ORIGINAL ARTICLE

Self-Esteem and its Associated Factors Among Secondary School Students in Klang District, Selangor

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SUMMARY

Self-esteem is an important determinant of psychological well-being that is particularly problematic during adolescent life stage. There is a correlation between low self-esteem and other social problems among today's adolescents. This study was conducted to determine the mean self-esteem score, and to determine the association between self-esteem and age, sex, race, religion, number of siblings, ranking among siblings, family function, parental marital status and smoking among adolescents aged 12 to 20 years old. A cross sectional study design using random cluster sampling method was done. Four out of a total of 35 secondary schools in Klang District, Selangor were selected. Respondents consisted of individual students in selected classes from the four selected schools. Data was collected using a self-administered, structured, pre-tested questionnaire and was analyzed using the SPSS version 12.0. Out of 1089 respondents, 793 completed the questionnaire (response rate 73.82%). The overall mean self-esteem score was 27.65. The mean self-esteem score for males (27.99) was slightly higher than females (27.31). The differences in the mean scores by race were statistically significant. There was a statistically significant relationship between mean self-esteem scores and sex, age, race, religion, number of siblings, smoking and family function. There was no statistically significant difference between mean self-esteem score with parental marital status and with ranking among siblings. The overall mean self-esteem score was 27.65. Self-esteem was associated with sex, age, race, religion, number of siblings, smoking and family function.

KEY WORDS:
Self-Esteem, Adolescents, Secondary-Schools, Selangor, Malaysia

INTRODUCTION

Self-esteem is defined as a person's feeling of self-worth[1]. Self-esteem is an important factor for helping persons deal with life stressors[2]. It is an important determinant of psychological well-being that is particularly problematic during adolescent life stage[1].

There is a correlation between low self-esteem and depression, and the resulting risk of suicide, increased unmarried sexual intercourse, teen pregnancy and alcoholism among today's adolescents[2,3,4,5,6]. Self-esteem changes significantly during adolescence which provides important insights into the dynamics of adolescent self-esteem[7].

As adolescents reach young adulthood, males and females often experience many adulthood stressors. Consequently, their reactions to these life stressors affect their self-esteem adversely[8]. Environmental issues such as socioeconomic status, family relations and language barriers may be factors that could contribute to the difference in the self-esteem level[9].

Ethnic differences were found to be predictors of self-esteem in a study conducted in Los Angeles where self-esteem was found to be significantly lower in Asians than Caucasians adolescents[7]. In the United States, Black adolescents have higher self-esteem than biracial adolescents followed by Asian adolescents. It was proposed that different levels of social support in communities resulting from varied racial backgrounds may partly explain racial differences in self-esteem[10].

In the study conducted by Rhee *et al* in the United States, the number of siblings among Asian students was found to predict self-esteem. It was mentioned that the fewer siblings they have the more positively they thought of themselves[7].

Quality of family relations has a strong influence on self-esteem[11]. Family environment is one of the most fundamental and central environments in adolescent life[12]. Family cohesion has significant effects on changes in adolescent self-esteem[8]. Self-esteem and family functioning are positively correlated with relatively greater effect in girls compared to boys[13]. Adolescents whose family challenged them to do their best, and encouraged autonomy and self-discipline have higher self-esteem[14]. Self-esteem and sense of mastery are enhanced by positive family environment. High parental support and parental monitoring were related to greater self-esteem and lower risky behaviors[15].

The aim of this study was to determine the mean self-esteem score for adolescents aged 12 to 20 years old and to determine the association between self-esteem and age, sex, race, religious practice, number of siblings, ranking among siblings, parental marital status, family function and smoking amongst adolescents aged 12 to 20 years old in Klang District, Selangor.

MATERIALS AND METHODS

This cross sectional study was carried out in Klang district, from March to May 2005. Klang is one of the nine districts in

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the state of Selangor in Malaysia. It covers an area of 571 km^2 and has a population of 828,202 people. In the year 2005, there were 35 secondary schools located in Klang district with a total secondary school student population of 52,409.

Random cluster sampling technique was used in this study. The sampling frame consisted of a list of all 35 secondary schools in Klang District. Four out of the 35 schools were selected via random sampling. The sample population consisted of students from the four selected schools. Five classes were randomly selected from each of the selected schools. The sampling unit was the individual students in the selected classes in the four selected schools. Universal sampling was used to select all students from the selected classes. Students who refused to participate were excluded from the study. The sample size was calculated with the Epi Info statistical programme using 95% confidence interval. The sample size calculated was 446.

Data was collected using a validated, self-administered, standardized, structured, pre-tested questionnaire prepared in English, Bahasa Malaysia and Mandarin versions. The questionnaire consisted of questions on social demographics, smoking history, self-esteem, family function and religious practice.

Self-esteem was measured using Rosenberg Self-Esteem Scale, which consisted of 10 statements related to overall feelings of self-worth or self-acceptance[1]. Permission was obtained from the authors for the use of this questionnaire. The items were answered on four-point Likert scales ranging from strongly agree to strongly disagree. Highest score able to be attained was 40 and lowest was 10.

A validated, modified version of the Family Interaction Scale was used to measure the students' family function which consisted of 20 statements in 3 sub-scales; (i) Family awareness, (ii) Communication, and (iii) System maintenance and general functioning[16]. The items were also answered on a four-point Likert scale ranging from strongly agree to strongly disagree. Highest score able to be attained was 80 and lowest was 20.

Data was analyzed using the Statistical Package for Social Sciences Programme (SPSS) version 12.0 and Epi Info version 6.0.4d. The statistical tests employed were student paired t-test, ANOVA test, regression and correlation test. Student paired t-test was used to test the difference between mean self-esteem scores for gender and smoking history. ANOVA test was used to test the difference between the mean self-esteem scores for race, religion, parental marital status, number of siblings and ranking of siblings. All significant levels were set at a standard p value of <0.05.

RESULTS

Out of the 1089 students, 793 students responded giving an overall response rate of 73.82%. The overall mean age was 15.14 years old (SD = 1.64) and ranged from 12 to 20 years. Mean age for males (15.08) was slightly lower than females (15.20) but this difference was not statistically significant ($t = -.1.074$, $df = 791$, $p > 0.05$). Males and females were almost equally distributed with the slight difference of females exceeding males by 0.4%. The majority of respondents consisted of Malays, followed by Chinese, Indians and the minority were from the "Other Race" group. As for religion, only two respondents (0.3%) had no religion.

Table I shows the distribution of respondents by parental marital status, number of siblings, ranking among siblings and smoking history. The results showed that majority of respondents had parents who were married and staying together (92.7%) and had less than five siblings (79.1%). Out of the 793 respondents, 163 (20.6%) were smokers.

The overall mean self-esteem score was 27.65 (± SD = 3.485) and self-esteem scores ranged from 14 to 38. Table II shows the mean self-esteem scores for sex, race, age and religion. The mean self-esteem scores in the males (27.99) was slightly higher than the females (27.31), which was statistically significant ($t = 2.772$, $df = 791$, $p < 0.05$).

Respondents aged 13 years and less had the highest mean score of 28.35, and respondents aged 18 years and more had the lowest mean score of 26.78. A Pearson's correlation analysis showed that there was a statistically significant and direct but very weak relationship between self-esteem and age ($r = 0.122$, $p < 0.05$).

The mean self-esteem score was highest among the "Other races" group (31.60), followed by the Indians (29.28), Malays (27.47) and Chinese (26.55). This difference of mean self-esteem score among the races was statistically significant ($F(3, 789) = 23.789$, $p < 0.05$).

Table III shows the results of the Post Hoc Test which indicate that there were statistically significant differences among two races in self-esteem scoring, where Indians scored significantly higher than Malays ($p < 0.05$) and Chinese ($p < 0.05$), and Malays scored significantly higher than Chinese ($p < 0.05$) and scored lower than "Other races" ($p < 0.05$).

The mean self-esteem score was highest among the Hindus (29.55), followed by the Christians (28.85), "Other religions" (28.18), Muslims (27.47) and Buddhists (26.12). There were only two respondents who had No religion and their mean score was 25.00. The difference of mean self-esteem score among the different religions was statistically significant ($F(5, 787) = 19.392$, $p < 0.05$).

The results of the Post Hoc Test indicated that there were statistically significant differences among two religions in self-esteem scoring, where Hindus scored significantly higher than Muslims ($p < 0.05$) and Buddhist ($p < 0.05$), and Christians ($p < 0.05$) and Muslims ($p < 0.05$) scored significantly higher than Buddhist.

Table IV shows the mean self-esteem scores for parental marital status, number of siblings, ranking among siblings and smoking history. For mean self-esteem scores associated with parental marital status, the highest mean self-esteem score was 27.68 and two groups of respondents had similar scores. These were respondents whose parents were still married and staying together, as well as respondents whose

Table I: Distribution of respondents (n = 793) by parental marital status, number of siblings, ranking among siblings and smoking

Characteristics	Frequency	Percent
Parental marital status		
Married (Staying Together)	735	92.7
Married (Not Staying Together)	19	2.4
Married (Either parent pass away)	22	2.8
Divorced	17	2.1
Number of siblings		
Less than five	627	79.1
Five or more	166	20.9
Ranking among siblings		
First Child	242	30.5
Second Child	215	27.1
Third Child	151	19.0
Fourth Child	60	7.6
Fifth Child	43	5.4
Others	82	10.3
Smoking		
Yes	163	20.6
No	630	79.4

Table II: Mean self-esteem score for sex, race, age and religion among respondents (n=793)

Characteristics	Mean	95% CI for Mean	SD	Range
Sex				
Male	27.99	27.65 – 28.33	3.470	14 – 37
Female	27.31	26.96 – 27.65	3.472	14 – 38
Race				
Malay	27.47	27.17 – 27.77	3.078	16 – 36
Chinese	26.55	26.04 – 27.06	3.753	14 – 36
Indian	29.28	28.77 – 29.79	3.402	19 – 37
Others	31.60	26.74 – 36.46	3.912	28 – 38
Age				
13 or less	28.35	27.86 – 28.85	3.26	18 – 37
14	27.82	27.29 – 28.36	3.162	19 – 35
15	27.77	27.23 – 28.30	3.447	17 – 38
16	26.82	26.21 – 27.43	3.529	14 – 35
17	27.50	26.94 – 28.07	3.555	18 – 36
18 or more	26.78	25.26 – 28.31	4.565	14 – 36
Religion				
Islam	27.47	27.17 – 27.77	3.104	16 – 36
Buddhist	26.12	25.61 – 26.64	3.490	14 – 36
Hindu	29.55	29.04 – 30.05	3.167	22 – 37
Christian	28.85	27.55 – 30.16	4.145	19 – 38
Others	28.18	26.88 – 29.49	1.940	26 – 32
No Religion	25.00			

Maximum self-esteem score was 40; Minimum self-esteem score was 10.

Table III: Results for Post Hoc test for mean self-esteem and race of respondents (n=793)

(I) Race	(J) Race	Mean Difference (I-J)	Std. Error	Sig.	95% CI	
					Lower	Upper
Malay	Chinese	0.918	0.285	.007	0.18	1.65
	Indian	-1.809	0.304	.000	-2.59	-1.03
	Others	-4.132	1.504	.031	-8.00	-0.26
Chinese	Malay	-0.918	0.285	.007	-1.65	-0.18
	Indian	-2.727	0.344	.000	-3.61	-1.84
	Others	-5.050	1.513	.005	-8.94	-1.15
Indian	Malay	1.809	0.304	.000	1.03	2.59
	Chinese	2.727	0.344	.000	1.84	3.61
	Others	-2.323	1.517	.419	-6.23	1.58
Others	Malay	4.132	1.504	.031	0.26	8.00
	Chinese	5.050	1.513	.005	1.15	8.94
	Indian	2.323	1.517	.419	-1.58	6.23

Table IV: Mean self-esteem score for parental marital status, number of siblings, ranking among siblings and smoking among respondents (n=793)

Characteristics	Mean	95% CI for Mean	SD	Range
Parental marital status				
Married (Staying together)	27.68	27.43 – 27.94	3.480	14 – 38
Married (Not staying together)	27.05	25.22 – 28.89	3.808	21 – 37
Married (Either parents passed away)	27.68	26.22 – 29.14	3.286	21 – 34
Divorced	26.65	24.73 – 28.56	3.724	20 – 34
Number of siblings				
Less than five	27.87	27.60 – 28.14	3.469	14 – 38
Five or more	26.81	26.28 – 27.33	3.429	14 – 36
Ranking among siblings				
First Child	27.87	27.44 – 28.31	3.436	18 – 37
Second Child	27.74	27.23 – 28.24	3.760	14 – 38
Third Child	27.50	26.96 – 28.03	3.344	14 – 36
Fourth Child	27.55	26.66 – 28.44	3.432	20 – 37
Fifth Child	27.88	26.86 – 28.91	3.340	20 – 34
Others	26.96	26.25 – 27.68	3.241	18 – 34
Smoking				
Yes	27.09	26.57 – 27.61	3.375	16 – 35
No	27.79	27.52 – 28.06	3.502	14 – 38

Maximum self-esteem score was 40; Minimum self-esteem score was 10.

Table V: Pearson correlation and linear regression of family function and religion with self-esteem among respondents (n=793)

	r	r square	F	df	P
Family function	0.478	0.228	234.00	1	0.01
Religious practice	0.099	0.010	7.79	1	0.01

parent were married but one of them had passed away. However, the differences of mean self-esteem scores and different parental marital status was not statistically significant ($F(3,789) = 0.679$, $p > 0.05$).

Respondents with less than five siblings had a higher mean self-esteem score (27.87) compared to respondents with five siblings or more (26.81), and this difference was statistically significant ($t = 3.516$, $df = 791$ $p < 0.05$).

This study found that there was no significant association between mean self-esteem scores and the ranking of a respondent among his/her siblings, based on the one-way ANOVA test results ($F(5, 787) = 0.968$, $p > 0.05$).

Students who did not smoke had a significantly higher mean self-esteem score (27.79) compared to students who smoked (27.09) ($t = -2.286$, $df = 791$, $p < 0.05$).

In Table IV, the Pearson's correlation test results show the linear relationship between self-esteem score and family function score. A statistically significant, direct, moderate relationship was found between self-esteem with family function ($r = 0.478$, $p < 0.05$). Linear Regression test was performed to evaluate the extent to which family function contributed to the changes in self-esteem. Result showed that family function explained 22.8% of the variation in self-esteem score (r square = 0.228, $p < 0.05$).

The Pearson's correlation test results showed that there was a statistically significant, direct but very weak correlation between self-esteem and religion ($r = 0.099$, $p < 0.05$) (Table V). Linear Regression test showed that religion only accounted for 1.0% of the variation of self-esteem score (r square = 0.010, $p < 0.05$).

DISCUSSION

In this study, males (27.99) had a statistically significant higher mean self-esteem score than females (27.31). This finding corresponds with the other studies carried out by different researchers in other countries such as James R *et al's* study on adolescents in Louisiana, United States of America[12], and Frost & McKelvie's study on self-esteem among students in Quebec, Canada[17].

The results of our study show that there was a statistically significant but very weak and positive direct relation between self-esteem and age of the respondents. This finding agreed with Baldwin and Hoffmann that self-esteem score increase significantly with age[8]. However, the results contradicted with another study done by Connor *et al,* which found that age was not significantly correlated with self-esteem[9]. Connor's study was conducted among 149 adolescents who were studying in two nonmainstream schools in Pennsylvania State, America. Although it was hypothesized that younger students would have lower self-esteem than older students, analyses of the results was not significant.

In our study, Indians (29.28) were found to have the highest mean self-esteem score compared to Malays (27.47), while Chinese (26.55) scored the lowest of the three major races in Malaysia. This finding was consistent with the research done by Rhee *et al* among Asian and American students[7], and

Bracey *et al's* study among biracial and monoracial students in a south-western city in the United States of America that there are statistically significant differences on ethnicity in self-esteem[10].

In this study, the respondents who had less than 5 siblings (27.87) had a higher mean self-esteem score compared to those who had more than 5 siblings (26.81). This result was supported by Rhee *et al* in the case of having fewer siblings is positively correlated with higher self-esteem[7].

This study found that students who did not smoke scored statistically significant higher mean self-esteem scores (27.79) compared to students who smoked (27.09). This outcome corresponded similarly with other studies carried out by other researchers such as Byrne & Mazanov's studies on self-esteem in cigarette smoking in Australia in 1999[18] and 2002[19], as well as another study by Kawabata *et al* among Japanese adolescents[20]. Further studies should look into matters, which could influence the self-esteem and smoking indicators such as neighborhood, school environment, family member influences and the different ethnic groups.

The correlation between self-esteem and family function had a statistically significant, direct relation of moderate strength ($r = 0.478$, $p < 0.05$) in this study. In their study, Connor *et al* reported that adolescents who communicated more openly with parents were likely to have higher self-esteem score[9]. In addition, the results of this study also lend support to the study conducted by Mandara and Murray among African American adolescents[13]. Consistently, these results are also supported by the study on parent-adolescent relations and adolescent functioning among 16,749 adolescents from the National Educational Longitudinal Study in the United States of America[18].

Our results also show that there was a statistically significant, direct, very weak correlation between self-esteem and religion. This finding agrees with a study on Black Americans that religion is one of the contributing factors to self-esteem[11]. However, in their study James et al found that there was no significant correlation between self-esteem and religious practice[12]. Further studies should be done in order to determine the correlation between self-esteem and religion especially in Malaysia.

The purpose of this study was to determine the mean self-esteem score and factors which are associated with self-esteem among adolescents in Klang district, Selangor. Hopefully the results obtained in this study can be used as a general guide on the self-esteem level and its associated factors among adolescents in Malaysia. The findings of this study can be used by doctors and other professionals in handling matters pertaining to adolescents' mental health and well-being. Larger and more in-depth studies should also be carried out to determine the correlation between low self-esteem and other social problems among adolescents in this country based on the findings of this study.

CONCLUSION

The overall mean self-esteem score for the secondary schools students in the Klang district was 27.65. There were statistically significant associations between self-esteem and sex, age, race, religion, number of siblings, smoking and family function score. In this study the results showed no statistically significant relationship between self-esteem and parental marital status or self-esteem and ranking among the siblings. Larger-scale studies on self-esteem need to be carried out in Malaysia. Future studies should include factors such as parental education level, number of family members, family income and academic achievement of students. Religious practices need to be studied in more detail.

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