



Gender Differences in Mental Health Status among Children Aged Three to Six Years

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ABSTRACT

This study was designed to examine the gender differences in children's mental health. A total of 427 children (205 male and 222 female) aged between 3 to 6 years old were recruited from 29 pre-schools in Malaysia using cluster sampling technique. Children's mental health status was measured by using Achenbach & Rescorla's *Child Behavior Checklist 1.5–5* (CBCL/1.5–5), which comprised of eight subscales. The CBCL is administered to the parents to answer regarding their child over a week's period. The findings revealed no significant gender differences on the overall mental health score and all its subscale scores, except for aggressive behavior. Boys had a higher mean score on aggressive behavior, compared to girls. This means that boys tended to be more aggressive than girls. Early detection of mental health and identification of the risk factors of mental health is crucial to understand the behavior of children.

Keywords: Mental health, children, gender

INTRODUCTION

According to the World Health Organization (2003a), mental health is a state of well-being where individuals are able to realize their abilities and to cope with normal daily stresses of life, competence,

work productively, and contribute to the community. Those who suffer from mental disorder also suffer from human rights violations, society discrimination, stigma, and isolation. In fact, mental health should not only be a concern for those who suffer from mental disorders and their families. It should be a concern for everyone as mental health problems seriously affect the society as a whole, rather than a small portion of the society (World Health Organization, 2003b).

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In addition, the psychological testing and intervention programs for mental health are still not well developed in Malaysia. Although attentions are given to the mental health field, psychology is still a new field in Malaysia. There are insufficient psychologists in our nation especially in the child psychology field. Also, psychologists who are trained to use psychological measurements are very few (Woo & Teoh, 2007). Therefore, it is crucial to train more psychologists in order to assess mental health problems in our nation.

Based on the World Health Organization (WHO) Report (2005), the prevalence rate of the worldwide mental health problems in children and adolescents is approximately 20 percent. Young children and adolescents are the vulnerable group of mental health problems. They should be given adequate attention and care as mental health problems started in the early years and prolonged till adulthood (Gelfand & Drew, 2003; Kessler *et al.*, 2007).

Mental health field is gaining more attention especially from the educators and parents as more people are facing mental health problems due to the rapid development of the nation (Woo & Teoh, 2007). Nowadays, parents put more emphasis on their children in terms of academic achievement and other various skills as they bring glory to the family. Children are also being taught and trained rigorously in order for them to be competence when they enter the challenging society. Due to the stresses and burden, children suffer from emotional and behavioral problems (Teoh & Rose,

2001). However, children development is very complex causing mental health problems to be difficult to be detected in children especially in young children (Gelfand & Drew, 2003).

Past studies had also shown prevalence rates of mental health are much higher in males compare to females. This is because compared to girls, boys are more disruptive when adjusting where they tend to be more aggressive and hyperactive. They also use more life-threatening method such as threatening, physical violence and suicidal (Crick & Zahn-Waxler, 2003). In contrast, a study by Teoh (2010) in Malaysia revealed that female involved more in aggressive problems, withdrawn and attention problems compared to male. There is no single answer whether boys or girls are more troublesome, and who involved more in mental health problems. (Andreas & Watson, 2009; Gelfand & Drew, 2003). Thus, to answer this question, our study examined the gender differences in mental health among children in Malaysia.

METHODOLOGY

Sample and procedures

A total of 427 children aged 3 to 6 years were randomly chosen to participate in this study. The parents of the selected children were invited to answer the questionnaire regarding their child's mental health. The cluster sampling technique is used for sampling selection. The participants were randomly selected from 29 pre-schools which are located in four states which are Selangor, Kuala Lumpur, Negeri Sembilan

and Malacca, Malaysia. Prior collecting data from the parents, the researchers contacted the selected pre-schools to obtain permission and discuss with the teachers regarding the suitable time to conduct the research. The researchers also explained to the teachers regarding the proper procedure of collecting data.

On the scheduled date of the data collection, the teachers explained and distributed the questionnaires to the parents who have agreed to participate in the research. The parents are encouraged to answer the questionnaire honestly by assuring them that their information will be kept confidentially. The parents are given one week duration to complete the questionnaire. The researchers are available to both the teachers and parents by phone and e-mail where they will responds to any question regarding the questionnaire. The researchers visited the pre-schools after all the questionnaires are collected back by the teachers.

Measures

Children's mental health was measured using the *Child Behavior Checklist 1.5–5* (CBCL/1.5–5) (Achenbach & Rescorla, 2000). It is a parent-reported questionnaire used to measure behavioral and emotional problems of children which consists of 100-items. CBCL is a three-point scale where 0 is for not true, 1 is for somewhat or sometimes true and 2 is for very true or often true. This scale consists of eight subscales, which are emotionally reactive, anxious/depressed, somatic complaints,

withdrawn, sleep problems, attention problems, aggressive behavior, and other problems. Higher scores indicate greater intensity of behavioral and emotional problems. The CBCL is translated into Malay language as it is the national language of our country. The Malay version of CBCL is translated using the back-to-back translation. Content validity of the Malay version of CBCL is assessed by two bilingual experts with professional expertise in the child development field. The present study showed good reliability where the overall Cronbach's alpha for the Malay version of CBCL scale is 0.951.

RESULTS

Data was analyzed using the Statistical Package for the Social Science (SPSS version 16). The independent sample t-test was used to examine the differences of children's mental health among male and female. In the present study, there were 427 children who consisted of 205 boys and 222 girls. Their aged ranged from 3 to 6 years old with a mean age of 4.5 years.

The borderline and clinical cut-off points for the Child Behavior Checklist are the 93rd and 97th percentile of the normal sample (Achenbach & Rescorla, 2000). From the data obtained, all the respondents were within the normal range of the Child Behavior Checklist. The mean and standard deviation for the CBCL total score were $M = 79.07$ and $SD = 34.23$. The mean and standard deviation for CBCL total score and subscales are presented in Table 1.

TABLE 1
Mean and standard deviation for CBCL total score and subscales

Scales	Mean	Standard Deviation
CBCL total score	79.07	34.23
Emotionally reactive	8.06	4.28
Anxious/depressed	7.25	3.64
Somatic complaints	6.73	4.66
Withdrawn	5.62	3.86
Sleep problems	4.33	4.87
Attention problems	4.87	2.03
Aggressive behavior	19.22	8.78
Other problems	22.99	10.68

The gender differences in the mean scores were determined by using independent sample t-test. Based on table 2, there was no significant difference between gender and children's mental health total score. However, there a significant gender difference between aggressive subscale ($t=3.091$, $p \leq .05$), where the mean for boys and girls are 20.56 and 17.98 respectively. Thus, boys were more aggressive than girls in this study. The effect size for the differences between gender and aggressive subscale is 0.021, which is small (Cohen,

TABLE 2
Mean differences between gender, CBCL total score and subscales

Scales	Mean	Standard deviation	t	p
CBCL total score			1.543	.124
Boys	81.70	33.09		
Girls	76.64	35.16		
Emotionally reactive			.696	.487
Boys	8.21	4.14		
Girls	7.92	4.40		
Anxious/depressed			-.260	.795
Boys	7.20	3.55		
Girls	7.29	3.73		
Somatic complaints			-.057	.954
Boys	6.72	4.36		
Girls	6.74	4.93		
Withdrawn			-.031	.975
Boys	5.61	3.89		
Girls	5.62	3.83		
Sleep problems			1.218	.224
Male	4.52	3.32		
Female	4.15	3.19		
Attention problems			.846	.398
Boys	4.96	1.99		
Girls	4.79	2.07		
Aggressive behavior			3.091*	.002
Boys	20.56	8.38		
Girls	17.98	8.96		
Other problems			1.741	.082
Boys	23.91	10.45		
Girls	22.13	10.85		

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

1988). The small effect size means that only 2.1% of the variance in aggressive behavior is explained by sex.

DISCUSSION

The CBCL scores of the boys and girls in the present study were within the normal range. Thus, none of the children had mental health problems. The t-test results also indicated there were no significant differences on the scores of the boys and girls on most subscales, except for aggressive behavior. The gender difference was only found significant in the children's aggressive behavior. The boys scored higher on aggressive behavior, compared to the girls. Aggressive is behaving in a threatening way, forceful and attacking (Hornby *et al.*, 2010). Children with aggressive behaviors tend to argue with others, be mean to others, attack people and destroy others' things.

Our results supported previous findings that suggested aggressive behavior varies among gender where boys tended to be more aggressive than girls (Xing *et al.*, 2011). Boys were more likely to be involved in fights and bullies, hit others, destroy property, use of weapon, and behave in ways that hurt people (Gelfand & Drew, 2003). Past studies indicated that boys were more often diagnosed with conduct disorder, hyperactive, and pervasive developmental disorders compare to girls (D'Oosterlinck, Broekaert, Wilde, Bockaert, & Goethals, 2005). In contrast, more girls were diagnosed with oppositional defiant disorders where they displayed an age-inappropriate recurrent pattern

of stubborn, arguing, throwing tantrums and defiant behavior. Another local study supported that there are gender differences in physical aggression where boys are more aggressive physically than girls (Kong, Maria, & Samsilah, 2012).

In this study, significant gender difference was only found in aggressive behavior. At this age stage, children have limited ability to express their thoughts and feeling verbally. They may snatch anything they want from others without asking politely due to the limited verbal abilities. They do not realize when they had offended someone by saying something inappropriate or hurt someone as their vocabulary in expressing themselves are limited. However, language abilities in girls develop earlier compare to boys. Girls acquire language and develop verbal skills at an earlier age than boys. Thus, girls are able to converse more fluently and express their opinions, feelings, wants, and needs in a better way (Shaffer & Kipp, 2010). In contrast, due to the limited language skills in boys, they may tend to express themselves through physical aggression. This may eventually lead to aggressive behavior in boys where they involve in fights, hurt others, throw temper, and easily get frustrated when things do not run according to their way.

Also, gender roles may contribute to the higher aggressive behavior in boys as boys are viewed as tough, dominant, aggressive, and unsentimental, while girls should be nurturing, polite, sociable, and emotionally expressive (Wenar & Kerig, 2006). This influence parents to play rougher with boys

than girls. Parents also react negatively if girls involve in aggressive behavior and boys are sissy. In addition, parents encourage children to play with gender appropriate toys where boys play with toys which symbolize destructive such as guns, tanks, missile, and soldiers, while girls play with toys which symbolize calmness such as dolls, cooking utensils, and clothes. These eventually promote the aggressive behavior in boys where they seem to gain approval from their parents to act aggressively (Tieger, 1980).

However, our study did not revealed a significant result for emotional problems, anxious, depressed, somatic complaints, withdrawn, sleep problems, and attention problems with gender. This finding is in contrast with past studies where they showed children's mental health varies according to gender (Crick & Zahn-Waxler, 2003; Syed, Hussein, & Mahmud, 2007; Teoh, 2010; Zahn-Waxler *et al.*, 2008). Past studies showed that female scored higher than male in emotionally problems, depression, and anxiety, while male involved more in attention and disruptive problems (Davis, Sawyer, Lo, Priest, & Wake, 2010; Zahn-Waxler *et al.*, 2008). This contrast may due to other confounding variables such as culture, race, family, age, and socioeconomic that may affect the other subscales of children's mental health (Gelfand & Drew, 2003).

In another research by Teoh (2010), the prevalence level of mental health in primary school children ranged from 5% (delinquency) to 27.6% (somatic complaints) while the prevalence level of

mental health in secondary school children ranged from 5.8% (anxiety) to 27.7% (somatic complaints). This shows that mental health in children should not be taken lightly. The children in our study are mentally healthy maybe due to their young age. However, there is a possibility that they will suffer from mental health due to the heavier stresses imposed on them as they grow older. Thus, it is crucial to monitor the children's behavior and understand them if they behave differently.

CONCLUSION, IMPLICATION AND LIMITATION

The present study had discussed about the gender differences in mental health among children. Although the present study provided additional information to the mental health field, it still has limitations. One of the limitations of this study is where the aggressive behavior is measure as a whole. In other study, aggressive behavior is further divided into direct aggression and indirect aggression where boys involved more in direct aggression while girls used more indirect aggression (Kerestes & Milanovic, 2006). Also, girls use more verbal aggression compared to boys (Mash & Wolfe, 2010; Zahn-Waxler *et al.*, 2008). However, there is a study revealed that boys involved more in both verbal and physical aggression (Hudley *et al.*, 2001). Therefore, for future studies, it is recommended to examine a broader concept of aggressive behavior.

Another limitation is the respondents' bias when answering the questionnaire. The researcher is unable to control the

respondents' bias including the social desirability bias when answering the questionnaire. Future studies are recommended to conduct experimental research or obtain data from different sources such as teachers or other major caregivers to minimize the bias.

The findings of this study revealed that mental health subscales have no significant differences with gender except for aggressive behavior. It is a relief to know that the mental health problem is not serious in young children aged 3 to 6 years old. However, past studies showed that adolescents and children in primary schools started to suffer from mental health problems (Kong, Maria, & Samsilah, 2012; Teoh, 2010; Uba, SitiNor, Rumaya, & Mansor, 2012). Thus, longitudinal studies are recommended for future studies to identify the risk factors of mental health as the developmental factors such as maturation and parents' expectation are unable to study in this cross-sectional study.

Mental health problem has been found to be increasing especially in older children (Teoh, 2010; WHO, 2005). Thus, children should also be monitored and observed strictly to ensure they are mentally healthy throughout their development. Intervention programs such as parents' training programs are recommended to aid parents in maintaining a healthy lifestyle for their children.

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