

## EXTERNALIZING BEHAVIOUR PROBLEM AMONG CHILDREN AGE FOUR AND BELOW IN PENINSULAR MALAYSIA

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### ABSTRACT

*This paper aims to examine the rates and distribution of externalizing behaviour problems and to identify associated children and parental characteristics that affect externalizing behaviour problems among preschool children in Peninsular Malaysia. A total of 174 (14.5%) out of 1198 children age four and below were conveniently selected for this study that consist of those who were in the borderline and clinical range of having externalizing behavioural problems as rated by parents using the Child Behavioural Checklist for Age 1 ½-5 (CBCL/1 ½-5). Descriptive statistics such as mean, t-test, ANOVA and correlation tests were applied in data analysis. Findings indicate significant differences in externalizing problem by age until age 4 and maternal education background. Results reveal a negative but non-significant correlation between externalizing problems with household income and father's age, whilst a positive with moderate significant relationship with child age. Findings in this study provide an increased knowledge in externalizing behaviour problems and adequate evidences that early intervention or preventive measure is needed to reduce the continuity of externalizing problems into adulthood and preschool age is the best time to identify early signs of problems before they become permanent.*

**Keywords:** externalizing behaviour, emotional and behavioral problem, child development, child behaviour checklist (CBCL), preschool children

### INTRODUCTION

In the past decades, interest in the early childhood development has increased tremendously. Recognizing the importance of this development in charting a child to adulthood, many researchers have made effort to study factors affecting child outcomes that focus in children behavioural and emotional problems (Caspi, 2000; Caspi et al., 2003; Poulou, 2015). These problems lead to an increased in poor outcomes in adulthood such as antisocial, risk taking behaviour, academic underachievement and other disruptive behaviour problems (Fergusson, 1998; Hiramura et al., 2010; Poulou, 2015).

Emotional and behavioural problems start at a young age (Egger & Angold, 2006; Hiramura et al., 2010; Poulou, 2015) and are categorized into internalizing and externalizing problems. The internalizing problem are problems mainly within the self or inner-directed and symptoms include emotionally reactive, anxious/depressed, somatic complaints and withdrawn (Achenbach & Rescorla, 2000; Poulou, 2015). Whereas the externalizing problems are outer-directed, mostly encompass conflicts with other people and expectations of the child, such as attention problems and aggressive behaviour (Achenbach & Rescorla,

2000; Kristensen, Henriksen, & Bilenberg, 2010; Poulou, 2015). The symptoms are noticeable noncompliance, aggression toward peers, high activity level, and poor regulation of impulses (Campbell, Shaw, & Gilliom, 2000).

Both behaviour problems usually can be seen in preschool years and will persist into school age and adulthood if no proper intervention or treatment is given. The children with co-occurring internalizing and externalizing problems were most likely to show persisting problems (Basten et al., 2015; Poulou, 2015) and preschool children experience emotional and behavioural difficulties with similar prevalence as older children (Egger & Angold, 2006). Once these behaviours are established, high possibility to be followed by an increased pattern of antisocial, risk-taking and related disruptive behaviours in adolescence and young adulthood (Fergusson, 1998).

Population of Malaysian children aged four years and below according to Malaysian Census 2010 was 3,291,816 with about 52% were boys and 48% girls (DOS Malaysia, 2011). Preschool education in Malaysia is provided by Ministry of Education (MoE), Jabatan Kemajuan Masyarakat (KEMAS)(*Community Development Department*), Jabatan Perpaduan Negara dan Integrasi Nasional (JPNIN) (*Department of National Unity and Integration*) and private operators. The percentage of children aged 4+ and 5+ enrolled in preschools has increased from 72.4% in 2010 to 90.7% in 2014 (EPU Malaysia, 2015a).

Past researches suggested the importance to focus on a wide range of child characteristics and family demographic backgrounds such as sex, age, socio-economic status, marital status of parents, education background of parents and have been found to be predictive for children's externalizing behaviour problems (Basten et al., 2015; Fergusson, 1998; Samarakkody et al., 2012; Sourander, 2001; Watson et al., 2012).

Findings on child sex differences in behaviour problems especially externalizing behaviour were mixed, as some studies report no child sex differences, while others have found significant differences in sex. These discrepancies were due to the differences in the definition and identification of externalizing problems in preschool years (Sourander, 2001). Boys in most societies tended to score higher on externalizing problems than girls (Chen, 2010; Rescorla et al., 2007; Samarakkody et al., 2012).

Previous studies also indicated an increased in externalizing until the 2nd or 3rd year of life, with a decreased after this age. Kristensen et al. (2010) and Tremblay et al. (2004) revealed that externalising problem scores were statistically higher among the youngest children of 1½–2 years than among 3–5-year-olds, both according to the ratings of parents and caregivers. Similar result reported by Campbell (1995) whereby externalizing problems in non-clinical samples tend to increase from age 2 to 3 and decrease from age 3. Furthermore, being the only child in the family has a significant negative association, number of sibling does not predict externalizing behaviour problem, while child living with one parent is identified as independent predictor of externalizing problems of preschool children (Samarakkody et al., 2012).

Parental responsiveness and relationship quality are powerful influences on early childhood development. A parental high education level was related to a lower level of externalizing symptoms (Sourander, 2001). According to Samarakkody et al. (2012) low maternal education was found to be independently related to externalizing problem. Study conducted by Aken, Junger, Verhoeven, Aken and Dekovi (2008) found that early stage of maternal support was negatively correlated to the initial levels of toddlers' externalizing behaviour problems whereas paternal parenting less strongly affects child outcomes. In most cases

mothers are more attached and involved with their child, especially when the child is very young because mothers normally will spend more time with their child as compare to fathers.

Parents and teacher reported that low socioeconomic status (SES) groups showed significantly higher levels of problem behaviour than middle and high groups (Prior, Virasinghe, & Smart, 2005). SES was computed using parent's occupational and highest education level. The low income households with few resources to buffer the effects of financial hardships, could experience more difficulties in the management of current and subsequent stressful life events and as such could increase the level of psychological distress (Bradshaw & Ellison, 2010; Kahn & Perlin, 2006) hence, may affect their parenting style (Sourander, 2001). However, study by Samarakkody et al. (2012) found that low SES and low maternal education did not predict the presence of externalizing behaviour.

The main objective of this study was to obtain the rates and distribution of externalizing behaviour problem and also to identify associated children and parental characteristics affecting externalizing behaviour problems of preschool children in Peninsular Malaysia so as to get a better understanding and address the issues pertaining to such problems. In this study, Child Behavioural Checklist for Age 1 ½-5 was used.

## **METHODS**

### **The Survey**

This study is a quantitative in nature, and a multistage random sampling technique was employed for the selection at regional, state and preschool level. At preschool level, the total population of children up to four year olds were selected. Data was collected in 2013 using a set of questionnaire that consists of two sections with the first section asking the background profile of the children, parents and teacher whilst the second section were questions related to child's behavioural and emotional problems. Upon data cleaning, exploratory data analysis and testing on assumptions, a total 1198 samples were retained.

For the purpose of this study, only 174 respondents were analysed. Sample selection was based on the children who were in the borderline and clinical range of having externalizing behavioural problems. This is 14.5% of total study samples. Study by Samarakkody et al. (2012) among a community sample of preschool children in Sri Lanka reported a prevalence of externalizing behavioural problems at 19.2% and in United Arab Emirates at 10.5% (Eapen, Yunis, Zoubeidi, & Sabri, 2004).

### **The Measures**

#### *Demographic Characteristics*

The parents provided demographic information about themselves and their children, including child gender, age, race, birth sequence and total sibling, parents' marital status, parents' income, age and level of education.

#### *Child Behavioural Problems*

Child behavioural problems were rated by the parents and assessed with the Child Behavioural Checklist for Age 1 ½-5 (CBCL/1 1/2 – 5, Achenbach & Rescorla, 2000; Achenbach & Ruffle, 2000). It consists of 99 problem items and respondent is asked to rate using 3-point ordinal scale where 0 means 'not true', 1 means 'sometimes true' and 2 means 'very true'.

To measure externalizing problems, two scales were included (attention problems & aggressive behaviour). Both comprise problems involving conflicts with other people and with their expectation for children's behaviour. Normalized T-scores converted from the raw

scores were used and T scores  $\geq 60$  were regarded as having externalizing problems in the child and can be further categorized as borderline ( $60 \leq T \leq 63$ ) or clinical at  $T \geq 64$ . Out of 174 respondents, more than half (58.6%) of the children in this study were in the borderline level and 41.4% were in clinical level with mean score of 63.76 and the range was between 60 to 80.

### **Statistical Analyses**

Descriptive statistics was used to describe the major variables in this study. Percentages were used for categorical variables and for continuous variables means and standard deviations were used to describe the distribution. Independent sample t-test and ANOVA were used to examine the differences between major study variables with externalizing behaviour problem score. Lastly, Pearson's product-moment correlation coefficient was also applied to determine the direction and strength of the linear relationship between major study variables. All these were carried out using the SPSS version 21.

## **RESULTS AND DISCUSSIONS**

Table 1 and 2 provides the information on major variables used in this study including frequency, percentage, mean, standard deviation and range, and also t-Test/ANOVA tests between these major variables and externalizing problem. Table 1 focusing on the respondents' profiles, whilst Table 2 focusing on the parents' profile and dependent variable.

### **Respondents' Profile**

A significantly higher proportion of boys (58%) were reported as having externalizing behaviour problem compare to girls (42%) although there was no significant different in mean for sex as shown in Table 1. This result was in accordance with the study conducted by Samarakkody et al. (2012), Kristensen et al. (2010) and Rescorla et al. (2007) where they reported boys' externalizing behaviour scored higher than girls'. A study carried out by Basten et al. (2015) found no relationship between sex and externalizing's profile at age 1.5 and age 3. Also, boys are more incline to be in the externalizing at age 3 and age 6.

The mean score recorded for respondent age was 2.99 years and 45.3% of the respondents were at the age of 3 years, followed by 4 years (28.8%) and 2 years (21.8%), whilst respondents whose age 1 year was the minority group (4.1%). From the above findings, the externalizing behaviour problems increased from age 1 to age 3, peaked at age 3 and then decreased after this age. According to Tremblay et al. (2004), physical aggression behaviours increased and peaked during the 2nd and 3rd year of life, and subsequently declined after the 3rd birthday. Result also showed that there was statistically significant difference in externalizing problem by age until age 4 ( $F=2.674, p \leq 0.05$ ). This is in agreement with many studies reporting that externalizing behaviour is more common at early age (Kristensen et al., 2010; Tremblay et al., 2004; Campbell, 1995). Young children with poor self-regulation have troubles in controlling their behaviour when emotionally aroused due to having limited ability to communicate about their emotion and they use externalizing behaviour to express their feeling, and as they grow they learn to communicate and express their emotion (Basten et al., 2015).

In term of birth sequence, almost half (48.5%) were first-born child (eldest), 30% were third and above and 21.5% were second child. Most of the respondents (36.3%) had 2 siblings, followed by 3 siblings (22.5%) and the only child (21.9%), while the rest were 5 and more (10.0%) and 4 siblings (9.4%). Majority (78.2%) of these children live with parents, 15.9 % live with single parent and about 6% live with others. Similar result found from study

conducted by Samarakkody et al. (2012) with almost halve (49.3%) of the externalizing problem children were the eldest child in their family and a significantly high proportion of these children lived with both parents (73%). Results in this study also showed that there were statistically no significant differences in externalizing problem by birth sequence, total number of sibling and child living structure.

**Table 1. The Distribution of the Major Study Variables (n=174) - Respondents' Profile**

Profile	Freq. (%)	Mean	S.D.	Range	t-Test/ANOVA p-value
Gender					
Male	101 (58.0)				n.s.
Female	73 (42.0)				t=0.728
Age (years old)		2.99	0.82	1 - 4	
1	7 (4.1)				<b>0.049</b>
2	37 (21.8)				F=2.674
3	77 (45.3)				
4	49 (28.8)				
Birth Sequence					
First Born	79 (48.5)				n.s.
Second Child	35 (21.5)				F=1.246
Third and above	49 (30.0)				
Total Sibling				1 - 9	
The only child	35 (21.9)				n.s.
2 children	58 (36.3)				F=2.197
3 children	36 (22.5)				
4 children	15 (9.4)				
5 and more	16 (10.0)				
Child Lives With					
Both parents	133 (78.2)				n.s.
Single parent	27 (15.9)				F=1.296
Others	10 (5.9)				

### Parent's Profile

Monthly household income (HHI) range from RM200 to RM5630, with a mean of MYR1957.50 (USD497.24, 1USD=3.94MYR) and much lower, almost two fifths compared to the mean HHI for Malaysia in 2012 which was MYR5000 (USD1270.10) (EPU Malaysia, 2015b). We can conclude that most of these children come from lower income group. This is in accordance to the previous study by Prior, Virasinghe, & Smart (2005). As for the parent marital status, large majority (91.8%) of these respondents were those staying with parents who were still married.

The mean for mother age was 31.74 years and majority (86%) of the respondents' mother having the age of 39 years and below and only 14% having age 40 years and above. In term of highest education received, the mean score was 11.35 with large majority (95%) of respondents' mother had secondary higher and above education meaning more than 9 years of formal schooling attended. Only 1.2% had primary education and 3.7% had secondary lower education. Results in this study also showed that there were statistically no significant differences in externalizing problem by marital status and maternal age except for maternal education background (F=2.825, p<0.05). As highlighted by Sourander (2001) and Samarakkody et al. (2012) high maternal education was found to be related to a lower level of externalizing problem.

In comparison with father's profile, father's age had mean score of 35.05 years, higher than mother's mean score. Almost half (46.6%) were between the age of 30 – 39 years, followed by 29 years and below (20.1%), 40-49 years (19.5%) and lastly, 50 years and above (2.9%). Mean for highest education received was 11.03 with majority (87.4%) of fathers had secondary higher and above, lower compared to mother's highest education received. Only 2.6% had primary education whilst 9.9% had secondary lower education. Results in this study also showed that there were statistically no significant differences in externalizing problem by paternal age and education background. As mentioned earlier, paternal parenting less strongly affects child outcomes because at the early stage, mothers spent more time with their child and became more attached with them as compare to fathers (Aken et al., 2008).

**Table 2. The Distribution of the Major Study Variables (n=174) - Parents' Profile**

Profile	Freq. (%)	Mean	S.D.	Range	t-Test/ANOVA p-value
Household Income, HHI (RM)		1957.5	1165.2	200.00 – 0	1 5630.00
Parents Marital Status					
Married	157 (91.8)				n.s.
Divorced/Widowed	14 (8.2)				t=1.766
Mother Age (yrs old)		31.74	6.48	20 - 53	
29 yrs & below	71 (43.3)				n.s.
30 – 39 yrs	70 (42.7)				F=0.658
40 – 49 yrs	20 (12.2)				
50 yrs & above	3 (1.8)				
Mother Education Background (yrs)		11.35	1.15	6 - 13	
Primary school	6 (3.7)				<b>0.041</b>
Secondary Lower	114 (70.8)				F=2.825
Secondary Higher	39 (24.2)				
Tertiary					
Father Age (yrs old)		35.03	7.04	24 - 60	
29 yrs & below	35 (20.1)				n.s.
30 – 39 yrs	81 (46.6)				F=0.464
40 – 49 yrs	34 (19.5)				
50 yrs & above	5 (2.9)				
Father Education Background (yrs)		11.03	1.34	6 - 13	
Primary school	4 (2.6)				n.s.
Secondary Lower	15 (9.9)				F=0.440
Secondary Higher	105 (69.5)				
Tertiary	27 (17.9)				

### Inter-correlations between Major Study Variables

In this correlations analysis, Table 3 showed the correlation matrix between all major study variables. Looking at the correlation between externalizing behaviour problem with other variables in this study there were two variables which had negative correlation which were household income and father's age, however these variables were not statistically significant.

The only variable that had statistically significant relationship with externalizing behaviour problem was child age with a moderate relationship at 0.01 level of significance. This is in line with previous findings that indicate an increased in externalizing until the 2nd or 3rd year

of life and decreased after this age (Kristensen et al., 2010; Tremblay et al., 2004; Campbell, 1995)

**Table 3. Inter-correlations between Major Study Variables**

	1	2	3	4	5	6	7	8	9	10
1 Externalizing Problem	1.00									
2 Child Gender	.023	1.00								
3 Child Age (Year)	<b>.206**</b>	.041	1.00							
4 Birth Sequence	.015	-.103	-.060	1.00						
5 Total Sibling	.022	-.075	.039	.912**	1.00					
6 Household income	-.041	.036	.009	-.051	-.017	1.00				
7 Mother's Age	.035	-.027	.069	.647**	.591**	-.096	1.00			
8 Mother Education (years)	.033	-.013	.085	-.194*	-.083	.224**	-.364**	1.00		
9 Father's Age	-.045	-.064	.021	.592**	.507**	-.043	.733**	-.194*	1.00	
10 Father Education (years)	.052	.134	.064	-.199*	-.143	.184*	-.268**	.287**	-.360**	1.00

\*\*Correlation is significant at the 0.01 level (2-tailed).

\*Correlation is significant at the 0.05 level (2-tailed).

## CONCLUSIONS AND IMPLICATIONS

This paper aims to obtain the rates, study the distribution of externalizing behaviour problem and also to identify associated children and parental characteristics affecting externalizing behaviour problems of preschool children in Peninsular Malaysia. The findings indicate differences in externalizing problems by children age and mother education background.

Throughout this study, there was a gradual emergence of higher prevalence of boys having externalizing problems compared to girls even though some studies among preschool children do not provide sufficient evidence for sex differences (Egger & Angold, 2006). As explained by Hay (2007), the emergence of these differences can be related to earlier maturation of girls whereby they are biologically more inclined than boys are to the social pressures that protect them against aggression; boys' vulnerability by such the general trend for boys to be more aggressive than girls is appears to be produced by a minority of troubled boys who engage in aggression at high rates; and differences in social influences whereby girls develop distinct ways of manipulating the social world, which often include verbal taunts and indirect aggression, meanwhile boys play in ways that may promote aggression in their male peer groups.

The increase in externalizing problems up to year 2 or 3 and then decrease after that age is in line with findings from other studies (Kristensen et al., 2010; Tremblay et al., 2004; Campbell, 1995). The increase during this age is due to the emergence of increasing self-awareness and goal-oriented that resulted in a strong push for independence in children and

when this increasing independence clashes with (parental) limits, it is often lead to frustration and non-compliance in children (Keenan & Wakschlag, 2000). The decline of externalizing problems after age 3 is due to the changes in the later age-related development including self-regulation and the emergence of other strategies in dealing with conflicts (Tremblay, 2000); more mature social-cognitive competence (Brownell & Hazen, 1999); through negotiation in conflict solving, seeking adult assistance and usage of more subtle types of aggression (Hartup, 1996).

Furthermore, the inconsistency in the findings of results across studies in documenting the prevalence and profiles of externalizing behaviour problems, and its association with demographic characteristics of child, and parents among preschool children may be due to a measurement issue (definition and identification), cultural difference, biological difference, different expectations/perceptions by parents and/or parents biasness (Samarakkody et al., 2012; Sourander, 2001).

However, findings in this study provide sufficient evidences that early intervention or preventive measure is needed to reduce the continuity of externalizing problems into adulthood. The preschool period is the best time to identify and reduce early signs of problems before they become permanent. Disruptive behaviours such as high levels of noncompliance and aggression are recognizable as early as the preschool years (Poulou, 2015). Thus, is important to properly identify the children who actually need early intervention especially during preschool period as they represent a key component in building a comprehensive prevention and early intervention system.

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