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To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v10-i7/7414 DOI:10.6007/IJARBSS/v10-i7/7414

Received: 09 April 2020, Revised: 10 May 2020, Accepted: 16 June 2020

Published Online: 25 July 2020

In-Text Citation: (Ng et al., 2020)
To Cite this Article: Ng, E. E., Daud, M. N., Arshat, Z., & Azam, N. D. (2020). Social Preference towards Reactive Aggression among Justice-Involved Adolescents in Malaysia. *International Journal of Academic Research in Business and Social Sciences, 10*(7), 265–279.

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Social Preference towards Reactive Aggression among Justice-Involved Adolescents in Malaysia

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Abstract
Low social preference has been found to produce aggression as a maladaptive outcome among adolescents. However, it is not clear whether the factors of social preference contribute to aggression. Therefore, the present study investigates whether the factors of social preference, namely, insult, ignorance, accusation, and physical attacks/bossiness, predict reactive aggression. Using cluster sampling, questionnaires were administered to 183 juveniles enrolled in government-approved schools at four geographical regions throughout West Malaysia. Data gathered was then analyzed via the Structural Equation Modelling-Analysis of a Moment Structures (SEM-AMOS) Version 23.0 approach. Findings showed all factors significantly and positively predicted reactive aggression. Future studies should implement diverse and well-defined measures to better understand how social preference can determine reactive aggressive behaviors. Implications of imitating the aggressive behaviors of other adolescents, internalizing aggressive victimization experiences, forming of healthy peer support from non-deviant socialization as an intervention, and implementing early intervention during adolescent development were discussed.

Keywords: Juvenile, Problem Behavior, Peer Victimization, Peer Likability, Peer Support.

Introduction
With a 30% aggression rate, crime rates serve as an indicator of the growing pattern of aggression among adolescents residing in West Malaysia (Hussin, Abd Aziz, Hasim, & Sahril, 2014). An individual aggresses against others when he commits violent behaviors, possibly leading to his arrest and subsequent criminal record. Although criminal offenses may differ in severity, crimes may still involve aggressive behaviors leading to contact with the justice system. For instance, fighting is a less severe criminal offense in contrast to armed robbery, but both fighting and armed robbery incur aggression to harm people and/or possessions (Robertson et al., 2018). Among Malaysian juveniles, repeated offenses increased by 37.5% from 491 cases in 2017 to 675 cases 2018. In 2017, property crimes recorded a total of 77,802 cases while violent crimes recorded a total of 21,366 cases. Although general rates of aggression have improved, instances of aggressive behavior indicate that
the problem of aggression remains a stable threat (Kong, Chong, & Samsilah, 2012; Pung, Yaacob, Baharudin, & Osman, 2015).

Aggression comprises of behaviors exhibited to cause physical or psychological harm toward others (Copeland, 2018). Harm inflicted upon others may fall under physical, verbal (Butovskaya, Timentschik, & Burkova, 2007), emotional, and relational suffering (Little, Henrich, Jones, & Hawley, 2003). One’s intention or personal motivation behind the aggressor’s harmful behaviors toward others may be seen in two main functions of aggression: (1) Proactive aggression and (2) reactive aggression. Proactive aggression is the instrumental, goal-directed behavior(s) aimed at harming others (Fanti, Frick, & Georgiou, 2009). Reactive aggression is the defensive behavior(s) aimed at protecting oneself against being aggressed by others (Azam, Novin, Oosterveld, & Rieffe, 2019).

Given that the context of this study deals with provocative behaviors, reactive aggression is selected as a variable of interest. An individual would not aggress against another person, unless provoked. Reactive aggression is a function of aggression in which a person attempts to exert control over others in response to provocation (Lee-rowland, Barry, Gillen, & Hansen, 2017). Reactive or impulsive aggression (Feilhauer & Cima, 2013; Miller-Johnson, Cole, Maumary-Gremaud, Bierman, & Conduct Problems Prevention Research Group, 2002) is characterized by provoked hostility and anger which result from emotional dysregulation and social cognitive impairments (Azam et al., 2019; Frick & Ellis, 1999). On the other hand, higher emotional and behavior regulation actually confer little risk for reactive aggression (Eisenbarth, Demetriou, Kyranides, & Fanti, 2016). Since reactive aggression is provocative aggression, researchers have sought to identify its key antecedents.

Despite a wealth of research, there is still a need for further knowledge on the antecedents of reactive aggression. Drawing from the contexts of aggressive peer victimization and delinquent peer affiliation, one antecedent that has come to light is social preference (Ojanen & Nostrand, 2014; Prinstein & Cillessen, 2003). Consistent with the theories of social learning and social networking, poor social preference may exacerbate aggression leading to more serious aggressive behaviors such as those involving violent offending (Miller-Johnson et al., 2002). Yet, social preference is an understudied, umbrella term for factors measuring peer likability, even among the criminal population. Thus, the primary objective of the study is to investigate the relationships between the factors of social preference and reactive aggression among justice-involved adolescents.

**Literature Review**

**Theoretical Underpinnings**

Bandura’s social learning theory states that peer behaviors facilitate conscience development (Kong et al., 2012; Pung et al., 2015). Individuals who commit aggression have deficient consciences, willing volition of acceptable moral conduct, and poor emotional arousal towards distress caused in others. If these individuals are disliked by others, they are also likely to become targets of aggressive behaviors inflicted by others. Not only are they victims of aggression, but also are they provoked by others’ aggression. Hence, these individuals progress from being victims of aggression to become aggressors themselves. These specific group of individuals is deemed as aggressive victims (Kimonis, Graham, & Cauffman, 2018).

Congruent with the social network theory, rejection from normative peers leads to rejected adolescents affiliating themselves with similarly rejected peers to commit rule-breaking behaviors together (Lin, Yu, Chen, Tian, & Zhang, 2018). Given that peer socialization has become integral as adolescents begin to seek validation from their peers, the false consensus effect of socialization leads
individuals to perceive their engagement in deviant, aggressive behaviors along with their fellow antisocial peers would increase their propensity for antisocial behaviors (Prinstein & Wang, 2005). With decreasing parental influence as adolescents mature, environmental influences from peers may serve as the positive reinforcement of aggression through training in deviant activities or negative reinforcement of delinquent peer aggression through social rejection from mainstream peers (Chen, Drabick, & Burgers, 2015).

**Overview of Social Preference**

Peer friendship is an important source of social support in adolescent development (Muñoz, Kerr, & Besic, 2008). Social preference is defined as peer acceptance or rejection (Choukas-Bradley & Prinstein, 2014). In other words, social preference is the degree by which an individual is liked or disliked by his peers. Peer rejection plays a crucial role in the development and perpetuation of later aggressive conduct. In this paper, social preference is operationalized as the individual factors of experiencing insult, ignorance, accusation, and physical attacks/bossiness.

**Insult and Reactive Aggression**

Insult is the first factor constituting social preference. Insult involves the relational and interpersonal aggression being perpetrated such as name-calling, teasing, swearing, rude-gesturing, embarrassment, and humiliation (Finkelhor, Turner, & Hamby, 2012; Lev-wiesel, Sarid, & Sternberg, 2013). Victims of aggression are often disliked by their peers and alienated from mainstream peer groups (Lin et al., 2018; Ostrov, 2010). Although not all aggressors are victims, victims of aggression are likely to react aggressively by committing aggression against others (Finkelhor et al., 2012). These individuals respond to others’ aggression with aggression and undergo a transition from being victims of aggression by others to becoming aggressors themselves (Lin et al., 2018; Shetgiri, 2013). This is consistent with the specificity hypothesis which states that observed relational victimization is more likely to lead to future aggression (Lundh, Daukantaité, & Wångby-Lundh, 2014; Ostrov, 2008, 2010). Rejected individuals who experienced being insulted by others may react to the insult, thereby, provoking future aggressive behaviors toward others.

**Ignorance and Reactive Aggression**

The second factor, ignorance, involves experiencing rejection in the form of being ignored by peers in a variety of situations. For example, experiencing rejection from others includes the rejected individual being stopped from contacting other peers; left out of invitations to parties, games or events/activities; sent away from social gatherings; prevented from obtaining important information; refused to turn up for personal invitations; and faced with further rejection as a result of others’ influence to reject the individual (Lev-Wiesel, Nuttman-Shwartz, & Sternberg, 2006; Lev-wiesel et al., 2013). Literature has shown that being ignored by others is a form of interpersonal and relational aggression experienced which may lead to future aggression (Lin et al., 2018). Being ignored by others is a form of indirect aggression which involves the exclusion of others from social activities (Kong et al., 2012; Ostrov, 2008) including peer efforts to withdraw the rejected person’s social support or “unfriend” him (Ostrov, 2010).
Accusation and Reactive Aggression

The third factor, accusation, involves blaming the rejected party for things that happened and/or did not happen, telling on the rejected individual, and spreading negative rumors about the rejected party (Lev-wiesel et al., 2013). In short, accusation manifests itself by directly blaming the rejected peer and indirectly reporting or damaging the rejected peer’s reputation. Aggression exhibited in the form of blaming the rejected individual for something he did or did not do may lead to the individual internalizing their peer aggression experiences (e.g., depression and self-blame) (Graham, Bellmore, & Mize, 2006; Lin et al., 2018; Shetgiri, 2013). Being accused of something may lead one to blame oneself for the aggressive victimization received from peers and thereby, expressing frustration in future aggression (Graham et al., 2006). Spreading rumors and being told on by others are forms of indirect, relational aggression intending to damage the victim’s social reputation (Mathieson et al., 2011). While research has indicated that aggressive and relational victimization can lead to further aggression regardless of hostile attribution and emotional dysregulation such as anger or sadness experienced, relational victimization by means of spreading rumors often comes in the context of hostility and emotional sensitivity (Cooley & Fite, 2016; Mathieson et al., 2011). Victims see themselves as causes responsible for giving others the opportunity to spread false rumors about them (Mathieson et al., 2011; Ostrov, 2008, 2010; Shetgiri, 2013). The specificity hypothesis states that individuals who experienced poor social preference such as having unjust rumors being spread about them or falsehood told by others are more likely aggress in a similarly aggressive manner (Lundh et al., 2014; Ostrov, 2008, 2010).

Physical Attacks/Bossiness and Reactive Aggression

The fourth factor of social preference involves harming the rejected person by physically attacking the rejected person, throwing objects at the rejected person, vandalizing the rejected person’s possessions, and ordering the rejected person around to do things for others (Lev-Wiesel et al., 2006; Lev-wiesel et al., 2013). Physical attacks or physical aggression is the exertion of physical force to express one’s anger or aggression on another person (Kong et al., 2012). Other forms of physical aggression exhibited against another person include kicking, hitting, pushing, shoving, and fighting (Buss & Perry, 1992; Kong et al., 2012; Ostrov, 2008; Polman, De Castro, Thomaes, & Van Aken, 2009; Rieffe et al., 2016). Bossing others around demonstrates aggressive control over less-powerful others (Finkelhor et al., 2012). Typically, aggressive behaviors are performed by a more powerful aggressor over a less powerful victim (Shetgiri, 2013). Scholars have identified that being victims of physical aggression and dominance evidencing a power-imbalance is a precursor for similar future aggressive behaviors (Lin et al., 2018). Physically aggressive peer victimization is likely to lead to further physical aggression (Ostrov, 2010).

While social preference has been linked with reactive aggression in prior studies, it is unclear whether the multi-dimensional factors of social preference predict reactive aggression. Furthermore, social preference is a relatively recent construct to be studied alongside aggression, especially among criminal populations wherein aggression exhibited in crime rates is higher than those among community populations of adolescents. From the aforementioned literature theorizing the links between social preference and aggression, it can be construed that the proposed factors of social preference may contribute to reactive aggression. Consequently, the present study seeks to test the following hypotheses (Figure 1):
H1: Insult will positively predict reactive aggression.
H2: Ignorance will positively predict reactive aggression.
H3: Accusation will positively predict reactive aggression.
H4: Physical attacks and bossiness will positively predict reactive aggression.

Figure 1. Proposed research framework

Method
Sample
The present study employed the quantitative correlational design and the survey approach. Using the cluster sampling method, questionnaires were distributed to 197 juvenile adolescents (ages ranged from 12 to 20 years) admitted to approved schools in four locations throughout West Malaysia. Due to incomplete and unreliable data, responses from 14 respondents were excluded, leaving the final 183 responses. Data generated was keyed into SPSS 23.0 and analyzed via AMOS 23.0.

Measurement
There are two parts to the measures utilized in the present study. The first section consisted of the demographic information sheet which required the respondents to provide their gender, age, ethnicity, nationality, duration of stay in their respective approved schools, parents/guardians’ monthly income, and parents’ marital status. The second section comprised of self-report measures back-translated from the English language into the Malay language (Brislin, 1970; Essau, Sasagawa, & Frick, 2006). The original English versions of the self-report measures were developed by Lev-wiesel et al. (2013) and Rieffe et al. (2016). Responses were recorded on a 5-point Likert scale ranging from 1 = not at all/very low severity/never to 5 = very high severity/always.

Results
A majority of the study respondents were male (157), followed by female (26). The mean age of the respondents was 16.70 years. Most of the respondents (90.20%) were of the Malay ethnic descent while the rest were from the Chinese and Indian ethnic descents (4.40%) respectively. One respondent (.50%) was of the Iban minority ethnic descent while another did not state his ethnicity.
Correlation Analyses

Table 1 presents the means, standard deviations, reliabilities, and bivariate correlations among the main study variables. In support of all the study hypotheses (1 to 4), the following correlation matrix indicates the low to high significant positive correlations coefficients found between insult, ignore, accusation, physical attacks/bossiness, and reactive aggression ($r = .34 \text{ to } .91; p < .001; p < .01$). Thus, convergent validity was supported. As bivariate correlations exceeded the common threshold of .70, collinearity diagnostics was performed. As shown in Table 2, collinearity diagnostics in the form of Tolerance and Variance Inflation Factor (VIF) values showed no problems with multicollinearity as the values were more than .10 for Tolerance and less than 10.00 for VIF (Pallant, 2011).

Table 1. Means, standard deviations, reliabilities, bivariate correlations, and average variances of variables

| Variables                  | 1     | 2     | 3     | 4     | 5     | M     | SD    | Average Variance Extracted (AVE) | Cronbach’s Alpha |
|----------------------------|-------|-------|-------|-------|-------|-------|-------|----------------------------------|------------------|
| 1. Insult                  | (.82) |       |       |       |       | 2.32  | 1.01  | .54                              | .85              |
| 2. Ignore                  | .75***| (.83) |       |       |       | 2.18  | .84   | .41                              | .81              |
| 3. Accusation              | .91***| .81***| (.70) |       |       | 2.26  | .93   | .44                              | .68              |
| 4. Physical attacks/bossiness | .84***| .85***| .91***| (.76) |       | 2.13  | .96   | .44                              | .75              |
| 5. Reactive aggression     | .45***| .34** | .41** | .45***| (.82) | 1.97  | .61   | .48                              | .84              |

Note: ***$p < .001$; **$p < .01$; Composite reliabilities (CR) of scales are in parentheses alongside diagonals.

Table 2. Collinearity diagnostics for the study variables

| Variables                      | Tolerance | VIF  |
|--------------------------------|-----------|------|
| 1. Insult                      | .37       | 2.71 |
| 2. Ignore                      | .44       | 2.28 |
| 3. Accusation                  | .39       | 2.56 |
| 4. Physical attacks/bossiness  | .36       | 2.53 |

Dependent variable: Reactive aggression

Measurement Model

Measurement model analysis evaluated the contributions of each scale items to the constructs (latent variables) being measured in the current study. Upon the removal of three items with high standardized residuals and the covariance of one item pair found to be related to one another, the hypothesized measurement model conducted assessing the scales representing the study constructs of insult, ignore, accusation, physical attacks/bossiness, and reactive aggression showed that all paths from the scale items to the constructs were significant ($p < .001$) and that all standardized factor loadings were within the acceptable range ($> .44$). The hypothesized
measurement model proved to be an adequate fit ($\chi^2 = 427.29; df = 241; \text{Relative } \chi^2 = 1.77; p = .000; \text{GFI} = .85; \text{AGFI} = .81; \text{IFI} = .91; \text{TLI} = .89; \text{CFI} = .90; \text{RMSEA} = .07$) (Hair, Black, Babin, & Anderson, 2014). Although the validation of the measurement model revealed that the average variance extracted (AVE)'s for the ignore and physical attacks/bossiness constructs were < .50, the construct reliabilities (CR) for the variables were ≥ .70. The good construct reliabilities might override the AVE values that were below the required threshold (J. Gaskin, personal communication, February 22, 2020). Hence, discriminant validity was adequately supported. The measurement model with the factor loadings between scale items and their constructs are shown in Figure 2 while the results for the validation of the measurement model are shown in Table 1.

Figure 2. Measurement model showing factor loadings of the social preference and reactive aggression scales

Structural Model

Using the structural model, path analyses tested for the hypothesized relationships among the study constructs of insult, ignore, accusation, physical attacks/bossiness, and reactive aggression. Consistent with the structure of reflective models, we constrained all four paths between social preference indicators and reactive aggression to be equal to one another (Kenny, 2011). Upon constraining all paths to be equal, all paths between insult, ignore, accusation, physical attacks/bossiness, and reactive aggression were significant ($p < .001$). Findings for the structural model (Figure 3) proved to have a good fit to the data ($\chi^2 = 429.81; df = 244; \text{Relative } \chi^2 = 1.76; p = .000; \text{GFI} = .85; \text{AGFI} = .81; \text{IFI} = .90; \text{TLI} = .89; \text{CFI} = .90; \text{RMSEA} = .07$). As expected, insult, ignore, accusation, and physical attacks/bossiness positively predicted reactive aggression ($\beta = .10 - .13, p < .001$).
Figure 3. Structural model showing hypothesized paths between the social preference factors and reactive aggression

Discussion

The present findings contribute to the understanding of the mechanisms between individual factors of social preference and aggression. The present study aimed to test whether the individual antecedents of social preference, namely, insult, ignore, accusation, and physical attacks/bossiness, predict reactive aggression. As expected, all paths of insult, ignore, accusation, and physical attacks/bossiness positively predicted reactive aggression when all paths are constrained.

Previous studies have tested for social preference using peer nominations (Choukas-Bradley & Prinstein, 2014; Graziano et al., 2016; Li & Wright, 2014; Prinstein & Cillessen, 2003). That is, the nature of peer dislikability is based on the samples’ own evaluations of how others treat them. Unlike previous studies, the current study seeks to gain insight into the respondents’ own evaluations of social preference. In line with previous research, retaliations to relational peer aggression involving insults hurled, physical attacks, and bossed over may lead to retaliation to aggress. Rejected peers respond in aggression from associated emotions such as hostility, anger, frustration, and sadness (Mathieson et al., 2011). In addition, our findings support prior research that victims of aggression are likely to respond by aggressing toward others (Lin et al., 2018; Shetgiri, 2013). Others who dislike and insult rejected peers may lead to the development of internalizing and/or externalizing problems among rejected individuals. Those who develop externalizing problems may go on to aggress against others (Graham et al., 2006; Lin et al., 2018; Shetgiri, 2013). Notwithstanding, scholars used mixed methods of assessing peer victimization and reactive aggression including both self-reports and peer nominations (Kistner et al., 2006; Lin et al., 2018; Mathieson et al., 2011).
Implications

Our findings have some practical implications for relevant parties such as school authorities and parents. First, the finding that individual antecedents of social preference factors (insult, ignore, accusation, and physical attacks/bossiness) led to reactive aggression solidifies the understanding that social learning of peer rejection and victimization experienced by adolescents could lead to adolescents acting out their experiences. Internalizing problems such as poor emotional regulation or frustration may lead to further impairments in adolescent development (Mathieson et al., 2011). The inability to cope psychologically with peer rejection and victimization exhibited through internalizing problems may lead to externalizing problems. These adolescents model their aggressors, thereby, acting out in aggression towards others (Lin et al., 2018).

Second, the specificity hypothesis may be ambiguous in situations involving aggression against the rejected adolescent and the adolescent’s response to being aggressed (Lundh et al., 2014). Victimized peers may not express themselves in aggression. Teachers and parents should not only seek to minimize the rejected individual’s contact with aggressors, but also observe signs of unresolved consequences of peer victimization. Unresolved problems may present themselves in internalizing problems which may go undetected by teachers and parents, thereby, leading to maladjustment problems as the rejected adolescent matures.

Third, relevant school authorities and families ought to be aware of peer delinquency. Consistent with the social networking theory, peers tend to associate themselves with like-minded peers. In the same way, rejected peers associate themselves with other rejected peers to commit aggression together. Hence, interventions should focus on integrating non-delinquent peer groups as a form of healthier peer support for peer victimized individuals so that these rejected peers would not perpetuate internalizing and externalizing problems.

Fourth, interventions aimed at improving the lives of victimized adolescents may want to concentrate on early interventions. Younger individuals (e.g., emerging adolescents) are more easily influenced by their own experiences (Ostrov, 2010). In addition, adolescents are more focused on forming their personal identities and moving away from their parents as key sources of support (Choukas-Bradley & Prinstein, 2014). Consistent with the social learning theory, individuals may reenact their own victimization experiences, thereby, reinforcing aggressive tendencies toward others.

Limitations and Future Research

Study limitations must be considered. First, a majority of the study sample were male adolescents, which did not enable us to compare gender differences. It is possible that boys may react differently to aggression and its accompanying emotions (Mathieson et al., 2011). For instance, boys are found to be more physically aggressive than girls, but girls are found to be angrier than boys in a study carried out among primary school children in Malaysia (Kong et al., 2012). In contrast to another study, boys scored high on aggression that was associated with anger (Azam et al., 2019). Meanwhile, a study also found that boys are more likely to exert direct aggression after being victimized by direct aggression while girls are more likely to exhibit indirect aggression after being victimized by indirect aggression (Lundh et al., 2014). Contrary to the above findings, Richardson & Green (2006) asserted that neither males nor females are more aggressive than the other, but that members of one gender exhibited aggression toward members of the same gender rather than members of a different gender (e.g., females aggress against females rather than males). Given that
gender differences appear to play an imperative role, future studies should also be conducted among more female adolescents detained and held at approved schools to compare possible gender differences.

Second, only juveniles from West Malaysia were sampled in this study. Hence, the current study’s findings could not be generalizable to the Malaysian juvenile population. Although the rates of criminal population are lower, future studies should investigate the underlying mechanisms tying the study’s main variables among juveniles from approved schools located in East Malaysia. Cultural differences may influence findings and thereby, should be taken into account.

Third, the discriminant validity for the social preference measure was acceptable, but marginal. Except for insult, all other AVE values showed approaching indiscriminant validities. Given that AVE values for ignore, accusation, physical attacks/bossiness, and reactive aggression were approaching the cut-off value of .5, future studies may aim to establish stronger discriminating strength between the constructs (Ostrov, 2010).

Finally, constructs measured in this study were limited by the self-report measures used. Instead of construing poor social preference as insult, ignorance, accusation or physical attacks/being bossed by others, the social preference construct could also be measured via instances of direct or indirect aggression. Moreover, the aggression scale used in this study tested for reactive aggression in the last four weeks. Individuals who have committed aggression within the past month may inaccurately report that they have not committed any aggression towards others as their response depends on their accurate recall. Due to the undesirable nature of social preference and aggressive behaviors, adolescents may also underreport their peer dislikability and aggressive tendencies (Docherty, Boxer, Huesmann, Brien, & Bushman, 2017). Nevertheless, self-reports provide insight into the participants’ lives which outsiders may not have access to (Fanti et al., 2009). Other more diverse assessments of social preference (e.g., observations/interviews by parents, teachers, counsellors, and peers) may provide more accurate measures than those provided by adolescent ratings.

Conclusion
The increasing number of adolescents involved in aggression, especially among the justice-involved population, warrants further study on how social preference may either mitigate or worsen adolescents’ deviant outcomes. It is understandable that experiences of being disliked and aggressed by others may lead these individuals to react by committing aggressive behaviors themselves. Future research should look into peer support as a possible intervention as adolescents rely on their peers for social support and self-validation.

The present study offers theoretical and contextual contributions. Theoretically, this study confirms the plausible interplay of social learning that happens when adolescents experience poor social preference leading to their future modelling of aggressive behaviors. More importantly, this study expands on previous research by observing that peer rejection in the form of insult, ignorance, accusation, and physical attacks/bossiness may predict further problems with reactive aggression in ways similar to the aggression they have encountered from their peers (specificity hypothesis). Contextually, this study contributes to the impact of poor social preference on reactive aggression among justice-involved adolescents in an Asian offender population. Our findings were consistent with those of Western contexts. In light of the vital role peers play in adolescents’ lives, it is unsurprising that peer rejection poses risks for reactive aggression including deviant peer networking.
Acknowledgement
We acknowledge Assoc. Prof. Dr. James Gaskin, whose invaluable suggestions for data analytic methods contributed to the data analysis process and reference in the results section of this paper.

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