The influence of parental rearing styles on university students’ critical thinking dispositions: The mediating role of self-esteem

Keywords: parental rearing styles, self-esteem, critical thinking dispositions, university students, mediation

Introduction

Critical thinking is the judgment to apply reasoning and logic to new or unfamiliar ideas, opinions, and situations (Broadbear & Keyser, 2000). Critical thinking involves not only abilities and skills but also a tendency to engage in reasoning processes: in other words, a disposition toward critical thinking (Ennis, 1987). Critical thinking disposition toward critical thinking is measured from an emotional perspective (e.g., Ennis, 1987).

Some studies consistently showed that critical thinkers need to possess a high level of self-esteem (e.g., Barkhordary et al., 2009). In recent years, some researchers divided self-esteem into two aspects: positive self-esteem (PSE) and negative self-esteem (NSE) [e.g., Supple, Su, Plunkett, Peterson, & Bush, 2013]. Raskin, Boothe, Reatig, Schulterbrandt, & Odle (1971) showed that parental rearing attitudes and behaviors contribute to bonding, which is influenced by two principal source variables: parental care and parental control. The provision of greater parental care had a positive effect on children’s self-esteem, while extreme control by parents negatively affected children's self-esteem (DeHart, Pelham, & Tennen, 2006). Based on the two dimensions of care and control, the Parental Bonding Instrument (PBI; Parker et al., 1979), which is widely used to measure parental rearing behaviors, can be divided into four types of parental bonding: optimal bonding (high care – low control), absent or weak bonding (low care – low control), affectionate constraint (high care – high control), and affectionless control (low care – high control). Martinez and García (2007) found that both affectionate constraint and optimal bonding led to higher levels of self-esteem in children, while affectionless control led to lower levels of self-esteem.

Study 1

Among the various factors associated with the cognitive growth of children in the family environment, parental rearing styles may be one of the most important factors that influence the development of children (Parker et al., 1979), including their critical thinking dispositions. We can postulate that not only a direct link between parental rearing styles and critical thinking dispositions exists, but also a mediating influence of self-esteem (PSE/NSE) on the relationship between parenting rearing styles and critical thinking dispositions. Studies have shown that self-esteem is influenced by parental rearing styles (e.g., Barkhordary et al., 2009) and contributes to critical thinking dispositions (e.g., DeHart, et al., 2006).

The hypotheses of Study 1 were as follows: (1) parental care would be associated with higher PSE, lower NSE, and higher critical thinking dispositions; (2) parental control would be associated with lower PSE, higher NSE, and lower critical thinking dispositions; (3) students whose parents had optimal bonding or affectionate constraint styles would have higher PSE, lower NSE, and higher critical thinking dispositions than would students who had been exposed to affectionless control by their parents; and (4) self-esteem (both PSE and NSE, or either) would possibly be a mediating factor in the path from parental rearing styles to critical thinking dispositions.
Method

Our sample included 284 university students (197 females, 87 males; 240 undergraduates, 44 postgraduates; M = 20.42 years, SD = 2.04, range = 18–29 years), 24.65% reported paternal rearing styles, and 75.35% reported maternal rearing styles.

Parental Bonding Instrument (PBI), Rosenberg Self-Esteem Scale (RSES) and Critical Disposition Scale (CDS), in the form of questionnaires, were created and completed online.

Participants were recruited from the universities through fliers distributed at the end of the lectures. The fliers provided information regarding the purpose of the study, summary of the procedure, and the URL address for the questionnaires. When each student fully understood our study and provided informed consent, we asked them to access the URL and complete the questionnaire. They were informed about the confidentiality and anonymity of their responses prior to starting the questionnaires. They were asked not to write out their real names but to provide nicknames. Participants were also assured that they could quit the session whenever they wanted to do so.

Results

A one-way ANOVA was conducted with parental rearing styles as the between-subjects factor. The results show that parental rearing style had significant main effects on the total score of critical thinking dispositions (F (3,280) = 5.63, \( \eta^2 = 0.057, p < 0.001 \)), PSE (F (3,280) = 12.93, \( \eta^2 = 0.122, p < 0.001 \)), and NSE (F (3,280) = 12.93, \( \eta^2 = 0.122, p < 0.001 \)).

When the total score of critical thinking dispositions was a dependent variable, there was a significant main effect of parental rearing style (F (3,280) = 5.63, \( \eta^2 = 0.057, p < 0.001 \)). Bonferroni-corrected pairwise comparisons revealed that the mean total score for critical thinking dispositions in the optimal bonding group was significantly higher than it was in the absent/weak bonding and affectionless control groups (F (3,280) = 12.93, \( \eta^2 = 0.122, p < 0.001 \)); the affectionate constraint group was not significantly different from the other groups. When NSE was a dependent variable, there was a significant main effect of parental rearing style (F (3,280) = 6.61, \( \eta^2 = 0.066, p < 0.001 \)). Bonferroni-corrected pairwise comparisons revealed that the mean score for NSE in the optimal bonding group was significantly lower than it was in the absent/weak bonding and affectionless control groups (F (3,280) = 6.61, \( \eta^2 = 0.066, p < 0.001 \)), the affectionate constraint group was not significantly different from the other groups.

Mediation analyses were conducted using IBM SPSS AMOS (version 24) to verify whether the relationships between parental care/control and critical thinking dispositions were mediated by PSE and NSE and that there was no missing data. An examination of specific indirect effects indicated that PSE was a significant mediator of the relationship between parental care and critical thinking dispositions based on the following results: parental care significantly predicted PSE (\( \beta = 0.26; t (3,280) = 3.31; p < 0.001 \)) and parental care significantly predicted critical thinking dispositions (\( \beta = -0.20; t (3,280) = -2.65; p < 0.01 \)). As the 95% confidence interval (CI95 = 0.12 to 0.42) did not contain the value zero, the mediated effect was regarded as significant. When the entire model was tested, the predictive power of parental care for critical thinking dispositions became \( -0.20 (\beta = -0.20; t (3,280) = -2.65; p < 0.01) \).

Discussion

Our findings provide an important new implication for teachers, namely that they should pay attention to the family environment of each student and work with their parents to improve students' critical thinking dispositions. Doing so may foster closer collaboration between the family and school in
educational settings. Our study provided clear findings in terms of the two dimensions of self-esteem: parental care had a positive effect on PSE and a negative effect on NSE, whereas parental control did not have a significant effect on either PSE or NSE. Further, we added a new finding to the existing literature: parental control had a negative effect on critical thinking dispositions, but parental care had no direct effect on critical thinking dispositions, contrary to our hypothesis. Therefore, hypothesis 1 and hypothesis 2 regarding the influence of parental care and control was partially supported.

Our results showed that optimal bonding had a more positive effect on self-esteem than did affectionless control and absent bonding, and it led to higher critical thinking dispositions than did affectionless control. Affectionate constraint showed no significant difference from affectionless control. Thus, hypothesis 3 was partly supported. Our results showed that PSE had a partial mediating effect on the relationship between parental care and critical thinking dispositions. Therefore, we revealed a more cohesive model that included self-esteem: students’ perceptions of parental care were associated with their critical thinking dispositions via PSE, indicating that hypothesis 4 was supported.

Study 2

Students’ perceptions of their parents’ behaviors and attitudes may sometimes be different from their parents’ perceptions or perception of their own behaviors and attitudes. To ensure if applying children’s perception was reasonable, Study 2 examined whether the parents’ perceptions of parental care/control and parental rearing styles have significant effect on children’s critical thinking disposition and self-esteem or not. Additionally, the perception gap of parents’ behaviors and attitudes between parents and children appears to affect children’s personality and this gap relates to some negative personalities. The hypotheses of Study 2 were as follows: (1) Parents’ perception of parental care/control does not have significant effect on critical thinking disposition and self-esteem (PSE/NSE). (2) Critical thinking disposition and self-esteem (PSE/NSE) had no significant difference among parents’ perceptions of four styles. (3) Both of PSE and NSE had not any significant mediating effect between parents’ perceptions of parental care and critical thinking dispositions. (4) Bigger gap of the perception of parental care and control between child and parent will be associated with lower critical thinking disposition and PSE, and higher NSE of the child.

Method

Participants were recruited from the participants of Study 1, and 158 students and their chosen parent (father or mother) who influenced them more before 16-year-old (123 females, 35 males; M = 19.94 years, SD = 1.71, range = 18–29 years) were participated. Among the participants, 16.46% reported paternal rearing styles, and 83.54% reported maternal rearing styles, which meant that 26 fathers and 132 mothers also participated. We used the students’ data of Study 1. We created the parent version of PBI for their parent to answer. We put the URL address for the parents’ questionnaires in the end of the children’s questionnaires. Then, children sent the URL address to their parents after they informed the information to their parents and their parents agreed to take part in the survey. Their parents were asked to write their children’s created nickname which was written by their children in the children’s questionnaires. We can match the parent’s questionnaire and children’s questionnaire by the nickname. When we received the answer from their parents, we emailed them an extra coupon as a reward.

Results

A one-way ANOVA was conducted with parents’ perceptions of parental rearing styles as the between-subjects factor. The results show that parents’ perceptions of parental rearing style had significant main effects on PSE (F (3,154) = 3.15, η² = 0.033, p < 0.05), but there was no significant difference among four styles when PSE was a dependent variable (all p’s > 0.05). And parents’ perceptions of parental rearing style had no significant main effects on the total score of critical thinking disposition and self-esteem.
thinking dispositions and NSE (all p's > 0.05).

In the mediation analyses, parental care did not have a significant overall effect on critical thinking dispositions ($\beta = -0.05; \ t(3,154) = -0.60; \ p = 0.55$), and parental control had a significant overall effect on critical thinking dispositions ($\beta = -0.19; \ t(3,154) = -2.18; \ p < 0.05$). An examination of specific indirect effects indicated that both of PSE and NSE had not any significant mediating effect between parents’ perceptions of parental care and critical thinking dispositions.

Multiple linear regression analyses were conducted to verify whether the perception gap of parents’ care/control significantly affected critical thinking dispositions, PSE and NSE. The results show that both the gap of care and control did not have a significant effect on critical thinking disposition (all p's > 0.05). The gap of care had a significant effect on PSE ($\beta = -0.27; \ t(3,154) = -3.36; \ p < 0.01$), but the gap of control did not have a significant effect on PSE: bigger gap of care was associated with lower PSE. The gap of care also had a significant effect on NSE ($\beta = 0.20; \ t(3,154) = 2.49; \ p < 0.05$), but the gap of control did not have a significant effect on NSE: bigger gap of care was associated with higher NSE.

Discussion

Our results provided findings that only the parents’ perception of parental control significantly affected critical thinking disposition. Thus, hypothesis 1 of Study 2 was partly supported. Although we found that parents’ perceptions of parental rearing style had significant main effects on PSE, critical thinking disposition and self-esteem (PSE/NSE) had no significant difference among parents’ perceptions of four styles. Hypothesis 2 of Study 2 was partly supported. We found that both of PSE and NSE had not any significant mediating effect between parents’ perceptions of parental care and critical thinking dispositions. Thus, hypothesis 3 of Study 2 was supported. Furthermore, we also examined if the perception gap of parents’ care and control between parents and children related to children’s self-esteem and critical thinking disposition. Study 2 provided some new findings: bigger gap of care was associated with lower PSE and higher NSE: the gap of control did not have a significant effect on PSE and NSE: the gap of parental care and control did not have any significant effect on critical thinking disposition. Thus, hypothesis 4 of Study 2 was partly supported. Our results extended previous findings (Murao & Nangai, 1964; 1966; Tsujioka & Yamamoto, 1977; Fujita & Omae, 1978) that the perception gap was related to negative personalities: the perception gap of parental care between parent and child significantly affected child’s self-esteem (PSE/NSE). However, the perception gap of parental care/control did not significantly affect children’s critical thinking disposition, which may be because critical thinking disposition also depends on many factors beyond family environment, such as educational environment (Abrami et al., 2008; Myers & Dyer, 2006; Terenzini et al., 1995).

General discussion

Our result implied that it is more reasonable to use the children’s perceptions of parental behaviors and attitude for researchers to examine how parental rearing styles affect children’s personalities.

References


