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Relationship Between Self-Esteem and Loneliness With Aggressive Behavior of Adolescents in Perak, Malaysia

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Abstract
This study investigates the relationship between the level of self-esteem and loneliness with aggressive behavior of adolescents. Respondents were students of Sultan Abdul Aziz High School, Seri Perak High School and Horley Methodist High School in Perak, Malaysia. A total of 200 students were involved in this study. This cross-sectional study measures aggressive behavior by four dimensions of verbal aggression, physical aggression, anger and hostility, which was assessed by Aggressive Questionnaire; level of self-esteem was assessed by Self Esteem Scale, and R-UCLA Loneliness Scale was used to measure the level of adolescent loneliness. Data analysis shows that overall self-esteem and loneliness are linked to aggressive behavior. The findings show that there are significant differences between high and low levels of loneliness with aggressive behavior. The results found that respondents with lower levels of loneliness behave more aggressively than respondents who experienced loneliness is high.

Keywords: Aggressive Behavior, Self-Esteem, Loneliness, Adolescents

Introduction
Adolescence is a transition period from the late childhood into adulthood (Dixon, Scheidegger, & Mcwhirter, 2009) which characterized by developmental changes in the pubertal, physical, cognitive, emotional, psychosocial and educational (Erikson, 1963). Adolescence is a demanding period in life cycle of a young person which may lead to aggressive behavior. The contributory factors that lead to aggressive behavior are many and varied such as stress, loneliness, and self-esteem. Several risk factors has been identified as potential antecedents for the development of aggressive behavior in adolescents. The antecedents at an individual level are low self-esteem (Martínez et al., 2009), psychological distress (Villarreal-González et al., 2011), feelings of loneliness (Martínez et al., 2012), lack of empathic skill (Mestre et al., 2012; Moreno, Estévez, Murgui, & Musitu, 2009); while at school level are low academic engagement (Álvarez-García et al., 2010), negative social relations at school with classmates and teachers (Eccles & Roeser, 2011;
Murray & Murray, 2004); and negative attitudes towards studies, the school, and the teaching staff (Estévez, Inglés, & Martínez-Monteagudo, 2013), and at the family level are the presence of frequent intense conflicts in the family (Wienke et al., 2009), negative communication between parents and adolescent’s siblings (Marković, 2015), and of affective cohesion among the family members (Estévez et al., 2014).

Several issues related to social issues involving adolescents for example bullying, truancy, murder, rape, loitering, and smoking. In adolescence, the individual will face a critical challenge of formation and development of self-identity. If the individual fail to address these challenges, adolescents experience a crisis of confusion about the role of their lives Erikson (1963). When the adolescent development of self-identity is negative, they will tend to lose confidence in themselves. Self-esteem is related to their self-esteem, if there is no confidence, teens will have low self-esteem. Barry, Frick and Killian (2003) has identified that low self-esteem relationship and behavioral problems can be noticed among teenagers. The purpose of this study was to examine the relationship between self-esteem and loneliness level of aggressive behavior in adolescents, to identify the association between the dimensions of aggressive behaviour with self esteem and loneliness, to identify the Gender differences in dimensions of aggressive behavior and to explore whether the level of loneliness influence aggressive behavior in adolescents.

**Literature Review**

**Aggressive Behavior**

Aggressive behavior is a behavior that has a malicious intent to harm others, including physical or psychological. While self-esteem is how a person think or feel about themselves and know that oneself can do things better. Individuals with self-esteem will have a good feeling about themselves, feeling where they feel that they are useful. There are several previous studies discuss the issues of self-esteem with aggressive behaviour. Donnellan et al. (2005) states that individual factors behave aggressively is closely linked to self-esteem. The findings have also been prove that individuals with high self-esteem tend to behave aggressively than those who have low self-esteem because individuals with high self-esteem tend to dominate others by showing some kind of aggressive behavior. Diamantopoulou Sofia, Rydell A.M and Henricsson Lisbeth (2007) was one of the factors that support individuals to behave aggressively is caused by high self-esteem. This study shows that students who are 12 years also behave aggressively because has high self-esteem. In addition, this study proves that there is a high self-esteem and aggressive behavior between the sexes to boys than girls. The study also found that boys who have difficulties in social acceptance behave more aggressively than male students are less problematic in social acceptance.

In addition, aggressive behavior is influenced by silence factors. Adolescent who do not get the attention of parents, teachers and people around them tend to behave problem and it also affects the self-esteem of the individuals. Most teenagers are lonely and act to behave aggressively because this is solely wants attention. Teenagers involved with addiction to video
games tend to behave in an aggressive and experienced loneliness than teens who are not addicted to video games (Uzma et al., 2013).

**Self-esteem and Loneliness**

Self-esteem is a positive or negative evaluation of self-concept. Rosenberg (1979) studied self-esteem among adolescents have to distinguish between self-confidence and self-esteem in self-extant. Self-confidence is linked to the concept of Bandura's self-efficacy in the expectation to overcome challenges and have control over the situation. In addition, the failure to obtain positive self acceptance will lead to depression and cause the individual has a low level of self-esteem. Moreover, Rosenberg (1979) found delinquent group were among individuals with low self-esteem. Therefore, based on past studies of factors affecting the self-esteem of adolescents to behave aggressively, Saleh (2011) found that self-esteem has contact with loneliness. Self is the largest contributor to adolescents silence.

Loneliness is described as an unpleasant and distressing state in which individuals perceive deficiencies in their social world (Peplau & Perlman, 1982) and it is a common emotional experience during adolescence (Qualter et al., 2015). Loneliness influences multiple facets of adolescents' physical and mental health. Adolescents with low self-esteem will have a high level of loneliness. Adolescent tendency to behave aggressively is when the individual feels lonely (Prinstein et al., 2001). Thus, to prove that these factors, the researchers conducted a study of adolescents to see the relationship between self-esteem and loneliness with aggressive behavior.

**Methodology**

**Research Design**

The design used in this research was a cross-sectional study involved the use of questionnaire or survey form. The questionnaire was self-administered by researcher. Independent variables involved in this research includes aggressive behavior, self-respect measures the level of self-esteem and loneliness scale to measure the level of adolescent loneliness.

**Participants**

The participants involved in this research were respondents among secondary school students around Sultan Abdul Aziz High School, Seri Perak High School and Horley Methodist High School and students in tuition Ulul Azmi, Rawang, Selangor. Respondents were selected among adolescents form one to form five aged about 13 years to 17 years. In this study, respondents consisted of 88 male students and 112 female students. Sampling methods used by the researchers in this study is a non-probability sampling methods, called snowball sampling.

**Instrument Tools**

There were three assessment tools that has been used in this study ie,. the Aggressive Test Questionnaire (Buss & Perry, 1992), the Rosenberg Self-Esteem Scale (Rosenberg, 1965) and the R-UCLA Loneliness Scale (Russell, Peplau & Cutrona, 1980). The questionnaire used was in Malay language and English-speaking test tool has been translated into Malay language.
Aggressive Questionnaire (Buss & Perry 1992)
Aggressive Questionnaire (Buss & Perry, 1992) is designed to measure aggressive behavior of teenagers. There are 29 items and it is divided into four dimensions of physical assaults, verbal attacks, anger and hostility. Aggressive media reliability testing for the entire questionnaire is α = .90. This assessment tool reported high reliability, α = .92. Past studies have shown that this Questionnaire Aggressive Test is a good test tool and can be used and referenced by researchers who want to measure aggressive behavior.

Rosenberg Self-Esteem Scale, RSE (Rosenberg 1965)
Rosenberg Self-Esteem Scale (Rosenberg, 1965) contains 10 items that measure self-reported themselves globally. Feelings of self-assessment and self-acceptance were the items contained in RES. The reliability of RSE was high, α = .73.

R-UCLA Loneliness Scale (Russell, Peplau & Cutrona 1980)
R-UCLA Loneliness Scale (Russell, Peplau & Cutrona, 1980) is designed to measure the level of silence. The test device contains 20 items about the silence that is divided into 10 positive and 10 negative items. High reliability of these measurements were reported α = .86 (Prinstein et al., 2001).

Data analysis
Data were reported as means and standard deviations unless otherwise indicated, with significance level set at .05. The statistical tests that were used were independent sample t-tests, one way ANOVA, and Pearson Correlation. The IBM SPSS Statistic 22 was used for all the above analysis.

Results
Demographic data of respondents
Table 1 shows the demographic data of the respondents in the study. Participants of the study consisted of 88 male respondents (44%) and 112 females (56%), making it a total of 200 respondents. Meanwhile, respondents involved in this study comprised of students aged from 13 years to 17 years, respondents aged 13 years were 2 respondents (1%), aged 14 of 26 were 13%, respondents aged 15 years were 48 (24%), 16 of 67 respondents (33.5%) and aged 17 years were 57 respondents (28.5%). 127 respondents were Malays (63.5%), 54 were Chinese (9.5%) and 19 respondents were India (27%). Meanwhile, 177 respondents live with their family (88.5%), 4 respondents lived with their brother (2%), and 9.5% of them lived in hostel (19 respondents).

Table 2 shows the mean and standard deviation for each of the variables measured in the study. The result shows the dimensions of aggressive behaviour by using a testing device aggressive questionnaire been found aggressive (M = 100.51, SD = 15.95), verbal attacks (M = 17.56, SD = 3.40), physical attacks (M = 32.76, SD = 5.64), anger (M = 24.79, SD = 5.31), hostility (M = 25.40, SD = 6.09). As for the variables self-esteem by using the self-esteem scale test found the M = 27.60, SD = 4.17 and loneliness variables by using the test R-UCLA Loneliness Scale is M = 42.25, SD = 8.97.
Table 1: Demographic Data of the Participants

| Demographic | N  | %   |
|-------------|----|-----|
| Gender      |    |     |
| Male        | 88 | 44  |
| Female      | 112| 56  |
| Age         |    |     |
| 13 years    | 2  | 1   |
| 14 years    | 26 | 13  |
| 15 years    | 15 | 24  |
| 16 years    | 48 | 33.5|
| 17 years    | 67 | 28.5|
| Race        |    |     |
| Malay       | 127| 63.5|
| Chinese     | 54 | 27  |
| Indian      | 19 | 9.5 |
| Residence   |    |     |
| Family      | 177| 88.5|
| Brother     | 4  | 2   |
| Hostel      | 19 | 9.5 |

Table 2: Mean Value and Standard Deviation of Variables

| Variable      | N   | Mean | S.P  |
|---------------|-----|------|------|
| Aggressive    | 200 | 100.51 | 15.95|
| Verbal attacks| 200 | 17.56  | 3.40 |
| Physical attacks| 200 | 32.76  | 5.64 |
| Anger         | 200 | 24.76  | 5.31 |
| Hostility     | 200 | 25.40  | 6.09 |
| Self esteem   | 200 | 27.60  | 4.17 |
| Loneliness    | 200 | 42.25  | 8.97 |

Association between the dimensions of aggressive behaviour with self esteem.

Result of correlation between the variables shown in Table 3. Aggressive behavior has five different dimensions; aggressive, verbal attacks, physical attacks, anger and hostility. However, correlation analysis shows there is a significant association between three of the dimensions (aggressive, anger and hostility) with the level of self-esteem. Based on the results, it can be concluded that the aggressive dimension shows a significant association with the level of self-esteem in respondents \( (r = 0.261, p < 0.05) \), anger dimension \( (r = 0.319, p < 0.05) \) and hostility \( (r = 0.327, p < 0.05) \). Thus, hypothesis accepted.
Table 3: Correlation of dimension aggressive behavior with self-esteem

| Variable       | Self esteem | Sig. (2-tailed) |
|----------------|-------------|-----------------|
| Aggressive     | .261**      | .000            |
| Verbal attacks | .008        | .910            |
| Physical Attack| .079        | .269            |
| Anger          | .319**      | .000            |
| Hostility      | .327**      | .000            |

*p< .05, **p < .01

**Association between the dimensions of aggressive behaviour with loneliness.**

Table 4 shows the correlation between the dimensions of aggressive behaviour with loneliness. Results indicate loneliness parties are weak but significant negative relationship between aggressive dimensions, namely $r = -0.322$, $p < 0.05$; anger ($r = -0.289$, $p<0.05$) and hostility ($r = -0.324$, $p < 0.05$) respectively.

Table 4: Correlation between dimensions of aggressive behavior with loneliness

| Variable     | Loneliness Pearson Correlation | Sig. (2-tailed) |
|--------------|-------------------------------|-----------------|
| Aggressive   | -0.322**                      | .000            |
| Verbal attacks| -0.92                        | .194            |
| Physical Attack| -0.232**                     | .001            |
| Anger        | -0.289**                      | .000            |
| Hostility    | -0.324**                      | .000            |

*p< .05, **p < .01

**Gender differences in dimensions of aggressive behavior.**

Based on table 5 above, the results show the mean and standard deviation between gender in aggressive dimension of male respondents indicated value $M = 101.63$, $SD = 15.89$, while female respondents indicated value $M = 99.63$, $SD = 15.94$. Results of the study was not significant ($t = .880$, df = 198, $p > .05$); meanwhile in verbal attack dimension, male respondents reported mean of $17.50$, $SD = 3.35$ and female respondents ($17.61 \pm 3.45$). There was no significant differences in aggressive and verbal attack dimension between the genders.
Table 5: Results of t-test analysis between the dimensions of aggressive behaviour by gender

| Dimension      | Gender | N   | Mean  | S.D  | df | t     | p     | Mean Value difference |
|----------------|--------|-----|-------|------|----|-------|-------|-----------------------|
| Aggressive     | Male   | 88  | 101.6 | 15.98| 198| .880  | .380  | 2.000                 |
|                | Female | 112 | 99.63 | 15.94|    |       |       |                       |
| Verbal attack  | Male   | 88  | 17.50 | 3.35 | 198| -.221 | .826  | -.107                 |
|                | Female | 112 | 17.61 | 3.45 |    |       |       |                       |
| Physical attack| Male   | 88  | 31.70 | 5.62 | 198| -2.37 | .019  | -1.885                |
|                | Female | 112 | 33.59 | 5.55 |    |       |       |                       |
| Anger          | Male   | 88  | 25.84 | 5.29 | 198| 2.53  | .012  | 1.886                 |
|                | Female | 112 | 23.96 | 5.20 |    |       |       |                       |
| Hostility      | Male   | 88  | 26.58 | 5.55 | 198| 2.46  | .015  | 2.106                 |
|                | Female | 112 | 24.47 | 6.36 |    |       |       |                       |

As for the physical attack dimension, female respondents reported higher mean (33.59 ± 5.55) as compared to male respondents (31.70 ± 5.62). There was a significant differences between the genders in physical attack dimension. This indicates that female respondents were more likely to have experienced physical attack than male respondents. While in anger dimension, male respondents reported higher mean (25.84 ± 5.29) as compared to female respondents (23.96 ± 5.20), and in hostility dimension, male respondents reported mean of 26.58, S.D = 5.55 and female respondents (24.47 ± 6.36). Thus, results show that there were significant differences between the genders in anger dimension.

Loneliness and aggressive behaviour among respondents.

Table 6 shows the result of t-test analysis of the level of loneliness and aggressive behaviour in respondents. There was a significant difference between high and low levels of loneliness with aggressive behavior. It indicates that respondents with low level of loneliness acted more aggressively than respondents with a high level of loneliness.
Table 6: Levels of loneliness and aggressive behavior

| Level of loneliness | N   | Mean | Standard deviation | df  | t    | p    | Mean value difference |
|---------------------|-----|------|--------------------|-----|------|------|-----------------------|
| Aggressive behavior |     |      |                    |     |      |      |                       |
| Low                 | 131 | 102.16 | 16.21              | 198 | 2.039| .043 | 4.798                 |
| High                | 69  | 97.36 | 15.06              |     |      |      |                       |

Discussion

**Association between the dimensions of aggressive behaviour with self esteem**

The results showed that the overall dimensions of aggressive behaviors related to self-esteem excluding the dimension of verbal attacks. However, the relationship between aggressive behaviour and level of self-esteem was weak for anger and hostility dimension. This means that the respondent who has self-esteem acted aggressively in a moderate level. The findings are supported by Diamantopoulou Sofia et al. (2007) that self-esteem related to aggressive behavior. Donnellan et al. (2005) supports the findings which all the dimensions of aggressive behavior were associated with self-esteem except the dimension of verbal attack.

**Association between the dimensions of aggressive behaviour with loneliness**

Results showed that the overall dimensions of aggressive behavior related to the loneliness. All dimensions aggressive behavior has a very weak relationship with loneliness except for the aggressive dimension has a poor relationship with loneliness. The findings were supported by James et al. (1985) and Uzma et al. (2013) that the aggressive behavior related to the silence. The findings show that respondents who experienced loneliness will behave aggressively.

**Gender differences in dimensions of aggressive behavior**

The results showed no significant differences in the dimensions of aggressive behavior and aggressive verbal attacks based on gender dimensions. The results show boys and girls no difference in dimensions aggressive behavior. While the dimensions of physical attacks, anger and hostility there were significant differences by gender. The findings are not consistent with the hypothesis developed by researchers noted that male students tend to behave aggressively in all dimensions than girls. The difference between the mean values of male students and female students in the dimensions of physical attacks showed that more female students have physical assault than male students. This finding is contrary to the findings Badrulzaman (2006) conducted a study on 210 students from Pontian. The findings showed that boys more deviant behavior than girls. This is likely because the study Badrulzaman (2006) has more male respondents than female respondents ie 71.4% male while 28.6% of women. Respondents researchers are more female students than male students, of whom 44% male and 56% female. However, if we see today too many cases of fights involving female students. Recently, the social networking site Facebook, the video fights secondary school girls had a fight because of love so willing punching, hair pulling and cursing each other. The fight occurred because one of the girls that had seized her boyfriend.
Researchers argued, boys prefer to show anger to wrestle and fight against women because of physical factors that stronger men than women. The study supports the findings of researchers such as Diamantopoulou et al. (2007), Wang et al. (2014) and Badrulzaman (2006) that teenage boys are more aggressive than girls. Moreover, the results indicate there is a significant difference between the mean values of the gender dimensions of hostilities. The results found that more male students have a dimension of hostility against girls. Researchers argue that, at this stage of adolescent boys more aggressive and active than girls.

Conclusion
Overall self-esteem and loneliness are linked with aggressive behavior. This reflects that individuals with self-esteem and suffer from loneliness are likely to behave aggressively. The results also showed a significant difference between aggressive behavior and self-esteem among male and female students. While there was no significant difference between loneliness among boys and girls, this portrait of male and female respondents experienced the same level of silence. The study researchers also found that there are significant differences in the level of low self-esteem and high self-esteem level with aggressive behavior of respondents who have high self-esteem behave more aggressively than respondents who have low self-esteem. Whereas, for the silence. The findings show that there are significant differences between high and low levels of loneliness with aggressive behavior. The results found that respondents with lower levels of loneliness behave more aggressively than respondents who experienced loneliness is high. Overall, the findings of researchers in line with previous studies, and there are some findings that contradict previous studies. This may be due to factors such as demographic factors in terms of culture, society and the number of respondents who are not the same as the study researchers.

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