the post-intervention score was 36.47. The pre-intervention score for the third session was 33.53 and the post-intervention score was 36.97.

Figure 3 shows that there was a significant decrease in state negative affect after the provision of the guided imagery intervention during all the three sessions. During the first session, the participants experienced a mean pre-intervention score of 15.67 which reduced to a post-intervention score of 12.1. The participants received a mean score of 15.13 before the provision of the intervention during the second session. Their post-intervention score during the same session was 12.23. The pre-intervention score for the third session was 13.93 which was reduced to 12 after the intervention.



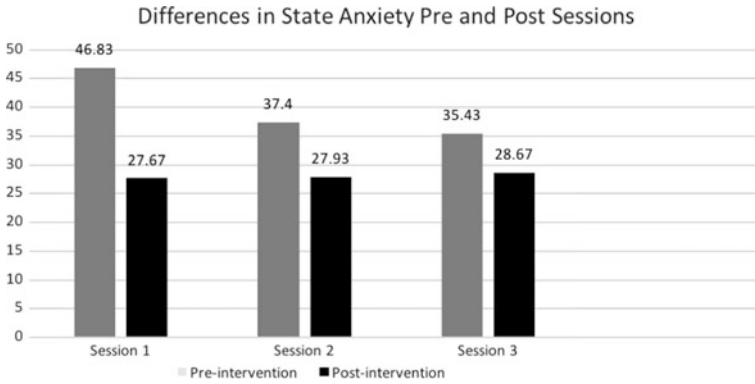


Fig. 1 Showing the differences in state anxiety pre and post the three sessions

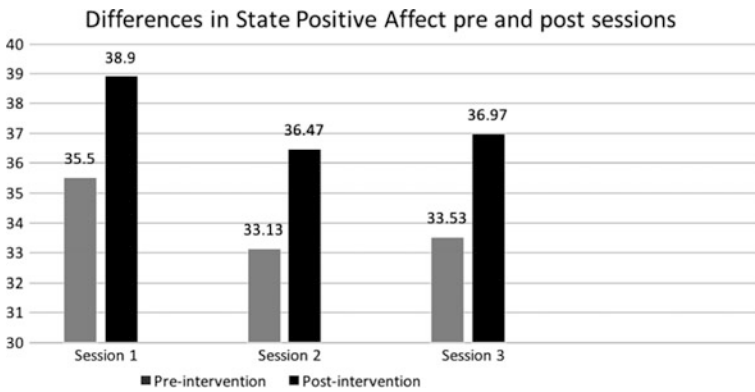


Fig. 2 Showing the differences in state positive affect pre and post the three sessions

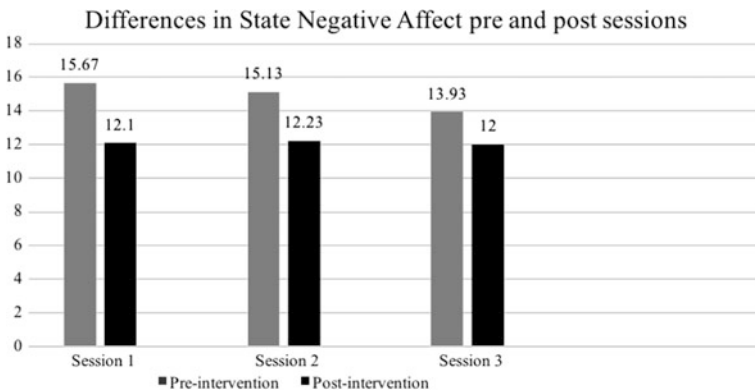


Fig. 3 Showing the differences in state negative affect pre and post the three sessions

## 7 Discussion

The present study demonstrates significant differences in the levels of state anxiety, state positive affect and state negative affect pre and post intervention. State anxiety levels before the intervention ( $M = 39.89$ ) were significantly higher than the state anxiety levels after the intervention ( $M = 28.09$ ). The pre-intervention positive affect scores of the participants were significantly lower ( $M = 34.06$ ) than the post-intervention positive affect scores ( $M = 37.44$ ). There was also a marked reduction in the negative affect scores with the pre-intervention scores ( $M = 14.91$ ) being significantly higher than the post-intervention scores ( $M = 12.11$ ). An investigation into the differences in the levels of state anxiety, state positive affect and state negative affect in each of the three sessions also exhibit a marked reduction in state anxiety and state negative affect and an increase in state positive affect in all the three sessions. This would mean that the guided imagery intervention was successful in alleviating state anxiety and state negative affect and in boosting state positive affect. These findings can be further supported by earlier studies which have used guided imagery as a means of relaxation (Walker et al., 1999; Watanabe et al., 2005). The analysis has also revealed that the means of post-intervention state anxiety, state positive affect and state negative affect have remained relatively consistent over the course of all three sessions suggesting that these post-intervention means indicate a stable level of relaxation which the participants experience after undergoing the guided imagery intervention.

A highly significant positive correlation between vividness of visual imagery and visual imagery control has been observed in this study. This would mean that there is a substantial possibility that participants with higher vividness of visual imagery also possess a higher capability to control and manipulate visual images. With respect to the relationship between vividness of visual imagery and control of visual imagery, Switras (1976) observed that controllability is the first stage of imagery production and is, therefore, a stepping stone to vividness of visual imagery. Only if a person can produce a target image, an ability which is assessed by image controllability, will he/she be able to focus on the vividness of the image. There is no possibility of vividly visualising an image when an individual lacks the ability to generate an image considering that he or she will not have an image to work with. Therefore, this finding can be corroborated by the fact that controllability of mental imagery is a pre-requisite for vividness of visual imagery. This can be further supported by previous research (Anderson, 1983; Pratt, Cooper, & Hackmann, 2004; Switras, 1976). Tellegen and Atkinson (1974) explained absorption as a form of attentiveness that causes individuals to use all their cognitive faculties to create representations of the attentional objects. It is due to this reason that individuals scoring high on absorption can easily construct mental representations. The findings of this study indicate a significant positive correlation between absorption and vividness of visual imagery thus suggesting that participants with the personality trait of absorption were more likely to produce vivid visual imagery during the intervention. These results thus support the

aforementioned theory. Absorption also correlates significantly and positively with visual imagery control. This relationship evinced by the current study can be explained by the fact that vividness of visual imagery and visual imagery control are corresponding concepts and therefore a significant relationship between vividness of visual imagery and absorption predicts a strong correlation between visual imagery control and absorption. Contrary to previous research (Nelis, Vanbrabant, Holmes, & Raes, 2012), the present study indicates a negative correlation between positive affect and vividness of visual imagery which would mean that participants with a higher vividness of visual imagery ability experienced lesser improvement in positive affect when compared to their counterparts. Studies conducted earlier either reported an improvement in positive affect or the absence of significant change after the provision of the intervention. According to the results of the current study, there exists a positive correlation between trait anxiety and difference in state negative affect. According to Watson and Clark (1984), individuals experiencing high negative affect are more likely to experience discomfort at all times and across all situations as they are more introspective and dwell on the negative side of themselves and the world. These results can be further supported by a study conducted by Ladd and Gabrieli (2015). The results also suggest that individuals who suffer from higher levels of trait anxiety experience greater alleviation of negative affect after the provision of the intervention. The above-mentioned study by Ladd and Gabrieli (2015) also examined the relationship between state anxiety and state positive and negative affect. The results showed that greater state anxiety correlated significantly with higher negative affect scores on the PANAS and with lesser positive affect scores on the PANAS. The results obtained in the current study are consistent with these findings. An interesting finding to note is that the correlation between state anxiety and state negative affect is significantly higher than the correlation between state anxiety and state positive affect. Tellegen (1985) factor analysed measures of anxiety, depression, negative affect and positive affect. The depression and anxiety measures had significant loadings on both positive affect and negative affect. However, the anxiety scale loaded more strongly on the negative affect factor whereas the depression scale was a much better marker of low positive affect. Vividness of visual imagery, visual imagery control and absorption have not had much influence on the reduction of state anxiety, state negative affect and the improvement of state positive affect. This might be attributed to the effectiveness of guided imagery interventions in universally inducing relaxation. The present study, therefore, suggests that imaging capabilities and absorption are not pre-requisites for the potential of guided imagery interventions to reduce anxiety and negative affect and improve positive affect. These findings are in contradiction with previously conducted research (Walker et al., 1999; Watanabe et al., 2005, 2006). An analysis of the correlation between vividness of visual imagery, visual imagery control, absorption, trait anxiety and the differences in state anxiety, state positive affect and state negative affect for each session was carried out to further verify the non-existence of significant relationships between the independent and dependent variables. The results suggest that participants who exhibit higher levels of trait anxiety experienced a significantly lower reduction in state anxiety

during the first session. This may be due to the fact that trait anxiety is a measure of general disposition and therefore might have acted as an obstacle to the participants' ability to relax. According to Hodges (1968), there exists a strong relationship between trait anxiety and state anxiety only in situations wherein there is a danger to the individual's self-esteem. The fact that the participants were unaware of the task that they would have to perform prior to the first session might have had an impact on their decreased ability to relax. Fear of underperformance in the unknown task might have grossly increased the impact of trait anxiety on state anxiety thus resulting in the decreased ability of individuals having trait anxiety to experience reduction in state anxiety. In stark contrast, the same participants experienced a significantly high level of reduction in state anxiety after the conduction of the first session. While referring to Hodges (1968) theory, one might say that since the participants were aware of the task during the second session, this might've changed the equation between trait anxiety and state anxiety and therefore must have significantly contributed to the relaxation experienced by the participants. In correspondence with the results mentioned in Table 2, the difference in positive affect is negatively correlated with vividness of visual imagery. Extroverts usually exhibit heightened emotional reactivity to positive mood induction when compared to introverts (Larsen & Ketelaar, 1991). In contrast, vividness of visual imagery as a trait is usually possessed by introverts (Wagele, 2009). This disparity might have been the basis for the results reported in the current study. As reported by Ladd and Gabrieli (2015) state negative affect has a very significant positive correlation with state anxiety. The strength of this correlation can be ascertained from the fact that there is consistency in the correlation results in the first session and the second session. There are no significant correlations in the third session which suggests that all the participants irrespective of the levels of vividness of visual imagery, visual imagery control, absorption and trait anxiety experienced relaxation. This might have been a result of the participants' desensitisation to the audio track.

## **7.1 Limitations**

A between group study with vivid and non-vivid imagers and high absorption and low absorption individuals has not been conducted to fully ensure that imaging capabilities and absorption are not imperative for guided imagery. Future research can adopt this method to understand better the influence of these factors on the amount of relaxation experienced by individuals.

## 7.2 Implications

The results of the *t*-test indicate that Guided imagery can be used as a relaxation technique for students considering the significant decrease in anxiety, negative affect and the improvement in positive affect after the provision of the intervention.

The current study also suggests that vividness of visual imagery, visual imagery control and absorption are not pre-requisites for guided imagery and that the intervention can be conducted on vivid and non-vivid imagers and individuals with high and low absorption levels to induce relaxation.

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# How Conceptual Metaphors Make Political Iconography: A Focus Group Discussion on the Psychological Aspects

Vishaka Venkat and Vinod Balakrishnan

**Abstract** Political cartoons constitute a critical interface of sociopolitical communication. The cartoonist, who is a principal player in building sociopolitical iconography, registers a historical moment by constructing a memory of the political system. The cartoon being a mass medium, addresses directly, in a recognisably metaphorical language; whereby, iconography circulates in the public sphere. A psychological analysis of visual metaphors would enlighten one about the process by which social perception develops and how public opinion gets configured. Metaphors are capable of configuring the quotidian, and they also add a new reference to the event. Political metaphors by the cartoonist present behavioural templates; on the one hand, the gestures of the politicians are provided while on the other, a cycle of thought and action is initiated within the readers; thus an icon is built as well as an opinion is shaped. The conceptual metaphor theory by George Lakoff and Mark Johnson in *Metaphors We Live By* (1980) supplies a framework to understand how a cartoonist, utilising metaphors to build iconography, influences public opinion. How are these metaphors directed? The authors employ focus group discussion (FGD) and a survey among 35 students for a pilot study to analyse the group perception and to study how the effect of iconography is played out. A selection of 20 cartoons on the linguistic issue and state organisation, faced by Jawahar Lal Nehru as portrayed by Shankar in 'Don't Spare Me Shankar' (1983), has been chosen for the study. How has Shankar portrayed the dilemma of Nehru? What are the metaphors employed by the cartoonist for the pictorial representation? How are these metaphors received by the group? The psychological investigation through metaphors will initiate a probe into the way a cartoonist thinks and how he

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affects the group perception and the process of building iconography. On the whole, the paper will analyse the interaction between the cartoonist and the public through metaphors.

**Keywords** Conceptual metaphor · Political iconography · Psychological impact

## 1 Introduction

The mind is inherently embodied. Thought is mostly unconscious. Abstract concepts are largely metaphorical (Lakoff & Johnson, 1999, p. 3)

Marga Reimer and Elisabeth Camp's definition of metaphor as a trope or figure of speech by which 'one thing is represented as something else' (Camp & Reimer, 2006, p. 845) gives a précis of the early theoretical conceptualisation of metaphors as a tool for figurative language; a poetic device which enhances rhetorical beauty by camouflaging ordinary thoughts and presenting them as imaginative comparisons. Metaphorical analysis, key to hidden ideas and intuitions, became exclusive to interpretation and practical criticism of poetic texts. The conceptual (cognitive) metaphor theory of George Lakoff and Mark Johnson in *The Metaphors We Live By* (1980) revolutionised the way metaphors were conceived, as they argued for the whole system of thinking to be metaphorical in nature and not merely limited to embellishing poetry. The metaphor, seen thus, is a pervasive thinking pattern (Gibbs & Raymond, 2011) in our lives.

How are metaphors different from conceptual metaphors? Metaphors, on the one hand, are more linguistic in nature and serve an exclusive function of addressing the extraordinary. Conceptual metaphors, on the other hand, are pragmatic and are intrusive in nature even as they confront the quotidian. While metaphors indicate creativity, say, in literature, conceptual metaphors examine the commonness and the thought process of humans in general. On the whole, conceptual metaphors have a holistic orientation as they are omnipresent and are critical to building the memory system by concretising the abstract. George Lakoff and Mark Johnson's *Philosophy in the Flesh* (1999) recognises the mind to be embodied and thoughts to be unconscious. How are these unconscious thoughts embodied through experience? Through the study of conceptual metaphors, inadvertently, the process of cognition is evaluated. Metaphors make 'known experiences' manifest as an object of equivalence, and they mediate between the unconscious and embodied cognition to construct a perception. As Andrew Ortony says:

Cognition is the result of mental construction. Knowledge of reality, whether occasioned by perception, language, or memory, necessitates going beyond the information given. It arises through the interaction of that information with the context in which it is presented and with the knower's pre existing knowledge. (Ortony, 1993, p. 1).

Metaphorical cognition, similarly, is constructed through language or memory involving an interaction with the context and the subjective knowledge. This particular study sees how this process of reception in the public sphere happens through

political iconography. Beginning by gauging its presence in language, conceptual metaphor theory has been applied to several fields. How does the metaphorical language of an image impact its audience? (Marin-Arrese, 2008; Negro, 2013; Refaie, 2003; Thibodeau & Boroditsky, 2011). To address this question, the paper studies how conceptual metaphors play a significant role in building political iconographic memory through a semiotic study of political cartoons and their psychological impact on the audience. Iconography [derived from two words: *eikon* (image) and *graphien* (writing) (Straten, 1994)] is the study of image writing or image describing. Political cartoons being emblematic and encapsulated representations of political situations communicate a certain amount of factual knowledge as well as exaggerate the truth represented. As a mass medium, they directly communicate with the citizens through newspapers and periodicals aiding in the shaping of public opinion and the building of an image about the political system. The study of conceptual metaphors in political iconography, thus, would throw light on the process of how political memory and icons are constructed.

A collection of twenty cartoons drawn by Shankar from '*Don't Spare Me Shankar*' on the issue of demand for linguistic states has been selected for the study. Considering the cartoonist to be the keeper of history, political cartoons document the sociopolitical and cultural events to preserve a political memory and historical past of a country. K. Shankar Pillai, father of Indian political cartooning, through *Shankar's Weekly* (also called *India's Punch*) which ran from 1948 to 1975, was among the first to chronicle post-independent Indian history. Most of his cartoons were on Mr. Jawahar Lal Nehru (the first Prime Minister of India) portraying his dilemma in building India as a nation which witnessed endless troubles during the demand for language-based regional autonomy. Through this pilot study on metaphors, one can gauge the cartoonist's view towards the polity and validate the universality of conceptual metaphors by analysing the audience response through focus group discussion (eight members) and a survey (35 samples). The paper looks at the purpose of employing metaphors in cartoons and how they act as conceptual metaphors, which can answer questions like: Whose perspective do the cartoons represent? How are conceptual metaphors directed? Is there a common framework for the conceptual metaphors? And finally, how does the audience relate to the cartoons?

## 2 Metaphorical Thinking

The word 'metaphor' is composed of two words: *meta* (go beyond/crossover) and *pherin/phora* (to carry or bear) (Bourke, 2014, p. 54), which exhibit its potential to move beyond the apparent, bearing meanings which can infuse new insights and intuitions. In *Philosophy of the Rhetoric* (1936), I. A. Richards' division into 'tenor' and 'vehicle' (Russo, 2015) examined metaphors as a medium of comparison affecting the rhetoric. The 'sense' metaphor and 'emotive' (Bilsky, 1952 p.130) metaphor convey Richards' dynamic approach to view metaphors as capable of manipulating feelings. Weller Embler in *Metaphor and Meaning* (1966), inspired

from Michel Bréal's *Semantics* (1900), expanded the notion of the universality of metaphors, foreseeing it as a decisive tool for comprehension. Philip Wheelwright's 'diaphor' in *Metaphor and Reality* (1968) saw the involvement of sociocultural milieu that complemented the discernment of metaphor. Gradually, studies in metaphor progressed from a communicative function to a cognitive aspect. Andrew Ortony, Ralph E. Reynolds and Judith A. Arter in *Metaphor: Theoretical and Empirical Research* (1978) emphasised the need for psychological theory as metaphors exposed the way humans frame language. George Lakoff and Mark Johnson's *The Metaphors We Live By* (1980) witnessed a culmination of all the features said above, as they argued for metaphors to be social, personal, intuitive and directive in nature.

Lakoff and Johnson affirm metaphor to be the concepts to which one can relate and are found, not just in language but in thought and action too, as they say, 'Our ... conceptual system ... is fundamentally metaphorical in nature' (Lakoff & Johnson, 2003, p. 3). For example when one involves in an argument, one tries to 'defend' one's views; 'counter-attack' the perspectives of the 'opponent' to 'win' the argument. An analysis of the referents above suggests that an abstract concept like 'argument' is equated with 'war field' (Lakoff & Johnson, 2003, p. 4). This process of parallelism happens unconsciously, revealing that rather than labelling language to be metaphorical, metaphors are the way by which one lives, thinks and acts. This concept of parallel thinking was earlier suggested by Arthur Koestler in his book *The Act of Creation* through 'bisociation'<sup>1</sup>. Michael Reddy's conduit metaphor (1979), the forerunner of conceptual metaphor, considered any linguistic expression to be 'containers' that communicated 'mental contents' (Lakoff & Johnson, 2003, p. 10). The metaphor is a metalanguage which provides thinking frames to discern hidden patterns. It takes the artist's creativity to tap such metaphors and make them explicit.

Conceptual metaphors are sometimes structural, sometimes orientational and at other times ontological (Lakoff & Johnson, 2003): (1) Structural metaphors explain one structure in terms of another like 'argument as war', 'time is money' and 'theories as buildings'. (2) Orientational metaphors involve spatial orientations, for example the way one associates feelings and qualities with 'up' (good, life, prosperity) and 'down' (bad, death, poverty). (3) Ontological metaphors describe experiences through objects, bodily parts or events using personification, metonymy and synecdoche. All these metaphors have an 'interactional and experiential' (Lakoff & Johnson, 2003) basis which keep differing in the way they are used by individuals. Marking the beginning of a socio-psychological probe into metaphors, conceptual metaphors were further developed as conceptual blending<sup>2</sup> by Gilles

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<sup>1</sup>The concept of bisociation explains the way mind associates an idea with two different fields, which are probably unrelated. A pun is an example of bisociation.

<sup>2</sup>Conceptual blending is a successor of bisociation and evaluates the cognitive process of blending mental spaces from the generic space into a new blended space.

Fauconnier and Mark Turner in *The Way We Think: Conceptual Blending and the Mind's Hidden Complexities* (2002).

### 3 Political Metaphor and Cognition

In 'The World Outside and The Pictures in Our Heads', Walter Lippman substantiates the power of media in shaping public opinion; political cartoons are no exception. Following the theory of Max McCombs and Donald Shaw, political cartoons act as the base for 'agenda-setting'<sup>3</sup>, and they unknowingly exert influence on the public which the authors term as 'priming effect'<sup>4</sup> (Coleman & Wu, 2015) demonstrating the metaphor's potential. Victor Ottati, Randall Renstrom and Erika Price while discussing the efficacy of political metaphors in 'The Metaphorical Framing Model: Political Communication and Public Opinion' have proposed the metaphor framing model, which argues for the presence of 'root metaphor' (2014 p.179) (conceptual metaphor) invoking a political event. What are the root metaphors used by Shankar in his cartoons and how does it affect the receiver in shaping an opinion towards polity? Though political cartoons are 'multimodal',<sup>5</sup> (Bounegru & Forceville, 2011) the study mainly focuses on visual metaphors. Similar to tenor and vehicle, there are two domains in conceptual metaphors: the source domain and the target domain (Lakoff & Johnson, 2003). While the former is concrete, the target domain is abstract. Through the interaction between the target and the source domains, the cognitive process and impact on the audience can be measured. In the study, the linguistic issue is the target, and the metaphors used to describe them are the sources.

Metaphors in political speeches illustrate the art of persuasion (Mio, 1997 p. 113). The metaphorical usage of seeing the nation as family and the leader as a parent, who cares for the citizens and nurtures them as children, is commonplace though effective as citizens easily relate to it. What kind of metaphors has Shankar used in the cartoons? How has he represented Mr. Nehru and the nation? Ottati, Renstrom and Price suggest different stages in cognising metaphors; they are primarily: metaphor activation (where root/conceptual metaphor is kindled) and metaphor application (the storyline in which it is applied) (Ottati, Renstrom, & Price, 2014 p. 184). The way metaphors are triggered depends on the context and the platform for interaction. The stages of systematic processing of metaphor cognition are: 'information seeking, selective information processing, interpretation

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<sup>3</sup>Agenda-setting theory asserts the power of media and their influence in prioritising news as well as shaping public opinion through their news coverage.

<sup>4</sup>Priming (memory effect) is a study in psychology which examines how the triggering of one stimulus results in the reaction to another stimulus.

<sup>5</sup>Charles Forceville's multimodal metaphors (Forceville & Urios-Apraisi, 2009 p. 3) explain the involvement of different modes in metaphors (like the visual and the verbal). The target and the source domain in multimodal metaphors are presented through multiple levels of perception.

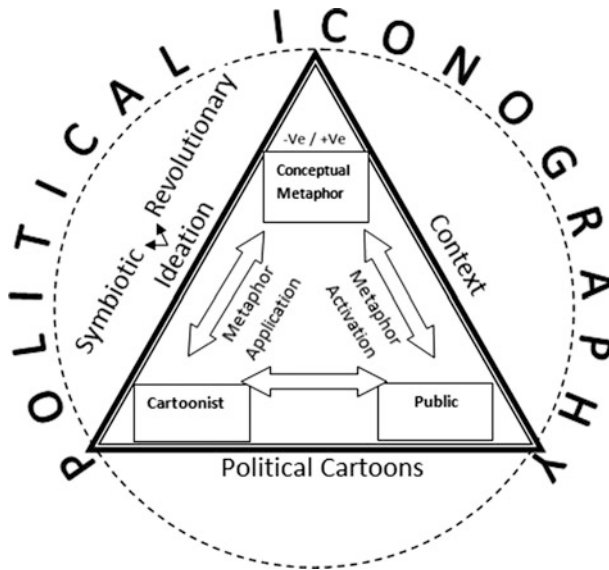


Fig. 1 Focus model

of ambiguous information; as well as metaphor-guided attribution, inference, and elaboration' (Ottati et al., 2014 p. 180); political cartoons seek information, and the cartoonist makes a selection of the information that has to be projected. The message is communicated in an ambiguous manner and inferred by the public. The metaphors act as information-processing tools and create a political reality. As Edelman says 'metaphors form a pattern of perception to which people respond' (qtd. in Goatly, 2007, p. 30) and can easily generate a psychological reactance. The arrest of Ambikesh Mahapatra after the circulation of political cartoons of the Chief Minister of West Bengal and the case of Aseem Trivedi who was charged with sedition for demeaning the national symbols, exposes the 'psychological reactance' and show how politicians as well as the Government are vigilant about the way political cartoons build image and memory.

The model (Fig. 1) unravels the key terms and the focus of the paper. Within the circumference of political iconography, the study looks at the interaction between the cartoonist, conceptual metaphor and the public through political cartoons. The study attempts to prove that the directionality of metaphors is based on the cartoonist's inclination and though conceptual metaphors are universal; there is an influence of the context in framing as well as receiving them. Through the process of ideation (creative process), the cartoonist comes up with a metaphor (stage of metaphor application) which can be either 'revolutionary' or 'symbiotic'.<sup>6</sup>

<sup>6</sup>Graham and Bachmann describe various types of ideation in their book *Ideation: The Birth and Death of Ideas* (2004) pp. 44–47.

Revolutionary ideas attempt to subvert the conventional notions while symbiotic ideas are mutually benefitting. Depending on these ideas, metaphors can either be positive or negative. People receive them (metaphor activation) in different ways depending on the environment that surrounds them. In this particular study, respondents from different states differ in their reception as they relate differently to the issue.

## 4 Historical Background

Post-independent India had to face the challenge of consolidating itself as a nation state. The British Provinces presented a non-cohesive India which undermined her cultural affinity (Chandra, Mukherjee, & Mukherjee, 2008). Language, the binding cement of culture, was the principal element for states' reorganisation. In 1921, the Indian National Congress proposed the policy of linguistic states and a recasting according to regional languages. Post-partition, leaders debated the demand for linguistic states; as a result, a committee under Justice S. K. Dar was formed in 1948. The recommendations of the committee considered the demand as a threat to national unity. The JVP committee (1949) led by Jawahar Lal Nehru, Sardar Patel and Pattabhi Sitaramayya reinvestigated the issue and proposed to postpone the reorganisation of linguistic states; meanwhile, the nation witnessed the *Visalandhra* (the United Andhra) movement. The death of Potti Sriramulu who went on a fast unto death for the cause incited the citizens. Finally, the Government buckled, and the Andhra state was created in 1953. The State Reorganisation Committee (SRC) formed in August 1953 which included Justice Fazl Ali, K. M. Panikkar and Hridaynath Kunzru, submitted the report in October 1955. The recommendations were passed in November 1956 with a few modifications, and fourteen states were formed with six territories. Still, the thirst for linguistic states remained unquenched, and Bombay was further divided into Maharashtra and Gujarat. Since then disputes have continued, and many independent states have been created. From fourteen states, now India has been reorganised into twenty-nine states.

## 5 Methodology

To measure the psychological impact of the conceptual metaphors through cartoons, two groups were studied. The first group included 35 participants among whom the survey was conducted. They were each given a set of five cartoons along with the questionnaire which inquired about their feelings towards the cartoons. To familiarise the students with the political cartoons, a pre-questionnaire presentation was made, in which the purpose of the study and the historical background were introduced to the students. The data have been analysed based on frequency distribution of the responses. Eight research scholars from varying backgrounds, who

are avid newspaper readers, were invited for the focus group discussion. The discussion lasted for an hour. The following questions, also identified as the objectives, were discussed:

- (a) Why does a cartoonist employ metaphors?
- (b) How would you rate the veracity of the cartoons presented?
- (c) What are the metaphors employed by the cartoonist? How have these metaphors added to your knowledge?
- (d) Has the author been successful in conveying the message in an unbiased manner?
- (e) Guess the artist's view about Nehru? How do you relate to Nehru?
- (f) Whose perspective do the cartoons present? Substantiate your view.
- (g) Can you easily relate to the metaphors? Are the metaphors straightforward or 'poetic'?
- (h) On the whole, how do you rate the directionality of the metaphors?

While the focus group discussion helped in understanding the experiential gestalt of the group the questionnaire aided in quantifying the psychological impact.

## 6 Focus Group Discussion—Analysis of Cartoons

To study the behaviour of the audience towards political metaphor, eight research scholars drawn from the departments of English, Economics and Maths were invited for the discussion. The group involved three female and five male members. The age of the members ranged from 26 to 57 and hailed mainly from the states of Kerala and Tamil Nadu. In the first five minutes of the discussion, members were introduced to each other, and a preview was given to the discussion. A set of twenty cartoons were distributed to each member; keeping in mind the fleeting attention editorial cartoons receive, the members were given around 15 minutes to examine the cartoons. The questions as mentioned in the methodology were discussed, and members were put at ease to express their opinions. Majority of the members rated the metaphorical representation as negative towards the linguistic issue, and it prompted them to empathise with Nehru. Each cartoon has been analysed in the first session, and the interpretation has been supported by the views of the members.

Around twenty metaphors were identified in the political cartoons taken from '*Don't Spare Me Shankar*' a collection published by Children's Book Trust. The publication of the cartoons spanned from 20 June 1948 to 29 October 1961. As one analyses the common thread running through cartoons, one can easily comprehend that the cartoons follow a kind of moral dualism. All the cartoons involve only two characters, Nehru and the linguistic issue. Either Nehru is overpowering (as the charmer, trickster or the tamer) or the demand for linguist states is cumbersome (as the fluttering fly, bop bag, Frankenstein, dragon's teeth, etc.). The cartoonist presents the situation in a Manichaeian binary opposition, where the subject is always

**Table 1** Conceptual metaphors found in the cartoons

Conceptual/root metaphors	Number of metaphors
Teacher–student	2
Tamer and the tamed	9
Scrounger	2
The recalcitrant	7

in a confrontation between the light and dark, good and bad, self and the other and strong and weak. Such power dynamics found in the metaphors provide a platform to judge Nehru. How has Nehru as a leader faced the issue? This power dichotomy, pivotal in constructing identity and representational politics, can be related to the colonial masters who schemed to control the colonies through divide and rule. As Albert Memmi commented, ‘the colonial situation manufactures colonialists, just as it manufactures the colonised’ (Memmi, 2013, p. 100), colonialism fabricated the identities of the coloniser and the colonised. *The Coloniser and the Colonised* (1957) by Albert Memmi, originally published in French, illustrates the psychological implications of colonialism. The book has been divided into two: the ‘Portrait of the Coloniser’ and the ‘Portrait of the Colonised’, wherein the author unravels how the identity of the coloniser as well as the colonised has been constructed. The colonised is the ‘humbling’, ‘lazy’, ‘litany of faults and inadequacies’, ‘muscular’ and a ‘hopeless weakling’ (Memmi, 2013). Coloniser on the other hand is ‘exalting’, strong and ‘legitimate’, as he says ‘whenever the colonizer adds that the colonized is a wicked, backward person, he thus justifies his police and his legitimate severity...’ (Memmi, 2013, p. 126). The same dualism follows in the cartoons too, as they were published during the post-independent era when India was struggling to unify as a nation and its administration carried traces of colonialism. Inadvertently, the metaphors too have an embedded colonial character. In *Learning the Media* (1987), Manuel Alvarado, Robin Gutch and Tana Wollen proposed four categories of racial stereotypes. They are namely: ‘exotic’, ‘humorous’, ‘dangerous’ and ‘pitied’ (Watson & Hill, 2015). Observing this pattern, the metaphors can be divided into four types: (a) teacher–student, (b) tamer and the tamed, (c) scrounger and (d) the recalcitrant. The recalcitrant and scrounger are direct adaptations of the ‘dangerous’ and the ‘pitied’. Tamer-tamed and teacher–student are the modified categories. Tamer-tamed is an extended category of the ‘dangerous’. The metaphor of teacher–student forwards the colonial model of how a teacher (Whites) has the duty to guide the unintelligent students (Natives). The categories of conceptual metaphors are both structural and orientational. Colonial metaphors in their divisions follow a spatial orientation of high (mother, guide, white) and low (child, ignorant, dark). The following table enumerates the occurrences of metaphors in the collection.



## 6.1 *Teacher–Student*

This category comprises of two cartoons. The first cartoon ‘The Hindi Test’ (‘Don’t Spare Me Shankar’ p. 5) shows Nehru as a stout and the strong-willed teacher who is burdened with the duty of educating the students (which includes cabinet ministers of Nehru from the South) who had failed in the Hindi proficiency test. On the walls hang the map of India which shows South India as a blank space. This metaphor of teacher–student stereotypes the non-Hindi community as they have to be governed and taught by the bureaucrats from the North. While in the second cartoon ‘Take it From Us’ (‘Don’t Spare Me Shankar’ p. 33), Nehru himself becomes a student along with other politicians where they are awestruck to see the Hindi equivalent term for ‘Sovereign Independent Republic’. Among the students, there are some who are uninterested as they play *tic-tac-toe* and some of them are just about to exit as the teacher is deeply immersed in teaching Hindi. The teacher presented is a Brahmin who again becomes the symbol of Sanskritisation. The cartoonist himself mocks the situation of declaring Hindi as an official language and how politicians were unaware of the repercussions as they were, themselves, not proficient in Hindi as the chosen language for administration.

The focus group discussion members took the teacher–student metaphors to be offensive as they felt that someone from the North had to come to teach the South Indian Bureaucrats the idea of national integration which required an official language to carry out its administration. As most of the members in the group were from non-Hindi-speaking regions, they were upset with the presence of superior–inferior relationship that always existed between the North and the South.

## 6.2 *Tamer and the Tamed*

Among the metaphors employed, the most common is the tamer and the tamed. In the cartoon, ‘The Charmer and the Charmed’ (‘Don’t Spare Me Shankar’ p. 111), Nehru is the charmer, and the states are the poisonous snakes. While the rest of the snakes have been charmed, the one left is the Telugu state. In ‘Coaxing the Genie Back’ (‘Don’t Spare Me Shankar’ p. 173) cartoon, Nehru is the magician, who is tricking the ‘genie of linguism’ into an urn. The urn represents the State Reorganisation Committee, which tries to trap the linguistic monster. Here again, Nehru is in an attempt to tame the monster. In the next cartoon (‘Don’t Spare Me Shankar’ p. 175), Nehru tries to tame the tiger, which represents the State Reorganisation Committee, presenting his dilemma, as the committee which like the tiger turns against him. The ‘Deeper and Deeper’ (‘Don’t Spare Me Shankar’ p. 189) cartoon portrays Nehru and Govind Ballabh Pant going deep into a pond as they relentlessly follow the fluttering fly of linguism with the flycatcher. This metaphor of fluttering fly represents the demand for linguistic states as far fetched which was slowly entrapping the politicians into a muddled administration.

Again, linguism is the biting dog, in the cartoon ‘The Pet I Bought’ (‘Don’t Spare Me Shankar’ p. 293), which has turned against its own master. The cartoon titled ‘The Age of Chivalry is Here Again’ (‘Don’t Spare Me Shankar’ p. 294), Nehru is shown as the brave knight, set out on a quest for rescuing the Damsel (Assam) by killing the dragon (Language War). This metaphorical representation heralded the Bengali language movement in Assam which ushered a bloody historical chapter. The ‘Parlour Game’ (‘Don’t Spare Me Shankar’ p. 320) reverses the tamer-tamed metaphor, as Nehru himself becomes the prey. Mr. Nehru is shown as a butterfly caught in a cobweb, surrounded by spiders (languages), all ready to feed on him. ‘Parlour game’ suggests the infinite play (the challenge of linguism) using logic till the players (the states) decide to end the game. In the next cartoon (pg. 321), Nehru is addressed as the tamer, walking audaciously with the whip into the cage with animals like Lion (provincialism), tiger (linguism) and cheetah (casteism). Among the animals, the naughtiest is the tiger bearing a malicious look while the rest look tired and baffled. The election-year edition (‘Don’t Spare Me Shankar’ p. 330) saw Nehru as a bullfighter pitted against the enraged bulls of linguism and communalism. The tamer and the tamed metaphors have pictured Nehru as the brave and hard-working leader struggling to resolve the problem.

One of the participants recognised that the cartoonist has visualised the Malayalam idiom ‘*Nairu Pidicha Pulivalu*’ (The Nair who caught the tiger by the tail) which presents Nehru’s dilemma as he gets hold off an unmanageable issue. The group also identified the metaphors to be portraying the identity politics of India, especially, in the cartoon where the animals represent casteism, communalism, provincialism and linguism. Throughout the discussion, the members felt that the cartoonist is against the linguistic issue and has given a flippant representation, even that of a fly. The tamer and the tamed metaphor, though portrays Nehru as a potential leader, it also insinuates that the ones to be tamed, are the ones, who are violent and unbridled; also they are the fools who can easily be tricked by their masters. This again follows a colonial subtext.

### 6.3 *Scrounger*

There are two major cartoons employing the metaphor of begging and the impoverished. In the first cartoon (‘Don’t Spare Me Shankar’ p. 24), the non-Hindi-speaking community is represented as an impoverished man carrying his burden like a donkey. This ‘man-donkey’ is ridden by four politicians who are vehement supporters of Hindi. The cartoon entitled ‘Buying Trouble’ (‘Don’t Spare Me Shankar’ p. 124) portrays the states as beggars. Mr. Nehru makes an entry into the cartoon as a strong-willed man. One woman (Andhra) begs, and Nehru walks off indifferently. The woman cries a lot, and Nehru finally gives her alms. Following which the rest of the states, characterised as beggars, run after Nehru, and finally, he exits the panel with a dreadful expression. Here again the depiction

of the states as scroungers reinforces the idea that the states are incapable of governing themselves, and they are dependent on the centre whose pity they crave.

The members during the discussion were agitated at the rendering of the 'demographics' in the cartoons. Citizens and their demand for linguistic states were targets to be tackled. The images of the crowd as snakes, beggars and the impoverished man projected the citizens as unthinking, who could be easily charmed and silenced. The idea of democracy as conveyed through the cartoons is that of providing minimal allowance to the people, thereby, keeping them at bay; politicians are rather tricksters who have all the charms to fool the people which echoes Rudyard Kipling's, 'Take up the White Man's burden, The savage wars of peace-Fill full the mouth of Famine' (qtd. in Spielvogel, 2009, p. 521). The agitation of the group points to the presence of such power dynamics.

#### **6.4 *The Recalcitrant***

Under this category, a collection of seven cartoons portrays the uncooperative attitude of the people. The 'Cheap Housing' ('Don't Spare Me Shankar' p. 131) cartoon uses a positive metaphor as Nehru is shown as the architect of post-independent India, struggling to consolidate the nation. On the one hand, Nehru builds a single building representing national unity; on the other hand, politicians construct their own rooms (signifying the linguistic states). In 'dragon's teeth' ('Don't Spare Me Shankar' p. 163), Shankar metaphorises the idea of linguicism as the dragon's teeth, referring to the Greek myth of how the dragon's teeth were sowed to reap armed warriors out of them. Cadmus after slaying the dragon buried the teeth from which Spartoi (the clan of valiant soldiers) arose. Similarly, the idea of linguistic states is also seen as one that manifested fearful soldiers. In the cartoon, 'Cause and Effect' ('Don't Spare Me Shankar' p. 178), the linguistic states are illustrated as an 'alcoholic'. On the one side, Nehru distributes the potion of linguistic idea, and on the other side, people go berserk as they become addicted and begin attacking each other. In the cartoon titled 'Tug of War' ('Don't Spare Me Shankar' p. 229), Nehru is caught between the fat gigantic woman (Hindi) and the slim and small women (representing other languages). This metaphor implies the lion's share Hindi language had attained in India as it was accepted by many as the national language. In the 'Frankenstein' cartoon ('Don't Spare Me Shankar' p. 296), the monster strangles a woman who symbolises the unity of India echoing how the monster turned against his master. This context portrays the Congress's demand for linguistic states as a monster with no conscience that went on a killing spree. The cartoon where linguistic states are bop bags ('Don't Spare Me Shankar' p. 317), knocks Nehru hard making him extremely tired. The final cartoon ('Don't Spare Me Shankar' p. 333) in the collection metaphorises the issue of Hindi versus other languages. Hindi again is symbolised as a virtuous domestic woman while Urdu, a minor language, is the new alluring woman.

Examining the recalcitrant metaphor, some of the cartoons reinforce stereotypes. The cartoons where Hindi is shown as the fat lady/housewife, unity of India as a woman and Assam as a damsel, give the linguistic issue a feminine representation and convey the thought that the problem has to be suppressed just like women who are, in a patriarchal society, both dominated by as well as protected by the men. The states represented as addicts and as bop bag and Frankenstein portray them as monsters. The metaphors, on the whole, also manifest the need for power to govern and navigate the problem. The group members also felt that the metaphorical representations of the states were quite stereotypical. The metaphors for recalcitrance were powerful enough to foment the historical struggles of the states against declaring Hindi as the national language. From the discussion, there was a slight deviation to a debating platform. This, in turn, validated the rhetoric of metaphors and emphasised how the members could connect to the issue of forcing the states to have Hindi inscription on milestones on the highway. Majority of the members agreed that the metaphors manifested Nehru's views, neglecting the crowd's.

The group members unanimously concluded that images of Nehru kept varying but could fall into two categories: one, that of being pathetic (emotional-helpless) and, the other, being a fighter (manager "Iron fists of Nehru"). They discussed the question as to who the real Nehru was. Is he just the poor guy desperate to hold on to the nation or the 'drill master' or the 'charmer'? Thus, three shades of Nehru as charismatic, dogmatic and melancholic have been represented by the cartoonist. Some of the metaphorical representations like that of bop bag were elitist in nature. Even without the context, metaphors taken from nature were more comprehensible. The members agreed that the cartoonist's representations were also binary in nature and had satirised the non-Hindi-speaking community. They also recognised that initially, the representations of the cartoonist towards the issue were dismissive. Most of the members experienced the metaphors to be negative and that the cartoonist had given a biased representation which was disappointing to them. But they also had a consensus that a context is needed to understand the cartoons. One of the members expressed her concern that a difference existed in the way people received the cartoons then from the way it is received now; moreover, the context played an important role in comprehending the metaphors. The rest of the members agreed to the fact that metaphors have a universal and communicative function making the effect long lasting and, thus, one could consider the need to study metaphors on how they have constructed the past of India.

## 7 Quantitative Analysis

A survey among 35 students was conducted. A set of five cartoons along with the questionnaire containing fifteen questions were distributed to measure the psychological impact and reception by the audience. A pre-questionnaire presentation was conducted to acquaint the students with the purpose of the survey, the concept of conceptual metaphors and the basis of selection of the cartoons. Questions were

mainly divided into three parts: those dealing with the essentiality of metaphors, then, perception regarding metaphors and finally, what the group felt when they perused the cartoons. The class comprised of 6 girls and 29 boys between 18 and 21 years and were from different states including Tamil Nadu, Kerala, Telangana, Rajasthan, Maharashtra, Uttarakhand, Andhra Pradesh, Assam, West Bengal, Pondicherry and New Delhi. Students were allotted 30 minutes to analyse the cartoons and respond. The data collected was skewed and checked for its reliability using Statistical Package for Social Sciences (SPSS). Later, it was analysed using three tools namely: frequencies, correlation and one-way ANOVA.

The key insights considering frequency responses are as follows:

- (a) 85.7% (Almost Agree 42.9%, Agree 25.7% and Strongly Agree 17.1%) of the students supported the statement that metaphors are essential in political cartoons while 2.9% remained neutral. None of the respondents disagreed with the statement.
- (b) 68.6% (Almost Agree 34.3% and Agree 34.3%) of them accepted that metaphors help them in grasping the situation while 2.9% remained inconclusive. On the whole, none of them disagreed that metaphors help in comprehension.
- (c) 60.6% of them could relate to the metaphors. 14.3% responses were inconclusive.
- (d) Though 11.4% disagreed with the statement, the majority (82.8%) of them also supported the fact that metaphors help in shaping their opinions.
- (e) The question 'are the metaphors used in the cartoons ordinary?' had varied responses and 57.1% of them agreed, and 20% also disagreed with it. 17.1% could not decide. In the graphical representation, the relation to the metaphors and identification of metaphors as ordinary, overlap each other and justifies that majority of them could relate to the metaphors as they were recognisable. As the metaphors were conceptual, the audience could equate with the structures easily.
- (f) Most of them (57.2%) also conceded that an understanding of the context is essential to grasp the metaphors in political cartoons. Out of which 22.9% strongly agreed with it. Around 23% also disagreed that there was a need for a context to understand the metaphors.

The graphical representation (Fig. 2) given below has recorded the percentage of responses to the questions regarding the metaphors in general.

- (g) 51.5% disagreed (disagree moderately 22.9%, strongly disagree 11.4%) to the statement that the cartoonist has given an unbiased representation and 9% remained inconclusive. Around 40% stated that the presentation is unbiased, but majority received it as a biased presentation.
- (h) When asked whether Mr. Nehru was targeted through the cartoons, 82.8% of them agreed to it and out of which 25.7% strongly felt that Nehru was being targeted through the cartoons. 2.9% remained indecisive, and very few disagreed.

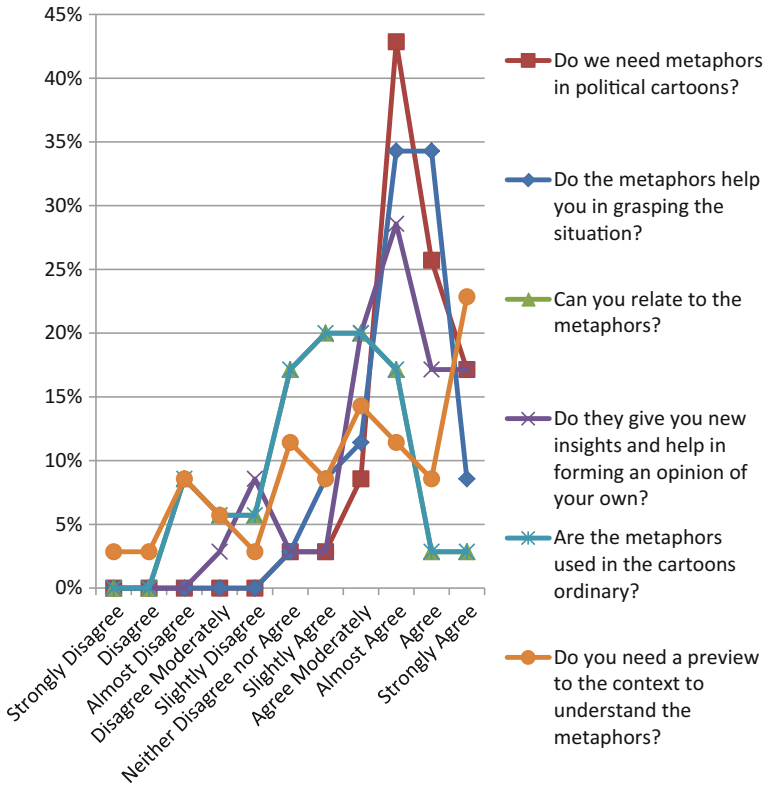


Fig. 2 Metaphors in general

- (i) 22.9% of them remained neutral to the question whether they could empathise with Nehru. Around 42.9% could sympathise with him, out of which 14.3% almost agreed to it. 34.3% disagreed and did not feel any kind of empathy towards Nehru. This response shows the iconographic value of metaphors which invokes empathy even as it provokes readers against Nehru.
- (j) 68.5% of them conceded that the use of metaphors can exaggerate the factual knowledge, out of which 14.3% agreed moderately and 25.7% almost agreed. 14.3% could not decide, and a few (17.1%) disagreed with the statement.

The graph below represents the responses of the audience towards the metaphors present in the cartoons (Fig. 3).

- (k) Among the questions that measured the feeling of the audience, the first one inquired about the artist’s attitude towards the system; the majority (62.9%) of them felt the artist’s attitude to be negative. This correlates with the statements

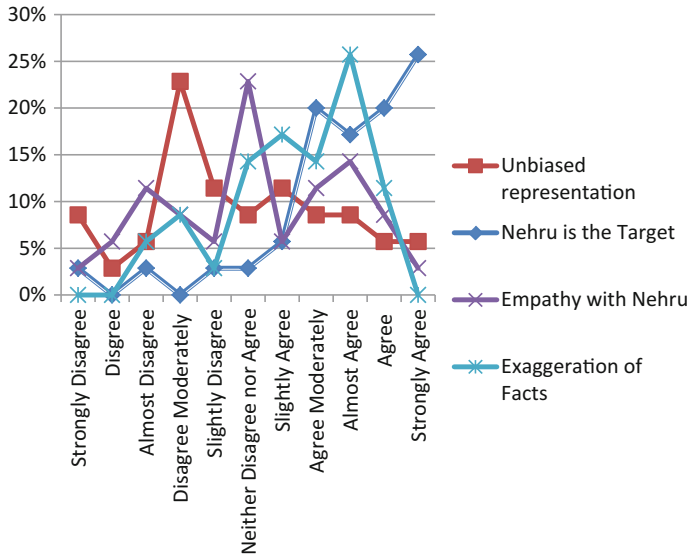
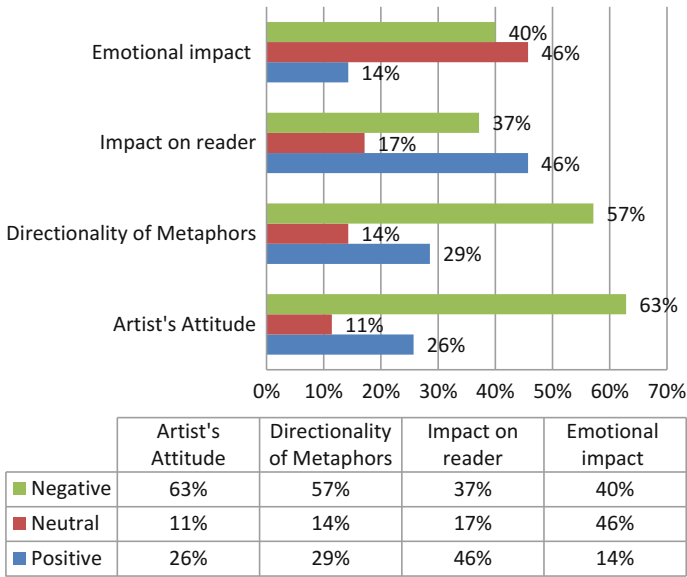


Fig. 3 Perception of metaphors

of FGD members who identified the cartoonist to give a negative representation of the linguistic issue.

- (l) Regarding the directionality of the metaphors, 57.2% felt it is negative. 14.3% remained indeterminate, and 28.6% admitted it to be positive. This again shows the relation between the cartoonist’s ideation which can be either revolutionary or symbiotic. Depending on the inclination and ideation, the metaphors turn out to be positive or negative.
- (m) 45.7% of the students felt a positive impact from the metaphors, and 37.2% had a negative feeling. 17.1% were ambiguous in their opinion. A mixed reaction proves the role of context in deciding the impact and the shaping of public opinion.
- (n) To the question whether metaphors made them feel hurt or angry, the same majority (45.7%) who felt positive impact have remained neutral. In fact, one among them also commented that he was amused by the use of metaphors in the cartoons. But 40% were angry at some of the metaphors, and some of them were hurt by the metaphor’s presence. This evinces the potentiality of metaphors to give a productive reception which makes the audience react as well as think (Fig. 4).

Using correlation tool, a bivariate analysis of the data was conducted. The results showed that the artist’s attitude towards the system had a significant relation in determining the directionality ( $p = 0.048$ ) and impact ( $p = 0.006$ ) of metaphors. The need for context was also significantly correlated with the artist’s attitude ( $p = 0.016$ ) and impact of metaphors ( $p = 0.037$ ). When variables were



**Fig. 4** Comparison of psychological impact

evaluated with the ANOVA tool, it revealed how there is a difference among the different states with respect to the emotional impact of metaphors ( $p = 0.005$ ). The ANOVA analysis, thus, demonstrates how the impact of metaphors varies as the states differ.

From the above study, one can conclude that metaphors are essential in political discourse because they help in comprehending a situation. Though majority of the respondents were from different background and generation, they were able to relate to the metaphors. They also agreed that metaphors play a significant role in shaping opinion; and justifying the argument that metaphors are critical to building political iconography. Most of them considered the metaphors given as familiar because of which they could relate to them, proving the argument that conceptual metaphors are universal. But a majority of them also admitted that to understand metaphors in political cartoons contextual knowledge is a prerequisite. This also points to the fact that in the study of political iconography, understanding situations and contexts is necessary to decode the images. In general, the group felt that the cartoonist has given a biased representation, making them empathise with Nehru which demonstrates how metaphors build a political icon and memory. The audience response also validates the statement that employing metaphors can exaggerate the factual knowledge, which again hints at the power of conceptual metaphors to create a reality of their own. Most of them felt that the artist’s attitude towards the system is negative and has used negative metaphors. This in turn has a negative influence on the audience reception. 40% of them ended up feeling agitated as the artist had been successful in provoking the reader’s minds through the metaphors. This manifests the psychological potential of metaphors.



## 8 Colonial Framework of Conceptual Metaphors

As stated earlier, conceptual metaphors become the frames of thinking and platforms for comparison. The way a metaphor forms depends on experiential gestalt as one brings comparisons by linking situations with the objects one is familiar, this in turn depends on the context and environment that surround us. Considering this argument, the pattern delineated from the conceptual metaphors is found to be colonial. Katherine Mayo's *Mother India* (1927) a vituperative book which saw India's condition as a festering disease (Teed, 2003) and undeserving of self-rule, presented India as a parasite that can be governed only by the British Raj. The metaphor of considering the nation as a disease and the crown as the doctor who can redress suffering is colonial in the constitution. It shows the colonial master as the responsible leader whose duty is to 'civilise' the savage.

Similarly, the broad division of conceptual metaphors into teacher–student, tamer and the tamed, scrounger and the recalcitrant is constituted as binaries. This duality can be traced back to the colonial discourse which provided thinking frames of dualities: 'self versus other'; 'us versus them'; 'coloniser versus colonised'; 'mother versus child'; 'black versus white'; and finally, 'inferior versus superior' (Ochoa, 1996, p. 221). As Frantz Fanon remarks in *The Wretched of the Earth*, 'the militant who faces the colonialist war machine with the bare minimum of arms realizes that while he is breaking down colonial oppression he [is] building up automatically yet another system of exploitation' (qtd. in Ochoa, 1996, p. 223), where the new regime having internalised colonial binaries thinks in terms of North vs. South, centre vs. state and the Hindi vs. non-Hindi. When India achieved independence a decentralisation happened, which was again followed by a 'new system of exploitation ... based on the dynamics of revolutionary ideology, which frequently creates the illusion that the independence movement is now "the one" in relationship to other political forces within a (former) colony; as the new dominant centre it has the power to define "others" and to marginalize those who do not reflect the ideals of the revolution' (Ochoa, 1996, p. 223). This same thinking pattern has been presented through the conceptual metaphors in the political cartoons. The demand for linguistic states was revolutionary in character, and there were many attempts from the centre to suppress the issue. This explains the provenance of metaphors of 'the tamer' and 'the tamed' where the linguistic issue is shown as an animal (tiger, dog, bull and snake) or a genie that has to be tamed by Nehru who acts as a trickster, circus master, charmer and the bullfighter. The conceptual metaphors in the political cartoons execute the colonial function of hegemonising the divided parts and give them a centripetality. The metaphors also act as catalysts in internalising the colonial values, such as the centre, that is working hard to integrate the nation. This is evident in the cartoon where Mr. Nehru builds a single house while the rest try to build single rooms. Metaphors also become the tools for hegemony and internalisation of the colonial values which

gradually helps in constructing an image of the political and bureaucratic system. The negative reception from the audience hints at the recognition of the colonial frameworks. But the neutral stature of the readers also suggests the impending power of metaphors which can beguile them.

## 9 Conclusion

The paper studies the psychological impact of conceptual metaphors in political cartoons and their role in making political iconography. Through the quantitative and qualitative analysis, one can come to the conclusion that conceptual metaphors form an inevitable phase of political iconography and they are successful in generating emotional responses. There are two stages involved in cognition of metaphors. In the stage of metaphorical application, depending on the inclination of the cartoonist, metaphors may be either revolutionary or symbiotic. The stage of activation of metaphors happens depending on the context in which they are created and the environment that surrounds the audience. One concludes that context is a prerequisite in order to comprehend metaphors in relation to political iconography. India as a nascent country, immediately after achieving independence, had the grains of colonial thought deeply embedded in her psyche. The political events are hence interpreted by the cartoonist in the colonial framework. Years later, the metaphors ring with the same colonial resonance which generates a negative reception from the audience. In this particular study, the metaphors used by the cartoonist were identified to be negative, and the response to them was also negative proving how psychological reactance is dependent on the directionality of metaphors. The study of conceptual metaphors on the whole looks at the representational politics through language, which is why the study becomes relevant in the field of political iconography. As this is a pilot study based on the responses of students, it can be extended to the reading public that receives political iconography through newspapers. To tap the authentic response, the study must be carried out among the public who had witnessed a particular issue in its historical frame (in this case, the demand for linguistic states). A factorial analysis can also be conducted to analyse which factor contributes the most. Thus, the scope of the study can be further expanded by reaching out to the public.

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