

# 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 ( $p = 0.05$ )

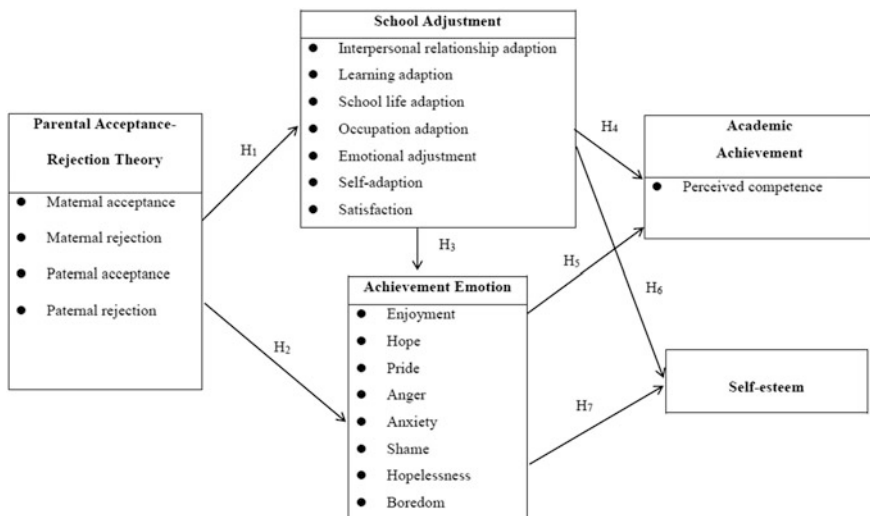
H<sub>9</sub> = Achievement emotion has a significant relationship with self-esteem ( $p = 0.05$ )

### 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

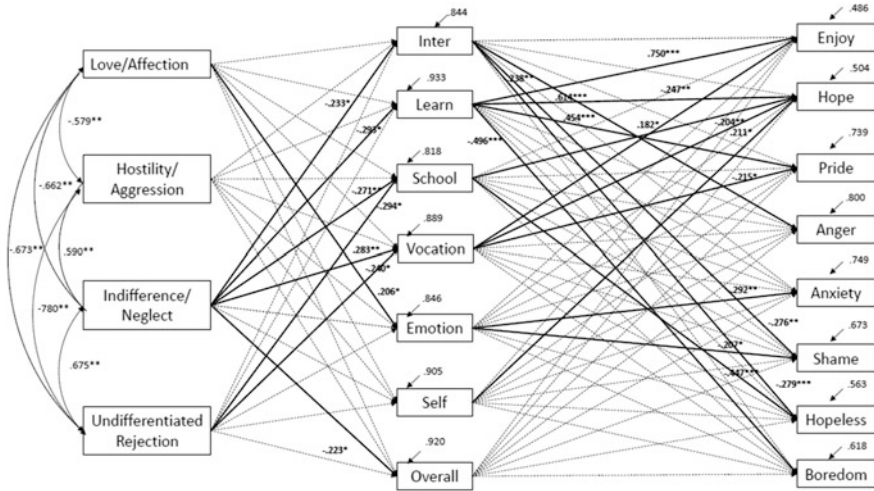
In this study, confirmatory factor analysis has been used to test the validity of the instruments by examining the interrelationship of the variables (Gorsuch, 1983). The detailed results of three instruments are shown in Table 7. For all scales, no parceling is needed. For achievement emotion scale 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

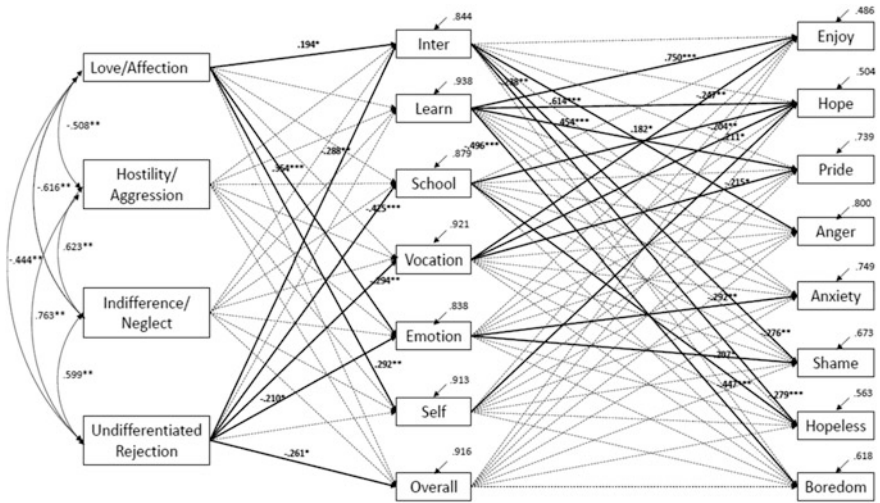


**Fig. 2** The path model showing the effects of maternal acceptance-rejection, school adjustment and achievement emotion. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

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. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

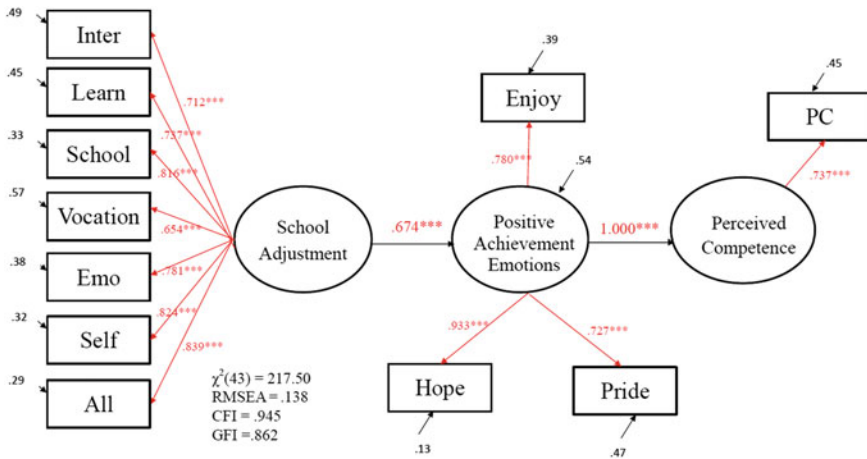
adjustment. As for the paternal hostility/aggression and paternal indifference/neglect, there were no significant relationships between these two factors and all indicators of school adjustment. For the undifferentiated rejection, it was a significant positive predictor of interpersonal relationship 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 ( $\beta = 0.72, p < 0.001$ ).

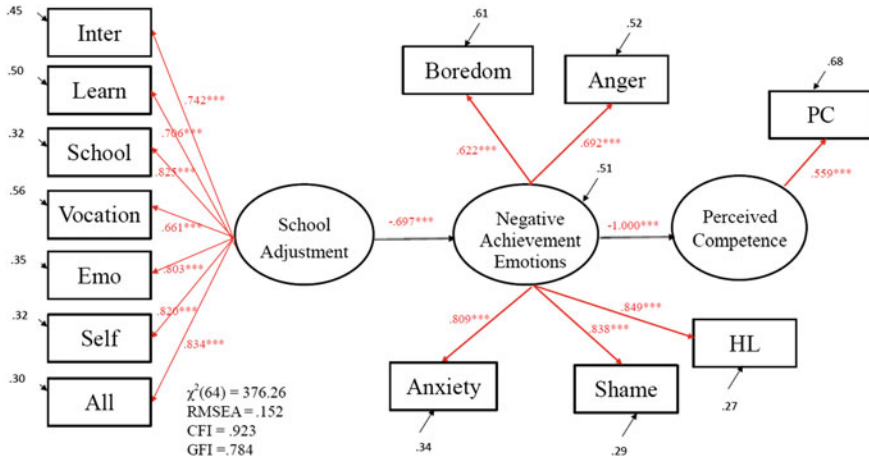
Perceived competence have 1 observed variables and it is significantly related to the indicators, which perceived competence ( $\beta = 0.73, p < 0.001$ ).

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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