Correlates of Stress among Female Adolescents

Fam Jia Yuin ¹
Siti Nor Yaacob ²

¹ Sunway University Business School
Sunway University
² Department of Human Development & Family Studies
Universiti Putra Malaysia

Corresponding author: sitinor8888@gmail.com

Excessive stress during adolescence might contribute to various problems. Given that female adolescents tend to perceive more stress than male adolescents, the present study aimed to determine the relationships between parent-adolescent relationship, prosocial behaviour, academic self-efficacy, and stress among female adolescents in Malacca, Malaysia. Participants of the present study are 235 female school-going adolescents aged between 13 and 19 years old. Results of Pearson correlation analysis revealed that parent-adolescent relationship, prosocial behaviour, and academic self-efficacy were negatively correlated with stress. Additionally, all the three independent variables significantly predicted stress among female adolescents, where parent-adolescent relationship was the strongest predictor of stress. In essence, female adolescents who reported more positive relationship with parent, higher prosocial behaviour, and higher academic self-efficacy tend to have lower stress. The current findings highlight the significant role of parents and individual factors in combating stress among female adolescents. Parents should maintain affectionate relationship with their female adolescent-aged children. Related authorities as well as parents can help promote prosocial behaviour and academic self-efficacy among adolescents.

Keywords: academic self-efficacy, prosocial behaviour, parent-adolescent relationship, stress, adolescent

Adolescence can be best described as a stage of “storm and stress”, which is accompanied by rapid development from various perspectives (Arnett, 1999). Given the nature of this developmental stage, the high prevalence of stress among adolescents was well-documented in literatures (Parpio, 2013; Roy, Kamath, Kamath, Alex, & Hegde, 2015; Schraml, Perski, Grossi, & Simonsson-Sarnecki, 2011). For instance, research indicated that the prevalence rate of stress among secondary-school students in Malaysia was 26.1% (Yusoff, 2010). Unfortunately, exposure to stress during adolescence can create vulnerability to various mental health problems and problematic behaviours, such as depression (Hammen, 2009), aggressive behaviour (Centeio, Whalen, Kulik, Thomas, & McCaughtry, 2015), and suicidal ideation (Asghari, Sadeghi, Aslani, Saadat, & Khodayari, 2013).

Despite the deleterious effects of stress on adolescents, existing evidences on correlates of stress had been mainly focused on college and university students (Fam & Teo, 2018; Tavolacci et al., 2013; Thawabieh & Qaisy, 2012), while less attention had been paid on adolescent-aged students. The lack of stress research among adolescents can cause potential problems, such as ineffective interventions. For this reason, it is the purpose of the present study to identify potential correlates of stress among adolescents. Additionally, analysis
by gender noted that female adolescents are more vulnerable to various mental disorders than male adolescents, which include stress (De Vriendt et al., 2011; Yaacob, Tan, Esmaeili, Tan, & Juhari, 2013), depression (Frost, Hoyt, Chung, & Adam, 2015), and nonsuicidal self-injury (Sornberger, Heath, Toste, & McLouth, 2012). For example, Parpio, Farooq, Gulzar, Tharani, Ali, and Javed (2012) found that 78% of the female adolescents are at a greater risk of stress than their males counterparts. In light of this, the present study put the main focus on studying stress among female adolescents in Malacca, Malaysia.

**Stress among Adolescents**

In general, the main sources of stress among adolescents come from home life, peers, and school (Moksnes, Byrne, Mazanov, & Espnes, 2010). Different from children, most adolescents tend to experience greater parent-adolescent conflict, peer-related problems, and academic pressure.

More precisely, most adolescents become increasingly autonomous and demand for greater freedom (Fleming, 2005). Hence, adolescents tend to strive for greater autonomy and detach from family (Soenens & Beyers, 2012), which will in turn damage the quality of parent-adolescent relationship when they consistently distancing themselves from their family (Van Petegem, Vansteenkiste, & Beyers, 2013; Yeh & Yang, 2006). Given the significant role of parents on adolescents’ development (Moretti & Peled, 2004), it is plausible that the weakened parent-adolescent relationship is stressful and disadvantageous for adolescents.

Following the detachment from family, adolescents tend to build stronger relationship with peers (Workum, Scholte, Cillessen, Lodder, Giletta, 2013). Indeed, previous study suggested building interpersonal relationship as one of the most stressful developmental tasks for adolescents (Compas & Phares, 1991). This is mainly due to new types and deeper level of friendships will emerge during adolescence, such as building relationships with friends from opposite-sex and the emergence of “best friend” (De Guzman, 2007). For this reason, adolescents who are prosocial tend to perceive more positive friendship quality (Griese & Buhs, 2014). In light of this consideration, it is possible that adolescents with deficit prosocial values are exposed to greater stress than their high prosocial values counterparts.

Last but not least, academic context is also often being cited as a major source of stress for adolescents (Banks & Smyth, 2015; Kaplan, Liu, & Kaplan, 2005). Referring to the social cognitive theory, adolescents with higher academic self-efficacy are able to cope better with academic stress than their low academic self-efficacy counterparts (Bandura, 1986). Theoretically, adolescent with high academic self-efficacy tend to view academic tasks as challenges, and feel motivated to achieve the academic goals (Schunk, 1991). In contrast, adolescents with low academic self-efficacy tend to view academic tasks as threats, which will demotivate them to fulfil the academic tasks. Following this rationale, adolescents with low academic self-efficacy are more inclined to stress than those with high academic self-efficacy.

Based on the above rationale, it is the purpose of the current study to:

1. determine the relationships between parent-adolescent relationship, prosocial behaviour, academic self-efficacy, and stress among female adolescents, and
2. determine the factors that uniquely predicts stress among female adolescents.
Method

Participants and Procedure

The sample of the present study was 235 female adolescents randomly drawn from four secondary schools in Malacca, Malaysia. The participants were aged between 13 to 19 years old, with an average age of 16.98 years old (SD = 1.289). In addition, the average monthly family income of the participants was RM 2084.98 (standard deviation = 1318.585).

Instrumentation

Parent-adolescent relationship was measured by 55 items from Parental Attachment Questionnaire (Kenny, 1987). Although this instrument was originally designed for university students (Kenny, 1987), but it is proven to work well for adolescents aged 12 to 18 years old (Shochet, Smyth, & Homel, 2007). The respondents were required to rate each from 1 to 5, that can best describe their parents, relationship with parents, and experiences and feelings, where 1 indicates for “not at all”, 2 indicates for “somewhat”, 3 indicates for “a moderate amount”, 4 indicates for “quite a bit”, and 5 indicates for “very much”. Upon adjusting for the inverse scoring, the scores of all items were summed up. Higher total score indicates better parent-adolescent relationship quality. Examples of item asked are “When I go to my parents for help, I feel confident that things will work out as long as I follow my parents’ advice” and “In general, my parents are persons I can count on to provide emotional support when I feel troubled”. The internal consistency of this instrument in the present study was relatively good (Cronbach’s alpha = .925).

Prosocial behaviour was measured by a prosocial subscale of Peer Relations Questionnaire (PRQ) for Children (Rigby & Slee, 1993). There are four items for prosocial scale, which requires respondents to rate how often they engage in prosocial activities by using a 4-point Likert scale, where 1 indicates for “never”, 2 indicates for “once in a while”, 3 indicates for “pretty often”, and 4 indicates for “very often”. Higher rating indicates higher prosocial behaviour. Examples of item in the prosocial subscale are “I like to make friends” and “I like to help people who are being harassed”. In the present study, this subscale showed an adequate reliability (Cronbach’s alpha = .645).

Academic Self-Efficacy Questionnaire (Zajacova, Lynch, & Espenshade, 2005) was used to measure academic self-efficacy among the respondents. This instrument consists of 27 items which required the respondents to rate their confidence on academic tasks. This instrument was designed as 11-point Likert scale, which are 0 = “not confident” to 10 = “extremely confident”. Higher rating indicates greater confidence on relative academic task. There are four subscales under this instrument, namely interaction at school, academic performance out of class, academic performance in class, and managing work, family, and school. All scores were summed up as general academic self-efficacy. Examples of item in this instrument are “Preparing for exams” and “Finding time to study”. Based on the results of reliability test, this instrument has high internal consistency (Cronbach’s alpha = .944).

Perceived stress was measured by 14-items of Perceived Stress Scale (PSS) developed by Cohen, Kamarck, and Merlstein (1983). The PSS required the respondents to rate how often the stated feelings and thought occurred during the previous month in 5-point Likert scale, where 1 indicates for “never”, 2 indicates for “almost never”, 3 indicates for “sometimes”, 4 indicates for “fairly often”, and 5 indicates for “very often”. Total score was summed up upon adjusting for inverse scoring. Higher total score indicates higher
stress. Examples of item in Perceived Stress Scale are “How often have you been upset because of something that happened unexpectedly?” and “How often have you been able to control irritations in your life?”. In the current study, the instrument showed an acceptable reliability (Cronbach’s alpha = .631).

**Results**

**Pearson’s Correlation**

Pearson’s correlation was performed to determine the relationships between parent-adolescent relationship, prosocial behaviour, academic self-efficacy, and stress among female adolescents. The results of Pearson’s correlation analysis were displayed in the Table 1. The results revealed that parent-adolescent relationship is inversely correlated with stress among female adolescents ($r = -.327, p = .000$). This result is in line with the finding of Seiffge-Krenke et al. (2013), which claimed that positive parent-adolescent relationship can help adolescents to cope and adjust to stress. Given that adolescents tend to seek for parental support in time of stress, parents who are unsupportive and maintain loose parent-adolescent relationship will increase the risk for maladjustment among adolescents.

### Table 1

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>$r$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent-adolescent relationship</td>
<td>-.327***</td>
</tr>
<tr>
<td>Prosocial behaviour</td>
<td>-.224**</td>
</tr>
<tr>
<td>Academic self-efficacy</td>
<td>-.334***</td>
</tr>
</tbody>
</table>

*Note. ** $p < .01$; *** $p < .001$*

The result also showed significant association between prosocial behaviour and stress among female adolescents ($r = -.224, p = .001$). This result is consistent with the finding of Martin and Huebner (2007), indicating that positive prosocial behaviour will help adolescents to cope better with stress. Referring to Linkrum (2006), adolescents with high prosocial behaviour tend to apply prosocial coping strategy when faced with stress, such as support seeking or problem-solving. Consequently, they are able to cope with incoming stress positively.

In addition, significant negative relationship was found between academic self-efficacy and stress ($r = -.334, p = .000$). Hence, it is proven that there is a significant negative association between academic self-efficacy and stress, indicating that higher academic self-efficacy can help adolescents to reduce stress. This result strengthens the findings of Zajacova et al. (2005). Adolescents with high academic self-efficacy tend to view academic tasks as challenges, while adolescents with low academic self-efficacy are more likely to view academic tasks as threats. Thus, it is reasonable to conclude that those with high academic self-efficacy tend to perceive less stress than their low academic self-efficacy counterparts.

**Hierarchical Multiple Regression**

Hierarchical multiple regression was performed to identify the predictors for stress among female adolescents. The result of the hierarchical multiple regression analysis was displayed in the Table 2 below. In step 1, age and family income were entered into the regression model. The model was significant with F value of 3.265 (sig-F $< .05$). Both of the variables
explained about 2.7% of the variance in stress ($R^2 = .027$).

In step 2, all main variables in this study were entered into the regression model, namely parent-adolescent relationship,

Table 2

<table>
<thead>
<tr>
<th>Variable</th>
<th>Step 1</th>
<th>Step 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SEB</td>
</tr>
<tr>
<td>Age</td>
<td>.220</td>
<td>.280</td>
</tr>
<tr>
<td>Family income</td>
<td>-.001</td>
<td>.000</td>
</tr>
<tr>
<td>Parent-adolescent relationship</td>
<td>-.045</td>
<td>.014</td>
</tr>
<tr>
<td>Prosocial behaviour</td>
<td>-.022</td>
<td>.009</td>
</tr>
<tr>
<td>Academic self-efficacy</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F 3.265*                                   | 10.124***       |
R$^2$ .027                                  | .181            |
R$^2$ change .154***                        |

Note. B = Unstandardized Coefficients B; SEB = Unstandardized Coefficients Standard Error; β = Standardized Coefficients Beta; * $p < .05$; ** $p < .01$; *** $p < .001$

prosocial behaviour, academic self-efficacy, and stress. Given the F value of 10.124 (sig-F = .000), the model is significant. In general, all of the variables in this model explained about 18.1% of the variance in stress ($R^2 = .181$). In comparison to Step 1 which explained 2.7% of the variance, the three main variables (parent-adolescent relationship, prosocial behaviour, and academic self-efficacy) explained for an additional of 15.4% of the variance in stress ($R^2$ change = .154). The results revealed that family income ($β = -.121, p < .05$), parent-adolescent relationship ($β = -.224, p < .01$), prosocial behaviour ($β = -.141, p < .05$), and academic self-efficacy ($β = -.168, p < .05$) are significant predictors for stress among female adolescents. Conversely, the result showed that age is not significant predictor for stress. In other words, female adolescents with high family income, positive parent-adolescent relationship, healthy prosocial behaviour, and high academic self-efficacy tend to perceive less stress.

Discussion

The present study examined the relationships between parent-adolescent relationship, prosocial behaviour, academic self-efficacy, and stress among female adolescents in Malacca, Malaysia. The results indicated that parent-adolescent relationship was the strongest predictor for stress among female adolescents. This finding is consistent with prior studies (Cheng, 2009; Laible, Carlo, & Raffaelli, 2000) which claimed that adolescents’ perceived relationship with parents has direct impact on their stress level. During adolescence, parents play an important source of support for adolescents (Wang & Eccles, 2012). Parental support becomes more important in times of stress (Hashim, 2007). Referring to the research conducted by Cheng (2009), a large proportion of adolescents rated “lack of support from parents” as a major stressor. Hence, the unmet expectation of social support from parents might lead adolescents to experience heavy stress. On the other hand, past study suggested that the quality of parent-adolescent relationship can influence adolescent’s choice of coping
strategy (Bannink, Broeren, van de Looij–Jansen, & Raat, 2013). More precisely, supportive parent-adolescent relationship will encourage adolescents to choose support seeking coping strategy and avoid maladaptive coping strategy (Cavanaugh, 2010).

Furthermore, academic self-efficacy was found to be a significant predictor for lower stress among female adolescents. Adolescents spend large proportion of their time in school and thus it is reasonable for them to perceive school works as a major stressor (Kamtsios, 2012). Being unable to meet the academic expectation will generate a sense of failure among adolescents, which will ultimately lead them to heavy stress. As mentioned in the article written by Breitenstein (2013), the Asian education system emphasized heavily on academic success. Consequently, many Asian students are fuelled by excessive parental expectations and fear of failure in competing with their peers. Adolescents with high academic self-efficacy tend to be more confident with their academic abilities and are less likely to feel stress and depress in dealing with academic tasks (Scott et al., 2008). For this reason, it is quite understandable that many female adolescents in this study see academic as a stressor.

The result of the present study also showed that healthy prosocial behaviour will help female adolescents to cope with stress positively. This result is identical to the findings of Martin and Huebner (2007). Adolescents with prosocial values are able to make friends easily (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007), those with deficit prosocial values tend to perceive maintaining interpersonal relationship as a stressful task. Moreover, adolescents with high prosocial values tend to implement prosocial coping strategy when facing with stressful events (Linkroum, 2006). Therefore, they tend to cope better than those with poor prosocial values.

Lastly, the result denoted significant predictive power of family income towards stress among the female adolescents. Undoubtedly, living under economically disadvantaged families takes a toll on adolescents’ development, meaning that adolescents who live in an economically disadvantaged families are more likely to perceive greater stress than their high family income counterparts (Davis & Mantler, 2004). Exemplifying this poverty-related stress, growing up in poverty is often associated with various health issues, behavioural problems, academic problems, and family conflicts (Ponnet, 2014; Santiago, Etter, Wadsworth, & Raviv, 2012; Wadsworth & Berger, 2006). Hence, it seems reasonable to see adolescents from low income family to perceive greater stress than their high income counterparts.

**Conclusion**

To recap, the results of the present study provide empirical support on the significant role of parent-adolescent relationship, prosocial behaviour, academic self-efficacy, and family income on stress among female adolescents. Given that parent-adolescent relationship is the strongest predictor for stress among female adolescents, parents should spend more quality time with their adolescent children. Parents are encouraged to be supportive and maintain warm parent-adolescent relationship in order to help adolescents to cope with heavy stress during this developmental stage.

Academic self-efficacy was also a significant predictor of adolescents’ stress. Therefore, it is suggested that educators besides providing knowledge and information to the students, should also seek ways to help improve the academic self-efficacy of the students. Being knowledgeable alone may not be adequate
to help adolescents to deal with stress positively. They must be encouraged to develop confidence towards their academic skills. Hence, adolescents who perform well in certain academic tasks should be praised and cheered to enhance their academic self-efficacy. On the other hand, adolescents who performed poorly in certain academic tasks should be encouraged for consistent hard work. School teachers as well as parents should fortify the students’ academic self-efficacy while preventing them from losing confidence on their academic skills.

Prosocial value is a useful tool that can protect adolescent from stress and thus it should be planted in the heart of adolescents. Therefore, parents as well as relevant parties should provide activities and opportunities that can encourage communication among adolescents can be beneficial in sharpening prosocial skills among adolescents. In addition, school counsellors and parents should track down and put more focus on adolescents with interpersonal difficulties.

The present findings must be viewed in terms of its limitations. The sample of the present study was limited to Malacca, Malaysia and focused only on three predictors of stress. It is recommended for future study to cover other geographical locations to be representative of female Malaysian adolescents. It is also suggested that other family and personal variables be examined in future research to sufficiently explain stress among female adolescents.

References


Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of


Virginia Commonwealth University Richmond.


