

DO FRIENDSHIP ATTACHMENT AND POSITIVE AND NEGATIVE EMOTIONS ENCOURAGE PROSOCIAL BEHAVIOR AMONG ADOLESCENTS IN MALAYSIA?

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ABSTRACT---*To investigate the associations between friendship attachment and positive and negative emotions on prosocial behavior in adolescents in Klang Valley, Malaysia. This is quantitative study. 429 adolescents between 13 to 22 years old, were selected to participate in this study using purposive sampling. The instruments used in this study were The Modified Differential Emotions Scale (mDES) for negative and positive emotions, The Adolescents Friendship Attachment Scale (AFAS) for friendship attachment, and prosocial behavior questionnaire that have been developed by authors. The results showed that there was a significant positive relationship between secure friendship attachment, negative and positive emotions on prosocial behavior. A significant negative relationship between anxious friendship attachment and avoidant friendship attachment on positive emotion were also found. The findings also found that three factors are needed to become a predictor of prosocial behavior. The research resulted in understanding the importance of friendship attachment and the effects of negative and positive emotions in enhancing understanding prosocial behavior among Malaysian adolescents. This study assists social workers and psychologists to design intervention programs in order to promote prosocial behavior and to build a secure friendship attachment among adolescents. The findings will also help the mental health professionals to classify adolescents' emotions and behavior in school settings in order to correct their behavior difficulties and to stabilize their emotional instability using emotional and behavioral therapy.*

Keywords-- Adolescents, Attachment Style, Emotion, Prosocial Behaviour, Malaysia

I. INTRODUCTION

Prosocial behavior refers to voluntary behavior to benefit others (Padilla-Walker & Carlo, 2014). In general, prosocial behavior has been defined as voluntary, intentional behavior that results in benefits for

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another; the motive is unspecified and may be positive, negative, or both (Eisenberg, Fabes, & Spinrad, 2006; Fatin Nabilah, Syaidatun Nazirah & Suzana Mohd. Hoesni, 2017) and this behavior may include physical helping, emotionally comforting, or providing financial or social assistance. Prosocial behavior has been described as the action to protect or enhance welfare (Weinstein & Ryan, 2010) by aiming at improving others such as bringing food for a sick friend, comforting peers or friends as well as more formal methods of helping such as volunteering weekly at a home shelters, assisting strangers with information, feeding people who are homeless, and many more (Brief & Motowidlo, 1986). In this study, the prosocial behavior in question is about voluntary and intentional behavior that benefits for another. In attempts to identify the influences of prosocial behaviors among adolescents, attention has been focused, in part, on friendship attachment (Padilla-Walker, Fraser, Black, & Bean, 2015) and positive and negative emotions as a likely antecedent (Erreygers, Vandebosch, Vranjes, Baillien, & De Witte, 2017). Why have researchers expected friendship attachment to be related to prosocial behavior? At least two distinct rationales for the friendship attachment-prosocial-behavior relationship have been offered. One explanation comes from the extensive literature in social-developmental psychology, which suggests that those people with secure attachment styles, they are more likely to be helpful (Markiewicz, Doyle, & Brendgen, 2001) and more resilient (Siti Hajar, Jamiah, Haslinda & Turiman, 2016).

Relating prosocial behavior with attachment theory, Bowlby (1988; 1989) also suggests that attachment can be explained through the internal working model. Internal working models exhibit cognitive learning by individuals that are how individuals are expected to behave in a certain way and eventually individuals assume that the people around can be trusted and can be expected when in difficult circumstances. The impression and what the individual thinks allows him to see the environment in a new social perspective. This new situation affects the behavior of individuals to be more positive in helping others without expecting a reward because it is helpful to be rewarded and beneficial to them and others. Thus, prosocial behavior results from motivation to meet the needs of others. Weinstein and Ryan (2010) explained that individual engagement in prosocial behavior to some extent may have certain motives for behavior such as developing understanding and enhancing social responsibility. Mikulincer and Shaver further explained that a sense of security associated with positive views of others fosters the development of prosocial behavior character traits such as kindness, empathy and compassion, love, generosity, forgiveness, gratitude and appreciation, and modesty. In contemporary theoretical writings, Mikulincer and Shaver (2007) emphasized on the relevance of attachment theory (Bowlby, 1988; 1989) for the study of prosocial behavior, and Shaver et al. (2018) suggested that secure attachment style responsible for altruistic motives for volunteering and actual engagement in philanthropic activities.

Previous studies suggested that underlying mechanism linkage between attachment to prosocial behavior is emotion regulation (Bowlby, 1988; 1989; Brenning & Braet, 2013). This can be explained in term of ability to regulate emotions due to repeated experiences of emotion regulation with attachment figures (Schwarz, Stutz, & Ledermann, 2012), resulting emotion regulation promotes prosocial behavior. In addition, peer

influence has been shown to predict prosocial behavior in adolescents (Paulus, Becker, Scheub, & König, 2016), thus allowing them to engage in the social world and activate helping-oriented behaviors (van Rijsewijk, Dijkstra, Pattiselanno, Steglich, & Veenstra, 2016).

Correlational and experimental design studies have established a robust relationship between subjective well-being and prosocial behavior (Otake, Shimai, Tanaka-Matsumi, Otsui, & Fredrickson, 2006; Martela & Ryan, 2016; Tian, Du, & Huebner, 2015; Weinstein & Ryan, 2010) as well as emotion regulation (Bowlby, 1988). In addition to this correlational evidence, performing acts of kindness has been shown to boost happiness in randomized controlled studies lasting from one day (Dunn, Aknin, & Norton, 2008) to eight weeks (Wallmark, Safarzadeh, Daukantaitė, & Maddux, 2013). This can be explained in terms of friendship attachment by improving the sense of trust to manage emotions. Attachment security develops from individual understanding and trust based on their experiences throughout life (Painfile & Laible, 2012). This means, indirectly, the attachment styles influence positive emotions, thereby resulting in prosocial behavior. In contrast, those individuals with insecure attachment style may represent maladaptive social and emotional instability bonding (Chen & Chang, 2012), thus may produce more negative emotions, thereby resulting in behavior problems.

Prosocial behavior among adolescents

Reports showed that adolescence is at a significant phase of developing prosocial behavior as a self-processes and understanding contextual cues in relation to the real social world (Wentzel, Filisetti, & Looney, 2007). In adolescence, prosocial behavior is due to time spent with their peers and less time with their parents (Larson & Richards, 1991) because peer relationships may influence behavior (van Rijsewijk et al., 2016; Choukas-Bradley, Giletta, Cohen, & Prinstein, 2015) including risk-taking or antisocial as well as prosocial behaviors (van Hoorn, van Dijk, Meuwese, Rieffe, & Crone, 2016; van Hoorn, Fuligni, Crone, & Galván, 2016). In Malaysia, most of the studies focused on antisocial behavior in adolescents (Baharudin, Krauss, Yacoob, & Pei, 2011; Razali & Kliwer, 2015; T'ng, Baharudin, & Ismail, 2015; Wazir, Ismail, Chan, Naing, & Shah, 2016). Reports suggested that peers increase delinquent behavior or aggression (Jose, Hipp, Butts, Wang, & Lakon, 2016; Monahan, Rhew, Hawkins, & Brown, 2014), especially in friendships (Franken, Prinstein, Dijkstra, Steglich, Harakeh, & Vollebergh, 2016; Gremmen, Berger, Ryan, Steglich, Veenstra, & Dijkstra, 2018). The influences of friendship on prosocial behavior are well documented (e.g., Berndt, 1981, 1985, 2002; Zimmer-Gembeck, Geiger, & Crick, 2005). Therefore, this study aims to fulfill this research gap by investigating and determining the specific psychosocial factors that may influence prosocial behavior.

Current study

To enhance our understanding on prosocial behavior in adolescence, we conducted a cross-sectional research design to investigate the relationship between secure friendship attachment, positive and negative emotions, and prosocial behavior and to determine if friendship attachment and positive and negative

emotions act as predictors of prosocial behavior among adolescents in Malaysia. By examining the association between friendship attachment, positive and negative emotions, and prosocial behavior and, this study may make a contribution to our understanding of the predictors of prosocial behavior in the Malaysian context, which was examined infrequently in the adolescence relation literature.

II. RESEARCH METHOD

Participants

A purposive sampling of 429 adolescents, between 13 to 22 years old, was selected to participate in this study (62.9% female; 36.6% male; 0.05% unknown) from Klang Valley area. They were selected from various schools in Klang Valley, Selangor. On average, the age of these respondents was 17.98; $SP=2.96$. In term of ethnic, 86.9% were Malay, 6.3% Chinese, 2.8% Indian, 3.7% other ethnics, and 0.02% unknown. The reason why the respondents did not complete a few of demographic questions was unknown.

III. INSTRUMENT

Positive emotions

The Modified Differential Emotions Scale (mDES) (Fredrickson, Tugade, Waugh, & Larkin., 2003) consists of 20 items to measure the highest experience towards emotion. This mDES has two dimensions: positive and negative emotion. Items are rated on a 5-point Likert scale of 1 (very little or none at all) to 5 (extreme). Scores range between 10 and 50 each dimension. In this study, respondents were asked to answer questions related to their feelings within the last 24 hours. Cronbach alpha values for negative emotions are 0.90 and positive emotions are 0.89, showing good and consistent internal consistency.

Friendship attachment

The Adolescents Friendship Attachment Scale (AFAS) (Wilkinson, 2008) was used to measure friendship relationship quality with friends as friendship attachment style. This scale is a reflection of contemporary thinking about the assessment of the dimension style dimensions. Items are rated according to the 5-point Likert scale of 1 (strongly disagree) to 5 (strongly agree). The scores range for the secure dimension ranges from 13 to 65, a score between 9 and 45 for anxiety dimensions and a score between 8 and 32 for avoidance dimensions. Cronbach alpha value is 0.80, indicating internal consistency is good and consistent.

Prosocial behavior

The prosocial behavior scale was developed by the authors. This scale consists of ten items rated on a 5-point Likert scale ("1 = strongly disagree"; "5 = strongly agree"). The items offer a description of adolescent's behavior on altruism, trust, and agreeableness. A total score can be obtained by summing up all the items, with a higher score indicating more prosocial behavior. In this study, the Cronbach's α was 0.826.

Procedure

Data collection starts from January to June 2017 in the Klang Valley area. Respondents described information about the study including study objectives, benefits, and risks encountered if participating in the study. Participants could withdraw from the study at any time. The informed consent was obtained by verbal agreement as most of the respondents refused to sign an informed consent. Each respondent was asked to complete a set of questionnaires containing demographic information, friendship attachment styles, prosocial behavior and positive emotions and negative emotions.

Statistical analysis

Firstly, correlation analyses were completed for each variable and the outcome variables to describe univariate relationships. Then multiple regression analyses were conducted to test if friendship attachment and positive emotions contributed to prosocial behavior after statistically controlling for gender and educational attainment. The order of entry in the regression was as follows: (1) gender, (2) positive emotions, (3) negative emotions, and (4) friendship attachment. The regression analyses allow us to ascertain whether positive emotions and friendship attachment are still significant predictors of prosocial behavior after controlling for gender.

IV. RESULTS

Preliminary analysis

Preliminary analysis was conducted to clean data as recommended by Tabachnick and Fidell (2007) and Hair et al. (1998). Data were examined for missing values, univariate and multivariate outliers, and acceptable between their distributions and the assumptions of multivariate analysis. There were no missing values in the data. The distributions of all variables were examined through histograms, q-q plots, bivariate scatter-plots, values of kurtosis and skewness to determine if the assumptions of normality, linearity, and homoscedasticity were met. The analysis showed no major deviation from normality. Analysis of the bivariate scatter-plots using prosocial as dependent variables revealed no significant deviations from linearity. Finally, no heteroscedasticity was observed.

Descriptive statistics and correlations

Means and standard deviations for all variables are found in Table 1. Correlations between all variables are also found in Table 1, and it is important to note that the friendship attachment style of secure was positively associated with positive emotions while the friendship attachment style of anxiety and avoidance was negatively associated with positive emotions. Prosocial behavior is also seen to be positively associated with

the style of attachment of secure and positive emotions. Negative emotions are seen as having no significant relationship with prosocial behavior.

Table 1:Correlation between variables

Variables	1	2	3	4	5	6
1. Secure friendship attachment	-					
2. Anxious friendship attachment	0.01	-				
3. Avoidant friendship attachment	-0.50**	-0.02	-			
4. Prosocial behavior	0.23**	0.01	-0.08	-		
5. Positive Emotion	0.34**	-0.12*	-0.17**	0.33**	-	
6. Negative Emotion	-0.30**	0.32**	0.11*	0.06	0.00	-
Means	49.256	26.69	19.63	31.92	25.31	13.11
Standard deviations	8.146	5.37	3.87	6.33	7.46	8.22

**p<0.01; *p<0.05

Table 2 displayed that when the friendship attachment and positive and negative emotions were used to predict prosocial behavior, the regression model was able to predict a significant proportion of variance in prosocial behavior ($R^2 = 0.14$, $p > .001$, Adjusted $R^2 = 0.13$, $p < 0.05$). The three influence factors, positive emotions ($\beta = 0.28$, $p < 0.001$), negative emotions ($\beta = 0.11$, $p < 0.001$), and secure friendship attachment ($\beta = 0.20$, $p < 0.05$), contributed significantly to the regression model, while the coefficients of anxious friendship attachment and avoidant friendship attachment were not significant in predicting prosocial behavior ($p > 0.05$).

Table2:Predictors of prosocial behavior

Predictors	Regression coefficient	Standardized coefficient	T-statistics	Probability level	Lower limit	Upper limit
Intercept	15.09	0.00	4.21	0.0000	8.04	22.13
Positive emotions	0.23	0.28	5.65	0.0000	0.15	0.31
Negative emotions	0.09	0.11	2.25	0.0246	0.01	0.16
Secure friendship attachment	0.15	0.20	3.51	0.0005	0.06	0.24
Anxious friendship attachment	0.01	0.01	0.13	0.8940	-0.10	0.12
Avoidant friendship attachment	0.09	0.05	1.08	0.2795	-0.07	0.26

$$R^2=0.14$$

$$\text{Adjusted } R^2=0.13$$

V. DISCUSSION

The purpose of this study is to determine the relationship between variables being studied and to determine the friendship attachment, negative emotions, and positive emotions as a predictor of prosocial behavior. The results of the study showed that higher scores on secure friendship attachment and positive emotions had significant correlations with prosocial behavior while both anxious friendship attachment and avoidant friendship attachment did not correlate significantly with prosocial behavior. The results showed that positive emotions, secure friendship attachment, and negative emotions were more important predictors of prosocial behavior than both anxious friendship attachment and avoidant friendship attachment. Results of this study suggested that secure friendship attachment may generate positive emotions in the close relationship among adolescents that the way in which adolescents perceive and manage positive emotions may motivate their prosocial behavior. This can be explained in term of attachment theory when friends behave positively, those secure individuals might experience positive emotions, given that positive behaviors often signal availability, responsiveness, adaptive, support, or approval when needed. Thus, those who were in secure friendship attachment style would tend to solve problem using adaptive strategies such as problem-focused or emotion-focused (Muhammad Irwan, Wan Shahrazad, Daniella Maryam, Haikal Anuar & Juliza, 2014).

Interestingly, both positive emotions and negative emotions were significantly predicted prosocial behavior. The findings of this study are also parallel to the model of happiness which explains that high in positive emotions and low in negative emotions can create prosocial behavior because negative emotions can act as a motive to perform the good behavior. Adolescents in Malaysia, for example, have generated prosocial behavior in school by engaging after-school activities. One of the prosocial behaviors often taught by teachers in the school is to help teachers pick up and send books to teachers' rooms, help teachers organize activities or activities in the school environment. All of these behaviors are indirectly helping students develop a good interpersonal relationship with their friends and teachers as well. This prosocial behavior also indicates that adolescents in Malaysia are maintaining harmonious relationship such as helping, comforting, loving and caring.

Our findings also found that the influence of secure friendship attachment on prosocial behavior was significant among adolescents, which may be due to the fact that adolescents experience an emotional state of getting closer ties to their peers, receiving more emotional support from their peers. The findings of this study support the views of the developmental psychology perspective that friendship enhancing positive emotions (Oldfield et al., 2015). Hence, those individuals with prosocial behavior are love to help others, be sensitive to their friends, and value friendship (Gross, Stern, Brett, & Cassidy, 2017), thus, they are more likely to strengthen

close and friendly relationships with friends. Therefore, the activation behavioral system of secure friendship attachment is based on trust, friendship, and happiness. Our findings revealed that anxious friendship attachment and avoidant friendship attachment did not significantly affect prosocial behavior.

Consistent with previous studies (Kim, Sharp, & Carbone, 2014; Ramsey & Gentzler, 2015; van der Voort, Juffer, & Bakermans-Kranenburg, 2014), secure friendship attachment was positively correlated to positive emotions and negatively correlated to negative emotions. Beyond this, our findings further indicated that those with secure friendship attachment score high on positive emotions and score low in negative emotions. It means that they are satisfied with their life. Life satisfaction would affect emotion, mood, personality and environment (Siti Marziah, Nor Ba'yah, Nasrudin & Khaidzir, 2015) and adolescents who were satisfied with their lives were those who have personality traits of secure attachment style (Wan Shahrazad, Nor Ba'yah, Fatimah and Fatimah wati 2015). The findings of this study also explain that low scores in negative emotions and high scores in positive emotions can be seen as a motivation for individuals to exercise prosocial behavior. The findings of this study can be explained by the theory of attachment (Bowlby, 1989) where friendship attachment motivates individuals to behave as prosocial and can influence individual emotions. As Siti Hajar, Noralina and Zaiton (2017) stated that adolescents who were prosocial can influence others in their community to well-behave.

Some limitations should be noted. First, this study applied a cross-sectional design and self-report data, therefore causal-effect relationships between the factors studied could not be inferred. Second, the current sample was obtained in one urban area, therefore, generalizability was limited. Although the results of this study have allowed for advances in the understanding of prosocial behavior in relation to secure friendship attachment and emotions, it is important to investigate further additional variables, such as religiosity, spirituality, gratitude, forgiveness or perceptions of others' intentions that could predict prosocial behavior toward strangers, family, and community members. Future research is suggested to analyze the role of gender and culture differences in regards to prosocial behavior. Cultural norms, for instance, which establish the role of socialization in adolescents are very different from culture to culture, therefore, it is essential to study prosocial behavior from developmental and cultural perspectives. Furthermore, data collection from diverse samples including different socioeconomic aspects and culture contexts should be taken into account for future research.

VI. RESEARCH IMPLICATIONS AND CONCLUSION

In general, this study provides information on friendship attachment, positive emotions, negative emotions, and prosocial behavior to assist social workers and psychologists to design intervention programs in order to promote prosocial behavior and to build a secure friendship attachment among adolescents. The findings will also help the mental health professionals to classify adolescents' emotions and behavior in school settings in order to correct their behavior difficulties and to stabilize their emotional instability using emotional and behavioral therapy. Our new instrument in this study is also suitable to screen prosocial behavior to

help pour adolescents to improve and maintain their interpersonal relationships with peers and significant others. This is because, adolescents are prone to imitate their peers behavior (Nor Jumawaton, Mariani, Zainal & Hanina Halimatusaadia, 2018).

Although the study seems to have some disadvantages, the study findings may have some implications for scholars, practitioners of mental health professionals, social workers and others who focus on prevention and intervention programs, especially those promoting prosocial behavior. Hence, fostering prosocial behavior is desirable to produce positive emotions as well as to build a secure friendship attachment with peers. Additionally, the findings of this study further enhance the professional practitioners' understanding of friendship attachment and positive emotions as well as negative emotions in influencing prosocial behavior.

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REFERENCES

1. Ainsworth, M. S. (1989). Attachments beyond infancy. *American Psychologist*, 44, 709-716.
2. Aknin, L. B., Dunn, E. W., & Norton, M. I. (2012). Happiness runs in a circular motion: Evidence for a positive feedback loop between prosocial spending and happiness. *Journal of Happiness Studies*, 13, 347-355.
3. Baharudin, R., Krauss, S. E., Yacoob, S. N., & Pei, T. J. (2011). Family processes as predictors of antisocial behaviors among adolescents from urban, single-mother Malay families in Malaysia. *Journal of Comparative Family Studies*, 509-522.
4. Berndt, T. J. (1981). Effects of friendship on prosocial intentions and behavior. *Child Development*, 636-643.
5. Berndt, T. J. (1985). Prosocial behavior between friends in middle childhood and early adolescence. *The Journal of Early Adolescence*, 5(3), 307-317.
6. Berndt, T. J. (2002). Friendship quality and social development. *Current Directions In Psychological Science*, 11(1), 7-10.
7. Bowlby, J. (1988). *A secure base: Parent-child attachment and healthy human development*. New York: Basic Books.
8. Bowlby, J., May, D. S., & Solomon, M. (1989). *Attachment theory*. Lifespan Learning Institute.
9. Brenning, K. M., & Braet, C. (2013). The emotion regulation model of attachment: An emotion-specific approach. *Personal Relationships*, 20(1), 107-123.

10. Brief, A. P., & Motowidlo, S. J. (1986). Prosocial organizational behaviors. *Academy of Management Review*, 11(4), 710-725.
11. Caprara, G. V., Luengo Kanacri, B. P., Gerbino, M., Zuffianò, A., Alessandri, G., Vecchio, G. M., et al. (2014). Positive effects of promoting prosocial behavior in early adolescence: evidence from a school-based intervention. *International Journal of Behavioral Development*, 38, 386–396.
12. Chen, B.B., & Chang, L. (2012). Adaptive insecure attachment and resource control strategies during middle childhood. *International Journal of Behavioral Development*, 36(5), 389–397.
13. Choukas-Bradley, S., Giletta, M., Cohen, G. L., & Prinstein, M. J. (2015). Peer influence, peer status, and prosocial behavior: An experimental investigation of peer socialization of adolescents' intentions to volunteer. *Journal of Youth and Adolescence*, 44(12), 2197-2210.
14. Dunn, E. W., Aknin, L. B., & Norton, M. I. (2008). Spending money on others promotes happiness. *Science*, 319(5870), 1687-1688.
15. Eisenberg, N., Fabes, R. A., & Spinrad, T. L. (2006). Prosocial development. In W. Damon (Ed.), *Handbook of child psychology: Social, emotional and personality development* (pp. 646–718). New York, NY: Wiley.
16. Eisenberg, N., Spinrad, T. L. & Eggum, N. D. (2010). Emotion-related self-regulation and its relation to children's maladjustment. *Annu. Rev Clin Psychol.*, 6, 495–525.
17. Erreygers, S., Vandebosch, H., Vranjes, I., Baillien, E., & De Witte, H. (2017). Nice or Naughty? The role of emotions and digital media use in explaining adolescents' online prosocial and antisocial behavior. *Media Psychology*, 20(3), 374-400.
18. Fatin Nabilah Abu Hassan, Syaidatun Nazirah Abu Zahrin & Suzana Mohd. Hoesni. (2017). Faktor-faktor yang mempengaruhi tingkah laku pro-sosial dan impaknya terhadap sebuah ketamadunan: satu kajian tinjauan. *Sains Insani*, 2(2), 55-62.
19. Franken, A., Prinstein, M. J., Dijkstra, J. K., Steglich, C. E., Harakeh, Z., & Vollebergh, W. A. (2016). Early adolescent friendship selection based on externalizing behavior: The moderating role of pubertal development. The SNARE study. *Journal of Abnormal Child Psychology*, 44(8), 1647-1657.
20. Fredrickson, B.L., Tugade, M.M., Waugh, C.E. & Larkin, G.R. (2003). What good are positive emotions in crisis? A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology*, 84, 365-376
21. Gremmen, M. C., Berger, C., Ryan, A. M., Steglich, C. E., Veenstra, R., & Dijkstra, J. K. (2018). Adolescents' Friendships, Academic Achievement, and Risk Behaviors: Same-Behavior and Cross-Behavior Selection and Influence Processes. *Child development*.
22. Gross, J. T., Stern J.A., Brett, B. E., & Cassidy, J. 2017. The multifaceted nature of prosocial behavior in children: Links with attachment theory and research. *Social Development*, 26, 661–678.
23. Gus, L., Rose, J., & Gilbert, L. (2015). Emotion coaching: A universal strategy for supporting and promoting sustainable emotional and behavioural well-being. *Educational & Child Psychology*, 32(1), 31-41.

24. Vekaria A, Gigani Y, Belemkar S. "Cardiovascular Indications and Complications of Recombinant Human Erythropoietin." *Systematic Reviews in Pharmacy* 2.1 (2011), 43-47. Print. doi:10.4103/0975-8453.83438
25. Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice hall.
26. Jose, R., Hipp, J. R., Butts, C. T., Wang, C., & Lakon, C. M. (2016). Network structure, influence, selection, and adolescent delinquent behavior: Unpacking a dynamic process. *Criminal Justice and Behavior*, 43(2), 264-284.
27. Kim, S., Sharp, C., & Carbone, C. (2014). The protective role of attachment security for adolescent borderline personality disorder features via enhanced positive emotion regulation strategies. *Personality Disorders: Theory, Research, and Treatment*, 5(2), 125-136.
28. Markiewicz, D., Doyle, A. B., & Brendgen, M. (2001). The quality of adolescents' friendships: Associations with mothers' interpersonal relationships, attachments to parents and friends, and prosocial behaviors. *Journal of Adolescence*, 24(4), 429-445.
29. Martela, F., & Ryan, R. M. (2016). Prosocial behavior increases well-being and vitality even without contact with the beneficiary: Causal and behavioral evidence. *Motivation and Emotion*, 40(3), 351-357.
30. Mikulincer, M., & Shaver, P. R. (2007). Boosting attachment security to promote mental health, prosocial values, and inter-group tolerance. *Psychological Inquiry*, 18(3), 139-156.
31. Mohamad Irwan Ahmad, Wan Shahrazad, W. S., Daniella Maryam Mokhtar, Haikal Anuar Adnan & Juliza Abd. Satar. (2014). Attachment style among female adolescents: it's relationship with coping strategies and life satisfaction between normal and lesbian female adolescents. *Malaysian Online Journal of Counseling*, 1-13.
32. Monahan, K. C., Rhew, I. C., Hawkins, J. D., & Brown, E. C. (2014). Adolescent pathways to co-occurring problem behavior: The effects of peer delinquency and peer substance use. *Journal of Research on Adolescence*, 24(4), 630-645.
33. Nor Jumawaton Shahrudin, Mariani Mansor, Zainal Madon & Hanina Halimatusaadiah Hamsan. (2018). Hubungan pengaruh rakan sebaya, estim diri dan lokus kawalan dengan sikap terhadap tingkah laku seksual. *Akademika*, 88(2), 81-94.
34. Oldfield, J., Humphrey, N. & Hebron, J. (2015). Investigating the role of parental, peer and school attachment relationships in predicting adolescent mental health outcomes. *Child and Adolescent Mental Health*, 21, 1-33.
35. Otake, K., Shimai, S., Tanaka-Matsumi, J., Otsui, K., & Fredrickson, B. L. (2006). Happy people become happier through kindness: A counting kindnesses intervention. *Journal of Happiness Studies*, 7(3), 361-375.
36. Padilla-Walker, L. M., Fraser, A. M., Black, B. B., & Bean, R. A. (2015). Associations between friendship, sympathy, and prosocial behavior toward friends. *Journal of Research on Adolescence*, 25(1), 28-35.

37. Panfile, T. M. & Laible, D. J. (2012). Attachment security and child's empathy: the mediating role of emotion regulation. *Merrill-Palmer Quarterly*, 58, 1-21.
38. Paulus, M., Becker, E., Scheub, A., & König, L. (2016). Preschool children's attachment security is associated with their sharing with others. *Attachment & Human Development*, 18(1), 1-15.
39. Ramsey, M. A., & Gentzler, A. L. (2015). An upward spiral: Bidirectional associations between positive affect and positive aspects of close relationships across the life span. *Developmental Review*, 36, 58-104.
40. Razali, M. M., & Kliever, W. (2015). Risk and protective factors for recreational and hard drug use among Malaysian adolescents and young adults. *Addictive behaviors*, 50, 149-156.
41. Rubin, K. H., Dwyer, K. M., Booth-LaForce, C., Kim, A. H., Burgess, K. B., & Rose-Krasnor, L. (2004). Attachment, friendship, and psychosocial functioning in early adolescence. *The Journal of Early Adolescence*, 24(4), 326-356.
42. Schwarz, B., Stutz, M., & Ledermann, T. (2012). Perceived interparental conflict and early adolescents' friendships: The role of attachment security and emotion regulation. *Journal of Youth and Adolescence*, 41(9), 1240-1252.
43. Shaver, P. R., Mikulincer, M., & Cassidy, J. (2018). Attachment, Caregiving in Couple Relationships, and Prosocial Behavior in the Wider World. *Current Opinion in Psychology*.
44. Siti Hajar Abu Bakar ah, Noralina Omar & Zaiton Azman. (2017). Penyertaan sosial dan indeks kesejahteraan sosial subjektif kanak-kanak miskin di Malaysia. *Akademika*, 87(2), 105-118.
45. Siti Hajar Kamruddin, Jamiah Manap, Haslinda Abdullah & Turiman Suandi. (2016). Daya tahan belia: pengaruh hubungan perapatan dalam institusi kekeluargaan. *Journal of Social Sciences and Humanities*, 2, 160-172.
46. Siti Marziah Zakaria, Nor Ba' Yah Abdul Kadir, Nasrudin Subhi & Khaidzir Ismail. (2015). Peramal kepuasan hidup wanita melayu pertengahan umur bekerjaya di Hulu Langat, Selangor. *Akademika*, 85(2), 45-53.
47. Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. Allyn & Bacon/Pearson Education.
48. Tian, L., Du, M., & Huebner, E. S. (2015). The effect of gratitude on elementary school students' subjective well-being in schools: The mediating role of prosocial behavior. *Social Indicators Research*, 122(3), 887-904.
49. Rahul saxena, farah khan, misha masood, zaineb qureshi, manoj rathore (2016) review on organ transplantation: a social medical need. *Journal of Critical Reviews*, 3 (2), 23-29.
50. T'ng, S. T., Baharudin, R., & Ismail, Z. (2015). Antisocial behaviour in Malaysian adolescents: Assessing measurement equivalence across gender differences. *Child Indicators Research*, 8(3), 537-550.
51. van der Voort, A., Juffer, F., & J. Bakermans-Kranenburg, M. (2014). Sensitive parenting is the foundation for secure attachment relationships and positive social-emotional development of children. *Journal of Children's Services*, 9(2), 165-176.

52. van Hoorn, J., Fuligni, A. J., Crone, E. A., & Galván, A. (2016). Peer influence effects on risk-taking and prosocial decision-making in adolescence: Insights from neuroimaging studies. *Current Opinion in Behavioral Sciences*, 10, 59-64.
53. van Rijsewijk, L., Dijkstra, J. K., Pattiselanno, K., Steglich, C., & Veenstra, R. (2016). Who helps whom? Investigating the development of adolescent prosocial relationships. *Developmental psychology*, 52(6), 894-908.
54. Wallmark, E., Safarzadeh, K., Daukantaitė, D., & Maddux, R. E. (2013). Promoting altruism through meditation: an 8-week randomized controlled pilot study. *Mindfulness*, 4(3), 223-234.
55. Wan Shahrazad, W.S., Nor Ba'yah Abdul Kadir, Fatimah Omar & Fatimah wati Halim. 2015. Relationship between personality traits, attachment styles and life satisfaction among adolescents. *Journal of Social Sciences and Humanities*, 2, 55-64.
56. Wazir, N. S., Ismail, W. S., Chan, L. F., Naing, L., & Shah, S. A. (2016). Psychiatric Morbidity and Family Environment Among Female Juvenile Detainees in a Malaysian Sample. *Journal of Child and Family Studies*, 25(11), 3342-3352.
57. Weinstein, N. & Ryan, R. M. (2010). When helping helps: Autonomous motivation for prosocial behavior and its influence on well-being for the helper and recipient. *Journal of Personality and Social Psychology*, 98, 222-244.
58. Wentzel, K. R., Filisetti, L., & Looney, L. (2007). Adolescent prosocial behavior: The role of self-processes and contextual cues. *Child Development*, 78(3), 895-910.
59. Wilkinson, R.B. (2008). Development and properties of the adolescent friendship attachment scale. *Journal of Youth Adolescence*, 37, 1270-1279.
60. Mehrabi, S., Momenzadeh, M., Maleknasab, M., Hosseinpour, R. The adrenal gland may be the first location of diffuse large B-cell lymphoma: A case report (2018) International Journal of Pharmaceutical Research, 10(1), pp.274-276. <https://www.scopus.com/inward/record.uri?eid=2s2.085059651535&partnerID=40&md5=5cb61855b8b0128c152fe15eac7eb850>
61. Zimmer-Gembeck, M. J., Geiger, T. C., & Crick, N. R. (2005). Relational and physical aggression, prosocial behavior, and peer relations: Gender moderation and bidirectional associations. *The Journal of*
62. Zuffianò, A., Eisenberg, N., Alessandri, G., Luengo Kanacri, B. P., Pastorelli, C., Milioni, M., & Caprara, G. V. (2016). The relation of prosociality to self-esteem: The mediational role of quality of friendships. *Journal of Personality*, 84, 59-70.
63. Kumar, P. (2014). Load Characteristics of Electric System for Distributing Power on Locality Based Criterion. *Bonfring International Journal of Power Systems and Integrated Circuits*, 4(4), 39-43.
64. Rama Rao, G., Purna Prakash, J., & Rama Raju, M. (2014). Designing High to Low Cost Solution for Crash Recovery of Servers through Virtualization using Cloud Computing. *International Scientific Journal on Science Engineering & Technology*, 17(5), 549-555.
65. Conte, E. What is the reason to use Clifford algebra in quantum cognition? Part I: "it from qubit": On the possibility that the amino acids can discern between two quantum Spin states (2012)

NeuroQuantology, 10 (3), pp. 561-565.

66. Chang, Y.-F. Nonlinear whole biology and loop quantum theory applied to biology (2012)
NeuroQuantology, 10 (2), pp. 190-197.