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## **Does Quality Child Care Centre Shape Children's Behaviour? A Case Study of IIUM EDUCARE**

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### **ABSTRACT**

This paper discusses the role of child care centre in shaping children's social behaviour. It hypothesizes that quality child care affects children's social behaviour. More specifically, it is assumed that high quality child care will predict positive social behaviour in children. 100 parents of children aged 4 to 5 year old at the IIUM EDUCARE, Gombak participated in this study. Data were collected via survey and observations using measures such as the Early Childhood Environmental Rating Scale-Revised [ECERS-R] (Harms, Clifford, & Cryer, 1998), the Caregiver Interaction Scale [CIS] (Arnett, 1989), and the Adaptive Social Behaviour Inventory [ASBI] (Hogan, Scott & Bauer, 1992). Results indicated that the aspect of caregiver child interaction significantly associated with children social competency. Findings also suggested that the role of quality child care varied as a function of family variable. These results provide useful information in understanding the significant role of child care centre in child development.

*Key words: child care quality, caregiver –child interactions, family relationship, children's social behaviour*

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### **INTRODUTICON**

The number of employed women has increased in Asian countries, and elsewhere in the world (ILO, 2010). Similarly, Malaysia is also experiencing an increasing number of employed women in the workforce, particularly women with young children. The Malaysian Ministry of Women, Family and Community Development (2010) reported that the numbers of employed mothers with children has increased greatly from 3.24 million in the year 2000 to 3.94 million in 2009. One reason that more women with young children participate in the workforce than a decade ago could be a result of the increased accessibility to child care services. In Malaysia alone, the number of registered child care

centres has increased from 47 in 1995 to 1, 831 in 2007 (Ministry of Education Malaysia, 2007; Peng, 2007).

In line with the government encouragement to establish child care centre within organization, the International Islamic University Malaysia (IIUM) has established child care centres for its staffs since 1995. There are currently three centres operating in Gombak, Petaling Jaya and Kuantan campus. These child care centres, which cater children from two months until six years old, are open from 7.40 in the morning until 6.00 o'clock in the evening. The IIUM Educare Sdn. Bhd manages all these centres from its main office in IIUM Gombak campus. It operates under a board of directors whose personnels are accountable for the monitoring and ongoing improvement of the centres. Although there are three centres available, this study focuses on the one in Gombak campus because it has the highest rate of children's enrollment. Another reason for selecting this particular centre was that despite the high number of children in attendance at the Gombak campus centre, the relationship between attending the child care and children developmental outcomes are largely unknown. Furthermore, there is a lack of information available to parents on whether they still play a significant role in children's development after the latter enters child care centre. For these reasons, it seems warranted to investigate possible issues associated with child care centre and to further examine the relationship between child care attendance and childhood development.

## **LITERATURE REVIEW**

Studies on the relationship between child care centre and children's developmental outcomes have suggested that the association between child care and children's development is related to child care, children, and family variables (NICHD Early Child Care Research Network, 2005a, Harrison & Ungerer, 2000; Ackerman-Ross & Khana, 1989; Pluess & Belsky, 2010). There has been a great deal of research concerning child care variables that influence child development. Quality and quantity of child care are those variables that have found significantly influence child developmental outcomes (Belsky & Rovine, 1988; Howes, 1990). In terms of child care quality, many studies have indicated that both structural and processes features can influence child development. Structural features (i.e., ratio, group size and caregivers' qualification or training) indirectly influence child development while processes features (i.e., caregiver interactions, attitudes and classroom practices) directly influence child development (NICHD Early Child Care Research Network, 2000; Burchinal & Cryer, 2003). Out of many processes features, overall classroom practices and caregiver interaction have been found consistently influence child developmental outcomes across cultures.

Studies that examined classroom practices using the Early Childhood Environmental Rating Scale – Revised – ECERS-R (Harms & Clifford, 1980; Harms, Clifford, & Cryer, 1998) suggested that observed classroom practices were related to children's social competency, with high overall score of classroom practices positively associated with children's social adjustment (Phillips, McCartney, & Scarr, 1987). Another study suggested that even moderate level of overall classroom practices could significantly influence children social developmental outcomes (Burchinal, Peisner-Feinberg, Bryant, & Clifford, 2000). Children who belong to classroom rated as 'moderate level of quality' were rated higher in social skills measure than their peers who belong to classroom that rated as 'low level of quality' (Burchinal, Peisner-Feinberg, Bryant, & Clifford, 2000). Hence, overall classroom practices that ranged from moderate to high could influence children social skills and competency.

Studies on the relationship between caregiver child interactions have shown that closeness of the caregivers and child relationship was related to both cognitive and social skills at 4 to 8 years old (Pianta,

1992), with strong implications being for social outcomes (Peisner-Feinberg, Burchinal, Clifford, Culkin, Howes, et al., 2001). NICHD Early Child Care Research Network (1996; 2002) indicated that more positive caregiving is significantly related to better or higher social competence and fewer social problems at 24 and 36 months, also better linguistic, cognitive, and pre-academic functioning at 15, 24, 36 and 54 months (NICHD Early Child Care Research Network, 1998, 2000, 2002). Recent studies in Australia that have examined the relationship between the levels of cortisol reactivity (i.e., that regulate stress) and quality caregiver and child interactions have shown that classroom that were rated as high in positive relationship between caregiver and children were found to be associated with lower levels of cortisol reactivity in children (Sim, Guilfoyle, & Parry, 2005; 2006). Taken together, these findings suggest that quality care (characterized by overall classroom practices and caregiver child interactions) significantly influence children's social developmental outcomes. In relation to the past studies, this study predicted that overall classroom practices and caregiver child interaction that are experienced by the children have effect on children social development. The higher the rating for overall classroom practices the higher the score of social competency of children. Also, this study assumed that sensitive caregiver child interaction positively influence children's social competency while harsh caregiver child interaction negatively influence children's social competency.

In the past, several studies that examined the effect of child care on children's development have demonstrated that family factors can have a direct and indirect significant influence on children's social developmental outcomes. NICHD Early Child Care Research Network (1997) suggested that maternal responsiveness and sensitivity significantly predicted infants' secure behaviour at 15 months, the effect of hours in a week on infants attachment behaviour depends on maternal sensitivity and responsiveness. Infants who attend child care centre high amount of hours in a week were rated low in secure attachment behaviour when their mothers were not responsive and sensitive. Another study by NICHD Early Child Care Research Network (1998) also demonstrated the significant influence of family factor, maternal psychological adjustment was associated with children's compliance and self-control and behavioural problems at 24 and 36 months age. These findings that based on USA sample shown that across ages, family factors continue to play important role in children's development even when children attend child care. The same finding that family factors influence children development is also could be found in other country. For example, a study in Australia has indicated that children who scored higher in secure attachment have mothers who were more educated and older than children who scored lower on measures of secure attachment. These studies therefore suggest that regardless of the cultural background of the samples, family factors have significant influence on children's social development and the effect of child care on children development is dependent on family factors. Based on these findings, the present study hypothesized that family social climate influences children's social competency and moderates the relationship between IIUM Educare child care quality and children developmental outcomes.

In summary, studies have demonstrated that the developmental outcomes of children who are in child care centre are associated with child care variables and family factors. Child care variables, particularly quality child care has significant association with children's social development. Similarly, studies also have shown that family continues to play significant role in determining children's developmental outcomes even when after they enroll in child care. To reiterate, the hypotheses to be tested in the study are; 1) the higher the ECERS-R score rated by researcher, the higher the children score of social competency; the higher the score of sensitive caregiving interaction, the higher the children score of social competency; the higher the score in harsh caregiving interaction, the lower the children's score of social competency; 2) Family social climate (i.e., relationship dimension) influence

children's social development. The higher the score on family conflict, the lower the score of social competency; the higher the score of expressiveness and cohesion; the higher children's score on social competency; and 3) Family conflict, expressiveness and cohesion moderate the effect of quality child care on children's social competency.

## METHODOLOGY

### *Participants*

Parents of all children aged 4-5 years old (i.e., 154 parents) at IIUM EDUCARE child care centre were invited to participate in this study. 100 parents agreed to participate and gave consent for their children to be involved. However, only 43 parents completed and returned the questionnaires – a response rate of 43%. The other 57 parents did not respond and complete the questionnaire, although the researcher had sent out two reminder letters asking them to complete and return it.

Respondents' demographic information is presented in Table 1. The majority of children were four years old (62.8%,  $n = 27$ ), with a mean of 4.3 years and a standard deviation of .48 years. In addition, there were more girls (55.8%,  $n = 24$ ) than boy (44.2%,  $n = 19$ ) involved in the study. With regard to parents, most of them were in the aged groups that ranged from 35 to 44 years old (Fathers:  $M = 37.98$ ;  $SD = 5.45$ ; Mothers:  $M = 35.51$ ;  $SD = 4.7$ ). In terms of parents' educational background, the majority of mothers reported having university qualifications (69.8%,  $n = 30$ ), while less than half of fathers (48.8%,  $n = 21$ ) reported having university qualifications.

### *Measures*

#### i) Caregiver Interaction Scale - CIS

Caregiver Interaction Scale was developed to produce information related to social interactions between caregivers and children (Arnett, 1989). The scale consists of four subscales that labeled as Sensitive Interaction, Harshness, Permissive, and Detachment. The scale has good psychometric properties. The items on each subscale have a minimum loading of .49 (Arnett, 1989). The interrater reliability ranged from .89 to .98 for each subscale, with median subscale scores ranging from .92 to .95 (Peisner-Feinberg, Burchinal, Clifford, Culkin, Howes, et al., 2001). In the present data set the internal consistency of the subscales ranged from a Cronbach's alpha of .87 (sensitivity) to .22 (detachment). Items are rated on a 4-point scale and indicate the extent of the caregiver's characteristics, from 1 (not at all) to 4 (very much). Scoring is done separately for each subscale. The summary of scores of each subscale is calculated by combining and averaging the score of items on a particular subscale (Arnett, 1989).

#### ii) Early Childhood Environmental Rating Scale – Revised (ECERS-R)

ECERS-R measures overall classroom quality; and its reliability as well as validity for measuring quality child care have been established in the literature (Harms, Clifford, & Cryer, 1998). The internal consistency of the total scale is Cronbach's alpha .92 and the subscale's internal consistency ranges from Cronbach's alpha .71 to .88. The internal consistency of the total scale in the present study is Cronbach's alpha .34. The test- retest correlation score in this study was .79. ECERS-R comprises seven separate subscales that include (i) space and furnishing; (ii) personal care routines;

(iii) language-reasoning; (iv) activities; (v) interaction; (vi) program structure; and (vii) parents and staff (Harms, et al., 1998). Higher total score means a high level of overall quality child care.

Table 1  
Demographic Characteristics of the Respondents.

Variables	E	Mean	Standard Deviation
1. Age of child			
(4 years old)	27 (62.8%)	4.3	.48
(5 years old)	16 (37.2%)		
2. Gender of child			
(Boy)	19 (44.2%)	1.5	.05
(Girl)	24 (55.8%)		
3. Age of Father			
(25 – 34 years old)	14 (32.6%)	37.98	5.45
(35-44 years old)	25 (58.1%)		
(45-54 years old)	4 (9.3%)		
4. Age of mother			
(25 – 34 years old)	19 (44.2%)	35.51	4.7
(35-44 years old)	23 (53.5%)		
(45-54 years old)	1 (2.3%)		
5. The Highest Educational Background of mother			
(Secondary School)	8 (18.6%)	2.13	.79
(Polytechnic/College)	5 (11.6%)		
(University)	30 (69.8%)		
6. The Highest Educational Background of father			
(Secondary School)	15 (34.9%)	2.13	.91
(Polytechnic/College)	7 (16.3%)		
(University)	21 (48.8%)		

### iii) The Adaptive Social Behaviour Inventory (ASBI)

ASBI is a social competence assessment for preschool aged children (Hogan, Scott, Bauer, 1992). The coefficient alphas for these scales were .77 for Express; .82 for Comply; and .60 for Disrupt (NICHD, 1998). Houck (1999) stated that the internal consistency reliability for ASBI was Cronbach's alpha .74 at 36 months. The reliability of the scale in this study was .71. The ASBI comprises 30 items and four subscales (i.e., Express, Comply, Disrupt and Pro-social). Parents or/and teachers rate the frequency of behaviour manifested by the children on a scale scoring 1 (never), 2 (sometimes) and 3 (often). A higher score indicates more adaptive social behaviour. Originally, the ASBI was used as a separate subscale (Hogan, et. al., 1992) but subsequent research has reversed the items in the

Disrupt subscale to generate the total ASBI score (Houck, 1999). This method was also used in the current study.

iv) Family Environment Scale – FES

The Family Environment Scale (FES) (Moos & Moss, 1986) was used to gather information about the social climate of the families of the participating children. The scale comprises three forms and this study used Form R that measures people's perceptions of their nuclear family environments. The internal consistencies of the ten subscales of Form R were generally within an acceptable range (.78 - .61 ) (Moos & Moos, 1986). The Form R is a 2-point scale (true-false) that contains 90 items. It assesses three groups of underlying domains: i) the relationship domain; (ii) Personal Growth Domain; and (iii) the System Maintenance domain. In this study, only subscales under the relationship domain were used, as previous studies have demonstrated that these subscales were significantly related to children development (Janon, 2009).

v) Demographic Questionnaire

Information concerning the children's and parents' demographic characteristics (age, sex, educational attainment, and etc.) was obtained using a demographic questionnaire used in Janon's 2009.

An exceptional to child care quality measures, the other measures, in particularly those that include in the questionnaire (i.e., ASBI, Demographic questionnaire and Family Environment Scale) in addition to English version, they were also translated into Bahasa Melayu using back-translation.

### *Procedure*

The first step of doing this study was contacting the IIUM EDUCARE principal to explain the procedure and significance of the study. The principal asked the researcher to write formally to the board of directors for permission to conduct the study. After the permission was granted, the centre gave a list of all children aged 4 to 5 years old. 6 years old children were excluded from the study because they have to focus on their early childhood lessons.

Following the receipt of the names of children and their parents, letters were sent inviting them to participate in the study. -A reminder letter was sent after a week to those who had not replied. For those who have replied by completing the consent form, they were given a set of questionnaire, the version of which depends on the language preference that they have indicated in the consent form (i.e., English or Bahasa):

Finally, while waiting for parents to complete the questionnaire, the researcher conducted observations on the interaction between caregiver and children and overall classroom practices. Every observation was conducted twice (with one week interval) to determine test retest reliability. It took researcher three to four hours of observation for each classroom.

### Statistical Analysis

The statistical analyses used in this study comprised predominantly of bivariate correlations and hierarchical multiple regression (MRA). In the bivariate correlations, Pearson's product moment coefficient was used when analyzing the associations between predictors and criterion variables. The analysis indicated to what extent predictor variables were significantly associated with the cognitive abilities and social behaviour.

A series of hierarchical regression analyses were conducted to examine the explanatory power of different classes of variable in sequence. In these model, child and family variables which have been shown by previous research (Gregory, Caspi, & Moffitt, 2006; Ramos et. Al., 2005) were entered in first. Thus, in examining the predictive effect of caregiver child interaction on child's social developmental outcomes, the variables were entered as follows: (1) age of child; (2) family social environment – relationship dimension (3) caregiver interaction. On the other hand, to investigate the extent to which the family social environment predicted children's cognitive and social development, the variables were entered as follows: (1) age of child; (2) caregiver interaction and (3) family social environment – each subscale of dimension of relationship was entered in each analysis.

The hierarchical multiple regression analysis was also used to test for interactions between caregiver child interactions and family social climate on child social developmental outcomes. Similar to the analysis of direct effect, regression analyses of interaction effect also controlled age of children in the first step. Then, family social environment- relationship dimension (one subscale analyzed for each time) was entered in the second step and the measure of caregiver interaction in the third step. Finally, cross product between family social environment and caregiver interaction was entered in the last step.

## RESULT

Descriptive results of all metric measures

Table 2  
Summary statistics for psychometric measures

Variable	M (SD)	Actual range	Possible scoring range
Family Social Environment – Relationship dimension			
Cohesion	6.27 (1.36)	3 – 8	0 - 10
Expressiveness	5.58 (1.67)	2 – 9	0 - 10
Conflict	4.04 (1.39)	2 – 7	0 - 10
Caregiver Interaction Scale			
Sensitive	23.9 (5.6)	18 – 33	10 – 40
Harshness	16.3 (4.7)	10 – 23	9 – 36
Permissiveness	5.3 (1.2)	4 – 7	3 – 12
Detachment	5.6 (.7)	5 – 7	4 – 16
Early Childhood Environmental Rating Scale – Revised (ECERS-R)			
Total score	3.30(.07)	1.33 – 6.20	1 – 7
Adaptive Social Behaviour Inventory			
Express	33.3 (3.6)	26 – 39	13 – 39
Distrupt	15.8 (2.5)	9 – 20	10 – 30
Comply	23.6(3.3)	7 – 21	17 – 30
Pro-social	57.0 (6.3)	44 – 67	23 – 69

Table 2 provides descriptive statistics for all metric measures. Overall, children in this study came from families that have good family relationship. In terms of the overall classroom practices, it ranged from inadequate to good, however, children in average experienced minimum level of quality overall classroom practices. With regard to social interactions between caregivers and children, the majority of children experience sensitive interaction and very few experience permissiveness and detachment. Most children were rated by their parents as having high social competency behaviour and low social problems.



## Univariate and correlation analysis

Table 3 shows that age of child was not associated with studied variables except it has correlated with sensitive, harsh, and detachment caregiving;  $r = .51, -.53, p < .01$ ;  $r = -.30, p < .05$ . The results implied that children who are older experienced greater sensitive caregiving and less harsh and detachment caregiving.

In terms of parents demographic characteristics variables (parents' age and educational attainment), there was only one variable that correlated with studied variable. Age of father was negatively associated with social cohesion in the family;  $r = -.31, p, .05$ . This means that greater social cohesion is found in the family with young age father.

With respect to predictor variables, data have shown that they were significantly correlated with the outcome variables. Table 3 shows the correlation between caregiver interactions and children's social competency. Sensitive caregiving has positive effect on children's ability to express something. On the other hand, harsh and detachment caregiving have negative effect on children's expressive ability. This means that those children who are competent to expressive their ideas and feelings are from the classroom that caregiver practice sensitive caregiving while those who have low ability to express are from classroom that caregiver that practice harsh and detachment interactions in their caregiving processes. However, overall classroom practices score was not correlated with any outcomes variables. Therefore, this measure of child care quality was dropped from further analysis.

Another variable that correlated with outcome variables is family social environment. Results have shown that the extent to family members are encouraged to act openly and express their feelings directly (i.e., Expressive) negatively correlated with disruptive behaviour and total score of children's social competency scale (ASBI). These results therefore suggest that children who are rated low in social competency generally come from family social environment that discourages -children to speak directly and act openly.

Following these results, the relationship between predictor and criterion variables are further examined in the next analyses. More specifically, variables found to be significant in the correlation analyses were examined as predictors of outcomes (social competency) after controlling for other variables.

Table 3  
Inter correlations between studied variables

	1	2	3	4	E	E	E	E	E	E	E
Caregiver Interaction Scale											
1) Sensitive Caregiving	E										
2) E	E	1									
3) Detachment	-.71**	.84**	1								
4) Permissiveness	-.12	-.13	-.01	1							
Family Social Environment											
5) Cohesion	.35*	-.35**	-.27	.02	1						
6) Expressiveness	.15	-.08	.03	.10	.34*	1					
7) E	-.25	.28	.31*	.05	-.09	.11	1				
Adaptive Social Behavioural Inventory											
8) Disrupt	-.22	.28	.36*	-.04	-.16	-.30*	-.03	1			
9) Express	.36*	-.46**	-.44**	.25	-.04	-.23	-.06	-.00	1		
10) Comply	.28	-.32*	E	.17	.06	-.10	.02	.14	.64**	E	
11) Total ASBI	.24	-.29	-.21	.20	EEE	E	-.03	.42**	.83**	.86**	1

Note: \*  $p < .05$ ; \*\*  $E < .01$

### Multiple regression analysis

#### i) Caregiver interactions and social behaviour

Table 4  
Hierarchical regression analysis: Express behaviour as predicted by the sensitive caregiving

	Express				
	Adj-R <sup>2</sup>	(-Adj-R <sup>2</sup>	F	t	β
<i>Step 1</i>					
Age of child	-.00	-.00	.82	.91	.14
<i>Step 2</i>					
Cohesion				.19	.03
Expressiveness				-1.99	-.32
Conflict	.02	.02	1.30	.08	.01
<i>Step 3</i>					
Sensitive Caregiving	.16	.14	2.65*	2.69*	.48

Table 5  
Hierarchical regression analysis: Express behaviour as predicted by harsh caregiving

	Express				
	Adj-R <sup>2</sup>	(-Adj-R <sup>2</sup>	F	t	β
<i>Step 1</i>					
Age of child	-.00	-.00	.82	.91	.14
<i>Step 2</i>					
Cohesion				.19	.03
Expressiveness				-1.99	-.32
Conflict	.02	.02	1.30	.08	.01
<i>Step 3</i>					
Harsh Caregiving	.27	.25	4.12**	-3.70**	-.63

The first series of multiple regression analyses investigated the extent to whether caregiver -child interactions relate to children's social competency behaviour, after controlling for age of child and family social environment – relationship dimension. Parents' demographic background was not controlled in this analysis and the rest of multiple regression analyses because it has no association with outcomes variables. It was hypothesized that when the score of sensitive caregiving interaction is high, the children score of social competency will be high; when the score in harsh caregiving interaction is high, the children's score of social competency will be low. This prediction was supported. The results showed that sensitive caregiving interactions positively associated with children's ability to express themselves (see Table 4) and harsh caregiving interactions negatively associated with children's social ability to express (see Table 5).

### *ii) Family social environment and social behaviour*

The second series of multiple regression analyses investigated the extent to whether family social environment, in particularly, family relationship dimension relate to children's social behaviour, - after controlling for age of children and caregiver child interactions. On the whole, only one analysis showed significant results that supported the hypothesis. Table 6 demonstrates that children who experience expressiveness in family (i.e., high encouragement to act openly, express their feeling directly, and good relationship in the family) were negatively related to disruptive behaviour.

### *iii) Interaction between caregiver interaction, family social environment and children's social behaviour*

Results (see Table 7) from the interaction analyses supported the hypothesis that family relationship dimension moderates the relationship between caregiver interactions and child social behaviour. The interaction term involving harsh caregiving and expressiveness was found to be significantly related to compliance behaviour. Meanwhile, sensitive caregiving and expressiveness were also found to be significantly associated with compliance behaviour. In other words, the environment in the family that encourages children to act openly and express feeling directly moderated the relationship between caregiver child interactions and children's social behaviour.

Figure 1 shows the relationship between harsh caregiving interaction and compliance behaviour for children in low and high family expressiveness. The figure suggests that attending child care that has caregivers who are rated as harsh in their interaction with children is associated with higher rating in compliance behaviour when the children come from family that reported high expressiveness.

Figure 2 shows the association between sensitive caregiving interaction and compliance behaviour for children in low and high family expressiveness. The figure suggests that classrooms with caregivers who are rated as sensitive in their interaction with children are related to higher rating in children's compliance behaviour when the children come from family that reported low expressiveness.

Table 6

Hierarchical regression analysis: Social behavioural competency as predicted by the expressive environment in family ( $N = 43$ )

	E				
E	E	E	E	E	E
<i>E</i> Age of child	E	E	.11	-.34	E
<i>Step 2</i>					
Caregiver Interactions Harsh Sensitive	.05	.03	1.7	1.65 .95	.78 E
<i>Step 3</i>					
E	.15	0.12	2.9*	2.40*	-.35

Table 7

÷ Hierarchical regression analysis for the moderating effect of social climate of expressiveness on the relationship between caregiver interaction measures and comply behaviour as rated by parents ( $N=43$ ).

	Comply						Comply				
	Adj-R <sup>2</sup>	(-Adj-R <sup>2</sup>	F	E	E		E	E	E	t	β
<i>Step 1</i> Age of child	-.01	.00	.24	4.5	0.7	<i>Step 1</i> E	E	E	E	E	.07
<i>Step 2</i>						<i>Step 2</i>					
Caregiver Interactions Harsh	.07	.06	2.75	-2.28	-.40	Caregiver Interactions E	.04	E	E	E	E
<i>E</i>						<i>E</i>					
E	E	E	2.03	-.80	-.12	Expressiveness	.04	.00	1.61	-.96	-.14
<i>Step 4</i>						<i>Step 4</i>					
Harsh X Expressiveness	.14	.08	2.70*	2.05	1.58*	Sensitive X Expressiveness	E	.07	2.34*	-2.03	-2.07*

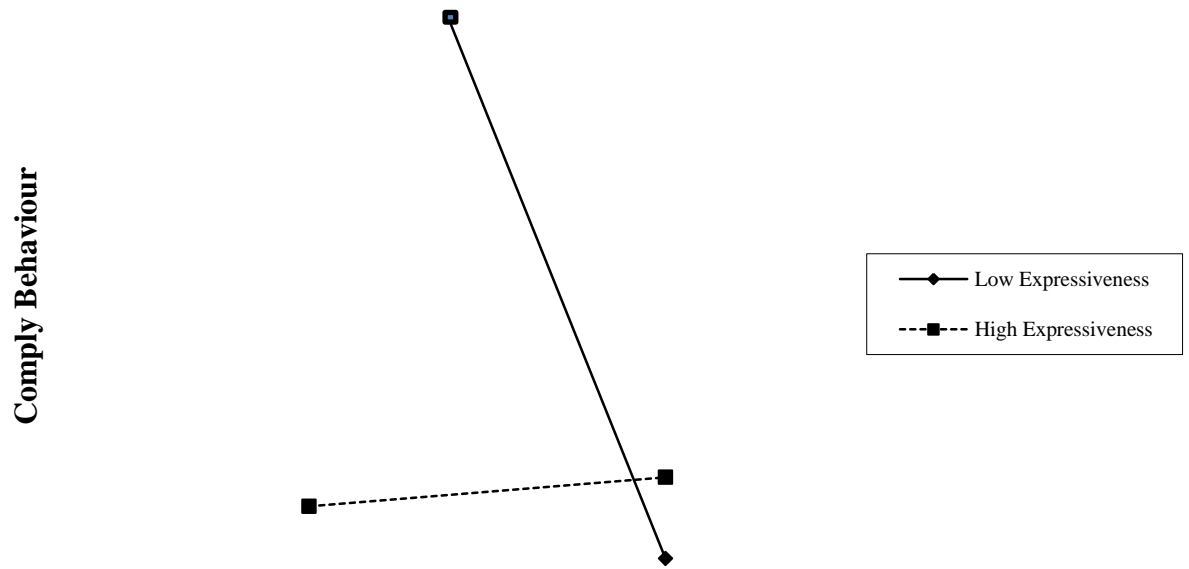


Figure 1  
The relationship between harsh caregiver interactions and comply behaviour for high and low social climate of expressiveness in family

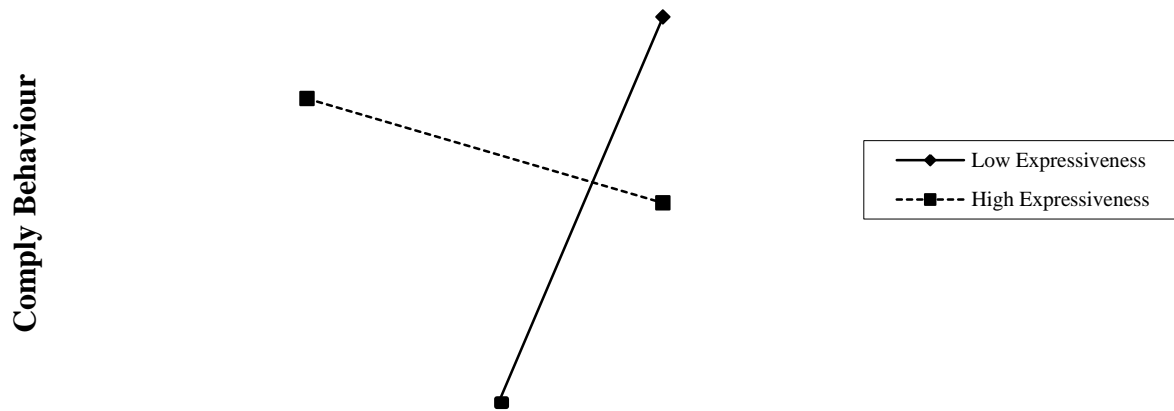


Figure 2  
The relationship between sensitive caregiver interactions and comply behaviour for high and low social climate of expressiveness in family

## DISCUSSION

According to Bronfenbrenner's ecological model (Bronfenbrenner, 1979), the elements of child care and family located in the microsystem have a direct effect on children's development. This study, which investigated the effect of child care and family related variables, showed that caregiver child interactions and relationship dimension of family social environment are significantly related to children's social development. Consistent with previous studies (Peisner-Feinberg, et. al., 2001; NICHD Early Child Care Research Network, 1996; 2002), the present findings demonstrate that sensitive caregiving predicted high ability for expressive behaviour while harsh caregiving predicted low ability for expressive behaviour. Even after controlling for age of child and family factors, children who belong to classroom with caregivers rated high in sensitive caregiving were rated high in expressive behaviour while children who come from classroom with caregiver rated high in harsh caregiving interaction were rated low in expressive behaviour. Altogether, this study provides some empirical evidence on the relationship between attending IIUM Educare child care centre and developmental outcomes of children.

In addition, this study also examined the relationship between role of family factors and child social behaviour. Previous studies on family social climate have indicated that cohesion, intellectual-culture orientation, expressiveness and family organization are significant predictors of child cognitive and social development (Garfinkle, 1982; & Moos & Moos, 1996). The results of this study also suggest that family social climate (i.e., expressiveness) has significant predictive effects on child social behaviour (i.e., comply and express). Expressiveness in the family was found to be a significant factor that can predict low expressiveness and disruptive behaviour among children in child care—even after controlling for age and caregiver interaction quality.

Family factors, specifically social relationship dimension (i.e., cohesion, expressiveness and conflict) were found to have moderating effects on the relationship between caregiver interactions and child social behaviour. Expressiveness was found to significantly interact with the relationship between harsh caregiving and children's social behaviour. The results show that high harsh caregiving affects high compliance behaviour when the child come from families that scored high on the family expressiveness scale. Another result on moderating effect was that expressiveness was found to significantly interact with the relationship between sensitive caregiving and children's social behaviour. The results show that high sensitive caregiving affects high comply behaviour when the child come from families that reported low on family expressiveness scale. It appears that the greater expressiveness reported by parents, the fewer behavioural incompetency were observed by caregivers. This situation can be explained as follows: Children who grow up in more expressive environments may learn more effective ways to interact with others (i.e., comply to parents/caregiver as they know that adults have different perception and mostly the adults know the best for them) and these abilities are translated into child care setting. In contrast, children who are not encouraged to express their feelings directly at home, appear to find it more difficult to interact with adults as they have lack of ideas that adults have different perception that best for kids and therefore less likely to comply to adults.

In summary, this study provides further support to Bronfenbrenner's ecological theory that child care and family factors significantly predict child development. Consistent with the literature, harsh caregiving negatively influence social competence behaviour while sensitive caregiving positively influence children's social competency. In addition, family factors (i.e., expressive environment in family) negatively associated to incompetent behaviour (i.e., disrupt) even after controlling for quality caregiver child interaction. Also there are significant findings on moderating effects. Children who come from

family that reported high in expressiveness they were rated high in comply behaviour even they experience harsh caregiving in the child care centre. However, children who come from family that reported low in expressiveness were rated high in compliance behaviour when they have sensitive caregiving in the child care centre.

### *Implication and direction for future research*

The findings that harsh and sensitive caregiving can contribute to poorer and greater social behavioural outcomes, family expressiveness associated with disruptive behaviour, and interaction effects between family expressiveness-, children's social competency and caregivers interaction quality have a number of implications for what the centre, caregivers and parents could do to support children to achieve social competency. In this case, it is highly recommended that appropriate training should be given to caregivers in order to develop more effective skills in communicating and interacting with children. Caregivers should also be reminded by supervisors that their social interactions with children could contribute to behavioural outcomes in children. And the other way around too, parents should realize that even though their children attend child care, their role as parents who could influence behavioural outcome in children is still influential. One of the roles is to create family environment that allow children to act openly and express feelings directly. Although this may contradict commonly held practices of some families, parents have to make an effort to create an open and expressive communicative environment as this study showed that this variable is a significant predictor of child development. Lastly, based on the interaction effects results, parents and caregivers are required to work as a team in helping the child to develop competent social behavioural during preschool aged because they compliment each other. The negative effect of harsh interaction could be moderated by high expressive home environment while the poor expressive home environment could reduce the risk to incompetent social behaviour when the caregivers are sensitive. A caution, however, is in order when using these results. As this study recruited small size of respondents and that data from only one child care centre were analyzed, the results should be taken as indicative rather than definitive. In this regard, it is recommended to conduct further studies using larger samples as they will give an improved representation of the phenomena.

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