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## **The Impact of Parenting Styles on Children Developmental Outcome: The Role of Academic Self-Concept as a Mediator**

### **Abstract**

Although the importance of parenting styles directly influencing child development is well established, fewer studies have examined whether parenting styles also affect children's behavioural problems indirectly, mediated through children's academic self-concept. We examined direct and shared effects of parenting styles on behavioural problems of 199 Kurdish primary school children with a mean age 11 years 7 months (range 11; 5 months -12; 3 months). Questionnaires measured parenting styles (Child version of Alabama Parenting Questionnaire, APQ), assessed children's academic self-concept (Myself-As-Learner Scale, MALS) and identified children's behavioural problems (Strengths and Difficulties Questionnaire; SDQ). *PROCESS* analysis was used to perform the mediation analysis. The results revealed that Positive and Negative Parenting Composites are indirectly related to children's internalising behaviour problems. In addition, academic self-concept partially mediated the relationship between the Negative Parenting Composite and prosocial behaviour. However, the mediation analysis did not show the expected indirect effect of parenting styles on externalising problems as being mediated via academic self-concept. Hence, we argue that the academic self-concept serves as a significant mediator in the relationship between parenting styles with prosocial behaviour and internalising problems.

*Keywords:* academic self concept, behavioural problems, mediating effect, parenting styles.

### Impact of Parenting Styles on Children Developmental Outcome

There is widespread evidence of the effect of parenting styles on children's developmental outcomes (e.g. Batool & Bond; 2015; Goraya & Sabah, 2013; McClun & Merrell, 1998; Scharf, Wiseman & Farah, 2011). Specifically, a number of studies indicate that positive parenting styles play not only an important role in the growth of children's academic self-concept but also in reducing behavioural problems (Nishikawa, Sundbom, & Hägglöf, 2010a; also see Sangawi, Adams & Reissland, 2015 for a review). In addition, it has been shown by Hernandez (2010) that parental monitoring was a significant predictor of academic self-concept. Academic self-concept can be defined as a "person's perception of self with respect to achievement in school" (Reyes, 1984, pp. 559). This can be positive or negative depending on experience in everyday life. McClun and Merrell (1998) administering a multidimensional self-report measure to 198 children, showed that self-concept scores of children raised using an authoritative parenting style were higher than in children raised by parents using a permissive or authoritarian style. This is supported by DeDonno and Fagan (2013) whose study observed that parents who praise and are involved in their children's school activities tend to have children with higher academic self-concepts. Lau and Leung (1992) recruited a sample of 1,668 Chinese secondary school children to investigate the impact of parents' relation with their children. They found that children who had a good relationship with their parents scored higher on a number of measures of self-concept including physical, social, and academic self-concepts. In sum, positive parenting techniques are central to helping children develop their academic self-concept.

Not only do parenting styles play an important role in the development of children's academic self-concept they also are central factors in child's behavioural problems. For example, in a study reported by Essau, Sasagawa and Frick (2006), positive dimensions of

parenting, such as parental involvement and positive parenting were negatively related to conduct problems including aggression, rule violations, and non-compliance. In contrast, poor parental monitoring and corporal punishment were positively correlated with behavioural problems. A further study by Goraya & Sabah (2013) found strong positive correlations between physical discipline and externalising (e.g. rule-breaking behaviour, aggressive and attention problems) and internalising problems (e.g. anxiety, withdrawal, emotional symptoms and somatic complaints) among some Pakistani children. Overall, the findings emerging from the above studies point to the preliminary conclusion that parenting styles play an important role in children's behavioural problems.

Most research in this area concerns only direct effects of parenting styles on behavioural problems but neglects indirect effects of parenting styles on behavioural problems. Based on the previous research we can conclude that parenting styles might predict children's academic self-concept and also a negative academic self-concept directly contributes to the development of behavioural problems in children (DeDonno and Fagan, 2013; Houck et al., 2011; Pisecco, Wristers, Swank, Silva & Baker, 2001). Furthermore, previous research (Wang, Zhang, Xu, Chen & Liu, 2007) suggests that children's self-concept may act as a mediator in the relationship between parents' negative punishments and children's social behavioural problems. They reported indirect effects for specific parenting dimension and children's behavioural problems, such as parents' negative punishments influence children's social behaviour. Hence, depending on the existing associations, it is likely that parenting styles and academic self-concept can jointly predict children's behavioural problems.

However, it is unclear how much of the effect of parenting style is based on cultural differences. There is some evidence which suggests that parenting styles have different effects on child behaviours depending on cultural norms (Deater-Deckard, Dodge, Bates, &

Pettit, 1996). Given that most research on the role parenting style on children's psychological and behavioural outcomes has been conducted among Western or North American cultures, the research fails to address the importance of parenting styles on children's outcomes in Eastern cultures. This is still the case today in spite of the criticism over a decade ago by Kim & Wong (2002, p. 185) who wrote, "Today's parenting literature is dominated by concepts and measures based on Western cultures even though Asian cultures constitute approximately 60% of the world's population". Therefore, evaluating the effect of parenting styles among non-Western societies is vital in order to obtain information about the full cultural range of socialisation experiences.

Moreover, Marsh (1990a) argued that student's self-perception of academic ability affects their school performance. Basic indicators of Kurdish student achievement show that a sizable group of students in Kurdistan perform poorly. For instance, a recent study reported that in about two-thirds of urban schools, more than 50% of students failed the 2007–2008 national school assessment, and about a third of grade 9 Kurdish students failed to pass the 2008–2009 national English, physics or mathematics tests (Vernez, Culbertson and Constant, 2014). It is important, therefore, to investigate the role of academic self-concept of children in this region as it is considered to be an important prerequisite for children's social and academic life. The purpose of the present study was to determine the direct and indirect effects of parenting style on children's behavioural problems in an Eastern Culture (i.e. Kurdistan of Iraq). Specifically we examine whether academic self-concept serves as a significant mediator in the relationship between parenting styles and behavioural problems (see Figure 1).

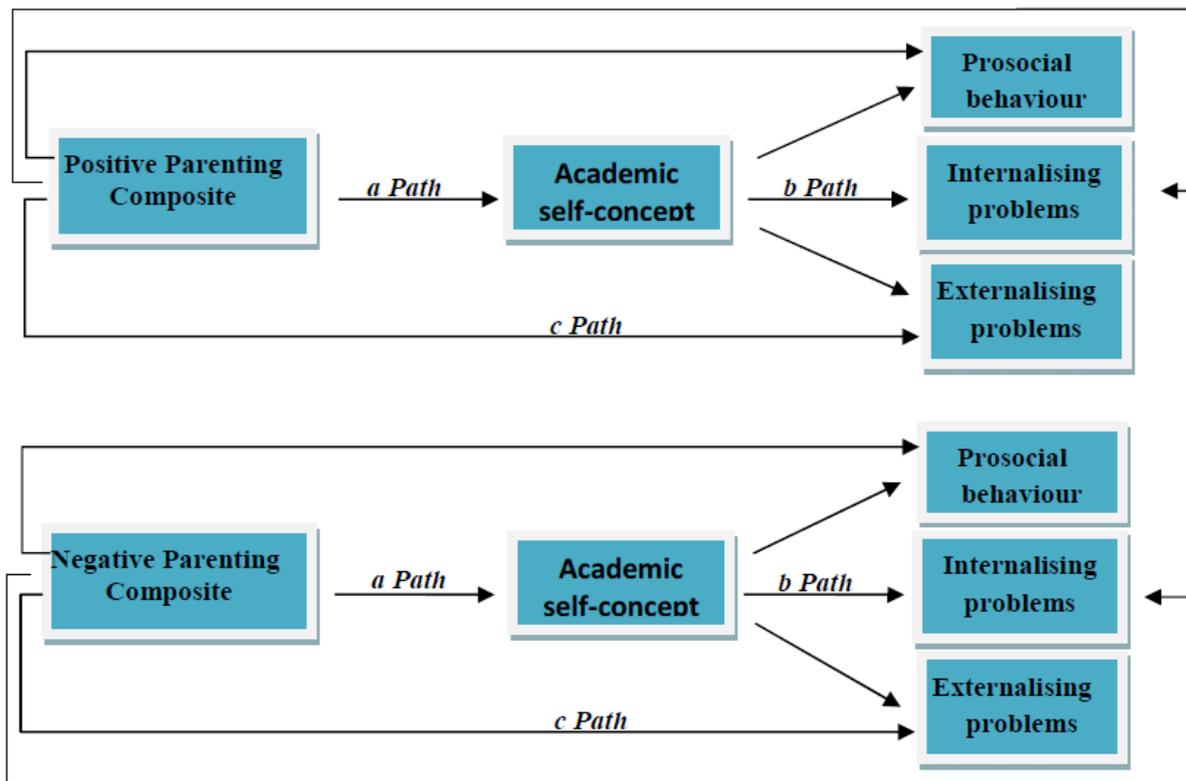


Figure1. Hypothetical model underlying the analyses conducted in this study.

## Method

### Participants

Two hundred and twenty-five sixth-grade children with a mean age 11 years 7 months (range 11 years 5 months to 12 years and 3 months) participated in the study in Sulaymaniyah city in Kurdistan region of Iraq. Twenty-six questionnaires to be completed by teachers were not returned and the data of these 26 children were taken out from the analysis. Therefore, the final sample size of the study comprised 199 children, 118 girls (59%) and 81 boys (41%). A questionnaire filled out by children provides information about their parents' demographic background, including level of education: children reported that 68 % of mothers and 62.2 % of fathers tended to have low education background (i.e. primary and preparatory school) with the remainder having obtained a high educational level with college or university education. Parental age was also reported by children (age range 30-45 years 65.5 % mothers,

59.3 % fathers and the rest ranged in age from 46-60 years), and 31.2% of mothers and 95.5% of fathers were employed outside of the home.

### **Procedure**

After obtaining access agreement from the Director of the Sulaymaniyah Education, twenty schools were chosen in different neighbourhoods in the Sulaymaniyah city. A letter requesting permission to use the school for research purposes received a positive reply from 12 schools. The research and methods were explained to headteacher, teachers and children in order for them to be familiar with the research instructions. Parental consent forms were sent via children and assured that children's responses were confidential and would only be shared with the research team.

### **Measures**

Three questionnaires were used in order to collect the data from children: Alabama Parenting Questionnaire (APQ; Shelton, Frick and Wootton (1996) to measure parenting styles, Myself-As-Learner Scale (MALS; Burden (1998) to assess academic self-concept and the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) for teachers to identify children's behaviour problems. APQ and MALS were completed by the children. Some negative aspects of parenting style are subject to a social desirability bias (Botello-Harbaum, Nansel, Haynie, Iannotti, & Simons-Morton, 2008) so children's self-reports represent a more accurate picture of parenting practice than parental self-reports (Zhou et al., 2004). It should also be mentioned that these questionnaires are considered as relatively culture bias-free and have already been used in several Eastern countries including Arabic and Iranian societies (Badahdah, Turner & Kien, 2013; Siyamak, 2011).

All the questionnaires they were back-translated to the Kurdish language. This process was performed by five professionals, including three bilingual and two native

speakers. Initially, the APQ, MALS and SDQ were translated to Kurdish by one of the professionals, and the translated copies were back-translated to English by another professional. Then, both copies (original and back-translated copy) were reviewed and compared by the third person in order to establish consistency between them. Finally, the back-translated versions were given to two native speakers of English for comments. In addition, in order to assure that these questionnaires were comprehensible to children and their teachers, a pilot study was conducted with fifteen children and eight teachers. All teachers understood the SDQ and some children asked for further explanation of two items of APQ (item 8 and 12) which needed some slight changes. Therefore, after amending these two items it was decided that the Kurdish versions of these three questionnaires were accurate and can be used for research purposes among Kurdish children. It should be mentioned that the SDQ has been translated to 83 different languages and the current Kurdish version of SDQ has been reviewed and accepted by the publisher and is available from their website <http://www.sdqinfo.com/py/sdqinfo/b0.py>.

### **Alabama Parenting Questionnaire (APQ)**

The Child Form of APQ consist of 42-items that require children to respond on a 5-point Likert scale ranging from 1 (Never) to 5(Always). The APQ covers 5 subscales; parental involvement (mother and father) that comprises of (10) items; an example of an item would be “Your mum helps you with your homework” and positive parenting (6) items; e.g., “Your parents reward or give something extra to you for behaving well”. These two dimensions can be considered as a positive composite. However, other subscales can be considered as a negative composite that includes poor parental monitoring, inconsistent discipline and corporal punishment. Poor parental monitoring consists of (10) items, such as “You go out without a set time to be home” and inconsistent discipline includes (6) items; e.g., “Your parents threaten to punish you and then do not do it” with a last subscale of corporal

punishment that contains (3) items; e.g., “Your parents slap you when you have done something wrong”.

The seven remaining items have not been classified according to a specific style, but they also assess discipline practices other than corporal punishment. These items have been included in the APQ in order to avoid an implicit negative bias for the corporal punishment items (Shelton et al., 1996). The measure of each APQ subscale was obtained by summing the scores of its items. The positive dimensions of APQ (parental involvement and positive parenting) have been combined as a *Positive Parenting Composite*. The negative dimensions (poor parental monitoring, inconsistent discipline and corporal punishment) have also been broken down as a *Negative Parenting Composite* (Garland, 2007). In the study of Garland (2007) internal consistency coefficients was reported to Positive .80 and Negative Parenting Composite .70. In the current study the APQ sub-scales reliability ranging from .61 – .79, and for the Positive Parenting Composite and Negative Parenting Composite .86 and .71 were obtained respectively.

### **Academic self-concept (ASC)**

In order to assess children’s academic self-concept, Myself-As-Learner Scale (MALS; Burden (1998) for students’ was used. The scale consists of (20 items); an example of an item include “I am good at doing test”; “I need lots of help with my work”. The scale also has five possible answers to each item (a= Yes definitely, b= Yes a bit, c= yes and No, about half and half, d= No not much, and e= Definitely not). A total score for (MALS) would be possible from 20 to100. Higher scores show high academic self-concept and vice versa for low scores. The alpha reliability in the study of Burden (1998) was.85 and in the current study.80 was obtained.

### **Strengths and Difficulties Questionnaire (SDQ)**

To measure children's behavioural problems the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) was administered. There are different formats of SDQ that can be filled in by children, parents or teachers. In the present study the teacher-form comprising questions on prosocial behaviour, hyperactivity, emotional symptoms, conduct problems, and peer relationship problems was used.

The prosocial subscale measures a positive aspect of children behaviour. Higher scores on the other four subscales reflect behavioural difficulties. The key answers for the items of SDQ scale ranges from Not True = 0 to Certainly True = 2. We followed Goodman, Lamping and Ploubidis, (2010) and combined the negative subscales (emotional + peer problems) into internalising problems and (conduct + hyperactivity symptom) into externalising problems.

Regarding reliability, certain studies have reported moderate to appropriate internal consistency, but not for all SDQ subscales. For example, in the study of Mieloo et al. (2012), using teacher reports high alpha Cronbach (higher than critical cut-off .70) was reported to prosocial behaviour and total difficulties, whereas the alpha was notably low for peer problems subscale. Consistent with Mieloo et al. (2012), the current study found Cronbach's alpha above .70 for all SDQ subscales except peer problems and for total difficulties. For internalising and externalising problems, .63 and .74 were also reported respectively.

### **Statistical Analyses**

All analyses were performed with SPSS 21.0 (SPSS Inc. 2012). Frequencies were computed using the sample's demographic characteristics. Missing values were treated by SPSS in two steps: First, the Little's MCAR test was performed to test the hypothesis whether the data are missing completely at random. This assumption must be satisfied prior to

replacing missing values with an imputation technique. The findings of Little's MCAR test indicated that the data were missing completely at random ( $P > 0.05$ ). Second, after meeting the assumption in the first step, Expectation-Maximisation Algorithm method was performed. This approach is considered to be powerful, unbiased and efficient way to deal with the missing values based on a hypothesis that missing values replaced with predicted ones (Dong & Peng, 2013). Skewness and kurtosis values for each variable were assessed based on the Kline's (2011) recommendation and no serious deviations from normality were detected. The internal consistency of the study scales was also determined by Cronbach's alpha coefficient. Correlation matrixes were determined by Pearson correlations in addition to computing the descriptive statistics (means, standard deviations) for them. The relationship between continuous-level variable and binary (dichotomous) variables was assessed by Point-Biserial Correlation. The *PROCESS* analysis by Hayes (2013) was used to create the mediation models.

## Results

### Descriptive statistics

Descriptive statistics revealed that children tended to have high level of academic self-concept and low level of behavioural problems. As shown in Table 1, the Pearson correlations indicate that parenting styles have significant relationship with the academic self-concept and behavioural problems among Kurdish primary school children.

Table 1  
Descriptive statistics and correlation matrixes between used variables

VARIABLES	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 Mother involvement	38.5	5.8																	
2 Father involvement	36.5	6.5	.68**																
3 Positive parenting	26.6	3.9	.51**	.52**															
4 Poor parental monitoring	16.0	6.4	-.20**	-.21**	-.19**														
5 Inconsistent discipline	14.6	4.2	.07	.01	.09	.10													
6 Corporal punishment	4.7	2.3	-.25**	-.28**	-.41**	.27**	.10												
7 Positive Parenting Composite	103	13.9	.89**	.91**	.73**	-.23**	.05	-.35**											
8 Negative Parenting Composite	35.2	8.7	-.18*	-.22**	-.21**	.83**	.54**	.50**	-.24**										
9 Academic self-concept	78.3	9.9	.40**	.36**	.40**	-.26**	-.02	-.30**	.44**	-.27**									
10 Prosocial behaviour	7.1	2.1	.22**	.19**	.23**	-.26**	.04	-.25**	.24**	-.24**	.21**								
11 Hyperactivity problems	3.0	1.8	-.23**	-.15*	-.22**	.33**	-.02	.23**	-.22**	.30**	-.21**	-.47**							

Note. - a = dichotomous variable; Gender (girls=1, boys=2), parental age group (1= 30- 45 years), parental education (1=low, 2= high), employment status (1=unemployed, 2= employed).\*. Correlation is significant at the 0.05 level, \*\* is significant at the 0.01 level

### **Mediation analyses**

To test whether parenting styles are indirectly related to children's behavioural problems through academic self-concept, mediation analysis were conducted. The *PROCESS* analysis by Hayes (2013) was used in creating the models. Baron and Kenny (1986) suggested that for mediation to be established, the following conditions must hold. First, the independent variable must significantly predict the dependant variable (IV\_ DV). Second, the independent variable must significantly predict the mediator (IV\_ M). Third, the mediator must be a significant predictor of the dependent variable (M\_DV) when controlling for (IV);therefore, the effect of the independent variable on predicting the dependant variable should no longer be significant (or less strongly than in condition 1) when both M and IV are simultaneously used to predict DV in the model. Importantly, the above conditions can easily be checked using the *PROCESS* analysis.

To conduct the mediation, the values of 10,000 bootstrap samples were selected and considered to be sufficient for the mediation (Hayes, 2013). The demographic variables were put in the covariates box and were only controlled for academic self-concept (mediator). This is for two reasons. First, most of the demographic variables (e.g., parental age, parental

education level, and fathers' employment status) were significantly related to the mediator rather than the outcome variables. Second, there is no an option in *PROCESS* to identify some covariates for the mediator only and other covariates for the dependant variable only.

### **Direct versus indirect effects of parenting styles**

Six mediation analyses were tested using *PROCESS* for the only combined variables (i.e. *Positive and Negative Parenting Composites*) as predictors and (prosocial behaviour, internalising and externalising problems) as outcome variables (Figure 2). Consequently, for the direct relationships between parenting styles and behavioural problems (without the mediator), it was found that *Positive Parenting Composites* directly predict prosocial behaviour ( $R^2=.071$ ,  $B = .036$ ,  $p < .005$ ), internalising problems, ( $R^2= .035$ ,  $B = -.033$ ,  $p < .01$ ), and externalising problems ( $R^2=.065$ ,  $B = -.052$ ,  $p < .001$ ). Likewise, results revealed that *Negative Parenting Composites* predict prosocial behaviour ( $R^2=.055$ ,  $B = -.056$ ,  $p < .001$ ), internalising problems ( $R^2=.023$ ,  $B = .042$ ,  $p < .05$ ), and externalising problems ( $R^2=.083$ ,  $B = .094$ ,  $p < .001$ ). These findings illustrate that *Positive and Negative Parenting Composite* were uniquely and directly predicted Kurdish children's prosocial behaviour, internalising and externalising problems. The results of this analysis also indicated that the first condition for mediation has been satisfied; the IV \_ DV is significantly related to each other (c path).

Moreover, the results showed that both *Positive and Negative Parenting Composites* significantly and directly predict academic self-concept ( $R^2=.25$ ,  $B = .28$ ,  $p < .001$ ) and ( $R^2=.188$ ,  $B = -.33$ ,  $p < .001$ ), respectively. These significant relationships also showed that the second condition (IV \_ M) for mediation has been met (a path).

With respect to the relationship between the mediator and dependent variables, while controlling for the independent variables (M\_DV), only three significant relationships were

found (b path). It was found that academic self-concept significantly predicted prosocial behaviour ( $R^2=.077$ ,  $B = .032$ ,  $p < .05$ ) when controlling for *Negative Parenting Composites*, whereas the prediction was not the case when controlling for *Positive Parenting Composites*. In addition, academic self-concept significantly predicted internalising problems, but did not predict externalising problems, while controlling for both parenting composites. Hence, the results of this analysis indicated that the third condition for mediation has been satisfied for three significant analyses only.

Regarding the indirect effect, of the six mediation analyses three potential indirect effects were noted. Specifically, it was observed that the direct effect of both *Positive and Negative Parenting Composites* on internalising problems became non-significant when academic self-concept, as a proposed mediator, was simultaneously presented in the model, ( $B = -.020$ ,  $p = .149$ ; and  $B = .028$ ,  $p = .168$ ). The indirect effect of *Positive Parenting Composites* was  $(-.012, CI [-.025, -.003])$  and for *Negative Parenting Composites* was  $(.015, CI [.005, .033])$ . In addition, it was found that academic self-concept partially mediated the relationship between *Negative Parenting Composites* and prosocial behaviour ( $B = -.046$ ,  $p = .007$ ), and the indirect effect was  $(-.010, CI [-.024, -.002])$ .

Therefore, the mediation analysis confirmed that academic self-concept emerges as mediator in the relationship between both *Positive and Negative Parenting Composites* and the internalising problems. In addition, academic self-concept showed a small and partial mediation role in the association between *Negative Parenting Composites* and prosocial behaviour. However, the mediation analysis found no significant indirect relationship between parenting styles and externalising problems through academic self-concept.

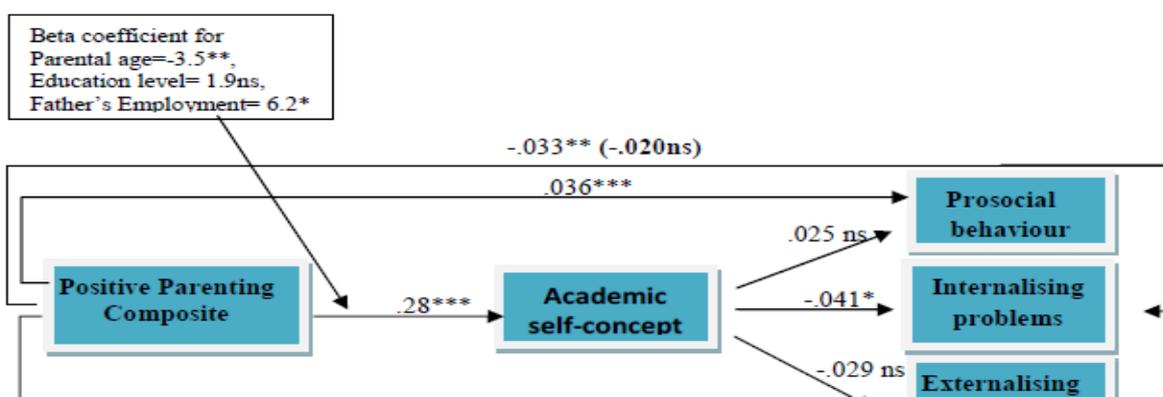


Figure2. Results from PROCESS shows indirect effect of parenting styles on behavioural problems through academic self-concept, \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .005$ , \*\*\*\* $p < .001$

### **Discussion**

The central research question of this study was whether academic self-concept acts as a significant mediator in the relationship between parenting styles and children's behavioural problems. The descriptive results revealed that children tended to have high level of academic concept and low level of behavioural difficulties. The results of the correlation analyses also indicate that apart from the inconsistent discipline dimension all parenting subscales were, independently and in combination, correlated to the academic self-concept and behavioural problems. These findings support the study of DeDonno and Fagan (2013) and Essau et al. (2006) reporting the vital role of parenting styles on children's academic self-concept and behavioural problems. Thus, the findings of the current study found that parenting styles are central factors in children's developmental outcomes in Eastern societies in general and specifically in Kurdish Society, and the results are inconsistent with the argument in the

literature (e.g. Leung, Lau and Lam, 1998) claiming that parenting styles are least effective of non-Western societies compared to Western societies.

In terms of the direct effect for combined variables, the findings indicate that some of the variance for academic self-concept, prosocial behaviour, internalising and externalising problems can be explained by *Positive and Negative Parenting Composites*. These findings are in the direction as predicted—as the composite of positive parenting dimensions increases, academic self-concept and prosocial behaviour levels also increase; conversely, the level of internalising and externalising problems declines. The opposite is also true for our analyses of *Negative Parenting Composites*. Although we found no evidence in the literature for the impact of parenting on Kurdish children's outcomes, the findings are consistent with much of the previous literature using Eastern samples (e.g., Goraya & Sabah, 2013; Yang, Kuo, Wang & Yang, 2014) all of whom found that parenting style has significant effects on children's psychological and behavioural outcomes. This cultural consistency in parenting styles might be explained in terms of the fundamental changes in Kurdistan region, particularly in education, women's work, rights and freedom during the recent decade compared to the past decades. These reasons might have become responsible for the similarity of parenting styles between Kurdish and Western mothers in terms of their impact on children developmental and psychological outcomes.

Regarding the indirect effect of the six mediation analyses, three potential indirect effects are evident. Specifically, *Positive and Negative Parenting Composites* were indirectly linked to internalising problems via academic self-concept, suggesting that academic self-concept plays an important role in the parenting - internalizing problems association. In addition, the mediation analysis also confirmed a small or partial mediating role for academic self-concept on the relationship between *Negative Parenting Composite* and prosocial behaviour, suggesting that a negative style of parent-child rearing is related to academic self-

concept, which in turn is related to children's prosocial behaviour. The findings are also in part consistent with those of Wang et al. (2007), who found that children's self-concept plays a mediating role in the relationship between parents' negative punishments and children's social behaviour.

Our mediation analysis did not show any significant indirect relationships between parenting styles and externalising problems being mediated through academic self-concept. This finding is also in some point harmony with the study of Nishikawa et al. (2010b) who found that self-concept confirmed the mediating role in the in the relationships between attachment and internalising problems, but not externalising problems. We suggest that this unexpected result is due to the fact that associations between parenting styles (as the predictor) and externalizing problems are stronger than the association with internalising problems. For instance, based on the magnitude of standardized beta weights, the direct association between both *Positive and Negative Parenting Composites* with externalising appeared stronger ( $\beta = -.052, p < .001$  and  $.094, p < .001$ ) than internalising ( $\beta = -.033, p < .01$  and  $.042, p < .05$ ) problems. In addition, based on the Pearson coefficient, the associations between both parenting composites with externalising were higher ( $r = -.26$  and  $.29$ ) than internalising problems ( $r = .15$  and  $-.19$ ).

To summarize, we found that if parents can provide a high level of positive parenting and a low level of negative parenting, their children's academic self-concept increased and their level of behavioural problems could potentially decrease. Although there are some arguments in the literature claiming that parenting styles are least effective for non-Western society, the present study found in contrast that parenting styles play a significant role in children's developmental outcomes in Eastern society. The *PROCESS* analysis showed that parenting styles are indirectly related to internalising problems as mediated through academic self-concept. In addition, academic self-concept was found to partially mediate the

relationship between *Negative Parenting Composites* and prosocial behaviour. These results suggest that parents and educators need to pay more attention to the importance and necessity to enhance the academic self-concept when dealing with children's internalising problems, particularly problems related to their emotional aspect, social and peer relationships at school.

The strengths of this study include its focus on parenting styles and the outcomes for children in a non-western culture, and the focus on mediated (indirect) relations between parenting styles and children's behavioural problems through children's academic self-concept. However, the current study has some methodological limitations which should be taken into account. First, the results of the current study were limited because the sample is limited to Kurdish children; as such, the findings of this study might not be generalisable to children of other ethnic groups. Second, the current study was cross-sectional. It is likely that the outcomes for children impact the child-rearing practices of parents, which the current study did not provide the possible findings to show this causal hypothesis. A longitudinal study should be undertaken to assess children's academic self-concept and behavioural problems in order to enable stronger conclusions. Furthermore, it is important to recognise that gender differences and some other demographic variables in the model should be taken into account. It is possible that boys may be treated differently to girls in terms of parental monitoring. Therefore, future larger studies should examine the potential moderating role of gender in the relationship between parenting styles and outcome variables which was not the main aim of the present study. In addition, it remains unclear whether the same results would be found in other age groups such as adolescents, something which future research might help to elucidate.

### **Implications for practice**

The results of this study are consistent with the findings of the majority studies in the literature emphasising the importance of the academic self-concept in children social and

academic life. We suggest that parenting styles can affect academic self-concept which in turn may impact the level of internalising problems. Children with poor academic self-concept might also have problems with self-esteem in general. Furthermore, since academic self-concept has been shown to be an important factor in academic achievement, the findings of the study suggest that experts such as primary care professionals, educators and psychologist have an important role to play in enhancing children academic self-concept. Our results suggest that parenting style has a direct impact on academic self-concept and behavioural problems for their children. Therefore, supporting parents in attending educational intervention is an important factor supporting in parental strategies to reduce their negative effects which ultimately have long-term implications for children's psychological and behavioural wellbeing.

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