Chapter 10
Psychosocial Safety Climate from Two Different Cultural Perspectives in the Asia Pacific: Iran and Australia Hospitals

Ali Afsharian, Amy Zadow and Maureen F. Dollard

Abstract Psychosocial safety climate (PSC) may be conceptualised as the organisational practices, policies and procedures for the protection of worker psychological health and safety. To date PSC theory has not been investigated at the boundaries of the Asia Pacific, in Iran, a developing country in the heart of the Middle East. We investigated PSC levels in Iran, and tested the theoretical paths of the extended Job Demands-Resources Model (Dollard and Bakker in J Occup Organ Psychol 83(3):579–599, 2010). The PSC-12 and work environment, emotional exhaustion and engagement scales were translated into Farsi and administered amongst 33 work groups in an Iranian hospital (N = 257), then compared with an Australian sample of hospital employees (N = 239, across 21 work groups). The findings provide evidence that PSC is a climate construct that exists as a group phenomenon cross-culturally; PSC in Iran has group like properties with around 11 % (cf 15 % in Australia) of the variance in PSC due to group-level factors, with high levels of homogeneity of perceptions of PSC within groups (0.92 vs 0.94 Australia). Australian hospital employees reported higher levels of PSC, skill discretion and decision authority, and lower levels of emotional demands, compared to the Iranian sample. Evidence in support of the climate concept also came from the way it behaved in a nomological network of analyses. The major theoretical paths delineated in PSC theory were confirmed in the Iranian data. Multilevel analysis showed that as a between-group effect in Iran and Australia, team PSC was significantly negatively related to psychological demands, and emotional exhaustion and significantly positively related to job resources, decision authority and work engagement. In Australia, an additional significant positive relationship was found between team PSC and higher levels of the job resource, skill discretion. The results support the utility of PSC theory in Iran (at least among hospital workers). Given empirical support also from Australia and Malaysia, we argue that workplace

A. Afsharian (✉) · A. Zadow · M.F. Dollard
Asia Pacific Centre for Work Health and Safety, A World Health Organization Collaborative Centre for Occupational Health, University of South Australia, Adelaide, Australia
e-mail: ali.afsharian@mymail.unisa.edu.au

A. Shimazu et al. (eds.), *Psychosocial Factors at Work in the Asia Pacific*,
DOI 10.1007/978-3-319-44400-0_10

assessment of PSC maybe useful to guide the development of organisational systems to prevent workplace psychosocial risk factors across the Asia Pacific.

Keywords Psychosocial safety climate · Job demands-resources · Health and work engagement

Introduction

Workplace psychosocial risk factors have negative impacts on workers' mental health and well-being and consequently their productivity and work experience (Dollard et al. 2014). The problem of workplace stress and its costs affects many employees across a wide range of occupational groups in Iran (Barzideh et al. 2014; Lotfizadeh et al. 2013; Mosadeghrad 2013). Knowledge of how work stress theories operate in countries such as Iran is limited (Kang et al. 2008; Leka and Cox, 2008). Most theoretical models of stress, tools, items and scales have been developed in Western countries and have not been tested in populations in the Asia Pacific despite being the world's most populous region (Brough et al. 2014; Dollard et al. 2014; Shimazu et al. 2010).

Despite the prevalence of work-related stress in Iran, and the social and economic consequences, research has not yet examined how managers and organisations can structure workplaces to prevent the development of work-related psychological health problems among employees. It is particularly important to test theoretical models cross culturally as cultures think, feel and act differently in relation to issues they experience at work (Iwata 2014). The nature of the workforce in Iran differs from other countries in the Asia Pacific as a large proportion of the almost 80 million population are young (more than 70 % under 30 years of age), highly educated (79 % hold high school diplomas or higher degrees), influenced by a mixture of three different cultural perspectives including Ancient Persian culture, Islamic culture, and more recently Western culture, and the public sector controls 80 % of the country's economy either directly (through ownership), or indirectly (through state-affiliated institutions) (Namazie and Tayeb 2006). Iran is a collectivist country with moderately high-power distance relationships in workplaces however the greater number of foreign joint ventures and multinational companies entering the country are influencing these values (Namazie and Tayeb 2006).

Recently, work stress studies conducted in Iranian organisations have concentrated on organisational safety climate (e.g. Jahanian and Hosaini 2014) and organisational culture (Abbasi and Zamani-Miandashti 2013). Research has identified that organisational culture is related to work stress in hospital nurses but is not related to other mental health measures (Ghassemi-Pirbalouti et al. 2013). Using

multilevel structural equation modelling in a sample of Iranian library staff, organisational climate predicted some psychosocial risks (i.e. job demands) and psychological health issues (Yaminfirooz et al. 2015). The difficulty with measures of organisational safety climate is that they generally measure perceptions of physical safety and do not specifically examine variables that relate to psychological health.

Psychosocial Safety Climate (PSC) (Dollard and Bakker 2010) is a construct that is distinct from other related climate measures (i.e. physical safety climate, team psychological safety, perceived organisational support) and is superior to other team-level climate measures in terms of its ability to predict psychosocial risk factors such as job demands and resources, and also psychological health outcomes (Idris et al. 2012). PSC theory has not been tested in an Iranian population. A recent study has found that the PSC main elements are negatively related to work place psychosocial risk factors (Amiri et al. 2015). PSC is anticipated to be a more effective predictor of psychosocial risk factors and psychological health in Iranian workplaces than previous general safety climate measures that are not specifically designed for psychological health.

Psychosocial Safety Climate in the Asia Pacific Region

Greater research attention towards understanding the nature and influence of psychosocial risks, and the role of PSC (Dollard and Bakker 2010) across differing sociocultural contexts is required. Using multilevel techniques the aim of this research is to compare PSC theory in two separate counties in the Asia Pacific region; Iran, to bring new understanding towards the role of the prevention of psychosocial risk in an unexplored area, and Australia, a neoliberal economy with a strong emphasis on profit and productivity (Kawakami et al. 2014). Testing PSC theory in the Iranian population will add to the growing body of literature about the role of PSC across the Asia Pacific region which has been predominantly tested in Australia and Malaysia (i.e. Dollard and Bailey 2014; Dollard and Bakker 2010; Idris and Dollard 2011, 2014b; Idris et al. 2012; Kwan et al. 2014) (see Chap. 6 cross). This cross-cultural research will build knowledge about how PSC theory applies to alternative socio-cultural contexts in the Asia Pacific Region.

Theoretical Framework of Psychosocial Safety Climate

Psychosocial Safety Climate (PSC) (Dollard and Bakker 2010) is defined as the managerial policies, procedures and practices to support employees' psychological

health in work environments (Dollard and McTernan 2011; Radzaz and Bahari 2013). Theoretically, PSC extends the Job Demands-Resources (JD-R) model (Demerouti and Bakker 2011). According to the JD-R model, psychosocial work aspects can be categorised as job demands—what workers have to do, and job resources—factors that assist workers to achieve work goals. The PSC theoretical framework extends two important paths of the widely used JD-R theoretical model, the health and motivation pathways (Demerouti et al. 2001), by defining the managerial and organisational context preceding the work conditions (job demands and resources).

In the JD-R model the health pathway describes the negative effects of excessive job demands leading to poor psychological health, while the motivational pathway focuses on the role of high levels of resources improving levels of work engagement and well-being. PSC is antecedent to the job demands and resources articulated in the JD-R model, and refers the managerial and organisational conditions that prevent the development of high levels of job demands and insufficient job resources. Consequently, PSC as a higher level construct has been described as a main upstream element in the prevention of work stress and an effective target for intervention (Dollard and Bakker 2010; Dollard et al. 2014). Since PSC precedes job design, it is likely to predict the level of psychological health problems such as psychological distress and emotional exhaustion via its relationship with job demands, and work engagement through its relationships with job demands such as skill discretion.

Psychosocial health and safety is attracting attention at both national and international levels (Bailey et al. 2015; World Health Organization 2015). This is particularly because continuous exposure to these psychosocial risk factors has been shown to be a robust predictor of psychological and also physical health problems (Biron et al. 2012). Moreover, reducing the prevalence of workplace psychosocial risk factors can improve job performance and productivity (Dollard and Bakker 2010).

PSC is designed to protect workers through the prevention of exposure to damaging psychosocial risk factors (Bailey et al. 2015; Dollard and Bakker 2010; Zadow and Dollard 2015). To this end, PSC embraces four basic elements; (a) management commitment, (b) management priority, (c) organisational communication and (d) organisational participation (Dollard and Bakker 2010). Management commitment describes decisive and rapid management intervention to prevent and control occupational issues causing stress at work and support employees affected by the negative consequences. Management priority relates to the importance given by managers to employees' psychological health and well-being (Idris et al. 2015). Organisational communication concerns communication about issues affecting the psychological health of employees including policies and practices that facilitate a mutual interaction between employees and managers with the purpose of problem solving and stress prevention in work groups and organisations (Idris et al. 2012). Organisational participation and involvement

is characterised by management consulting with employees about psychosocial risk factors at work and engaging employees and other stakeholders such as supervisors, managers, unions and work health and safety representatives in the development of practices to prevent psychosocial risks throughout all levels of the organisation. Participation is a critical preventive strategy for occupational stress (Dollard and Gordon 2014). These four domains of PSC are vital elements for organisations looking to prevent and address workplace stress (Biron and Karanika-Murray 2014).

Even though the PSC model is recent, it is nascent, with a considerable number of studies conducted (e.g. Dollard et al. 2012; Dollard and Bakker 2010; Idris and Dollard 2011) in different organisations and contexts. They have shown that PSC is negatively related to job demands and poor psychological health (the health erosion path), and positively related to job resources and work engagement (the motivation path). The PSC model was born in Australia and is progressively growing in Asia Pacific countries, with more empirical and longitudinal studies [e.g. Australian Workplace Barometer (AWB)] focusing on PSC aspects in work contexts. Key PSC findings include the moderating role of PSC as a buffer of the effects of job demands and bullying on psychological health (Bond et al. 2010; Dollard and Bakker 2010; Dollard et al. 2012; Law et al. 2011), multilevel effects where work group classification is responsible for around 24 % of the variance in PSC (Dollard et al. 2014), the application of the PSC model to different cultural contexts, for example, Australia and Malaysia (Idris et al. 2012; Kwan et al. 2014) and that levels of PSC and subsequent workforce health are influenced by country sociopolitical mechanisms such as national ideology, policy and power (e.g. union density) (Dollard and Neser 2013).

This study tested PSC theory in an Iranian population. PSC was examined as a predictor of job demands (e.g. psychological and emotional demands), job resources (skill discretion and decision authority), emotional exhaustion and work engagement (See Fig. 10.1). As one of the first PSC studies in the Middle East, this multilevel and multi-group investigation will expand the PSC boundaries to consider the role of cultural differences. Generally, investigating climate and

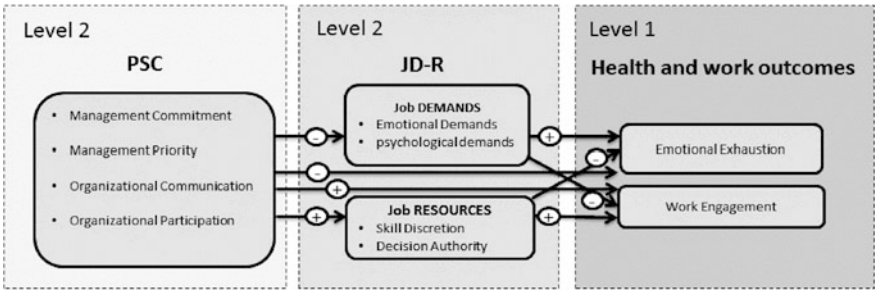

Fig. 10.1 PSC model

psychosocial risk factors in developing countries is challenging, complex and almost impossible (Kortum et al. 2010).

Given the worldwide impact of economic globalisation, technological advances, and the emergence of workplace psychosocial hazards (European Agency for Safety and Health at Work 2013) it is anticipated that workers in both Iran and Australia will report similar levels of PSC and work conditions. These psychosocial work factors are expected to impact upon workers in Iran and Australia despite their cultural differences. As work-related stress is acknowledged as a growing worldwide phenomenon affecting more than 40 million individuals across the European Union alone (World Health Organization 2008) it is anticipated that Iranian employees will report levels of emotional exhaustion and work engagement, consistent with European (European Agency for Safety and Health at Work 2013; World Health Organization 2008), Malaysian (Idris and Dollard 2014a, b; Idris et al. 2012) and Australian (e.g. Bailey et al. 2015; Dollard and Bailey 2014) samples. Accordingly we predict no net difference in organisational (PSC) and work conditions and reactions across Australia and Iran (Hypothesis 1).

Previous studies across public and private organisations (e.g. Dollard et al. 2012; Law et al. 2011; Zadow and Dollard 2015) and countries (e.g., Idris and Dollard 2014a) have shown that PSC is negatively related to job demands and emotional exhaustion, and is positively related to job resources and work engagement. Across Iran and Australia we expect that PSC at the team level predicts work conditions and outcomes (Hypothesis 2). Testing PSC theory in the Iranian population, and contrasting the results with an Australian sample will add to the growing body of the literature about the role of PSC and the management of psychosocial risk factors across the Asia Pacific region.

Method

This is a multi-group, multilevel, cross-sectional study.

Participants and Procedure

Participants were employees from clinical and non-clinical work groups in Australian (n = 239, 21 work groups, average size = 11) and Iranian (n = 257, 33 work groups, average size = 8) hospitals. To evaluate higher level concepts like PSC only work groups with an identifiable supervisor were approached to participate in the research.

In both countries access to the hospitals was granted by management but researchers could recruit the participants directly, with consideration to the work

unit time schedule and priorities. In Australia participants completed the survey using hard copy or IPad surveys, and in Iran, hard copy only. In all cases data derived was given directly to the researchers (via letter, pick up, or electronically) with no organisational scrutiny. Ethics approval was given by the University of South Australia's ethics committee. All the participants were informed about the anonymity of the study and their participation was voluntary. Participants signed a written consent form in Iran.

Instruments

The instruments used in both countries were identical with the exception of language, English in Australia, and Farsi in Iran.

PSC

PSC-12 consists of four subscales each with three items; management commitment, management priority, organisational communication and organisational participation. The 12-item version was developed from the original scale that includes 26-item scale developed by Dollard and Kang (2007) as it has good validity and reliability (Cronbach's alphas of .81 or higher for all the subscales). The PSC-12 response list is ranged on a five-point Likert scale from 'strongly disagree' (one) to 'strongly agree' (five).

Job Demands

These were assessed using the Job Content Questionnaire (JCQ 2.0) (Job Content Questionnaire Centre 2012); psychological job demands (six items for the Australian sample and three items for the Iranian sample) and emotional demands (four items) were assessed on a four-point Likert scale from 'strongly disagree' (one) to 'strongly agree' (four) with reverse items recoded as required. The size of the psychological job demands scale was reduced for the Iranian sample to improve the reliability of the scale.

Job Resources

Job resources were assessed using the JCQ 2.0. In this study, skill discretion (six items) and decision authority (four items) were used to investigate job resources on a four-point Likert scale from 'strongly disagree' (one) to 'strongly agree' (four).

Health and Work Outcomes

Work Engagement

This consisted of vigour, dedication and absorption with three items measuring each aspect using the Utrecht Work Engagement Scale—Shortened Version (UWES-9) ($\alpha = 0.91$). A seven-point scale from 'never' (one) to 'every day' (seven) ranged the response list.

Emotional Exhaustion

This refers to psychological awareness of physical and emotional weakness triggered by work issues (Maslach and Jackson 1981). This was assessed using the five-item Maslach Burnout Inventory ($\alpha = 0.90$) (Maslach and Jackson 1996), with responses on a seven-point scale Likert scale from 'never' (one) to 'every day' (seven).

Statistical Analysis

Descriptive analysis and *t* tests were conducted using the Statistical Package for the Social Sciences (SPSS) (Version 22.0, 2013). Data from the individual level were nested within work unit, and to determine the functional relationships among nested workplace risk factors and phenomena, hierarchical linear modelling is recommended (Meade and Eby 2007). Hierarchical Linear Modeling (HLM 7) software (Bryk et al. 1996) was used for multilevel analysis. Face validity and consistency of the translated Iranian version of the scales were determined by five psychologists and psychiatrists' expert revisions. To confirm the psychometric properties of the research tool a pilot test–retest study on a small group of health care workers in Iran ($n = 15$) was conducted two times within a fortnight.

Results

The group-level properties of PSC were assessed using the intra-class coefficient (ICC [1]) which determines the proportion of variance due to the work group, the mean agreement index (r_{WG}) which represents homogeneity of variance within the work groups, and the ICC [2] which represents the reliability of the aggregated measure. The ICC [1] for PSC was 0.15 in Australia, and 0.11 in Iran, which indicates that approximately 15 % (Australia), and 11 % (Iran) of the variance in PSC is due to group-level random effects (see Table 10.1). The r_{WG} (median) = .94

Table 10.1 Means, standard deviations, Cronbach's alphas and correlations

	Australia				ICC [1]	Iran				ICC [1]	Correlations						
	N	*M*	SD	α		*N*	*M*	SD	α		1	2	3	4	5	6	7
1. PSC team level	227	3.30	0.92	0.97	0.151	257	3.09	0.80	0.94	0.105	1	−0.54**	−0.26**	0.40**	0.38**	−0.35**	0.41**
2. Psychological demands	239	2.84	0.47	0.71	0.139	257	2.80	0.48	0.67	0.040	−0.30**	1	0.41**	−0.08	−0.18**	0.48**	−0.33**
3. Emotional demands	239	2.74	0.62	0.86	0.252	257	2.97	0.59	0.80	0.063	−0.18**	0.48**	1	0.30**	−0.09	0.39**	−0.19**
4. Skill discretion	239	2.85	0.44	0.73	0.047	257	2.75	0.45	0.72	0.021	0.21**	−0.03	0.20**	1	0.45**	−0.08	0.29**
5. Decision authority	239	2.72	0.49	0.51	0.058	257	2.34	0.52	0.50	0.015	0.34**	−0.26**	−0.08	0.41**	1	−0.19**	0.27**
6. Emotional exhaustion	239	4.05	1.68	0.91	0.078	257	3.88	1.77	0.92	0.082	−0.39**	0.34**	0.26**	−0.25**	−0.27**	1	−0.37**
7. Work engagement	239	5.57	1.21	0.90	0.089	257	5.62	1.31	0.90	0.041	0.30**	−0.18**	−0.08	0.36**	0.26**	−0.54**	1

Correlations above the principal diagonal are from the Australian sample and below are from Iranian sample

*$p < 0.05$, **$p < 0.01$ (2-tailed)

for Australian sample and r_{WG} (median) = 0.92 for Iranian sample indicates that more than 90 % homogeneity of PSC perceptions within hospital workgroups in both contexts (James et al. 1984). PSC was also positively related to job resources and work engagement. The aggregated PSC measure was reliable as the ICC [2] was 0.97 and 0.94 for Australian and Iranian data respectively. These results provide justification for aggregating and assessing PSC at the group level.

Descriptives, means, standard deviations, Cronbach's alpha, and correlations between PSC team level and all the variables are presented in Table 10.1. Notably Cronbach's alpha for the variable, decision authority, demonstrated poor reliability and results involving this variable need to be interpreted with caution.

Hypothesis 1 proposed no differences between Australia and Iran on the work and health related measures. As shown in Table 10.2 using the *t* test there were no significant differences for psychological demands, emotional exhaustion and engagement supporting Hypothesis 1; but for PSC team level, emotional demands, skill discretion and decision authority of the hypothesis was not supported. Iranian workers reported lower levels of PSC, skill discretion and decision authority, and higher levels of emotional demands than their Australian counterparts.

Hypothesis 2 proposed that PSC team level predicts job demands, job resources, emotional exhaustion and work engagement. HLM analysis showed that the Iranian and Australian work teams reporting higher levels of PSC also reported lower levels of psychological demands, higher levels of decision authority and work engagement, and lower levels of emotional exhaustion. Australian work teams reporting high PSC also reported lower levels of higher levels of skill discretion (See Table 10.3).

Table 10.2 T-test differences between Iran and Australia on PSC, demands, resources, health and work outcomes

	Australia		Iran		95 % CI	*t*
	Mean	SD	Mean	SD		
PSC	3.30	0.92	3.09	0.84	0.08, 0.38	3.05**
Psychological demands	2.84	0.47	2.80	0.50	−0.05, 0.12	0.91
Emotional demands	2.74	0.62	2.97	0.61	−0.33, −0.11	−4.04**
Skill discretion	2.85	0.44	2.75	0.47	0.01, 0.17	2.33*
Decision authority	2.72	0.49	2.34	0.52	0.28, 0.46	8.36**
Emotional exhaustion	4.05	1.68	3.88	1.77	−0.15, 0.45	0.97
Work engagement	5.57	1.21	5.62	1.34	−0.24, 0.20	−0.19

N; Australia = 239, Iran = 257, *df* = 510. *CI* confidence interval
*$p < 0.05$; **$p < 0.01$ (2-tailed)

Table 10.3 Multi-level analysis of PSC team level (L2) as a predictor of level 1 factors

PSC	Psychological demands (Model 1)			Emotional demands (Model 2)			Skill discretion (Model 3)			Decision authority (Model 4)			Emotional exhaustion (Model 5)			Work engagement (Model 6)		
	$\beta 1$	S.E.	t	$\beta 1$	S.E.	t	$\beta 1$	S.E.	t	$\beta 1$	S.E.	t	$\beta 1$	S.E.	t	$\beta 1$	S.E.	t
Iran	−0.17**	0.04	−3.95	0.03	0.11	0.28	0.11	0.10	1.08	0.18**	0.06	3.04	−0.18**	0.06	−3.11	0.18*	0.07	2.48
Australia	−0.32**	0.07	−4.53	−0.14	0.11	−1.29	0.28*	0.12	2.40	0.20*	0.08	2.57	−0.25*	0.07	−3.60	0.13*	0.07	2.03

Note: Iran (N = 257, 33 work groups), Australia (N = 239, 21 work groups)
$\beta 1$, parameter estimate coefficient; S.E. Standard Error, t t-ratio
*$p < 0.05$; **$p < 0.01$

Discussion

Prior studies have not investigated PSC in Iran, a Muslim Middle Eastern country in the Asia Pacific. This study examines PSC, work conditions and psychological health amongst Iranian employees, and compares these results with an equivalent Australian sample, to examine similarities and differences between two Asian Pacific countries. This research is important as Iran has a unique large population of predominantly young, highly educated mainly public sector workers with a complex range of cultural influences, yet knowledge of how work stress theories operate in countries such as Iran is limited as most theoretical models of stress and measurement tools have been developed in Western countries (Brough et al. 2014; Dollard et al. 2014; Shimazu et al. 2010). Clearly it is critical to test theoretical models cross culturally across the Asia Pacific region as cultures react differently in relation to experiences at work (Iwata 2014). Measuring PSC in Iran enables the assessment of organisational system factors in the creation of the psychosocial work conditions that are a risk factor for work place stress, burnout, depression and anxiety, to develop and set priorities for policies and bench mark progress across the Asia Pacific.

In general, the study identified similarities and differences between the two Asian Pacific countries. Iranian employees reported lower levels of PSC, and the job resources, skill discretion and decision authority, and higher levels of emotional demands, than their Australian counterparts. Yet both the Iranian and Australian workers reported similar levels of psychological demands, emotional exhaustion and work engagement. Multilevel analysis identified that both Iranian and Australian work teams who report low PSC also experience higher levels of psychological job demands and emotional exhaustion and lower levels of decision authority and work engagement. The Australian work teams reporting lower levels of PSC also reported lower levels of skill discretion. These ground breaking research findings suggest that PSC theory as a predictor of workplace psychosocial risk factors can be applied to Middle Eastern countries such as Iran.

Strength, Limitations and Practical Implication

The strength of this study is the assessment of PSC theory in an unexplored area of the Asia Pacific, the Middle Eastern country of Iran. Translating the survey tool to Farsi and assessing psychosocial risk factors and psychological health amongst 33 work groups in an Iranian hospital represents a new frontier in work stress research. From a practical point of view the findings suggest that promoting high PSC in organisations in Iran will improve the psychological health of workers. Organisations in Iran can use the PSC framework to identify, measure, and monitor organisational psychosocial risk, target interventions, develop policies, benchmark progress and monitor trends to improve work conditions, productivity, work engagement and the psychological health of employees (Hall et al. 2010).

The complexity of undertaking this new research in Iran has restricted its scope. Future research should consider a larger sample size, including more organisational groups, and longitudinal methodology, as this study is underpowered and restricted in its ability to determine causality. A larger longitudinal sample will enable the examination of the mediated pathways through which PSC influences work conditions and psychological health conditions. The measurement of a wider range of job demands, including bullying and harassment, and job resources such as social support, would provide a stronger understanding of the work conditions that are most prevalent and influential in Iranian workplaces as predictors of workplace psychological health.

Collecting self-report data from different cultural contexts requires the development of trust and cultural sensitivity to respect social structures including morals, religion, politics and economic practices (Iwata 2014). To reduce misunderstanding and confusion about item meanings a combination of qualitative data collection and objective measurement would enrich the findings and shed light on cross-cultural differences in response styles including the use of styles such as acquiescence, extreme ratings, social desirability, or impression management (Iwata 2014). Triangulating evidence from a range of sources (e.g. injury rates, safety audit material or patient data), measuring PSC in alternative ways such as evidence of actual policies, practices and procedures for the protection of psychological health, and analysing how leadership styles and psychosocial safety-specific leadership training impact upon PSC levels would add to the evidence base about psychosocial risk in Iran (Zadow and Dollard 2015).

The present study adds to the literature as it provides support for PSC as a precursor to the work conditions that influence workplace psychological health. For the first time the propositions of the PSC model were shown in an Iranian sample broadening understanding of the assessment of psychosocial risk across the Middle East and supporting previous findings suggesting that the PSC theoretical framework can be applied cross culturally in both Western and Eastern contexts (e.g. Idris and Dollard 2011; Idris and Dollard 2012a, b; Idris et al. 2012). Building PSC in hospitals in Iran and Australia is required as we have a social, moral, economic and legal imperative to protect the psychological health of workers across the Asia Pacific region.

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