



## Family Correlates of Child Outcomes among Rural Malay Families

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### ABSTRACT

The study examined the relationship between familial factors (i.e. number of children, economic strain, marital quality and parental nurturance) and child outcomes (self-esteem and academic achievement) among rural Malay families. The participants comprised 200 parents with a child aged from 7 to 12 years. Findings indicated that children with higher self-esteem tended to have parents with positive parental behaviour and come from families with high economic strain. Economic strain also was found to significantly correlate with children's academic achievement. These findings imply a significant contribution of parental nurturance and economic strain on children's self-esteem and academic achievement.

*Keywords:* Economic strain, marital quality, parental nurturance, self-esteem, academic achievement

### INTRODUCTION

Self-esteem has long been viewed as a requisite for healthy personal development. The prominent role played by self-esteem in defining human nature can be found in most theories of personality (Adler, 1958; Maslow, 1968). Coopersmith (2002, p. 1) defines self-esteem as "a set of attitudes and beliefs that a person brings with him or

herself when facing the world. It includes the beliefs as to whether he or she can accept success or failure, how much effort should be put forth, whether failure at a task will 'hurt', and whether he or she will be capable as a result of different experiences". Positive self-esteem may serve as a buffer against negative outcomes, which is very important in children's development (Ruiz *et al.*, 2002). Academic achievement has been indicated as a means to acquiring personal advancement, higher social status, wealth and respect for the individual, family or community (Magnuson, 2007). In relation to the educational setting, Steinberg,

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Dornbusch and Brown (1992) stated that achievement is related to the evaluation of the student's success in his or her grade point averages, test scores, awards, acquired skills and abilities (in both academic and life skill domains), career preparation and content-based knowledge educational attainment (the number of schooling years completed).

The ecological framework (Bronfenbrenner, 1986) suggests that the development of children depends on resources (e.g. number of children) and processes (e.g. economic strain, marital quality and parental nurturance) that are available in the family. Consistent with the ecological theory, prior studies have found significant relationship between family factors and children's self-esteem (e.g. Zarinah *et al.*, 2006; Rudy & Grusec, 2006; Shek, 2000) and academic achievement (e.g. Ferguson, 1991; Sun, 2001; Leung *et al.*, 1998; Boon, 2007).

Previous studies (e.g. Ellsberg *et al.*, 2000; Flake & Forste, 2006;) on families have considered large family size as a risk factor that may have negative impact on the development of a child. Similarly, other studies have also suggested that large family size poses a risk factor for children's mental health and behaviour, which may have negative effects later in life (Fisher *et al.*, 1997). This may be explained by the fact that as the number of children in the family increases, there are often less resources to share, less parental involvement and more stress in relations to child-rearing. Nevertheless, previous studies have shown mixed results in relation to the linkage between

number of children and child outcomes. For instance, a study by Zarinah *et al.* (2006) found that the number of children was only significantly correlated to self-esteem, but not to academic achievement among children living in the rural areas in Malaysia. Similarly, Casanova *et al.* (2005) found that the number of siblings was not significantly correlated with academic achievement among students with low and normal achievement. On the other hand, Ferguson (1991) found that family size was only modestly related to children's achievement.

Economic strain is always tied to the number of earners and the amount of income brought into the family, unpaid contributions to the family's economy and the needs of family as determined by family size and composition (Voydanoff, 1990). Studies on the role of economic strain on children's self-esteem are sparse in the literature. Most of the studies have focussed on the indirect relationship between economic strain and children's self-esteem through family processes such as parental nurturance (Ho & Lempers, 1995; Solantaus *et al.*, 2004), parental depression (Conger *et al.*, 1993; Mistry *et al.*, 2004; Forkel & Silbereisen, 2001; Solantaus *et al.*, 2004), and parental marital relationship (Sobolewski & Amato, 2005; Solantaus *et al.*, 2004). Thus, the results of this study may contribute to the literature on the relationship between economic strain and children's self-esteem. Reviews of the literature generally conclude that financial hardship increases the risk of a variety of problems for children, including

academic failure and impaired cognitive development (Seccombe, 2000; Robila & Krishnakumar, 2006). Parents who lack income and other financial assets cannot afford to purchase commodities (e.g. books, educational toys and personal computers) needed to facilitate children's success in school and progress in education. For instance, poor children who managed to graduate from high school with passing grades may fail to further their education because their parents usually cannot afford to help with college expenses.

Marital quality is another familial factor highlighted in the literature on developmental and socialisation processes. In general, research examining the relation between marital quality and child outcomes has demonstrated mixed findings between these two constructs. Some studies have shown that marital quality was significantly correlated to children's self-esteem (Pawlak & Klein, 1997; Shek, 2000) and school achievement (Feldman *et al.*, 1990; Sun, 2001). Others, such as Acs (2005) found that the quality of parental marriage did not affect children's mathematics and reading scores. Similarly, Rumaya and colleagues (2004) found that marital quality was not related to children's academic achievement in the rural areas of Malaysia.

Literature has also shown that parents who use authoritative parenting (characterised by warmth, strict, consistent, supportive and nurturing behaviour) tend to have children with higher self-esteem (Pawlak & Klein, 1997; Ruiz *et al.*, 2002; Parker & Benson, 2004; Zarinah *et al.*,

2006) and academic achievement (Leung *et al.*, 1998; Boon, 2007). On the other hand, children of authoritarian (characterised by traits of control, strict rules and expectation, and supervision) or permissive (characterised by traits such as few standards of behaviour, avoid punishing the child, and inconsistent rules) parents have been found to have lower self-esteem (Rudy & Grusec, 2006) and academic performance (Koutsoulis & Campbell, 2001).

In sum, the ecological theory and the reviewed literature indicate that family factors affect the development of children. This study, therefore, examined the relationship between familial factors (namely number of children, economic strain, marital quality and parental nurturance) and child outcomes (self-esteem and academic achievement) among rural Malay families.

## METHODS

### *Sample and Procedure*

The sample consisted of 200 (97 mothers and 103 fathers) members of the second generation of Federal Land Development Authority (FELDA) settlers with a focal child of 7 to 12 years living in the home. The purpose of FELDA is to help the government to carry out rural land development schemes and to improve the economic status as well as living standards of poor rural communities. A lot of aid and facilities are provided continually to second generation FELDA settlers in terms of educational, spiritual and physical development.

All the participants were Malay and residing in FELDA schemes in Negeri Sembilan and Pahang, two states in Malaysia. Therefore, in terms of ethnicity, the selected families are not a representative of the Malaysian multiethnic population. Negeri Sembilan and Pahang were purposively selected as the location of the study based on the following considerations: (1) the availability of second generation FELDA families that would facilitate the selection of respondents based on the discussion with FELDA's Director of Community Development in Kuala Lumpur (2) the availability of study resources (finance, manpower) and (3) the accessibility of the respondents.

Prior to data collection, approval was obtained from FELDA's Director of Community Development at the FELDA headquarters in Kuala Lumpur and the Director of FELDA in Negeri Sembilan and Wilayah Mempaga, Pahang. This study selected only 10 out of 21 FELDA schemes given by FELDA's headquarters that had a high probability of obtaining the respondents who fulfilled the criteria using simple random sampling. The 10 selected schemes included four FELDA schemes in Negeri Sembilan (Felda Bukit Jalor, Felda Bukit Rokan, Felda Pasir Besar and Felda Sg. Kelamah) and six FELDA schemes in Pahang (Felda Bukit Kepayang, Felda Bukit Mendi, Felda Lurah Bilut, Felda Bukit Puchong, Felda Mayam and Felda Cemomoi).

The participants were identified through a list of names of married second generation

FELDA settlers who were eligible for the study obtained from 10 selected FELDA settlements using simple random sampling. The participants were interviewed face-to-face by the researchers and trained assistants using a set of standardised questionnaires at their homes. This method permitted the collection of the most extensive data about each participant (Salkind, 2006; Tan, 2004). Prior to the interview, a briefing on the objectives of the study was given and permission to participate in the study was also sought from the participants. A token of appreciation was given to the participants upon completion of the questionnaire.

#### *Measures*

**Economic strain.** This was assessed using the Economic Strain Scale (ESS; Pearlin *et al.*, 1981) which consisted of nine items focussing on family's difficulties in acquiring the necessities of life (e.g. food, clothing, housing and medical care) and some of its more optional accoutrements (e.g. furniture, automobiles and recreation). Some of the items included were, 'I have enough money for treatment and medication for family as needed', 'My money was never enough as needed' and 'I don't have enough money to pay bills'. The responses were rated on a 4-point scale ranging from 1=strongly disagree to 4=strongly agree. Seven items were reverse-scored to ensure that higher scores indicated higher levels of economic strain. This measure (ESS) has been used with a variety of populations. In Simons *et al.* (1992), the alpha coefficients were 0.88 and 0.89 for males and females

respectively, whereas in Mayhew and Lempers (1998), the alpha coefficients exceeded 0.70 for both male and female respondents. The alpha coefficient derived in the study by AnjliPanalal (2004) based on a Malaysian sample was 0.77, and this indicated a good internal consistency of the scale. For this study the alpha coefficient for the ESS was 0.80.

**Marital quality.** This was measured using the modified Kansas Marital Satisfaction Scale (KMSS; Schumm *et al.*, 1986) by Rumaya (1997), who had added an item that shows affection in one's relationship. The three original items by Schumm *et al.* (1986) were, "How satisfied are you with your marriage?", "How satisfied are you with your relationship?" and "How satisfied are you with your wife/husband as a spouse?" The added item was, "How satisfied are you with expression of love in your marriage? The items were rated on a 7-point scale (from 1=extremely dissatisfied to 7=extremely satisfied). Cronbach's alpha for the modified version of the KMSS in Rumaya's (1997) study ranged from 0.93 to 0.95. In a local study, Noralina (2001) recorded a reliability coefficient of 0.95. Cronbach's alpha for the KMSS in this study was 0.95.

**Parental nurturance.** This was assessed using the 24-item Parental Nurturance Scale (PNS; Buri, 1989). The scale had been translated into Bahasa Malaysia using back-to-back translation method. Based on a scale ranging from 1=strongly disagree to 5=strongly agree, the participants rated their warmth, care, understanding and

supportiveness towards their children. Some of the items included, "My child is an important person in my eyes" and "I am warm and caring." Negative items were reverse-scored and higher scores indicated higher levels of parental nurturance. Buri (1989) found that the scale had good internal reliabilities in excess of 0.90 for both mother's and father's nurturance. The concurrent, predictive and construct validity of the scale have also been well established (e.g. Buri, 1989; Buri & Muller, 1993; Hopkins & Klein, 1993; Watson *et al.*, 1993; Pawlak & Klein, 1997). Cronbach's alpha for the PNS in this study was 0.80.

**Self-esteem.** This was measured using the modified Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). In the original RSES, the respondent rates his/her own self-esteem. However in this study, the parents rated their children's self-esteem. Their responses were measured on a scale ranging from 1=strongly disagree to 4=strongly agree. Five negative items were reverse-scored and higher scores reflected higher levels of self-esteem. Some examples of the items included, "My child feels that he/she is a person of worth", and "My child takes a positive attitude towards him/herself". In a local study, the scale was used by AnjliPanalal (2004) to measure a child's self-esteem from the perspective of a mother, and the alpha coefficient was recorded as 0.63. In this study the alpha coefficient for the RSES was 0.71.

**Academic achievement.** This was assessed based on a child's scores on four selected subjects: the Malay language,

English, Science and Mathematics in school final exam. The possible cumulative minimum and maximum scores were 0 and 400. The higher the score, the higher the academic achievement would be.

#### **Socio-demographic characteristics.**

Participants completed a brief demographics form that assessed age, sex, number of years of education, family monthly income, child focal age and child focal sex.

#### *Data Analysis*

Firstly, a descriptive analysis was conducted to provide a clearer picture of the data distribution. Secondly, the magnitude and strength of the relationship of study variables were quantitatively measured using Pearson product-moment correlations. Thirdly, the multiple regression analysis using the hierarchical procedure was conducted to determine the best set of predictors of child's self-esteem and academic achievement while controlling the socio-demographic characteristics (i.e. participant's age, participant's sex, participant's education, family monthly income, child's age and child's sex).

## **RESULTS**

### *Socio-Demographics Characteristics*

The mean age of participants involved in the study was 36.6 years old ( $SD = 5.7$ ). On average, they had been married for about 13 years and had completed about 10 years of formal education ( $SD=1.9$ ). Financially, the participants involved in this study had lower family income per month

( $M=RM932.4$ ,  $SD=604.0$ ) than the national average household income for rural area (RM2545) (Department of Statistics, 2009). They seemed to have a considerably large number of children ( $M=3.7$ ,  $SD=3.7$ ) which exceeded the average size of the Malaysian family of 2.76 (Ninth Malaysia Plan 2006-2010). The mean age of the focal child was 9.6 years. The sex distribution showed that there were slightly more males (58%) than females (42%) of the focal child.

### *Relationships between Socio-demographic Characteristics, Familial Factors and Child Outcomes*

Correlational analysis were used to explore the relationships among the study variables in the study (Table 1). The results showed that none of the socio-demographic characteristics was significantly correlated with child's self-esteem. The findings revealed that parent's education ( $r=.20$ ,  $p<.01$ ), family monthly income ( $r=.15$ ,  $p<.05$ ) and child's sex ( $r=.20$ ,  $p<.01$ ) had positive and significant relationship with child's academic achievement. Child's age was found to significantly correlate with child's academic achievement ( $r=.17$ ,  $p<.05$ ). For familial factors, it was found that economic strain had significant negative relationship with child's self-esteem ( $r=-.21$ ,  $p<.01$ ), while marital quality ( $r=.15$ ,  $p<.05$ ) and parental nurturance ( $r=.31$ ,  $p<.01$ ) had positive relationships with child's self-esteem. However, the study did not detect any significant relationship between familial factors and child's academic achievement.



TABLE 1  
Correlation Matrix of Study Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Participant's age	-											
2. Participant's sex	-.32	-										
3. Participant's education	.04	-.07	-									
4. Family monthly income	.18	.04	.34**	-								
5. Child's age	.36**	.01	.02	.09	-							
6. Child's sex	.03	-.02	-.02	-.03	-.02	-						
7. Number of children	.30**	.01	-.10	.13	.34**	-.07	-					
8. Economic strain	.09	.06	.19**	.25**	.19**	-.17*	.01	-				
9. Marital quality	-.00	-.21	.03	.02	-.03	.02	-.03	0.00	-			
10. Parental nurturance	-.04	.02	.11	.09	.08	-.00	0.02	0.17*	0.29**	-		
11. Self-esteem	-.03	-.06	.06	-.02	-.01	.03	0.05	0.21**	0.15*	0.31**	-	
12. Academic achievement	-.06	-.09	.20**	.15*	-.17*	.20**	-.010	0.14	0.07	0.09	0.10	-

Note: Participant's sex: 1=Female, 0= Male

Child's sex: 1=Female, 0= Male

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

*Predictors of Child Self-Esteem and Academic Achievement*

Hierarchical regression analysis was computed to examine the relative strength of the four familial factors in predicting the children's self-esteem and academic achievement while controlling for the effect of socio-demographic characteristics of participants and children. Analysis of predictors of children's self-esteem and academic achievement are presented

in Table 2. A preliminary analysis was conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. The first model illustrates that the socio-demographic characteristics of parents and children are entered as controls for child's self-esteem (Model 1a) and academic achievement (Model 1b). The second model examines familial factors, namely number of children, economic strain, marital quality

TABLE 2  
Standard Regression Coefficients ( $\beta$ s) Predicting Child Outcomes

Predictors	Child Outcomes			
	Self-Esteem		Academic Achievement	
	Model 1a	Model 2a	Model 1b	Model 2b
<i>Socio-demographic Characteristics</i>				
Participant's age	-.06	-.06	-.07	-.07
Participant's sex	-.08	-.09	-.10	-.11
Participant's education	.05	.01	.16*	.14*
Family monthly income	.02	-.05	.13	.10
Child's age	.01	-.08	-.16*	-.19*
Child's sex	.03	.07	.21**	.23**
<i>Familial Factors</i>				
Number of children		.10		.01
Economic strain		.22**		.17*
Marital quality		.05		.02
Parental nurturance		.26**		.05
R <sup>2</sup>	.01	.15	.14	.17
R <sup>2</sup> change	.01	.14	.14	.03
F	.36	3.32**	5.03**	3.73**
F change	.36	7.70**	5.03**	1.69

Note: Participant's sex: 1=Female, 0= Male

Child's sex: 1=Female, 0= Male

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



and parental nurturance, which were added simultaneously to determine the significant predictors for child's self-esteem (model 2a) and academic achievement (model 2b), after taking into account socio-demographic characteristics.

As shown in Table 2, Model 1a, socio-demographic characteristics explained 1% of the variance in child's self-esteem. After entering familial factors in model 2a, the total variance explained by the model as a whole was 15%,  $F(10,189)=3.32, p<.01$ . The four variables of familial factors explained an additional 14% of the variance in child's self-esteem, after controlling for socio-demographic characteristics,  $R$ -squared change=.14,  $F$  change (2, 189)=7.70,  $p<.01$ . In the final model, only economic strain and parental nurturance were statistically significant, with parental nurturance the strongest predictor of child's self-esteem ( $\beta=.26, p<.01$ ) followed by economic strain ( $\beta=.22, p<.01$ ).

In Model 1b, as explained earlier this study is undertaken to control for the variation in socio-demographic characteristics which could impact the child's academic achievement. The results showed (Model 2b) that only one out of four familial factors which was economic strain ( $\beta=.17, p<.05$ ) could significantly predict the child's academic achievement after controlling for the preceding factors. However, the addition of familial factors to the model decreased the overall model fit in predicting the child's academic achievement,  $R$  change=.17,  $F(10, 189)=3.73, p<.01$ .

## DISCUSSION AND CONCLUSION

This study examined the relationship between familial factors and child outcomes among rural Malay families. Surprisingly, based on a hierarchical regression analysis, this study found that as the level of economic strain increased, the level of self-esteem and academic achievement among children tended to increase after controlling socio-demographic characteristics. These findings are contrary to a study by Robila and Krishnakumar (2006) that found financial hardship increased psychological disorders and academic failure among children because parents could not provide a healthy environment during times of economic difficulties. The findings of this study showed that the children of second generation FELDA settlers had successfully adapted to their high family economic strain that made them more resilient. According to Masten *et al.* (1990), resilience is "the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances."

Another main finding of this study indicates that parental nurturance was the strongest predictor of child's self-esteem in comparison to other familial factors in the model. This finding shares important consistencies with other similar studies, which seem to support that positive parenting behaviour increases the level self-esteem of children (Morvitz & Motta, 1992; Pawlak & Klein, 1997; Ruiz *et al.*, 2002; Parker & Benson, 2004). The result of this study showed that the child's academic achievement was not affected by the number

of children in the family, which is consistent with the findings by Cassanova *et al.* (2005) and Zarinah *et al.* (2006).

Overall, the findings support the theory that child development may be influenced by a myriad of factors that are present within the ecosystem of the family (Bronfenbrenner, 1979). The unexpected relationship between economic strain and children's self-esteem and academic achievement in this study showed that children are resilient. Children whose parents were warm, caring, understanding and supportive tend to have a higher level of self-esteem. Therefore, family professionals are encouraged to consider the roles of economic strain and parental behaviour when organising programmes to foster child development.

Limitations of this study highlight directions for future research. First, the findings from the regression analysis indicate that the variables specified in the models do not account for most of the original variability. Clearly, there are other important variables which are related to the two dependent variables tested that were not accounted for in this study. Moreover, this study only included four familial factors as independent variables (i.e. number of children, economic strain, marital quality and parental nurturance). Therefore, any future studies carried out on Malaysian families will require a more in-depth look at other key family variables such as family functioning and parent-child relationship. A second limitation lies in the sample of this study i.e. it involved only Malay families

with primary-school-age children (7 to 12 years old) in the rural areas. This, thus, limits the extent to which the findings can be generalised to a more diverse population. The findings of the study will need to be replicated with a more heterogeneous population that includes other ethnic groups, different family structures and social classes to determine whether the findings hold true in contexts with different cultural values, lifestyles, occupational variations and opportunities. Third, this study focussed on two aspects of child outcomes i.e. self-esteem and academic achievement. It would be interesting if other aspects of child outcomes were also employed in this study. Finally, conclusions about the direction of effects cannot be made regarding the relation between family characteristics and child outcomes because of the cross-sectional nature of the data. It would certainly be interesting to include more time points over longer a period of time.

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