Peer Acceptance, Deviancy Training, and Victimization as Predictors of Adolescent Problems:

A Search for Personality Moderators

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Ph.D. Dissertation

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2006

Your file Votre référence
ISBN: 978-0-494-21545-6
Our file Notre référence
ISBN: 978-0-494-21545-6

Acknowledgements

I would like to thank a number of people for their support, patience, and encouragement throughout the process of writing, conducting, and presenting this work. First, and so importantly, Dr. Brian O'Connor, my supervisor and research model, who has encouraged, supported, and facilitated the development of this project. Your enthusiasm for research is contagious, and your commitment to excellence in research and training new scientists is ever apparent. Thank you.

I would like to thank the members of my committee – Dr. Dwight Mazmanian, second reader, and Dr. Chuck Netley, internal examiner, – thank you for your time, availability, and your questions, which provided interesting stimulation for discussion, and seeds for future research ideas. To Dr. Sonja Grover, who served as the internal/external examiner on this project, thank you for sharing your perspectives and time. To Dr. Wendy Craig, thank you for participating in this work as the external examiner – your time and expertise were greatly appreciated.

Thanks to the Introductory Psychology instructors and high school principals and teachers who allowed their students to participate in this work - without you this project would have remained a proposal. Thanks of course, to those men and women, boys and girls, who participated in this research for sharing your time and experiences to make this project come to fruition.

Thanks to my friends – Jenn, Dana, Sarah, Leah, Amy, and Rosleen, for hearing my worries and ideas, celebrating the victories along the way, and helping me to retain perspective when I sometimes got a little lost. Your presence in my life throughout this process has been invaluable.

I am grateful to Grandma Dearest and Granny for your support and encouragement through these six years of graduate training. It has meant a great deal to me to have you both in my corner. Thank you.

And of course, unending thanks to my mother, Wendy, and my brother, Dan. I would need an entire appendix to outline how much each of you has given me that has allowed me to get here. Your support and faith in me, and your presence throughout my life have been sustaining forces in this experience. Thank you.

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Abstract

Historically, parent variables have been conceptualized as the most salient factors impacting the development of children and adolescents' competencies and deficits. More recently, the importance of peer relationships with respect to the development of behavioural and emotional difficulties in children and adolescents has been acknowledged with increasing frequency. The extent to which individuals' experience acceptance or rejection from their peers, associate with deviant peers, or are victims of bullying have all been associated with internalizing and externalizing difficulties. Research examining variables that moderate these relationships has been relatively scant. O'Connor and Dvorak (2001, 2002) demonstrated the importance of considering personality as a factor that moderates the relationships between parent variables and adolescent behavioural and emotional difficulties. Following this research, the moderating influence of personality on frequently found bivariate relationships between peer variables and adolescent outcomes was explored. Five hundred and thirty nine adolescents participated in the present research, 368 girls and 171 boys. Bivariate relationships consistent with those commonly found in the literature emerged, such that greater peer difficulties were associated with more self-reported difficulties. However, moderated regression analyses revealed that these relationships are conditional. That is, peer variables were not invariably associated with positive and negative self-reported experiences for adolescents, but instead depended on personality. Results are discussed with reference to directions for future research and implications for intervention.

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A great deal of the research examining child and adolescent development has documented the influence that parents have on both normal and pathological development. Relatively less research has explored the impact of other relationships. Peer relationships deserve at least as much attention in clarifying factors which shape child and adolescent development. Judith Rich Harris (1999) wrote in her book, "The Nurture Assumption", that the peer context provides the most important interpersonal relationships in the development of children, adolescents, and young adults. Harris, as the title of her book implies, states that the belief among academics and lay-people that the healthy development of children depends on parenting, is faulty and based on correlational research that holds little weight. She urges researchers to look instead at children's peer groups, a factor she believes is more salient in influencing development.

It would be remiss to identify Harris as the only voice to emphasize the importance of peer variables in the development of children and adolescents. Hartup (1989) writes of the developmental significance of social relationships, including both adult and peer relationships. He discusses the importance of understanding the impact of social relationships, be they hierarchical (such as child-caregiver relationships) or more egalitarian (such as those seen in peer relationships). The more egalitarian relationships, Hartup indicates, are integral to the socio-emotional development of youth. In the context of friendship children learn specific social skills, such as cooperation, intimacy, and social

competence. Without these peer experiences, children are more vulnerable to develop both internalizing and externalizing difficulties.

What is it about individuals' peer groups that affects their development, and more specifically, which factors affect an individuals' adjustment? Harris (1999) indicates that one of the most important peer variables to affect the development of children and adolescents, is the extent to which the child belongs to a peer group. Roughly translated, this parallels the research conducted by psychologists that looks at peer acceptance and rejection of an individual. A great deal of research that examines this phenomenon has been conducted, and supports Harris' position that peer acceptance has important implications for development. It suggests that children who are rejected by their peers are at an increased risk for depression, anxiety, aggression, and delinquency, not only immediately during the period of rejection, but also later in adolescence, and even during adulthood (Bagwell, Newcomb, & Bukowski, 1998; Parker & Asher, 1987).

Another peer factor linked to adolescent outcomes is affiliation with deviant peers. The deviance of individuals' peer groups and the effects that this has on individuals' adjustment has been well researched. Thomas Dishion (2000), a leading researcher in this area, has investigated the iatrogenic effects of group therapy for high-risk youth, elegantly illustrating the effects of involvement with deviant peers. Consistently, findings suggest that when children and adolescents associate with deviant peers, they are at greater risk for developing or increasing problem behaviours.

A third variable frequently documented in the literature on developmental psychopathology is victimization. Victimization is defined as the experience of being bullied,

teased, harassed, or excluded from social groups (Crick & Grotpeter, 1996; Goodman, Stormshak, & Dishion, 2001). According to Goodman and colleagues (2001), the process of being victimized has recently been recognized for its importance as a significant contributing factor in the development of child and adolescent psychopathology. Empirical evidence suggests that children who are victimized report higher levels of both internalizing difficulties (i.e., depression, anxiety, loneliness) and externalizing problems (i.e., aggression, bullying) (Boivin, Hymel, & Bukowski, 1995; Craig, 1998; Crick & Grotpeter, 1996; Goodman et al., 2001; Haynie et al., 2001; Kingery, McCoy, & Simandle, 1997; Schwartz, Dodge, & Coie; 1993).

The three main effects findings reviewed here all point to the importance of external variables that contribute to the development of difficulties in children and adolescents. The small extant literature on personality and psychopathology in children and adolescents suggest that intra-individual variables are also important to consider. While insufficient in providing a thorough understanding of the impact that personality exerts on adolescent adjustment, existing studies suggest the importance of examining personality factors for providing a clearer understanding of adolescent difficulties. To date, however, this research has been inconsistent in the operationalization of personality. It has also been scattered in its examination of behaviours to which personality relates (Gullone & Moore, 2000; Halloran, Ross, & Carey, 2002; Shiner, 2000).

While the main effects discussed this far have all been consistently demonstrated, research examining the exacerbating or ameliorating effects of individual difference variables has been scant. While research examining the moderating effects of parent variables has been

conducted with respect to deviant peer influences (e.g., Vitaro, Brendgen, & Tremblay, 2000), the moderating influence of intra-individual characteristics has been largely ignored. The present research, in keeping with Harris' recommendation to expand research on the sequelae of the peer environment, attempts to understand whether personality moderates the most often replicated peer relationship-adolescent adjustment associations. In their work on the relationships between parent variables and adolescent outcomes, O'Connor and Dvorak (2001) explored the extent to which personality moderated the associations between parental warmth and control and adolescent emotional and behavioural difficulties. They found that parental warmth and control mattered only for some participants, and that this conditional relationship was accounted for by differing personality characteristics of the participants. A review of the current theory and empirical evidence will demonstrate the current state of understanding with respect to peer relationships and adolescent outcomes, and how personality might influence these relationships.

Judith Rich Harris: Group Socialization Theory

Judith Rich Harris' book *The Nurture Assumption* questions some of the basic beliefs about child and adolescent development. Specifically, she refutes the idea that much of what a child becomes is the result of the parenting that child receives. A great deal of child development research focuses on the impact which the parent has on the developing child, and concludes that difficulties of children and adolescents are the result of poor parenting practices; when the child succeeds, it is the result of positive child rearing practices. Harris indicates that the research on which these conclusions are based are correlational and have yielded small effect sizes. She claims that findings to date do not warrant what she calls "the

nurture assumption".

Harris argues that children's difficulties or successes are the result of two other factors: genetic predisposition and peer group. She supports her argument with cross-cultural research, indicating that children and adolescents take on the accents of their peer groups, the values of their peer group, and numerous other attributes of those with whom they socialize. Parents, Harris suggests, merely provide the neighbourhood in which children live and meet their peers. She argues that researchers should shift their emphasis from child-parent relationships to the peer relationships of children and adolescents.

When confronted with sometimes startling similarities between parents and their offspring, Harris does not augment her argument to account for this finding. She iterates that children are like their parents merely because they share the same genes. Harris indicates that genes are parents' most significant contribution to their children's development, and that for the most part it is the peer group that is responsible for the socialization of the child. Harris acknowledges the importance of attachment relationships for normal brain development of children, but the impression that she leaves is that genetic contributions and stimulation of neurodevelopment aside, parents matter very little. She suggests then, a shift in research focus, from one that looks at the impact of parenting to one which looks at the impact of a child's social group, to better explain the development of children and adolescents.

A caveat to the discussion of Ms. Harris' work is that while the focus of the present research seeks to investigate the importance of peers to adolescent development, it is not intended to discredit the importance of parents. While Harris' theory focuses mainly on normal development and the transmission of culture, her theory posits that peers are the most

influential figures in the lives of children and adolescents. As such, the current research focuses on the importance of peer factors, and their impact on adolescent adjustment.

Peer Acceptance and Rejection

Among the peer variables thought to be determinants of adjustment are acceptance and rejection. Numerous studies have found relationships between social status within the peer group and current and subsequent childhood adjustment (For a review, see Zakriski, Jacobs, & Coie, 1997). Furthermore, social status within the peer group has been linked to later adult adjustment. However, little has been done in the area of peer acceptance and rejection in older adolescents, demonstrating a gap in the literature. If one subscribes to Harris' point of view (1999), then the peer group is particularly important during this time, as it is a time of growing independence from the family of origin. Harris indicates that during late-adolescence and adulthood, the influence of the peer group increases with growing autonomy. Thus, Harris states that it is the peer group and its influences that have the most significant effects on an individuals' development.

Bagwell, Newcomb, and Bukowski (1998) conducted a 12 year longitudinal study that examined the sequelae of childhood friendship and peer rejection. They reported that individuals classified as highly rejected by their peers at the initial assessment were seen by other children as aggressive and immature. As well, these same individuals, when assessed at the 12-year follow-up point, reported significantly poorer overall adjustment as young adults than did individuals reporting lower levels of peer rejection. Additionally, individuals who experienced peer rejection during pre-adolescence reported higher levels of psychological maladjustment in adulthood. Even when rejected children reported having a "very best

friend", the difficulties that they experienced with rejection appeared to make a significant contribution to adult adjustment difficulties, above and beyond the positive influence of intimate friendships. While the positive effects of friendship have been reported by other researchers(e.g., Parker & Asher, 1993), they do not seem sufficient for overcoming the difficulties associated with peer rejection. Additionally findings suggest that the experience of rejection and having friendships are not mutually exclusive - rejected children are much less likely to report the presence of friends (Bagwell et al.,1998).

Kupersmidt, Burchinal, and Patterson (1995) examined developmental patterns of childhood relations as predictors of externalizing behaviour problems. They indicated that in their review, the primary variable that was predictive of a wide range of negative outcomes for youth was peer rejection. As such, they examined the effects of peer rejection and low peer acceptance (with rejection thought to be the active dislike of a person, whereas low acceptance might indicate that an individual is not actively sought out for social activities) on externalizing behaviour difficulties. The results indicated that the more disliked a child was, the more aggressive and delinquent they were. As well, less accepted students evidenced higher levels of aggression.

The causal nature of the relationship between peer rejection and emotional and behavioural difficulties was explored by Dodge and colleagues (2002). They suggested that the rejected child may present with difficulties that make them vulnerable to rejection. In this case behavioural difficulties are seen as variables that beget rejection, rather than being the result of rejection. They investigated the extent to which rejection contributes to behavioural and emotional difficulties, or whether it is the precursor to rejection. Children participated in

a longitudinal study over four years. Ratings were obtained on participants' acceptance and rejection, as well as their behavioural difficulties at both measurement times. A robust negative relationship between sociometric status and aggression emerged. Partial correlations controlling for initial levels of behavioural difficulties in rejected children, indicated that rejection contributed uniquely to the development and maintenance of such difficulties over time. These results are important in that they demonstrate that rejection is not merely the result of behavioural and emotional difficulties, but is also a significant contributing factor to the development of these problems.

Similar findings have been reported by other investigators, suggesting that children are not rejected because they are aggressive. A meta-analysis conducted by Newcomb, Bukowksi, and Pattee (1993) examined the influence of sociometric status on a variety of outcomes. They explored the impact of accepted, rejected, controversial, average, and neglected statuses. Relationships between social status and social withdrawal, anxiety, depression, and aggression were explored, and revealed that controversial, rejected, and average children were the most aggressive. The least aggressive children were the popular and neglected children. Rejected children evidenced elevated levels of aggression assessed in a number of categories – disruptive, physical, and verbal aggression, and composite aggression scores. Controversial children (those accepted by some peers and rejected by other peers) were also higher than average with regards to disruptive and composite aggression scores. These findings suggest that aggression is not necessarily linked to rejection and exclusion from peer groups, as both controversial and average children evidenced belonging and aggressive styles.

Coie, Dodge, and Kupersmidt (1990) reviewed the effects of peer group status on children between ages 8 and 12, and also found that rejection is not always the result of aggression. They consistently found that rejected children were more aggressive and more disruptive than non-rejected children. Controversial children, however, also exhibited aggressive or disruptive behaviour, arousing peer group anger and peer group amusement. According to Harris' hypotheses (1999), it is the behaviour which controversial children exhibit that arouses laughter from their peers that determines their acceptance within a group of like-minded children. Rejected children on the other hand, are wholly unsuccessful in their interpersonal forays.

Coie, Terry, Lenox, Lochman, and Hyman (1995) also explored the extent to which peer rejection was the result of aggression. They posited that the aggressiveness of an individual has been demonstrated to contribute both to the development of externalizing problems (delinquency, chronic aggression), internalizing problems, (anxiety, depression) and rejection by peers. They assessed acceptance and rejection using sociometric nominations. Parent-report measures and child and adolescent interviews were used to tap aggression and externalizing and internalizing difficulties. Males who were rejected and aggressive at the initial measurement increased in their levels of externalizing symptoms when compared to those who were non-rejected and aggressive, rejected and non-aggressive, and non-aggressive and non-rejected. As well, boys who were rejected and aggressive at the initial measurement showed increases in internalizing symptoms across time, while those who were not rejected and aggressive showed decreases in internalizing symptoms. No differences in internalizing and externalizing difficulties were evident for girls.

Werner and Crick (2004) explored the impact of rejection by peers on aggression, in an adolescent sample. They suggested that acceptance by peers functions to facilitate the development of social skills, regulation of emotion, and conflict resolution skills. Children and adolescents rejected by peers are denied opportunities for learning these skills in the absence of acceptance by peers. After controlling for autoregressive effects, Werner and Crick found that rejection by peers was related to increased aggressive behaviours in boys and girls over time.

Apparent from research in this area is that children who experience rejection by their peers are more likely to exhibit aggressive behaviours. While cause and effect have not been determined, that is, whether aggression begets rejection or vice versa, findings consistently support a relationship between the two. Some studies exist suggesting that aggression is not necessarily responsible for the development of rejection, with the experience of rejection accounting for variance above and beyond autoregressive effects. The link between rejection and aggression has been attributed to a number of factors. Some have argued that through acceptance into peer groups, the development of important social skills such as cooperation, perspective taking and empathy develop (Coie & Dodge, 1998; Dodge et al.,2003). These skills are thought to inhibit children's natural aggression, providing them with the prosocial skills necessary to navigate social situations successfully and non-aggressively. As well, being excluded from mainstream, prosocial peer groups places children at risk for being drawn into deviant peer groups, where they are likely to be susceptible to the negative influence of peers who display conduct problems. (Miller-Johnson, Coie, Maumary-Gremaud, Bierman, et al., 2002).

Peer group status is not related solely to aggression, rather it also relates to internalizing difficulties such as depression and anxiety. Newcomb et al. (1993) reported that with respect to anxiety, depression, loneliness, and withdrawal, popular children demonstrated lower levels of loneliness than average children. When rejected children were compared to average, popular, and neglected children, they exhibited higher levels of depression, anxiety, and withdrawal. The findings with regard to rejected children were consistent across types of information source used. That is, regardless of whether children rated themselves or whether a teacher or a peer rated them, high levels of depression, anxiety, and withdrawal were apparent in rejected children.

Coie and Carpentieri (1990) examined the relationship between social status and childhood depression and conduct disorder, and the comorbidity of these two diagnoses. They found that rejected children scored significantly higher on measures of depression than popular, average, or neglected children. The results for children reporting conduct problems, however, were not as clear-cut. Controversial boys reported the highest level of conduct problems, whereas rejected girls reported the highest levels of conduct problems. With regard to neglected and controversial statuses, both groups were characterized as having some difficulties, though not to the same extent faced by the rejected children. That is, these individuals seem to fare better than those who are rejected by their peers, at least in the short term, suggesting the protective effects of acceptance by some peers, in the face of rejection by others, with rejection leading to poorer outcomes.

Not to be ignored are the positive effects that acceptance can have on individuals' development. Schwartz, Dodge, Pettit, and Bates (2000) examined the moderating effects of

friendship and group acceptance on the relationship between family difficulties and later victimization. They hypothesized that group acceptance and friendship would ameliorate the often-found relationship between harsh family environment and later victimization. Their results supported this hypothesis. Group acceptance and friendship ameliorated the negative impact of early negative home environment and its relationship to victimization. That is, children who reported friendship and acceptance in the face of negative home environments experienced less victimization than those who experienced group rejection, fewer friends, and poor family experiences. This research further supports the significance of the protective/risk value of acceptance by a child's peer group, and illustrates the importance of looking at the positive effects of peer group experiences.

The literature to date demonstrates a relationship between peer acceptance and rejection and the adjustment of children. Together the findings suggest three things. First, that peer rejection is predictive of negative outcomes for children and adolescents. Second, peer rejection is not merely a proxy risk factor, related to negative outcomes because of its relationship to aggression. Rather, it contributes to negative outcomes in its own right. In light of such findings, it is reasonable to hypothesize that some of the variance associated with aggression in rejected children, is due the fact that they are rejected. Third, as findings can differ for girls and boys (Coie et al., 1995), it is likely important that research in this area conduct analyses separately by sex. However, a number of things are missing from the current understanding of acceptance and rejection. First, the research discussed here focuses on acceptance and rejection of school-aged children and its effects, either immediate or across time. Research on acceptance and rejection in older adolescents is limited. Most

commonly seen is research that assesses peer acceptance/rejection during childhood, and then assesses at some later point (later childhood, adolescence, adulthood) measures of adjustment, such as difficulties with externalizing and/or internalizing problems. Absent in the literature to date is an examination of the effects of current peer group status in older adolescents. Most of the existing research focuses on childhood and early adolescent peer group acceptance. Examining the impact of peer group acceptance during late adolescence and early adulthood will inform developmentalists about the relevance of this phenomenon at this time.

Deviant Peer Affiliations

A review of peer variables associated with developmental psychopathology would be would be incomplete without a discussion of deviant peer affiliations. Research on the effects of deviant peer associations has clearly illustrated the negative effects of deviant peer affiliations. This discussion of deviant peer influences examines research comes from two camps – that which studies the iatrogenic effects of peer interventions, and research that examines deviant peer influences in normal samples of children and adolescents.

Thomas Dishion (1999) and colleagues have conducted research that examines the effect of peer intervention with high risk youth. He indicates that for years researchers have posited that problem behaviour in youth is found within the peer group, and that it is at this level that researchers should attempt to understand the roots of externalizing difficulties. Dishion indicated that the research which he and his colleagues have conducted has demonstrated a phenomenon called "deviancy training" which is the "contingent positive reactions to rule-breaking discussions".

Three studies by Dishion and colleagues highlight the importance of deviancy training as a contributing factor in the development of problem behaviour. Dishion, Capaldi, Spracken, and Li (1995) found that when deviancy training was observed in a cohort of adolescent males at ages 13 and 14, by ages 15 and 16 there was an increased probability that the same youth had engaged in tobacco, alcohol, and marijuana use. In the second study, Dishion, Spracken, Andrews, and Patterson (1996) found that youth who were exposed to deviancy training showed increases in their self-reported delinquency. Finally in the third study from this group, Dishion, Eddy, Haas, Li, and Spracken (1997) showed that youth who were exposed to deviancy training across adolescence showed violent behaviours, as reported by both themselves and police.

The effects of an adolescent intervention program consisting of parent-skills training and peer group pro-social activities and self-regulation training were discussed by Dishion, McCord, and Poulin (1999). For the peer group aspect, peers were used as a positive contingency in a group setting. Participants were exposed to one of four conditions – parent-focus only, teen-focus only, parent- and teen-focus combined, and a placebo group. The hypothesis of the researchers was that the most effective treatment group would be the combined group – that which encompassed both the peer and parent foci. However, findings revealed that any short-term gains made via the parent focus component of the treatment were undermined in the long term by the negative effects of the teen-focus aspect of treatment. In fact, regardless of whether the adolescents had been exposed to the parent-focus training, the teen-focus component of the therapy was associated with long-term increases in tobacco use. Additionally, when compared to a control group of high-risk adolescents,

teacher ratings revealed greater incidence of delinquency in those youth exposed to the teen-focus aspect.

Dishion (2000) also examined the cross-setting consistency in adolescent psychopathology and the impact of deviant friendships on this phenomenon. The sample was screened to select youth at risk for the development of problem behaviours. They were rated on measures of externalizing and internalizing difficulties by parents and teachers (both were used so as to provide a measure of cross-setting consistency). Video clips of their interactions with peers provided indices of deviancy training. Coders rated the discussion and endorsement of substance use and delinquency when viewing these clips. Follow-up assessment looked at arrest records, substance use, and sexual promiscuity. Involvement with deviant peers was highly associated with adolescent psychopathology. Youth who were classified as comorbid internalizers and externalizers both at home and at school were also the youth who were the most engaged with deviant peers, as well as being rated high on deviancy training.

More recent work by Dishion and colleagues (2004) also reveals the negative influence of deviant peer relationships and how they are moderated by parent variables. Results demonstrated that deviant friendships are particularly potent for children whose parents are prematurely disengaged. For adolescents living in families with higher levels of management, deviant peer contexts were less damaging than for those with lower levels of management. These findings suggest the importance of looking at variables that moderate relationships that might at first glance appear to be more direct.

The research of Dishion and colleagues illustrates a number of points. First, it is

apparent through these findings that there is a probable danger in aggregating youth who experience difficulties with externalizing behaviours. Secondly, and most pertinent to the present discussion, is the impact of deviant peer influences. While commonly thought of as "bad influences", Dishion's research provides empirical evidence supporting the negative impact of deviant peers. Third, recent work by Dishion and colleagues (2004) suggests that other factors are at play in determining which adolescents are likely to engage in antisocial behaviours. Exposure to deviant peers appears to be less harmful for adolescents who have adequate supervision, compared with those whose families are less engaged in management.

Studies examining "normal" (as opposed to "at-risk") adolescents and their experiences with deviant peers also support the existence of the deviancy training phenomenon. Mason, Cauce, Gonzales, and Hiraga (1994) examined peer problem behaviour, and the moderating effects of the mother-child relationship and father absence. The authors indicated that these two variables were important to examine with respect to their moderating influence, as they had been found in previous research to moderate risk associated with other variables. Young adolescents participated in the study, and were assessed for the presence of a father figure in the home, and their relationship with their mother (i.e., the trust, communication, and total attachment they had to their mother), and the extent to which they and their friends participated in problem behaviour. Results showed that all measures of participant problem behaviours were related to peer problem behaviour measures, supporting the hypothesized relationship between peer deviancy and participant problem behaviour.

Maxwell (2002) conducted research that examined the impact of peer influence on a

number of adolescent risk behaviours; marijuana use, sexual behaviour, alcohol use, cigarette smoking, and tobacco chewing. Both participants and their peers were assessed longitudinally, as to the extent to which they engaged in these activities. Findings indicated that the likelihood of engaging in the risky behaviours increased if peers were engaged in these activities, above and beyond autoregressive effects.

Vitaro, Brendgen, and Wanner (2005) investigated patterns of affiliation with delinquent peers over three years, in a non-clinical group of 10-year-olds. They found that over time, children who associated with deviant peers increased in their own delinquency, while those who reduced their affiliation with deviant peers showed declines in their levels of delinquency. Children that fit within classifications which denoted their involvement with deviant peers, evidenced higher levels of delinquency than those children who never, or infrequently associated with deviant peers.

Results of research using normal samples, extends the work of Dishion and colleagues. That is, "at-risk" youth are not alone in their vulnerability to the negative effects associated with deviant peer influences. Rather, findings indicate that the influence of deviant peers is apparent in non-referred children and adolescents, and similar findings emerge when investigators examine these effects in normal youth.

While answering some questions, research described thus far still invites the question - Are delinquent youth just more likely to engage with deviant peers, or do deviant peers actually contribute independently to delinquency in adolescents? Empirical evidence seems to suggest that while delinquent youth may search out deviant peers, these peers are contributing above and beyond the effects which the individual contributes to the

development of delinquency (Dishion & Owen, 2002; Fergusson, Swain-Campbell, & Horwood, 2002).

Dishion and Lee (2002) conducted longitudinal research examining the effects of friendship on substance use across adolescence and adulthood. They acknowledged the consistent finding that deviant peer contexts are associated with delinquent activity, and acknowledged that this is insufficient for making causal statements. As such, their study aimed to elucidate whether associating with substance using friends contributed to the development of substance abuse above and beyond the effects of seeking out like-minded peers. They hypothesized that deviant peer associations would contribute to the "development and progression" of substance abuse throughout adolescence and into adulthood. They also suggested that early substance use would contribute to adolescents seeking out deviant peers, and that these deviant peers would contribute to the substance use of these individuals. Their findings supported their hypotheses: early adolescent drug use predicted affiliation with similarly deviant peers. However, deviant peer association contributed uniquely to the variance of subsequent drug use into later adolescence. These findings suggest that while delinquent youth do seek out deviant peers, these peers also contribute to the further development and maintenance of externalizing behavioural difficulties.

Research by Fergusson, Swain-Campbell, and Horwood (2002) also addressed the question of whether or not deviant peer affiliations acted as contributing factors to adolescent delinquency, or whether they were the result of the confound of prior delinquency. They did this by using a fixed effects regression model, allowing them to estimate the effects of the

parameter of interest (in this case peer deviancy) while controlling for nonobserved fixed factors (in this case, prior adolescent delinquency and other factors that may effect the outcome, but that may not have been considered). The goal of the study was to clarify the relationships between deviant peer associations and delinquency and substance use between ages 14 and 21. Results demonstrated a highly significant relationship between deviant peer relationships and crime and substance abuse at all measurement intervals, even after controlling for the fixed factors. These findings, combined with those of Dishion and Lee (2002) suggest that while delinquent youth may seek out deviant peers, deviant peer affiliations make their own unique contributions to the development and maintenance of problem behaviours

Recent work by Werner and Crick (2005) demonstrated similar contagion effects for relational aggression in girls. They found that girls who associated with relationally aggressive peers demonstrated increases above and beyond initial levels of self-reported relational aggression over time.

Across a number of studies, evidence has emerged that indicates deviant peer affiliations are associated with delinquent behaviours in adolescents. Such consistent findings suggest that adolescents who affiliate with deviant peers are likely to initiate, maintain, and/or increase problem behaviours. These relationships do not appear to be due only to innate or previous levels of aggression. Rather affiliation with deviant peers appears be related to the development of delinquency, regardless of pre-existing conduct problems.

Victimization

Victimization of children and adolescents is an area that is receiving increased attention by researchers and clinicians (Haynie et al., 2001). Research that investigates the impact of victimization on children has gained momentum, and a growing body of evidence has consistently demonstrated associations between victimized youth and experiences of depression, anxiety, and aggression (For a review, see Hawker & Boulton, 2000).

Haynie and colleagues (2001) investigated the differences in psychosocial profiles of bullies, victims, non-bullies and non-victims, and those who were both bullies and victims. They recruited youth from middle schools to determine the effects of bullying and victimization on self-reported indices of deviant peer associations, problem behaviour, behaviour misconduct, school adjustment, depressive symptoms, and school bonding. Findings demonstrated that while bullies reported more problem behaviours, behavioural misconduct, and poorer school adjustment and school bonding than victims, victims showed higher levels of depressive symptomatology.

Boivin, Hymel, and Bukowski (1995) examined the impact of social withdrawal, peer rejection, and victimization by peers in the prediction of children's depressed mood, hypothesizing that negative peer experiences would be mediated by social withdrawal and loneliness. Negative peer experiences included victimization and rejection by peers. Sociometric assessment yielded scores of rejection, victimization, and withdrawal while loneliness and depression were assessed using reliable and valid self-report measures. Assessments were conducted at two points in time, and results demonstrated that self-reported loneliness and depression were related to victimization and social preference, with

those participants who reported higher levels of peer rejection reporting higher levels of loneliness and depression.

In addition to associations that have emerged with respect to depression and loneliness, victimization has also been associated with aggression and delinquency. Kingery, McCoy-Simandle, and Clayton (1997) examined risk factors that contributed to the likelihood that an adolescent would engage in violence. They reasoned that being the victim of violence or other types of victimization at the hands of others leads to the belief that violence is a useful way to obtain desired outcomes, and in turn is responsible for the development of aggression. They had grade 9 students complete a well known drug-abuse prevention psychometric instrument that assessed the frequency of violent behaviours, criminal activity, school punishment, victimization, and drug use. Analyses were conducted to determine which variables successfully discriminated between less violent (those reporting two or fewer violent acts) and more violent (those reporting three or more violent acts) individuals. Findings revealed that the frequency of being hit at school along with the frequency of being inappropriately touched by a peer discriminated between the two groups. Those who were hit more often reported more violence, and those who were inappropriately touched also reported more violence than the students who did not experience these stressors. Combining these two variables with a third variable (seeing a weapon at school) represented a composite score of vulnerability, or experience as victim. This composite variable accounted for significantly more variance in the violent behaviour dependent variable, than any of the individual scores. The authors indicated that these findings suggest that students who are victimized develop a sense of vulnerability that lends itself to relying on violence as

a coping mechanism.

Goodman, Stormshak, and Dishion (2001) conducted a cross-lag study that examined the impact of peer victimization at two points in development across time. They collected data on peer rejection, peer victimization, and internalizing difficulties on children in grades one and 5, and then collected subsequent data for the next three years. Participants were rated by peers on indices of victimization, aggression, and social status. The researchers also obtained independent ratings of victimization using an observation schedule, with three 10-minute observation periods being conducted for each participant, yielding three dimensions for each observation: setting of the peer interaction, content of the interaction, and emotional tone of the interaction. Finally, teachers completed a behavioural-rating scale. Use of structural equation modeling revealed that for those participants who were in the fifth grade during the first year of data collection, victimization scores predicted later teacher-reports of internalizing difficulties. However, victimization scores of the first-grade children were not predictive of internalizing difficulties reported during subsequent data collection waves. The authors suggest that the underlying mechanism responsible for this result may be social cognition; that is they suggest that the social comparisons which younger children make are not as salient as those which older children make, and thus may not have the same impact as those which are more salient to the individual (i.e., those made by older children).

While victimization as defined by the above authors does not attempt to differentiate between the experiences of males and females, more recent hypotheses and findings have suggested that girls and boys may experience victimization differently from one another. Storch (2001) points to recent research that suggests the importance of discerning between

two types of victimization, one that is more frequently experienced by females, and one that is more frequently experienced by males. Relational aggression, a form of aggression thought to be more frequently experienced by females, is described by Crick and Grotpeter (1996) (in contrast to overt aggression) as being aggression which "harms others through hurtful manipulation of or damage to peer relationships (e.g., spreading mean rumours about a peer; retaliating against a peer by purposefully excluding her from one's own social group)".

Crick and Grotpeter (1996) sought to assess the characteristics of individuals deemed victims of relational aggression. They hypothesized that sex differences in relational victimization would be either negligible or biased with girls experiencing more victimization of this type. The extents to which participants were victimized, either physically or relationally, was measured using an instrument designed expressly for the study (The Self-Experiences Questionnaire - SEQ), and consisted of three sub-scales representing relational aggression, overt victimization, and receipt of pro-social acts. Four hundred and seventy-four children participated in the research, completing the measures described above. Results revealed that boys reported more overt victimization (i.e., physical) but that there were no sex differences on the measure of relational victimization. Findings also suggested that rejected children reported greater levels of both relational and overt aggression, than did any of the other status groups (i.e., popular, average, controversial, and neglected). The experience of being a victim of overt aggression was related to loneliness, depression, social anxiety and social avoidance. The experience of relational aggression added significantly to the prediction of each of these variables, supporting a unique contribution of relational aggression to the explanation of children's psychosocial adjustment. The second set of

analyses demonstrated that relational aggression predicted scores on all of the psychosocial adjustment measures, and that overt aggression added only to the prediction of depression. The authors concluded that these results support the importance of including relational aggression when attempting to delineate the relationship between victimization and aggression. Relational aggression apparently contributes to the development of psychosocial difficulties experienced by children, above and beyond that which can be explained by measures of overt aggression alone. As well, Crick and Grotpeter indicated that their sample was dichotomous with respect to the type of aggression that they experienced; that is, children typically experienced one form of aggression or another. As both seem to contribute uniquely to the variance of psychosocial adjustment, it appears important to measure both.

Craig (1998) also included alternatives to overt physical aggression in her exploration of the relationship between bullying, victimization, and depression, anxiety, and aggression in a large sample of children in grades 5 to 8. Both indirect aggression, akin to the relational aggression described by Crick and Grotpeter (1996), and verbal aggression were included in addition to an index of physical aggression. Results revealed that all three types of victimization predicted experiences with anxiety, highlighting again the importance of considering various forms of aggression when conceptualizing victimization.

Rusby, Forrester, Biglan, and Metzler (2005) also examined the impact of victimization on adolescent difficulties. Included in their definition of harassment by peers, was verbal teasing and insults, and physical assault. Groups of children who experienced varying levels of peer harassment emerged - those who experienced no harassment, those who experienced moderate amounts of harassment, and those who experienced frequent

harassment. As exposure to peer harassment increased, problem behaviours also rose. Greater experiences with physical victimization were associated with increased deviant peers affiliations, greater self-reported aggression, and more antisocial behaviour. Additionally, higher levels of verbal victimization were associated with greater aggression. Finally, multiple problem behaviours were more common for adolescents with the highest levels of physical and verbal victimization, than for those in the sample who reported moderate or infrequent experiences with peer victimization. Moderate experiences with victimization were related to moderate levels of problem behaviours, while those who experienced no harassment showed low levels of problem behaviour. Results of this research suggest that as exposure to victimization varies so too do problem behaviour in adolescents.

The results of the research discussed in this section, suggest two things. First, they implicate victimization as an important variable in the development/maintenance of child and adolescent psychopathology. Replications have demonstrated a consistent association between victimization and internalizing difficulties. The second issue that arises from this review is the importance of including different types of victimization (i.e., relational versus overt victimization). By overlooking the more recently explicated form of relational aggression, researchers run the risk of ignoring a significant portion of children and adolescents who experience more covert forms of victimization.

Evident in general from the peer relationships literature is the importance of the peer environment as a contributing factor to the development and maintenance of psychopathology in children and adolescents. While questions of causality have emerged, it appears that rejection, deviancy, and victimization are not merely the result of pre-existing

psychopathology. However, research examining these variables has largely excluded the intrapersonal variables that put children at risk for the development of problems. We turn our attention to the small extant literature on one of these factors, personality.

Personality and Adolescent Behaviour

While some research has been conducted on adolescent personality and outcomes (Gullone & Moore, 2000; Halloran, Ross, & Carey, 2002; Shiner, 2000), in general, these associations have been infrequently explored and have used an inconsistent approach to measuring personality constructs. As an example of the latter, Gullone and Moore (2000) measured personality using a five-factor approach (i.e., conceptualizing personality as existing along five broad traits: extraversion, neuroticism, openness to experience, agreeableness, and conscientiousness), while others approached the assessment of personality using one or two factors determined from more qualitative assessments to predict outcomes (e.g., interviews) (Shiner, 2000). Still others use more clinical approaches (i.e., the Millon Adolescent Personality Inventory) to predict outcomes of adolescent psychiatric inpatients (Halloran, Ross, & Carey, 2002). What readers are left with is an inconsistent understanding of the effects of personality on adolescent outcomes, for a number of reasons. First, there is no consistency in the way in which personality is conceptualized. Second, replication studies attempting to reproduce the relatively few research findings have not been conducted. Third, outcomes that researchers have attempted to understand have also been inconsistent, with psychiatric diagnoses, interpersonal style, and risk taking all being measured as outcomes. However, it is still important to examine the small literature that does exist, to gain insight into methodological and theoretical issues, as well as to provide an understanding of how

personality has been conceptualized.

Halloran, Ross, and Carey (2002) examined the relationship between adolescent personality and psychiatric diagnosis, hypothesizing that one's personality may be, to some extent, responsible for physical and psychological difficulties. Participants completed the Millon Adolescent Personality Inventory, results of which were subjected to a factor analysis that yielded 2 personality factors, Socially Confident and Cooperative/Respectful. Psychopathology was assessed using diagnostic assessment schedule that yielded indices reflecting a variety of mood, anxiety, and disruptive-behavioural disorders. Results suggested that a socially confident personality was associated with fewer symptoms of mood, anxiety, and disruptive behavioural disorders. An inverse association emerged between a cooperative/respectful personality style and scores on scales measuring disruptive behaviour disorders. The authors concluded that personality styles were significantly related to diagnoses, but suggested that future research employ a more general sample of adolescents, as the sample that they used was limited by the fact that participants were distressed psychiatric inpatients.

Jensen-Campbell, Graziano, and Hair (1996) examined the effects of personality on interpersonal conflict in adolescence. They hypothesized that scores on agreeableness, one of the personality traits explicated by the five factor theory of personality, would predict adolescents' interpersonal conflict strategy styles. They suggested that those scoring low on agreeableness would regard negative and destructive approaches to conflict resolution as effective, and those high on agreeableness would perceive these same conflict resolution strategies as ineffective. One hundred and sixty-two adolescents participated in the research,

completing measures of agreeableness and responding to vignettes of conflict scenarios. Responses to conflict vignettes reflected strategies of power assertion, negotiation, and disengagement. Analyses yielded results that supported the hypothesized relationship between agreeableness and conflict resolution approaches - those low on agreeableness were high on their endorsement of power assertion techniques of conflict resolution, while those high on agreeableness were high on their endorsement of negotiation techniques of conflict resolution.

Shiner (2000) longitudinally examined the relationship between children's personalities and their later academic achievement, rule adherence, and social competence. Personality traits were assessed using interviews with parents and children and teacher ratings. The author then rated the interviews and combined the ratings with those provided by the teachers to generate scores on personality dimensions previously defined by her (Mastery Motivation, Academic Conscientiousness, Surgent Engagement, and Agreeableness). She found that Mastery Motivation was related to all three outcome variables, Academic Conscientiousness was related to academic achievement and rule adherence, Surgent Engagement was related to social competence, and Agreeableness was related to competence in all three outcome domains. These findings suggest that personality makes significant contributions to important areas of adolescents' functioning, supporting the utility and importance of assessing personality in childhood and adolescence to further understanding of variables that contribute to the development of psychosocial functioning.

Gullone and Moore (2000) examined the effects of adolescent risk taking, attempting to explicate the relationship between risk-taking and personality. They acknowledged the

limitation of past research failing to employ a comprehensive assessment of personality when examining relationships between personality and adolescent psychopathology As such, their study aimed to overcome the limitations of past research that had relied on single personality traits. Four hundred and fifty nine adolescents completed a measure of risk taking behaviour and judgments of the risk associated with activities. This was comprised of four factors: thrill seeking risks, rebellious risks, reckless risks, and antisocial risks. Personality was assessed using Costa and McCrae's (1992) NEO-Five Factor Inventory, a measure that assesses Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. Findings indicated that Extraversion was related to all four of the risk judgment factors, as was Agreeableness, such that individuals who scored high on Extraversion and/or Agreeableness judged all types of risky behaviours as less risky. Conversely, they found that those scoring high on Conscientiousness judged three of the four risk factors (all but thrill seeking) as more risky than those scoring moderately on this personality factor. With respect to actual risk behaviours, Agreeableness was positively related to three of the four risk behaviour factors (all but reckless risk taking), Extraversion was positively related to thrill-seeking behaviour, and Openness to Experience and Conscientiousness were both negatively related to rebelliousness and reckless risk taking. Multiple regression analyses revealed that different personality factors appeared to be important in predicting different risk behaviours. Extraversion appeared to be important in predicting thrill-seeking, Neuroticism predicted antisocial behaviour, and Conscientiousness and Agreeableness predicted rebellious risk taking.

Evident from the relatively few studies that have sought to understand the association

between personality and various outcomes is the importance of considering personality as a factor that relates to adolescent behaviours. Current research also suggests that various personality factors are differentially associated with outcomes, supporting the use of a comprehensive assessment of personality. At the very least, existing research supports further exploration of personality as a variable that contributes to the outcomes of children and adolescents.

Personality: A Potential Moderating Variable?

While research exploring bivariate relationships between peer variables and adolescent outcomes has been conducted, research examining variables that moderate these relationships is relatively non-existent. The dearth of research examining moderators ignores an important question: for which individuals do peer variables matter most, and for whom do they not matter at all? An endless number of variables could be explored with respect to their moderating influence; parent factors, cognitive ability, ethnicity, and so on. While the merit of examining these factors as potential moderating variables in the peer influence-adolescent adjustment relationship is unquestionably important, the literature on personality in adolescents suggests that it may be a factor that likely influences outcomes. This argument is further supported when one examines the findings of O'Connor and Dvorak (2001), who addressed the moderating effect that personality has on the parenting-adolescent adjustment relationship. These authors indicated that the often-cited relationship between parental behaviour and subsequent adolescent adjustment is a modest one and as such, elucidating variables which moderate this relationship would provide insight into the conditional nature of this relationship. They assessed 402 adolescents, ranging in age from 14 to 21, from high

school and first year university classes. Participants completed measures that assessed parental warmth and control, depression, anxiety, delinquency and aggression, and personality. Analyses consisted of a series of moderated regressions, to test the hypothesis that personality factors moderated the relationship between parental warmth and control and adolescents' adjustment scores. Results demonstrated that there were indeed a number of interactions between personality factors and parental behaviour in the prediction of emotional and behavioural difficulties, suggesting that by looking only at bivariate relationships, a host of information is lost. Specifically, O'Connor and Dvorak (2001) found that parental warmth and rejection were not related to adolescent adjustment to the same extent for all participants - adolescents' personality moderated the extent to which parenting impacted adjustment.

O'Connor and Dvorak (2001) described five types of linear interactions that can take place between two variables when they are predicting a third variable. These are illustrated in Figure 1. Essentially these interactions hypothesize that the relationship between peer difficulties and adolescent problem behaviours depends on the personality characteristics of the individual; that is, not all adolescents will develop the same difficulties or strengths even if they are exposed to the same stressors or opportunities. In the context of the present research, it is thought that the extent to which peer acceptance/rejection, deviant peer affiliation, and victimization affects individuals, will depend on personality variables. In pattern A, individuals will only develop problems if they are exposed to certain peer difficulties, and some individuals' personalities' buffer against exposure to peer problems, preventing them from developing difficulties. In pattern B, some individuals are prone to developing difficulties regardless of the types of peer experiences they encounter, while

others are likely to develop difficulties only if they encounter peer problems. Pattern C is reflective of individuals whose variability in peer experiences contributes to, or buffers against, the development of problems, depending on the individual's personality. In pattern D, high levels of exposure to particular peer difficulties result in typical levels of problems for all individuals, while low exposure to peer difficulties may result in either high or low levels of behavioural/emotional problems, depending on an individual's personality. Finally, in pattern E, high or low levels of peer difficulties can result in high or low levels of behavioural/emotional problems, depending on the individual's personality (O'Connor & Dvorak, 2001). O'Connor and Dvorak then suggest that it is important to learn about what types of interactions actually exist, which ones are most common, for which problem areas interactions occur, and the personality factors that moderate these relationships.

Recent research by Akse, Hale, Engels, Raajmakers, and Meeus (2004) sought to confirm personality as moderating influence in the relationship between parenting variables and adolescent outcomes. Specifically, they examined the moderating effect of three personality types on parental rejection on both internalizing and externalizing difficulties in adolescents. Using the Big Five Questionnaire, they constructed three personality types – over controllers, under controllers, and resilients. Analyses confirmed the hypothesis that parental rejection determined outcomes differentially depending on personality types. Over controlling girls were more likely to experience depression in the face of parental rejection, than were girls whose personalities fit with a resilient style. For resilient boys, parental rejection was related to higher levels of aggression, something that was not apparent for boys classified as over controllers. These results offer further support for the existence of

personality moderator effects in commonly found bivariate relationships, and also suggest that importance of considering results separately for males and females, as results differed by sex.

Recent work by Jensen-Campbell and colleagues (2002) examined the moderating influence of personality, hypothesizing that agreeableness would moderate the relationship between behavioural vulnerabilities and victimization by peers. They suggested that agreeableness would act as a buffer, helping vulnerable adolescents (ages 11 and 12) to avoid victimization. Results supported this hypothesis, with individuals at risk for victimization (due to internalizing difficulties, poor social skills, or little physical strength) and who also had moderate to high scores on agreeableness, experiencing less victimization by their peers than those who were victimized by their peers. This study demonstrates the importance of considering personality as a factor that can buffer against or exacerbate existing difficulties.

Research by Persson, Kerr, and Stattin (2004) also investigated the moderating influences of personality. They investigated the extent to which adventurousness (characterized by thrill-seeking and impulsivity scores) moderated the relationship between affiliating with risk taking peers and norm-breaking. They found that girls who were adventurous were more likely to engage in precocious sexual relationships, while those who did not have high scores on a measure of adventurousness, did not engage in this same behaviour, despite exposure to similar peer groups. These findings lend further support to the idea that personality is an important factor in determining vulnerability and resiliency in the face of similar risk factors.

Research to date highlights the importance of assessing the moderating effects of

personality on variables thought to directly influence adolescents' psychosocial adjustment. Typically, when assessing personality variables, researchers conduct analyses that examine a single personality factor in relation to some other variable. However, a novel approach is proving fruitful in yielding information on how personality, as measured by the five factor, model moderates bivariate relationships. Research by O'Connor and Dyce (2001) and O'Connor and Dvorak (2001) suggests that the standard approach of looking at individual factors and their statistical impact is limited. Rather, work by these researchers suggests examining where individuals exist on a combination of all five factors simultaneously. O'Connor and Dvorak (2001) utilized this method when conducting analyses using the five factor model of personality, and describe the method as using "dimensional scores to construct a large number of vectors of scores reflecting the blends of the five factors, providing a relatively comprehensive sweep of the five factor space". They iterated that the personality variables which are of interest are not the individual factors, but rather the blends of the five factors which more closely represent an individual's personality.

Apparent from the current review is the inconsistency in conceptualizing personality during childhood and adolescence across the literature. The five-factor model of personality offers a comprehensive and empirical solution to this problem, as evidenced by the work of O'Connor and Dvorak (2001) and Gullone and Moore (2000). The five factor model of personality as described by Costa and McCrae (1999) is a theory of personality that has emerged through much empirical research that seems to suggest that at the core of personality are five factors: extraversion, neuroticism, agreeableness, openness to experience, and conscientiousness. Costa and McCrae (1999) suggest that the FFM is not so much a

theory of personality, as a model which has emerged as a result of hundreds of studies that suggest the presence of these five factors as being at the core of human personality. Characteristic of extraversion is a need for social stimulation and participation in numerous activities, while neuroticism is characterized by low self-esteem and pessimism. Openness to experience is characterized by a variety of hobbies and interests, and agreeableness is characterized be cooperative attitudes. Finally, characteristic of conscientiousness are leadership ability and long-term planning (Costa & McCrae, 1999).

Current Study

The present review demonstrates the relationships between peer rejection, deviant peer groups, and the experiences of victimization and externalizing and internalizing difficulties. Also evident is the importance of considering variables that rest within individuals, particularly personality. However, a number of gaps exist in the current literature. First, rejection has primarily been studied in young samples - assessments of rejection by Coie et al (1995) were done in grade six (age 11), and represent the oldest cohort assessed for this variable of the studies reviewed here. Older adolescents' experiences of rejection are also important to understand, particularly as this variable appears to be quite powerful in contributing to externalizing and internalizing difficulties for younger children. The investigation of rejection experiences of older adolescents represents a unique aspect of the current research, as participants' ages ranged from 14-19.

Another gap in the current understanding of the effects of rejection, deviant peer influences, and victimization, is the moderating influence of personality. The research of O'Connor and Dvorak (2001) demonstrated the impact of personality as a moderating factor

in the relationship between parent variables and adolescent externalizing and internalizing symptoms. These findings suggest that pursuing research that examines the moderating influence of personality in other bivariate relationships might be valuable. Peer influences thought to be of importance in determining adolescent outcomes were thus explored, resulting in the three areas described above - acceptance/rejection, deviant peers, and victimization. It was these three variables that emerged as the most frequently discussed in the peer experiences literatures.

Also unique to the current research was the use of personality composites as moderating variables. Researchers frequently seek to understand the impact of individual personality factors on outcomes (Gullone & Moore, 2000; Jensen-Campbell, 1996). The current focus involved exploring the extent to which composites, or blends of the five factors, interacted with predictor variables (in this case, peer relationship variables) to predict outcomes.

Much of the research that has been conducted to date, with respect to peer experiences and adjustment has used a peer nomination approach, which is mentioned frequently as a key research tool used in much of the research described above. The present study did not employ peer nomination strategies - rather self-report methods were used. The reasoning behind this is the interest in individuals' experiences and perceptions of their treatment by others, and how this relates to psychosocial adjustment. Additionally, in keeping with the work of Crick and Grotpeter (1996), employing self-report measures allows for the measurement of peer interactions that do not take place within the classroom. This is particularly important for the current study, as the majority of peer interactions do not

necessarily take place with one group of individuals within one classroom setting. Rather, within the secondary school and university settings peer interactions are likely to take place at many different venues, and with several different groups (See Pepler and Craig (1998) for a review of methodological issues in the assessment of peer relationships).

Method

Participants and Procedure

Five hundred and thirty nine participants were recruited from local secondary schools and introductory psychology classes. One hundred and seventy one males and 368 females participated, and ranged in age from 14 to 19 (M= 17.61, SD = 1.57). With respect to proportion of participants in each grade range, 10% were from grade 9 (n = 54), 8.7 % from grade 10 (n = 47), three and a half percent were from grade 11 (n = 19), one point nine percent were from grade 12 (n = 10), and 75.9% were from introductory psychology classes (n = 409).

The nature of the present research was explained via an informed consent letter, and participants were advised of their right to withdraw at any time from the research project. As well, parental consent forms were garnered for those 18 and under, in accordance with ethical guidelines around conducting research with minors. The nature of the parental consent letters was the same as those given to the students, describing the nature of the study and their freedom to withdraw their consent for participation at any time (see Appendix A). Upon completion of the questionnaire, participants were provided with a debriefing letter, explaining the goals of the research, and providing them with information on resources should they have any concerns with the issues addressed in the questionnaire (see Appendix

B). They were also provided with five dollars, which was provided as an incentive for participating in the study.

Measures

NEO-Five Factor Inventory (NEO-FFI; Costa & McCrae)*)* - The NEO-FFI (a shortened version of the NEO-Personality Inventory (Costa & McCrae, 1989)) is a 60-item inventory intended to measure the five factors of personality outlined by the five factor model of personality; extraversion, neuroticism, openness to experience, agreeableness, and conscientiousness. Scores on the individual scales (measuring the different personality factors) are moderately to highly correlated with the corresponding scales of the NEO-PI, and all have acceptable internal consistency, with coefficient alpha scores ranging from .74 (for the Agreeableness scale) to .89 (for the Neuroticism scale). With respect to validity, the authors of the scale indicate that the NEO-FFI demonstrates convergent and discriminant validity.

Inventory of Socially Supportive Behaviours (ISSB; Barrera, Sandler, & Ramsay, 1981*), Interpersonal Support Evaluation List (ISELBEL,* Cohen, Mermelstein, Kamarck, & Hoberman, 1985*), and Semantic-Differential Word List (SEMDEF,* Leary, Cottrell, and Phillips, 2001*).* The assessment of acceptance/rejection was conducted using a number of measures used by Leary and colleagues in their measurement of acceptance and rejection as a function of sociometer theory. While the assessment of acceptance and rejection is typically done using sociometric methodology discussed in the above section on acceptance and rejection, such an approach is not feasible for the current research, nor is it desired. While the classroom may be the social culture during grade school years, peer culture is more broadly

defined during secondary and postsecondary school, with peer influences such as acceptance and rejection residing in a number of niches, such as the classroom, school in general, neighbourhoods, church groups, and extracurricular activities. It is for these reasons that a self-report approach to the assessment of peer acceptance and rejection was chosen. The sociometer approach to conceptualizing acceptance and rejection, according to Leary and colleagues (2001) holds that self-perceived acceptance and rejection is monitored by the self-esteem system, with the self-esteem system "monitoring the social environment for cues indicating relational devaluation" (e.g., disinterest, dislike, exclusion, ostracism, and rejection), with Leary and colleagues' approach to the assessment of social acceptance and rejection being replicated in the current research. The measures used by Leary and colleagues in assessing acceptance and rejection, and those which were used in the current research include the Interpersonal Support Evaluation List (Cohen, Mermelstein, Kamarck, & Hoberman, 1985), and a measure of received social support, the Inventory of Socially Supportive Behaviours (Barrera, Sandler, & Ramsay, 1981), as well as a list of semantic differential words, used to describe the perception of the self in relation to others (e.g., accepted-rejected).

Problem Behaviour Scale (PBS; Mason 1994*).* The assessment of deviant peer influences was conducted using the Problem Behaviour Scale (PBS) (Mason, 1994). Mason's own research using this scale suggested good internal consistency (Cronbach's alpha = .81) and the scale also has good face validity. As the methodology for much of the research which looks at deviant peer influences employs interviews with participants and this is not a feasible approach with the current research, after a search of the current measures, the PBS

appears to be the feasible and sound alternative.

Child Behaviour Checklist - Youth Self-Report (CBCL-YSR; Achenbach, 1991*).* The CBCL-YSR is a self-report instrument which assesses a number of emotional and behavioural difficulties experienced by children and adolescents, including delinquency, aggression, depression, and anxiety, as well as yielding overall scores for internalizing and externalizing difficulties. The CBCL-YSR has demonstrated adequate test-retest reliability (r=.79) as well as good discriminant and construct validity.

Child Depression Inventory (CDI; Kovacs, 1992*).* The CDI is a self-report instrument consisting of 27 questions, and yields an overall depressed mood score, and scores on five sub-scale scores; interpersonal problems, anhedonia (i.e., loss of interest or pleasure), negative mood, ineffectiveness, and negative self-esteem. Good reliability and validity have been demonstrated for this measure. Research on the reliability of this measure demonstrated moderate internal consistency of the five factors (ranging from a low of .59 on the scale measuring interpersonal problems, to a high of .68 on the scale measuring negative self-esteem). Research examining the test-retest reliability of the CDI, suggests coefficients ranging from .38 one- week test-retest reliability for normal youth, to .87 one-week test-retest reliability for psychiatric inpatients. Concurrent validity, according to Kovacs (1997) has been well documented in the literature, and correlation coefficients between scores on the CDI and a measure of self-esteem and self-concept were .72 and .66 respectively.

Revised Children's Manifest Anxiety Scale (RCMAS; Reynolds & Richmond, 1985*)* is a self-report measure consisting of 28 items, which provides an index of children's anxiety experienced as somatic problems, worry, and attention/concentration problems. It has good

internal consistency as well as demonstrating concurrent validity.

Children's Self Experiences Questionnaire – Self Report (CSEQ; Crick & Grotpeter, 1996*)*. This measure was used to assess participants' experiences of victimization. It is a 15 item measure, consisting of three sub-scales, which yield scores on overt victimization, relational victimization, and experiences as a recipient of pro-social acts. Psychometric properties of the CSEQ demonstrate adequate reliability, with internal consistency scores ranging from .77 to .80 for prosocial recipient scores and relational victimization scores respectively. No validity analyses have been conducted to date with this measure, though it does appear to have good face validity.

The various measures were compiled and administered as one questionnaire (see Appendix C), with introductory psychology students completing it online, and high school students completing a paper version. An 8-point Likert-type scale was used, as was done in the previous work by O'Connor and Dvorak (2001), in order to facilitate ease of completion.

Statistical Analyses

The question of interest for the current study was whether commonly found bivariate relationships in the peer relationship-symptomatology research are moderated by personality variables. As such, moderated regression analysis was the statistical approach employed. Exploring interactions between dimensional personality scores and predictor variables was conceptualized as offering a limited understanding of the influence of personality in this context. Instead, combinations of personality factors, or composites, were the variables conceptualized as offering the best understanding of the whether or not the associations commonly found in the peer relationships literatures are conditional.

O'Connor and Dvorak (2001) provide a rationale for why composites (rather than dimensional) scores, are more informative moderator variables. They argue that personality profiles (i.e., a combination of personality factors), offer the best understanding of how personality moderates commonly found bivariate relationships. They suggested that few variables of interest fall along single dimensions, but rather exist in the blends of the five personality dimensions. It is these blends which likely make the greatest contribution to moderating relationships between predictor and outcome variables. Their research on the existence of conditional associations between parent variables and adolescent outcomes supported their stance that personality composites could be powerful moderators. Two hundred and seventy eight interactions between parenting and adolescent personality emerged in the prediction of adolescent psychopathology. These findings highlight the importance of considering composite factor scores as moderating factors, and argue against relying solely on the use of dimensional scores.

An illustration of how these composite blends are quantified and conceptualized is offered by O'Connor and Dvorak (2001) and O'Connor (in press). They refer to the warmth-hostility/dominant-submissive dimensions frequently discussed in the interpersonal literature. By conceptualizing interpersonal styles as blends, the dominant-submissive and warmth-hostility dimensions would be considered simultaneously to describe an individuals interpersonal style Conceptualized this way, individuals end up falling somewhere within one of the quadrants represented in Figure 2, rather than squarely on one axis or the other. Quantitatively, this is represented by their score on the warmth-hostility dimension multiplied by the number of degrees that the blend deviates from the warm-hostile

dimension. This is then added to their score on the dominance-submission dimension, which is also multiplied by the number of degrees that the blend deviates from the dominant-submissive dimension. This provides a numeric quantification of an individual's interpersonal style, encompassing both dimensions – warmth-hostility and dominance-submission.

The same conceptualization can be applied to research employing personality factors - the only difference is the number of dimensions to be considered. Composites or blends of the FFM would encompass five dimensions – Agreeableness, Neuroticism, Extraversion, Openness, and Conscientiousness. Following the same description provided for the warmth-hostility/dominance-submission composites, these vector score composites would be the sum of products of each of the five individual personality scores and coordinates of that same personality factor.

While proposed as a more enlightening approach to understanding personality moderator effects (O'Connor & Dvorak, 2000; 2001), the challenge lies in how to apply it practically. First, how would one determine composite scores? One method might involve compiling a list of all possible composites by looking at all possible combinations of personality scores. One would then calculate composite scores using the equation described above. The next step would involve conducting several hundred moderated regression analyses with each of these composites, and determining which composites made the greatest contribution in interactions with peer variables predicting the outcome measures. This would provide the researcher with an exponentially large number of combinations existing in the five-factor space. Each personality dimension would have several hundred possible scores in

five-factor space, resulting in several hundred possible composites of the five factors, leaving investigators with a prohibitive task

An alternative method, successfully employed by O'Connor (in press), involves using the FMINCON optimization routine in MATLAB 13. Simply stated, this program was used to explore combinations of the five personality factors that interacted with peer variables to predict the symptom outcome measures. It allows the researcher to specify the type of analyses to be conducted (in this case multiple regression). In the present research, 32 different regions consisting of the 5 personality dimensions were explored for composites that moderated the bivariate relationships that emerged. These 32 regions can be conceptualized in the same way as the four quadrants (or regions) constituted by the warmth-hostility/dominance-submission dimensions, illustrated in Figure 2. Each personality factor had two areas, a positive (or high score) area, and a negative (or low score) area, and it was all possible combinations of the two areas for each of the five factors that resulted in the 32 regions of the five factor space being explored for moderating composites.

The optimization routine, which is described in detail below, is an efficient method for determining which composite personality blends act as moderator variables. First, it provides a scan of five-factor space, and allows for the detection of various composite scores. Secondly, it allows one to pinpoint exactly which combination of scores interacts most strongly with the different variables in predicting outcome measures. That is, which points in five factor space (i.e., composites) moderate main effects in predicting ouctome variables? Relative to the laborious and cumbersome approach of computing all possible composites, the optimization routine drastically reduces the number of analyses required, while at the

same time providing the composites that provide the greatest moderator effects (i.e., providing the researcher with a composite that interacts with predictor variables, to provide the largest increment in explained variance of outcome measures). The FMINCON optimization routine, a two step-procedure, facilitates the detection of personality composites that offer the greatest contribution to moderator relationships. The two steps involved in moderated regression analyses using the FMINCON optimization routine are described below.

Step One

The first step involves specifying the function to be optimized. This involves defining the personality variables, peer variable, and outcome measure to be analyzed. Additionally, moderated regression is specified as the analysis to be done (i.e., the optimized routine). This optimized routine scans through the space constituted by the five personality factors, which is defined by the constraints specified in step two (outlined below). Scanning through the defined space, the routine conducts moderated regressions, searching for the interaction between the specified independent variable, (in this case, one of the peer predictors) and the FFM composite which most strongly predicts a specified outcome variable (for this research, one of the four outcome measures looking at internalizing and externalizing difficulties).

Step Two

The second step of the optimization routine involves specifying the constraints, or limits, on the space that could be scanned in the search for moderated relationships. This involves specifying for each search that the composite (or vector) coordinates of each of the FFM values have upper and lower limits of 1.0 and -1.0 (the cosines of the angles), which

correspond to zero and 180 degrees. These are the logical upper and lower limits for each factor. Thus, each personality factor can deviate between zero and 180 degrees away from its dimension. The other necessary constraint, or specification, is that the sum of squares of any of the vectors must sum to one, which is a geometric necessity: Vectors or composites cannot have merely any combination of cosines between 1.0 and -1.0 (Green & Carroll, 1976, p.87).

Using the above specifications, thirty-two regions of five factor space are explored in the search for moderated relationships. The 32 regions are a result of five dimensions, each with a high and low score. Composites, then, are represented by combinations of different high and low values of each dimension. For instance, when using (+) to indicate high and (-) to indicate low, two of these regions would be defined as +N+E+O+A+C and –N+E+O+A+C (O'Connor, in press). For the searches of the high scores, constraints of values falling between zero and 1.0 were specified, while the constraints for low scores specified that values must fall between zero and -1.0. As each region specified has a mirror image, 32 FFM regions were produced. However, this produces redundant results (O'Connor, in press), and as such only 16 of the 32 regions are reported for each predictor and outcome measure. Figure 3 provides a key as to the make-up of these 16 regions. These regions are searched for conditional associations between each bivariate relationship under consideration.

To summarize, specifications for the optimization routine direct the program to determine which composites in FFM space interacted with each peer variable to predict each outcome variable. Additionally, the interaction that was revealed needs to have the maximum effect size of any interactions detected. Finally, constraints are also specified in order that the space which is searched corresponds with the geometric restrictions of the FFM model.

Values need to fall between 1.0 and -1.0 for each factor, and the sum of squares of each cosine has to sum to one. A total of thirty two regions are explored.

Interactions between peer variables and personality composites in the prediction of depression, anxiety, and conduct problem scores were the analyses of primary interest in the current study. In addition to these analyses, moderated regressions analyses that employed single dimension scores as moderators were also conducted. This was done to explore the moderating influence that individual dimensions exert as moderators of the bivariate relationships under consideration. This one-dimension-at-a-time approach resulted in 420 additional moderated regression analyses being conducted, as each of the 5 factors was considered as it interacted with each of the 7 peer measures, to predict each of the four outcome variables. These analyses were conducted for the sample as a whole, in addition to being conducted separately for boys and girls.

This one-dimension-at-a-time approach involved analysing each factor individually as it interacted with each peer variable in the prediction of each of the four outcome measures, and was explored using SIMPLE (O'Connor, 1998), a moderated regression program that can be executed using SPSS. The output generated by SIMPLE includes f-squared (the effect-size statistic of interest for the current study), and provides an index of the variance accounted for in the dependent variable by the interaction, above and beyond the variance accounted for by main effect analyses. It also provides graphical representations of the interactions, offering an easy-to-interpret sense of the emergent relationships.

An exploratory study intended to determine whether personality acts as a moderator in commonly found peer experiences-adolescent outcome relationships, the goal was not to

disconfirm specific null hypotheses. As such, significance testing was not incorporated and statistical power for detecting significance was not a concern. Instead effect sizes that emerged from analyses were examined to determine the extent to which "real effects" emerged. A cut-off of f squared $\geq$.031 was used to determine whether an effect was detected. This minimum effect size follows the work of O'Connor and Dvorak (2001), who chose this conservative effect size based on earlier research by Wooton et al (1997). In Wooton et al.'s research, this was the maximum effect size detected for relationships between interaction variables of parenting and callous-unemotional traits in their children, to predict delinquency outcomes

Results

Preliminary Analyses

Prior to the planned moderated regression analyses, descriptive statistics were explored. Means and standard deviations for each of the measures are provided in Table 1 for males, females, and the full sample.

Pearson product-moment correlational analyses were also conducted. Results of these analyses are consistent with relationships commonly found in the literature on peer relationships. In general, more peer difficulties were associated with greater symptom and problem behaviour endorsement, while the absence of peer difficulties and presence of peer support was associated with fewer symptoms. Consistent with the literature on acceptance and rejection by peers, rejection was related to internalizing outcomes; lower levels of acceptance were moderately associated with higher scores on measures of depression and anxiety.

Moderate associations also emerged between measures of overt and relational victimization and depression, anxiety, delinquency, and aggression. Again, these findings replicate results often cited in the existing literature. Findings for deviant peer affiliations were consistent with the previously reported results - affiliation with deviant peers was associated with higher levels of self-reported aggression and delinquency. The same pattern emerged when analyses were conducted separately for males and females, with one exception. Affiliating with deviant peers was moderately associated with scores on measures of delinquency and aggression, and weakly associated with depression and anxiety for females. However, similar associations emerged for males, only between deviant peer affiliation, and delinquency and aggression. For males, correlations between deviant peers and internalizing symptom reports and depression and anxiety were close to zero. The results that emerged from the correlational analyses are illustrated in Tables 2, 3, and 4.

Moderated Regression - Dimensional Analyses

Using the dimensional personality scores, a total of 420 moderated regression analyses were conducted. Again, this large number of regression analyses was the result of all possible combinations of the 5 personality dimensions, the 7 peer variables and the four measures of self-reported symptomatology, being considered for males, females, and the sample as a whole. Tables 5-9 provide results for moderated regression analyses using dimensional scores. Of the resulting interactions, only three met the cut-off of f-squared = .031. All three interactions involved the prediction of anxiety. Agreeableness interacted with acceptance to predict anxiety scores for boys (f squared =.039), and with social support to predict anxiety for females (f squared =.050). The third interaction involved Neuroticism

interacting with deviant peers, to predict anxiety in males (f squared =.032). These three interactions notwithstanding, results from the one-dimension-at-a-time analyses suggest that personality adds little to understanding the associations between adolescents' peer relationships and internalizing and externalizing difficulties.

Moderated Regression - Composite Score Analyses

In contrast to the few findings from dimensional analyses meeting the cut-off criterion, the FMINCON optimization analyses revealed 130 interactions meeting or exceeding the f squared $\geq$ .031 criterion. Tables 10, 11, 12 and 13 provide information as to the interactions that emerged. The predictor and outcome variables involved in the emerging interaction, as well as the effect sizes and pattern type that emerged are provided for each interaction. The region of five factor space in which the interaction was found is also provided in these tables. Tables 10 and 11 provide this information for females, while the interactions that emerged for males are summarized in Tables 12 and 13. Examples of each type of interaction pattern are presented below, providing a guide as to how each interaction can be interpreted.

The first relationship that appears in Table 13 is a moderated relationship consistent with Pattern A, and involved deviant peer affiliation predicting delinquency in boys. The relationship between delinquency and deviant peers was moderated by a composite found in region 9 of the five factor space. The emergence of this interaction suggests that boys with a low score on this composite reported few delinquent activities regardless of deviant peer affiliations. Self-reported delinquency for boys with high scores on this composite varied depending on the degree to which they were involved with deviant peers - increased

affiliation was associated with increasing delinquency scores for boys. A graphical representation of this interaction is provided in Figure 4, illustrating the Pattern A-type interaction.

Figure 5 graphically depicts an interaction that emerged between personality and acceptance in the prediction of anxiety. This interaction was consistent with Pattern B. Apparent from this interaction is that for girls, the relationship between acceptance (as measured by the Interpersonal Support Evaluation List) and anxiety was moderated by a personality composite found in region 4 of five factor space. This finding indicates that girls with high scores on a composite found in region 4, endorsed greater levels of anxiety, regardless of the acceptance they experienced in their peer group. Girls with low scores on this composite, however, only report problems with anxiety if they are rejected by their peers. For girls with high levels of this particular blend, peer rejection appears to matter little in determining anxiety scores, while rejection demonstrably predicts anxiety scores in those with low levels of this composite.

An emergent Pattern C interaction is depicted in Figure 6. The interaction that emerged indicates that for girls, the relationship between social support and depressive symptoms was moderated by a composite personality profile located in region 2 of five factor space. Apparent from this interaction was that girls with low scores on this specific composite experience moderate levels of depression, regardless of the social support they receive from their peers. That is, neither peer rejection nor peer acceptance was related to experiences of depression for these girls. High scores on this composite acted to protect against depression in girls with peer social support – however, girls with high scores on this

composite and little social support report higher levels of depression than average.

An example of an interaction matching pattern D is provided in Figure 7. This interaction indicates that for boys, the relationship between deviant peer affiliation and scores on the depression inventory, were moderated by a composite found in region 10 of five factor space. Interpreting this using the Pattern D configuration, demonstrates that boys with high levels of this composite will develop average levels of depression if they affiliate with delinquent peers, and their endorsement of depressive symptoms increases in the absences of delinquent peer affiliation. Conversely, boys with low scores on this composite endorsed low levels of depressive symptomatology in the absence of deviant peer affiliation, and average levels of depression when exposed to problem peers. Boys with average scores on this composite, regardless of their affiliation with deviant peers, reported average level of depression.

To reiterate, each relationship depicted in Tables 10-13, involves the interaction between a peer variable and a composite score, predicting internalizing or externalizing symptomatology. The type of pattern is provided to facilitate an understanding of how the particular personality composite moderated the impact of peer variables on the outcome variables. That is, how low, moderate, and high scores interacted with peer variables to predict depression, anxiety, delinquency and aggression for males and females.

In addition to providing information as to the types of patterns that emerged, results also provided information as to which personality dimensions weighed most heavily in the interactions that emerged. Patterns of influence were apparent for three particular dimensions. For all participants, relationships between acceptance/rejection and internalizing

difficulties were moderated by composites heavily weighted on Agreeableness. For males, composites moderating this relationship were also heavily weighted on Neuroticism. Both sexes also demonstrated relationships between acceptance/rejection and disruptive behavioural difficulties that were influenced by composites heavily weighted on Conscientiousness. While no moderated relationships involving relational aggression and internalizing difficulties emerged for females, a number of these were apparent for males. Composites that moderated these relationships were all heavily influenced by Neuroticism. Both boys and girls evidenced relationships between deviant peer affiliations and their own self-reported externalizing difficulties, however different dimensions appeared to be most heavily involved in moderating these relationships. For boys, blends involving Agreeableness and Conscientiousness emerged as important moderators. For girls, important moderators were most heavily weighted on scores of Agreeableness, with less weight coming from any of the other personality dimensions.

Pattern and Variable Frequencies

The frequencies with which each pattern (as depicted in Figure 1) emerged are presented in Table 14. Again, commonalities and differences between males and females were evident. No interactions consistent with Pattern E emerged for either sex, while pattern C was the most common pattern for males and females. A number of interactions consistent with Pattern D were revealed for males, while no Pattern D interactions emerged for females

Frequencies with which interactions involved specific peer variables are provided in Table 15. Again, males and females demonstrated different results. Social support emerged as the most frequently moderated predictor variables for females, while it did not factor into

any of the interactions that emerged for males. Most often moderated for males were deviant peer affiliations (with the deviancy scores involved in 32% of the interactions), while these rarely interacted with personality composites for females (accounting for only 15% of the interactions that emerged).

The frequency with which each outcome variable was involved in the emergent interactions is summarized in Table 16. Interactions most often involved the prediction of anxiety for both sexes. Delinquency was rarely involved in the interactions of male participants, but was frequently involved in the interactions that emerged for females. Thirty-one percent of the interactions that emerged for females involved the prediction of delinquency, compared to only one percent for males.

Discussion

A number of findings emerged from the present research, replicating and extending the existing understanding of the influence that peer variables exert on adolescent outcomes. Bivariate correlational analyses reproduced previously documented relationships between peer experiences and adolescent outcomes. Experiences of rejection were associated with more symptoms of both internalizing and externalizing difficulties. Participants reporting social support and acceptance from peers also reported fewer symptoms of depression, anxiety, and disruptive behaviour, all of which are consistent with previous research findings. Positive correlations between deviant peer affiliation and delinquency and aggression also emerged, consistent with the theory and research in this area. The associations between victimization and internalizing and externalizing difficulties were also consistent with previous research – participants who reported greater experiences with relational and overt

aggression had higher scores on the measures of psychopathology employed for this study. These results add to the growing literature that demonstrates the importance of peer relationships as determinants of adolescent outcomes. Rejection, deviant peer influences and victimization by peers are clearly associated with less desirable outcomes for adolescents. Experiences with social support and an absence of peer difficulties were associated with fewer self-reported difficulties.

While the replication of previous relationships emerged, the most striking finding is the conditional nature of these frequently reported bivariate relationships. Previous research has focused on the negative sequelae of peer difficulties, exploring mechanisms of impact using mediator analyses, or the impact of multiple risk factors. For example, researchers have explained the relationship between rejection and difficulties in children by suggesting that social cognitions mediate this relationship. Others have explored the consequences of the aggregation of risk factors. By in large, research has neglected to explore moderator influences in the context of peer relationships and child and adolescent outcomes. Conclusions drawn from explorations to this point suggest that individuals will report problems in the face of difficult peer experiences. Current results suggest that this is true for some, but not all individuals. Exposure to less than ideal peer relationships is not directly related to problems for all adolescents. Similarly, the absence of problematic peer relationships is not protective in all instances. *Instead, the relationships between rejection, acceptance, deviant peer affiliation, and victimization, and symptoms associated with internalizing and externalizing problems depend to some extent on personality.*

Some participants in the current research reported depression, anxiety, and disruptive behaviour problems despite positive peer experiences. For some of these individuals, negative outcomes appear to be associated with particular personality styles. For others, personality acted as protective factor, buffering adolescents against the negative effects commonly associated with deviant peers, victimization, and peer rejection. These various patterns of risk and resiliency were evident from the number of different interaction patterns that emerged.

A number of Pattern A results emerged both for males and females. Findings consistent with this pattern suggest that for some adolescents, particular personality composites act as resiliency factors in the face of peer difficulties. Some individuals reported low levels of problem behaviours, even in the face of problems. For these participants, low scores on particular personality composites appeared to ameliorate the negative impact of peer problems. On the other hand, the presence of a number of interactions consistent with Pattern B, suggest that some individuals will develop problems, regardless of their exposure to peer difficulties. Findings consistent with Pattern B demonstrate that high levels of some personality composites are associated with internalizing and externalizing difficulties regardless of peer experiences. That is, regardless of the presence or absence of peer difficulties, individuals whose profiles were consistent with Pattern B interactions evidenced outcome difficulties.

Pattern C findings suggest that low levels of certain composites are associated with moderate problems, regardless of peer difficulties, while high scores on these same composites may exacerbate the difficulties associated with negative peer experiences.

Demonstrated by these findings is that for some, personality and peer experiences aggregate to heighten the risk of negative outcomes. Results consistent with Pattern D suggest that children with both high and low levels of certain composites will develop similar levels of problems when faced with one level of peer difficulties. However, they will show high and low levels of problems, respectively, when faced with the opposite level of peer difficulties. Apparent from the numerous interactions that emerged, is that while peer problems are predictive of both internalizing and disruptive behaviour symptomatology, they do not universally predict outcomes.

Results of correlational analyses replicated previous research findings with regard to the association between rejection and negative outcomes, such as depression and anxiety. However, this relationship does not exist for all participants. A number of Pattern B and C findings for the girls in this sample, indicates that personality profiles are associated with higher than average reports of internalizing difficulties, regardless of peer experiences. For boys, the relationship between rejection and internalizing difficulties was most often consistent with Pattern A, suggesting that for boys with low levels of moderating composites, personality acts as a buffer against rejection by peers. Boys with high scores on moderating composites, tended to report problems, but only when faced with peer difficulties. Otherwise, they were similar to boys with low scores on this personality composite.

Delinquency and deviant peer affiliation also emerged as a conditional relationship. Pattern A findings for both boys and girls with respect to moderated relationships, suggest that exposure to deviant peer influences will not necessarily result in delinquency or aggression – low levels of certain personality composites will function to buffer these

individuals from the negative influence of deviant peers. Adolescents with high scores on moderating composites do report aggression and delinquency, but only in the face of deviant peers. In the absence of a "bad influence" these children are similar to the low-scoring members of their cohort, reporting lower than average levels of delinquency and aggression.

Finally, the relationship between experiences of victimization and internalizing and externalizing problems also varied, depending on personality. The emergence of results consistent with Patterns B and C suggest that some participants report emotional and behavioural problems despite reporting no experiences of victimization. It seems that for these individuals, it was their particular personality makeup that put them at risk for the experiences of depression, anxiety, and disruptive behaviour problems. For others, the experience of victimization appeared to be an associated with psychopathology, with personality exerting little in the way of exacerbating or ameliorating effects.

In addition to the number of interactions that emerged, the limited utility of considering personality dimensions in isolation was also apparent from the analyses. Arguing against considering dimensional scores was previous research on the conditional nature of relationships between parenting approaches and adolescent outcomes (O'Connor & Dvorak, 2001, 2002). A number of moderated relationships emerged when these researchers considered personality composites as moderators, instead of a more traditional dimensional approach. Findings from the present study replicated and confirmed earlier findings - numerous moderator effects were apparent when personality composites were considered, while very few findings meeting criterion cut-offs emerged when personality dimensions were considered in isolation. These findings argue against isolating specific dimensions to

employ in moderator analyses. Rather, they support a more comprehensive approach to understanding personality effects, considering combinations of personality factors. It appears to be the makeup of an individual's personality, not individual personality dimensions, which provide the richest understanding of the influence of personality on outcomes.

While these composite scores might appear unwieldy in their interpretation, clear patterns of dimensional influence emerged in the current research. Exploration of personality composite moderators revealed interesting patterns. Specifically, three dimensions of the five factor model consistently emerged important factors in moderating the relationships of interest. Agreeableness, Conscientiousness, and Neuroticism appeared to exert the greatest influence in the moderating blends that emerged. For girls, Agreeableness was clearly the most important personality factor that entered into moderated relationships, demonstrated by the composite coordinates in Tables 10-13. This finding suggests that for females, the traits of consideration for others, kindness, and cooperation are the greatest determinants of risk and resiliency in the face of peer experiences. For boys, Neuroticism and Conscientiousness, in addition to Agreeableness, emerged as important factors in moderating composites. This pattern of findings suggests that for boys, emotional lability, goal-directed planning ability, consideration for others, kindness, and cooperation were the personality traits that were key in moderating the relationships of interest.

Strengths and Implications of Current Research

Although exploratory in nature, the results that emerged from the present research are bolstered by a number of strengths. The measures employed in the current study, particularly the Children's Depression Inventory, the Revised Children's Manifest Anxiety Scale, the

Children's Behaviour Checklist, and the NEO-Five Factor Inventory, are psychometric assessment tools with demonstrated reliability and validity. These measures, frequently employed in both research and clinical practice, are arguably gold standards in assessing their respective constructs. The strengths of the measures used suggest that the findings that emerged are unlikely to be the result of measurement artefact.

A unique aspect of the current investigation was the use of self-reported peer experiences. Much of the extant literature has employed observational methods and external evaluators in judging the extent to which youth affiliate with deviant peers, or are rejected by their peer group Relying on self-report of peer experiences is consistent with the diversity of peer environments associated with adolescence, lending ecological validity to the current results.

The current research also avoided the problem of employing a poorly explicated conceptualization of personality, something that has plagued a number of researchers in the area of adolescent personality research. Recently, investigators have employed the five factor model of personality described by Costa and MacRae (1992) with increasing consistency (e.g., Akse et al., 2005; Gullone & Moore, 2000). The current research is part of this trend, addressing the inconsistent approach that has plagued personality research within the adolescent population. Employing a theoretically viable and empirically supported approach to personality conceptualization consistently across research will provide much needed replication, while increasing understanding as to the influence that personality exerts on a variety of issues.

Apparent from current findings is the utility of conceptualizing personality moderators as composites personality dimensions, rather than the more traditional dimensional score approach. Employing a strictly dimensional approach revealed only three moderated relationships. Using a dimensional approach exclusively would have lead to the erroneous conclusion that personality does not act as much of a moderator between adolescents' experiences with their peers and their self-reported internalizing and externalizing difficulties. In reality, personality appears to exert a significant influence on the associations of these variables. This revelation comes only when considering individuals particular personality blends, and suggests that considering personality holistically will be an important factor for researchers to consider in future. Ascertaining a clear picture of the influence of personality appears to depend in part, on how it is analysed.

The current results also function to inform risk and resiliency research. Resiliency researchers seek to understand the variables and mechanisms whereby some individuals are protected from the negative outcomes typically associated with certain risk factors (Rutter, 1987; 1999). Searching for moderators is important work. Masten (2005), in a review of associations between developmental psychopathology and peer experiences, argued that research examining peer relations and psychopathology has moved beyond merely a descriptive approach, and is now trying to seek out factors acting as mediators and moderators.

Theory and research that support Masten's (2005) review, suggest the importance of friendship (e.g., Bollmer et al, 2005), family factors (e.g., Dishion et al., 2004), connectedness to neighbourhood, and community cohesion (e.g., Christiansen & Evans,

2005) as factors that ameliorate and exacerbate the deleterious impact of difficult peer experiences. Evident from these studies is that peer experiences will not have the same influence on all children. However, investigators who have considered moderators have typically focused on external protective and risk factors, neglecting factors lying within children and adolescents. The moderating influence that intrapersonal factors such as temperament and personality exert has been relatively under explored. The current research reveals that intrapersonal factors do exert a considerable influence in the common associations between difficult peer experiences and sequelae. As conceptualized in the present study, personality is notably associated with disruptive behaviour problems and symptoms of mood and anxiety.

In addition to methodological strengths and theoretical implications, practical applications of the current findings are also apparent. Understanding how personality makeup exacerbates risk in the face of peer experiences may facilitate understanding of how best to target interventions for children and adolescents. For instance, research described by Dishion and colleagues suggests that aggregation of deviant adolescent males as a factor which may lead to the escalation of delinquency. Further research has suggested that family management offsets the risk associated with deviant peer affiliation. The current investigation suggests that deviant peer influences are associated with delinquency scores – however, this was only true for adolescent males with high scores on a composite personality factor found in region 9. Adolescent boys with low scores on this composite demonstrated low levels of delinquency, even in the face of deviant peers. Reducing the risk of iatrogenic treatment effects, like those described by Dishion and colleagues, might be facilitated by employing an

understanding of personality variables which heighten the likelihood of increased delinquency. By contrast, aggregating deviant youth with for whom personality acts as a buffer against the deleterious effects of deviant peers, may provide desired results without the undesirable deviancy training side effect. While targeting interventions to individuals based on personality profiles is premature at this point, future investigations that replicate the current research may more confidently make recommendations that can be used by interventionists.

Targeting preventive interventions for youth at risk for the negative effects associated with peer difficulties might also emerge as a practical application of the current research. Understanding factors that increase vulnerability to the negative influence of peer relationships, may aid in the development of programming that more effectively targets at-risk youth. It may also assist in the efficiency of programming, by informing which individuals are less likely to require preventive interventions (i.e., those who are likely to be resilient in the face of peer difficulties). In the present study, personality factors emerged as variables that differentiate between youth who are susceptible to the deleterious effects of peer difficulties, and youth for whom these experiences mattered less. Pending replication, it is likely that understanding the influence of intraindividual factors like personality will be useful in planning efficient preventive interventions, selecting individuals for whom treatment would most likely needed.

Limitations and Future Research

A limitation of the current research is the cross-sectional design. Without a longitudinal perspective, no statements can be made about whether personality composites

predispose an adolescent to rejection or acceptance. Nor is it apparent whether personality serves as a risk factor that increases the likelihood that youth will seek or gravitate to deviant peer groups. Likewise, statements about the extent to which personality increases the likelihood that they will experience overt and relational victimization are not appropriate. At this time, conclusions are limited to descriptions of associations that emerged, as the design of the study does not lend itself to understanding problem development in the context of various personality composites. Personality is likely related to the types of experiences adolescents seek and encounter. Persson and colleagues (2004) found differences between girls who sought peers in youth centres and those who did not, and those who attended youth centres and became involved in precocious heterosexual relationships. The degree of impulsivity and thrill seeking appeared to separate the two groups, suggesting that personality functions to set some adolescents up to seek out certain peer groups. Developing an understanding of the extent to which various personality composites predispose children and adolescents to seek out certain peer experiences will likely be an important area of research. Longitudinal research aimed at elucidating the extent to which personality composites predict the types of peer interactions an individual is likely to seek will also be important. Masten (2005) argues that longitudinal research is important in gaining insight into peer relationships and adolescent outcomes, and Harris(1995) highlights the importance of understanding how an individuals' internal traits (or personality) are modified by their peer group. Matsen cites a growing body of longitudinal research as key to understanding "the dynamic transactions over time between individuals and peer systems" (p. 89). Research employing a longitudinal design will be important in expanding research that addresses the

associations between personality, peer group experiences, and adolescent difficulties. Persson and colleagues (2004) found that impulsivity and thrill seeking increased the likelihood that girls would seek experiences that increased their risk for exposure to deviant peers.

Untangling the extent to which personality predicts the types of peer experiences adolescents seek, will further understanding of how personality exacerbates problems. It will also inform developmental psychologists as to the influence which different peer groups assert on developing personality in children and adolescents. This will only be possible in the context of research which documents development over time. Recent research (Abe, 2005) has demonstrated stability of personality over time in young children, suggesting that longitudinal research that investigates personality-environment interactions beginning in the preschool years is feasible. Personality as a predisposing factor in the development of peer difficulties could then be explored, using a longitudinal design that examines the interplay between personality, peer experiences, and various outcomes over time. Also germane to this type of research will be understanding the types of experiences that function to exacerbate or buffer the influence of personality as a risk or resiliency factor, as the interplay between personality and other factors likely influences the relationships between peer and personality variables. For example, children with personality or temperament characteristics associated with avoidance of novel situations would likely benefit from parenting that encourages exposure to novel situations (e.g., peer situations), while children who are behaviourally disinhibited would likely benefit from parenting that scaffolds the use of prosocial behaviour (Gallagher, 2002; Morris et al., 2002; Sanson, Hemphill, & Smart, 2004). It is likely that the interaction of a number of factors that ultimately determines the extent to which children will

have negative or positive peer experiences. Research that explores these issues will provide further evidence of the role that personality exerts in determining outcomes for children and adolescents.

In addition to exploring the development of these relationships over time with longitudinal methodology, further correlational research that employs a cross-sectional design will be important. The current study did not yield large enough samples for analysis of data across age ranges, and so additional moderator analyses were not conducted. Information provided by additional cross-sectional research that allows for the exploration of the relationships documented in the current study, across ages, would clarify the nature of these conditional relationships across adolescence, and likely inform hypotheses of longitudinal research. As adolescence is a period of significant social development, the extent to which peer relationships function differently at different ages would be facilitated by research that includes age as moderating variable.

The current research focused exclusively on the experiences of adolescents. Examining the moderating influence of personality in children would be an interesting extension of the current research. While some have argued that personality is an evolving entity in children, providing limited insight into the more stable personality characteristics discussed here, recent research suggests the presence of stable personality traits in children as young as three and a half years of age. Abe (2005) found that personality measured at age three and a half, was predictive of five-factor scores at 12 ½ year of age. Results of Abe's research suggest that studying the phenomenon of how composites moderate difficulties in younger children would be a reasonable extension of the current investigation. Related to

personality are the various dimensions of temperament, including reactivity, emotion regulation, and inhibition. Findings have recently emerged purporting the importance of temperamental differences in explaining the influence of parenting variables (Gallagher, 2002; Sanson & Smart, 2004). Exploring the moderating influence of dimensions of temperament, particularly in combination, on parenting and peer influences in a younger cohort will likely prove informative.

While the peer variables explored in the current study are arguably the most frequently discussed in the literature, other peer difficulties are still left to explore. Current understanding of the relationship between rejection/acceptance and poor peer outcomes is being expanded to include the concepts of controversial and neglected children (Newcomb et al., 1993). Vitaro, Brendgen, and Wanner (2005) recently demonstrated that children who did not have any peer affiliation (or those with no friends) evidenced behaviour that was more disruptive than that of children who affiliated with deviant peers, suggesting the importance of considering alternate configurations of peer rejection and acceptance. While rejected youth may manifest problem behaviours, it may be that children who are ignored completely are at the greatest risk for the development of negative sequelae. Examining the extent to which personality moderates the impact of other types of experiences on psychological well-being and symptoms of psychopathology will be an important next step in developing a more comprehensive understanding of the conditional nature of the impact of peer relationships.

Positive peer experiences were explored only minimally in the current research. Absence of peer difficulties and the presence of social support were assessed in the current study, but protective peer factors were not the variables of primary interest. Christiansen and

Evans (2005) explored the impact of social connectedness as a factor that ameliorates difficulties for adolescents, while Bollmer and colleagues (2005) examined the importance of friendship quality in protecting against negative outcomes for adolescents. Results of their investigations suggest the importance of social connectedness and friendship quality as determinants of positive outcomes for adolescents. However, it is possible that these relationships are conditional in the same way that the relationships explored in the current investigation were. Broadening the scope of peer experiences to be considered will be important in developing a more complete understanding of personality as a risk and resiliency factor.

Of note is the approach that was employed for data collection – namely the use of self-report measures. A more common approach to understanding acceptance and rejection is the use of sociometric ratings (e.g., Coie et al., 1990). As well, Dishion and colleagues have employed observation methods in studying the influence of deviant peers on delinquency. The current research relied solely on self-report of the variables of interest. While the strategy employed for the current investigation is not a limitation per se, future research may consider combining the use of common observational methods and self-report measures in replicating the relationships that emerged in the current study.

It is important to reiterate the exploratory nature of this study. Research confirming the existence of personality moderators and the nature of these moderated relationships is important. More closely examining how individuals' personality profiles provide protection or exacerbate the negative effects of problematic peer relationships will be important. Dishion and Dodge (2005) argue the importance of understanding the mechanisms by which

peer deviance contributes to the development, maintenance, or increase in delinquency of adolescents. They highlight social cognition and models of competition as variables that may drive the association between deviant peer affiliation and delinquency. Exploring how specific composites function to ameliorate or exacerbate difficulties will be interesting and important for future research. For example, Persson and colleagues (2004) found girls with high scores on measures of impulsivity and adventurousness were more likely to affiliate with deviant peers, and become involved in precocious heterosexual relationships. These findings suggest that personality functions as a vulnerability to deviant peer influences, but also that it predisposes girls to seek out deviant peer relationships. Exploring how personality functions to moderate the associations between peer relationships and adolescent outcome will be an interesting area for future investigation, and will provide important replication of the current research.

It appears important to consider personality as it relates to risk and resiliency in children and adolescents. The consideration of personality dimensions together will be particularly important, as it was composite scores that exerted the greatest influence in moderating the relationships of interest. Expanding risk and resiliency research to consider factors that exist within individuals, in addition to assessing external risk and protective factors is demonstrably important. Doing so will likely provide greater insight into the nature of the factors associated with variable outcomes that emerge for children and adolescents.

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Table 1

Means and Standard Deviations of predictor, outcome, and moderator variables for females, males, and total sample

Variable	Females		Males		Total N	
	M	SD	M	SD	M	SD
Delinquency	2.71	.98	2.97	1.05	2.80	1.01
Aggression	2.81	.93	2.88	1.10	2.83	1.00
Depression	2.68	1.06	2.38	.88	2.59	1.01
Anxiety	3.96	1.20	3.56	1.11	3.83	1.19
Peer Delinquency	2.93	1.01	2.99	1.10	2.95	1.04
Victimization-Overt	1.38	.65	1.74	.96	1.49	.78
Victimization-Relational	1.93	1.06	2.07	1.20	1.97	1.11
Social Support	6.72	1.01	5.72	1.51	6.40	1.28
Rejection/Acceptance [a]	5.73	1.10	5.56	1.04	5.68	1.08
Rejection/Acceptance [b]	6.11	1.00	5.40	1.25	5.89	1.13
Rejection/Acceptance [c]	6.51	1.00	6.34	1.06	6.45	1.01
Neuroticism	4.38	1.14	3.95	1.07	4.24	1.13
Extraversion	5.62	.87	5.43	.90	5.56	.88
Openness	4.90	.83	4.74	.94	4.85	.87
Conscientiousness	5.47	.92	5.12	.95	5.36	.94
Agreeableness	5.65	.82	5.36	.88	5.56	.85

[a] Interpersonal Support Evaluation List. [b] Inventory of Socially Supportive Behaviours.
[c] Semantic Differential Word List

Table 2

Intercorrelations between all variables for the full sample (N = 539)

Variable	ISSB[a]	ISLBL[b]	SEM/ DEF[c]	OA[d]	RA[e]	SS[f]	PBS[g]	A[h]	C[i]	E[j]	N[k]	O[l]
Delinquency	.02	-.06	-.21**	.32**	.28**	-.13**	.62**	-.36**	-.31**	.05	.12**	.05
Aggression	.02	-.07	-.26**	.35**	.29**	-.06	.40**	-.50**	-.20**	.11	.25**	.03
Depression	-.23**	-.45**	-.58**	.29**	.42**	-.30**	.22**	-.17**	-.21**	-.29**	.63**	.00
Anxiety	-.14**	-.40**	-.50**	.22**	.38**	-.18**	.18**	-.17**	-.10*	-.18**	.76**	.03
ISSB		.61**	.52**	-.20*	-.29*	.72**	.14**	.07	.18**	.35**	-.08	.12**
ISLBL			.62**	-.16**	-.33**	.52**	.06	.08	.17**	.45**	-.33**	.05
SEM/DEF				-.36**	-.53**	.53**	-.10*	.22**	.19**	.42**	-.37**	.00
OA					.49**	-.26**	.27**	-.22**	-.15**	-.05	.15**	-.08
RA						-.32**	.21**	-.20**	-.09*	-.16**	.26**	-.01
SS							.02	.15**	.25**	.34**	-.12**	.15**
PBS								-.17**	-.12**	.11*	.08	.12**
A									.00	.00	.00	.01
C										.00	.02	.01
E											.00	.08
N												.00
O												

[a] Inventory of Socially Support Behaviours. [b] Interpersonal Support Evaluation List. [c] Semantic Differential Word List
[d] Children's Self-Experiences Questionnaire – Overt Aggression Subscale. [e] Children's Self-Experiences Questionnaire – Relational Aggression Subscale. [f] Children's Self-Experiences Questionnaire – Social Support Scale. [g] Problem Behaviours Scale
[h] Agreeableness. [i] Conscientiousness. [j] Extraversion. [k] Neuroticism. [l] Openness
* p<.05. ** p <.01.

Table 3

Intercorrelations between all variables for females (n = 368)

Variable	ISSB[a]	ISLBL[b]	SEM/ DEF[c]	OA[d]	RA[e]	SS[f]	PBS[g]	A[h]	C[i]	E[j]	N[k]	O[l]
Delinquency	.06	-.06	-.18**	.30**	.29**	-.09	.66**	-.37**	-.35**	.11*	.23**	.08
Aggression	.00	-.11*	-.27**	.34**	.34**	-.09	.47	-.50**	-.27**	.17**	.38**	.07
Depression	-.26**	-.45**	-.58	.36**	.41**	-.40**	.30**	-.20**	-.26**	-.26**	.66**	-.01
Anxiety	-.16**	-.39**	-.51**	.30**	.40**	-.26**	.30**	-.20**	-.17**	-.20**	.79**	-.01
ISSB		.63**	.54**	-.10	-.27**	.67**	.13*	.04	.18**	.39**	-.09	-.05
ISLBL			.62**	-.11*	-.28**	.57**	.04	.07	.10*	.47**	-.34**	.00
SEM/DEF				-.28**	-.49**	.60**	-.10*	.17**	.24**	.42**	-.42**	-.04
OA					.55**	-.21**	.00	-.15**	-.09	.03	.24**	-.05
RA						-.34**	.28**	-.14**	-.13*	-.10	.31**	-.00
SS							.00	.12*	.22**	.38**	-.20**	-.03
PBS								-.22**	-.14**	.16**	.18**	.08
A									.07	-.06	-.06	-.05
C										-.04	-.04	-.03
E											-.03	-.00
N												-.04
O												

[a] Inventory of Socially Support Behaviours. [b] Interpersonal Support Evaluation List. [c] Semantic Differential Word List [d] Children's Self-Experiences Questionnaire – Overt Aggression Subscale. [e] Children's Self-Experiences Questionnaire – Relational Aggression Subscale. [f] Children's Self-Experiences Questionnaire – Social Support Scale. [g] Problem Behaviours Scale [h] Agreeableness. [i] Conscientiousness. [j] Extraversion. [k] Neuroticism. [l] Openness

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

Table 4

Intercorrelations between all variables for males (n = 171)

Variable	ISSB[a]	ISLBL[b]	SEM/ DEF[c]	OA[d]	RA[e]	SS[f]	PBS[g]	A[h]	C[i]	E[j]	N[k]	O[l]
Delinquency	.05	-.04	-.24**	.31**	.25**	-.10	.54**	-.32**	-.19*	-.04	.00	.02
Aggression	.08	.02	-.22**	.37**	.22**	.01	.27**	-.51**	-.08	-.22**	.68**	.06
Depression	-.35**	-.54**	-.66**	.31**	.49**	-.40**	.05	-.17*	-.19*	-.43**	.52**	.00
Anxiety	-.28**	-.49**	-.55**	.24**	.41**	-.28**	-.04	-.19*	-.06	-.22**	.68**	.06
ISSB		.60**	.49**	-.21**	-.31**	.72*	.19*	.01	.21*	.25**	-.29*	.35**
ISLBL			.62**	-.19*	-.43**	.50**	.11	.07	.11	.40**	-.42**	.14
SEM/DEF				-.46**	-.61**	.48**	-.08	.27**	.08	.41**	-.37**	.047
OA					.43	-.21**	.22**	-.25**	-.16*	-.12	.17*	-.09
RA						-.31**	.06	-.27**	.02	-.26**	.24**	-.01
SS							.08	.08	.18*	.24**	-.30**	.35**
PBS								-.09	-.09	.03	-.12	.19*
A									-.18*	.05	.00	.07
C										.02	.04	.06
E											-.02	.20**
N												.02
O												

[a] Inventory of Socially Support Behaviours. [b] Interpersonal Support Evaluation List. [c] Semantic Differential Word List
[d] Children's Self-Experiences Questionnaire – Overt Aggression Subscale. [e] Children's Self-Experiences Questionnaire – Relational Aggression Subscale. [f] Children's Self-Experiences Questionnaire – Social Support Scale. [g] Problem Behaviours Scale
[h] Agreeableness. [i] Conscientiousness. [j] Extraversion. [k] Neuroticism. [l] Openness
* p<.05. ** p <.01.

Table 5

Effect sizes of interactions involving Neuroticism, predictor variables, and outcome measures, for males (M), females (F), and total sample (N)

Interaction	Delinquency			Aggression			Depression			Anxiety		
	M	F	N	M	F	N	M	F	N	M	F	N
Neuroticism by ISSB[a]	.00	.01	.01	.00	.02	.00	.00	.00	.00	.00	.00	.00
Neuroticism by ISELBEL[b]	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Neuroticism by SEMDEF[c]	.00	.00	.02	.00	.02	.00	.00	.00	.00	.00	.00	.00
Neuroticism by CSEQOA[d]	.00	.00	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00
Neuroticism by CSEQRA[e]	.01	.03	.02	.02	.03	.02	.01	.00	.00	.02	.01	.01
Neuroticism by CSEQSS[f]	.00	.02	.01	.00	.01	.01	.00	.00	.00	.00	.01	.00
Neuroticism by PBS[g]	.01	.00	.00	.02	.00	.00	.02	.00	.00	.03	.00	.00

[a] Inventory of Socially Support Behaviours. [b] Interpersonal Support Evaluation List [c] Semantic Differential Word List. [d] Children's Self-Experiences Questionnaire – Overt Aggression Subscale. [e] Children's Self-Experiences Questionnaire – Relational Aggression Subscale. [f] Children's Self-Experiences Questionnaire – Social Support Scale. [g] Problem Behaviours Scale

Table 6

Effect sizes of interactions involving Extraversion, predictor variables, and outcome measures, for males (M), females (F), and total sample (N)

Interaction	Delinquency			Aggression			Depression			Anxiety		
	M	F	N	M	F	N	M	F	N	M	F	N
Extraversion by ISSB[a]	.00	.00	.00	.00	.00	.00	.01	.00	.00	.01	.00	.00
Extraversion by ISELBEL[b]	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
Extraversion by SEMDEF[c]	.00	.01	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
Extraversion by CSEQOA[d]	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01
Extraversion by CSEQRA[e]	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00	.00
Extraversion by CSEQSS[f]	.00	.00	.00	.01	.00	.00	.02	.00	.01	.02	.00	.00
Extraversion by PBS[g]	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

[a] Inventory of Socially Support Behaviours. [b] Interpersonal Support Evaluation List [c] Semantic Differential Word List. [d] Children's Self-Experiences Questionnaire – Overt Aggression Subscale. [e] Children's Self-Experiences Questionnaire – Relational Aggression Subscale. [f] Children's Self-Experiences Questionnaire – Social Support Scale. [g] Problem Behaviours Scale

Table 7

Effect sizes of interactions involving Openness to Experience, predictor variables, and outcome measures, for males (M), females (F), and total sample (N)

Interaction	Delinquency			Aggression			Depression			Anxiety		
	M	F	N	M	F	N	M	F	N	M	F	N
Openness by ISSB[a]	.00	.00	.00	.00	.00	.00	.00	.00	.01	.01	.00	.02
Openness by ISELBEL[b]	.01	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Openness by SEMDEF[c]	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00
Openness by CSEQOA[d]	.00	.00	.00	.00	.01	.00	.00	.00	.00	.00	.00	.00
Openness by CSEQRA[e]	.00	.00	.00	.00	.00	.00	.01	.01	.00	.00	.01	.00
Openness by CSEQSS[f]	.00	.00	.00	.00	.00	.00	.02	.01	.01	.02	.00	.02
Openness by PBS[g]	.00	.00	.00	.01	.00	.00	.01	.00	.00	.02	.00	.00

[a] Inventory of Socially Support Behaviours. [b] Interpersonal Support Evaluation List [c] Semantic Differential Word List. [d] Children's Self-Experiences Questionnaire – Overt Aggression Subscale. [e] Children's Self-Experiences Questionnaire – Relational Aggression Subscale. [f] Children's Self-Experiences Questionnaire – Social Support Scale. [g] Problem Behaviours Scale

Table 8

Effect sizes of interactions involving Agreeableness, predictor variables, and outcome measures, for males (M), females (F), and total sample (N)

Interaction	Delinquency			Aggression			Depression			Anxiety		
	M	F	N	M	F	N	M	F	N	M	F	N
Agreeableness by ISSB[a]	.00	.02	.01	.00	.03	.01	.02	.02	.00	.04	.02	.00
Agreeableness by ISELBEL[b]	.00	.01	.00	.01	.03	.02	.00	.01	.00	.01	.01	.00
Agreeableness by SEMDEF[c]	.00	.00	.00	.01	.01	.01	.00	.01	.01	.00	.02	.01
Agreeableness by CSEQOA[d]	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.01	.01
Agreeableness by CSEQRA[e]	.00	.01	.00	.00	.02	.00	.00	.01	.01	.00	.00	.01
Agreeableness by CSEQSS[f]	.00	.00	.00	.00	.01	.00	.01	.02	.00	.02	.05	.00
Agreeableness by PBS[g]	.00	.02	.01	.01	.02	.01	.01	.00	.00	.01	.00	.00

[a] Inventory of Socially Support Behaviours. [b] Interpersonal Support Evaluation List. [c] Semantic Differential Word List. [d] Children's Self-Experiences Questionnaire – Overt Aggression Subscale [e] Children's Self-Experiences Questionnaire – Relational Aggression Subscale. [f] Children's Self-Experiences Questionnaire – Social Support Scale. [g] Problem Behaviours Scale

Table 9

Effect sizes of interactions involving Conscientiousness, predictor variables, and outcome measures, for males (M), females (F), and total sample (N)

Interaction	Delinquency			Aggression			Depression			Anxiety		
	M	F	N	M	F	N	M	F	N	M	F	N
Conscientiousness by ISSB[a]	.01	.00	.00	.00	.01	.01	.00	.00	.00	.01	.00	.00
Conscientiousness by ISELBEL[b]	.00	.00	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00
Conscientiousness by SEMDEF[c]	.02	.00	.00	.02	.03	.00	.01	.00	.00	.02	.01	.01
Conscientiousness by CSEQOA[d]	.00	.00	.00	.02	.00	.00	.00	.00	.00	.00	.01	.01
Conscientiousness by CSEQRA[e]	.00	.00	.00	.01	.00	.00	.01	.00	.00	.00	.00	.00
Conscientiousness by CSEQSS[f]	.01	.01	.02	.00	.02	.02	.00	.00	.00	.00	.00	.00
Conscientiousness by PBS[g]	.01	.00	.00	.00	.00	.00	.00	.00	.00	.01	.00	.00

[a] Inventory of Socially Support Behaviours. [b] Interpersonal Support Evaluation List [c] Semantic Differential Word List. [d] Children's Self-Experiences Questionnaire – Overt Aggression Subscale. [e] Children's Self-Experiences Questionnaire – Relational Aggression Subscale. [f] Children's Self-Experiences Questionnaire – Social Support Scale. [g] Problem Behaviours Scale

Table 10

Predictors, vector coordinates, effect sizes, pattern types, and region numbers for interactions involving the prediction of depression (CDI) and anxiety (RCMAS) scores in females, where f squared ≥ .031

Predictor Measure	Outcome Measure	N	E	O	A	C	fsquared	Pattern	Region
CSEQSS[a]	CDI[b]	+033	.000	+.621	+.760	-.182	.033	C	2
CSEQSS	CDI	.000	.000	-.606	-.770	+.198	.033	C	15
CSEQSS	RCMAS[c]	.000	.000	+.345	+.925	+.154	.057	C	1
CSEQSS	RCMAS	.000	.000	+.342	+.939	.000	.056	C	2
CSEQSS	RCMAS	+098	+.231	.000	-.967	.000	.054	C	3
CSEQSS	RCMAS	+079	+.256	.000	-.950	-.157	.054	C	4
CSEQSS	RCMAS	+042	.000	-.085	+.903	+.417	.044	C	5
CSEQSS	RCMAS	.000	.000	.000	1.000	.000	.050	C	6
CSEQSS	RCMAS	+.061	+.215	-.316	-921	.000	.059	C	7
CSEQSS	RCMAS	+.044	+.238	-.324	-897	-.176	.061	C	8
CSEQSS	RCMAS	.000	-.232	+.338	+.891	+.190	.061	C	9
CSEQSS	RCMAS	.000	-.204	+.340	+.917	.000	.058	C	10
CSEQSS	RCMAS	+.086	.000	.000	-.996	.000	.051	B	11
CSEQSS	RCMAS	+.070	.000	.000	-.989	-121	.052	B	12
CSEQSS	RCMAS	.000	+.248	.000	+.949	+.189	.054	C	13
CSEQSS	RCMAS	.000	-.216	.000	+.976	.000	.052	C	14
CSEQSS	RCMAS	+.049	.000	-.322	-.945	.000	.057	C	15
CSEQSS	RCMAS	+.033	.000	-331	+.931	-.143	.057	C	16
ISELBEL[d]	RCMAS	.000	+.332	+.247	+.855	-.311	.045	C	2

Table 10 continued

Predictor Measure	Outcome Measure	N	E	O	A	C	fsquared	Pattern	Region
ISELBEL	RCMAS	+.082	.000	.000	-.807	+.583	.033	C	3
ISELBEL	RCMAS	+.143	.000	.000	-.989	.000	.034	B	4
ISELBEL	RCMAS	.000	+.337	.000	+.900	-274	.042	C	6
ISELBEL	RCMAS	+.060	.000	-191	-.928	+.311	.039	C	7
ISELBEL	RCMAS	.000	.000	+.218	+.924	-.312	.039	C	10
ISELBEL	RCMAS	+.040	+.331	-.227	-.862	+.305	.046	C	15
SEMDEF[e]	RCMAS	.000	+.329	+.523	+.678	+.396	.038	C	1
SEMDEF	RCMAS	.000	+.370	+.533	+.760	.000	.032	C	2
SEMDEF	RCMAS	+.429	.000	.000	-.903	.000	.033	B	3
SEMDEF	RCMAS	+.396	.000	.000	-.910	-.116	.034	B	4
SEMDEF	RCMAS	+.242	.000	-.261	-.903	-.238	.034	B	8
SEMDEF	RCMAS	.000	.000	+.528	+.726	+.439	.033	C	9

[a] Children's Self-Experiences Questionnaire – Social Support Subscale. [b] Children's Depression Inventory
[c] Revised Children's Manifest Anxiety Scale. [d] Inventory of Socially Supportive Behaviours
[e] Semantic Differential Word List

Table 11

Predictor variables, Vector coordinates, effect sizes, pattern types, and region numbers for interactions involving the prediction of Delinquency (DEL) and Aggression(AGG) scores in females, where f squared ≥ .031

Predictor Measure	Outcome Measure	N	E	O	A	C	f-squared	Pattern	Region
PBS[a]	DEL[b]	+.046	+.356	.000	+.917	+.170	.034	A	1
PBS	DEL	+.043	+.358	-.013	+.917	+.164	.034	A	5
PBS	DEL	+.002	+.373	-.070	+.924	.000	.032	A	6
PBS	DEL	+.117	-.392	+.164	-.897	.000	.031	A	11
PBS	DEL	+.064	-.334	+.146	-.916	-.158	.032	A	12
PBS	DEL	+.000	-.373	.000	-.927	.000	.032	A	15
PBS	DEL	+.000	-.361	.000	-.918	-.163	.033	A	16
CSEQRA[c]	DEL	+.918	.000	.000	+.230	-.321	.037	C	2
CSEQRA	DEL	+.972	.000	.000	.000	-.233	.033	B	4
CSEQRA	DEL	+.980	.000	-.158	+.120	.000	.032	C	5
CSEQRA	DEL	+.903	.000	-.170	+.218	-.328	.037	C	6
CSEQRA	DEL	+.984	.000	-.175	.000	.000	.031	C	7
CSEQRA	DEL	+.930	+.040	-.263	.000	-.252	.034	C	8
CSEQRA	DEL	+.917	-.028	.000	+.228	-.324	.036	C	10
CSEQRA	DEL	+.970	-.033	.000	.000	-.237	.033	B	12
CSEQRA	DEL	+.980	-.014	-.157	+.120	.000	.032	C	13
CSEQRA	DEL	+.902	-.027	-.170	+.215	-.332	.037	C	14
CSEQRA	DEL	+.983	-.015	-.178	.000	.000	.031	C	15
CSEQRA	DEL	+.929	-.092	-.209	.000	-.288	.034	C	16

Table 11 continued

Predictor Measure	Outcome Measure	N	E	O	A	C	f-squared	Pattern	Region
PBS	AGG[d]	+.121	+.236	+.236	+.907	+.221	.033	A	1
PBS	AGG	.000	+.259	+.229	+.911	+.220	.033	A	16
SEMDEF[e]	AGG	.000	+.367	+.140	+.276	+.877	.040	B	1
SEMDEF	AGG	.000	+.295	+.227	.000	+.927	.038	C	3
SEMDEF	AGG	.000	.000	-.221	.000	-.975	.031	C	6
SEMDEF	AGG	.000	.000	.000	.000	+.955	.036	C	7
SEMDEF	AGG	+.012	.000	+.216	.049	+.974	.032	B	9
SEMDEF	AGG	+.124	-.331	.000	.000	-.935	.036	C	10
SEMDEF	AGG	+.002	.000	+.221	.000	+.975	31	C	11
SEMDEF	AGG	+.109	-.350	+.220	.000	-.903	.038	C	14
SEMDEF	AGG	+.082	-.394	-.113	-.277	-.864	.040	A	16

[a] Problem Behaviour Scale. [b] Delinquency Subscale – Achenbach Child Behaviour Checklist – Youth Self Report Inventory [c] Children's Self-Experiences Questionnaire – Relational Aggression Subscale. [d] Aggression Subscale – Achenbach Child Behaviour Checklist – Youth Self Report Inventory. [e] Semantic Differential Word List

Table 12

Predictors, vector coordinates, effect sizes, pattern types, and region numbers for interactions involving the prediction of depression (CDI) and anxiety (RCMAS) scores in males, where f squared ≥ .031

Predictor Measure	Outcome Measure	N	E	O	A	C	fsquared	Pattern	Region
PBS[a]	CDI[b]	+.544	-.293	+.572	+.483	-.237	.040	D	10
PBS	CDI	+.341	-.495	+.713	.000	-.358	.033	D	12
CSEQRA[c]	CDI	+.624	+.423	+.656	.000	.000	.033	C	5
CSEQRA	CDI	+.597	+.438	-.668	-.055	.000	.034	C	7
CSEQRA	CDI	+.585	+.456	-.562	.000	-.366	.040	B	8
ISSB[d]	CDI	+.553	.000	.000	-.845	.000	.032	A	3
ISSB	CDI	+.691	.000	+.408	-.451	-.389	.042	A	4
ISSB	CDI	+.542	.000	-.121	-.831	.000	.032	A	7
ISSB	CDI	+.777	.000	-.148	-.562	-.240	.035	A	8
ISSB	CDI	+.786	-.123	+.468	.000	-.383	.036	A	10
ISSB	CDI	+.408	-.199	.000	-.890	.000	.034	A	11
ISSB	CDI	+.681	-.101	+.375	-.463	-.412	.043	A	12
ISSB	CDI	+.434	-.409	-.379	-.706	.000	.038	A	15
ISSB	CDI	+.580	-.236	.000	-.706	-.329	.042	A	16
PBS	RCMAS[e]	+.802	.000	+.574	.000	-.161	.033	D	2
PBS	RCMAS	+.303	.000	+.816	-.492	.000	.033	D	3
PBS	RCMAS	+.748	.000	+.057	-.614	-.243	.050	D	4
PBS	RCMAS	.000	+.465	-.702	+.501	+.196	.041	D	5

Table 12 continued

Predictor Measure	Outcome Measure	N	E	O	A	C	f-squared	Pattern	Region
PBS	RCMAS	.000	+.455	-.755	+.470	.000	.037	D	6
PBS	RCMAS	+.816	+.006	-.141	-.559	.000	.040	D	7
PBS	RCMAS	+.771	.000	.000	-.596	-.221	.050	D	8
PBS	RCMAS	+.333	-.404	+.851	.000	.000	.038	D	9
PBS	RCMAS	+.425	-.406	+.774	.000	-.231	.044	D	10
PBS	RCMAS	+.275	-.439	+.670	-.530	.000	.045	D	11
PBS	RCMAS	+.440	-.378	+.467	-.595	-.301	.063	D	12
PBS	RCMAS	+.997	.000	-.064	0	.000	-.034	D	13
PBS	RCMAS	+.862	.000	-.261	-.434	.000	-.038	D	15
PBS	RCMAS	+.680	-.185	.000	-.662	-.252	-.054	D	16
CSEQRA	RCMAS	+.892	+.253	-.255	+.270	+.012	.052	B	1
CSEQRA	RCMAS	+.892	+.258	+.251	+.272	.000	.052	B	2
CSEQRA	RCMAS	+.874	+.359	+.321	.000	+.042	.044	B	3
CSEQRA	RCMAS	+.870	+.380	+.312	.000	.000	.044	B	4
CSEQRA	RCMAS	+.849	+.526	.000	.000	.000	.039	B	7
CSEQRA	RCMAS	+.703	+.579	-.292	.000	-.289	.035	B	8
CSEQRA	RCMAS	+.881	.000	+.472	.000	.000	.032	B	12
ISSB	RCMAS	.000	+.408	.000	+.912	.000	.045	C	1
ISSB	RCMAS	.000	+.415	.000	+.906	-.072	.045	C	2
ISSB	RCMAS	.000	+.335	-.209	+.919	.000	.047	A	5

Table 12 continued

Predictor Measure	Outcome Measure	N	E	O	A	C	f-squared	Pattern	Region
ISSB	RCMAS	.000	+.334	-.195	+.921	-.019	.047	A	6
ISSB	RCMAS	.000	.000	.000	+.988	-.150	.038	C	10
ISSB	RCMAS	.000	-.555	+.322	-.748	+.166	.040	A	11
ISSB	RCMAS	.000	.000	-.345	+.937	-.038	.042	A	14
ISSB	RCMAS	+.064	-.364	.000	-.929	+.043	.046	A	15
ISSB	RCMAS	+.086	-.357	.000	-.929	.000	.046	A	16

[a] Problem Behaviour Scale. [b] Children's Depression Inventory. [c] Children' Self-Experiences Questionnaire – Relational Aggression Subscale. [d] Inventory of Socially Supportive Behaviours. [e] Revised Children's Manifest Anxiety Scale

Table 13

Predictor variables, Vector coordinates, effect sizes, pattern types, and region numbers for interactions involving the prediction of Delinquency (DEL) and Aggression(AGG) scores in males, where f squared ≥ .031

Predictor Measure	Outcome Measure	N	E	O	A	C	f-squared	Pattern	Region
PBS[a]	DEL[b]	+.422	-.306	+.355	+.264	+.728	.035	A	9
PBS	AGG[c]	+.431	.000	+.435	+.452	+.647	.041	A	1
PBS	AGG	+.442	.000	.000	+.493	+.749	.031	A	5
PBS	AGG	.000	+.266	-.308	-.508	-.758	.033	A	8
PBS	AGG	+.417	-.257	+.366	+.475	+.632	.045	A	9
PBS	AGG	+.399	-.355	.000	+.528	+.659	.038	A	13
CSEQRA[d]	AGG	+.781	+.515	.000	.000	+.353	.041	C	1
CSEQRA	AGG	+.782	+.608	+.136	.000	.000	.035	C	2
CSEQRA	AGG	+.668	+.593	+.089	-.168	+.406	.043	C	3
CSEQRA	AGG	+.786	+.602	+.136	-.030	.000	.035	C	4
CSEQRA	AGG	+.751	+.409	-.198	.000	+.478	.039	C	5
CSEQRA	AGG	+.810	+.585	.000	.000	.000	.035	C	6
CSEQRA	AGG	+.688	+.572	.000	-.146	+.420	.043	C	7
CSEQRA	AGG	+.902	.000	+.057	.000	+.427	.031	C	9
CSEQRA	AGG	+.876	.000	.000	-.026	+.480	.031	C	11
CSEQRA	AGG	+.873	.000	-.107	.000	+.474	.032	C	13

Table 13 continued

Predictor Measure	Outcome Measure	N	E	O	A	C	f-squared	Pattern	Region
CSEQRA	AGG	+.867	.000	-.107	-.012	+.486	.032	C	15
SEMDEF[e]	AGG	+.351	+.605	+.128	.000	+.702	.033	C	1
SEMDEF	AGG	+.335	+.510	.000	-.395	+.685	.051	C	3
SEMDEF	AGG	+.342	+.619	.000	.000	+.706	.033	C	5
SEMDEF	AGG	+.334	+.513	-.025	-.396	+.682	.051	C	7
SEMDEF	AGG	.000	-.502	+.033	+.461	-.730	.043	B	10
SEMDEF	AGG	+.302	.000	+.067	-.510	+.802	.036	C	11
SEMDEF	AGG	+.000	-.496	.000	+.463	-.733	.042	B	14
SEMDEF	AGG	+.303	.000	.000	-.505	+.807	035	C	15

[a] Problem Behaviour Scale. [b] Delinquency Subscale – Achenbach Child Behaviour Checklist – Youth Self-Report Inventory [c] Aggression Subscale – Achenbach Child Behaviour Checklist – Youth Self-Report Inventory . [d] Child Self-Experiences Questionnaire – Relational Aggression Subscale. [e] Semantic Differential Word List

Table 14

Interaction pattern frequencies and percentages for males, females, and total sample, where fsquared ≥ .031

Pattern	Males		Females		Total Sample	
	Number	Percentage	Number	Percentage	Number	Percentage
A	21	30	9	15	30	23
B	9	13	11	18	20	15
C	23	33	41	67	64	49
D	16	23	0	0	16	12
E	0	0	0	0	0	0

Table 15

Frequency of interaction involving peer variables for males, females, and total sample, where fsquared ≥ .031

Predictor Variable	Males		Females		Total Sample	
	Number	Percentage	Number	Percentage	Number	Percentage
Delinquency	22	32	9	15	31	24
Relational Aggression	21	30	12	20	33	25
Overt Aggression	0	0	0	0	0	0
Social Support	0	0	18	30	18	14
Acceptance[a]	0	0	7	11	7	5
Acceptance[b]	8	12	15	15	23	18
Acceptance[c]	18	26	0	0	18	14

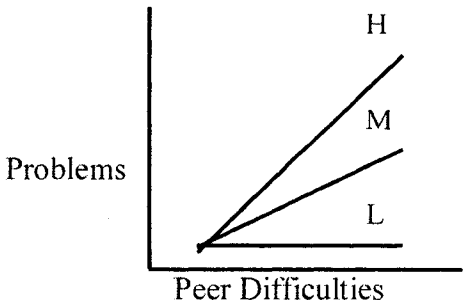
[a] Interpersonal Support Evaluation List. [b] Inventory of Socially Supportive Behaviours
[c] Semantic Differential Word List

Table 16

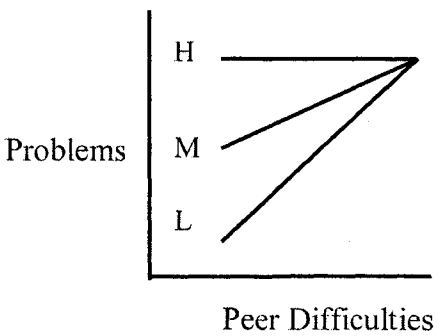
Frequency of interactions involving outcome variables for males, females, and the total sample, using composite personality factors detected using the FMINCON optimization routine, where fsquared ≥ .031

Outcome Variable	Males		Females		Total Sample	
	Number	Percentage	Number	Percentage	Number	Percentage
Depression	14	20	2	3	16	12
Anxiety	30	43	29	48	59	45
Aggression	24	35	11	18	35	27
Delinquency	1	1	19	31	20	15

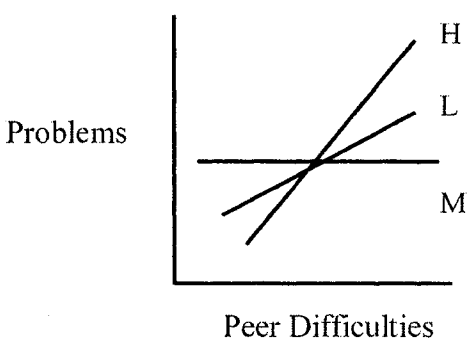
Figure 1. Five pattern types, adapted from O'Connor & Dvorak (2001).



Pattern A: Personality can serve as a buffer against peer problems. Children with particular personality characteristics (L) will have low levels of problems, regardless of exposure to peer difficulties; children who have the opposite kinds of traits (H) will only develop problems if exposed to peer difficulties.

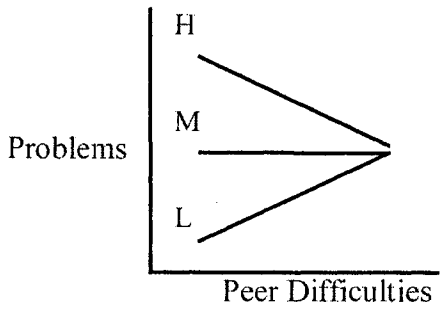


Pattern B: Personality can be a hopeless problem Children with particular personality characteristics (H) will develop problems regardless of the kind of peer difficulties they encounter; children with the opposite kinds of traits(L) will only develop problems if exposed to particular kinds of peer difficulties

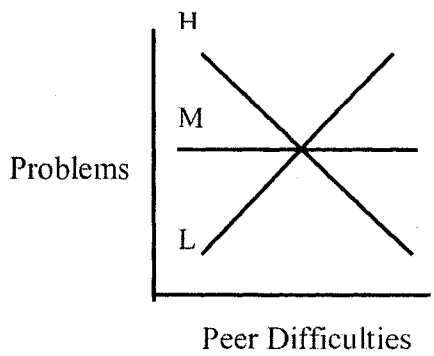


Pattern C: Responsive to peer environment, or moderately problematic. Children with particular personality characteristics (L) will develop average levels of problems regardless of the kinds of peer difficulties they encounter; children with the opposite kinds of traits (H) will develop either more than average or less than average problems, depending on the kinds of peer difficulties they have

Figure 1. Five pattern types, adapted from O'Connor & Dvorak (2001).



Pattern D: Moderately problematic or dramatically different. Children with average levels of particular personality characteristics (M) will have average levels of problems regardless of the kind of peer difficulties they experience; children with high(H) and low (L) levels of these traits will also have average levels of problems when exposed to one level of peer difficulties, but they will develop either more (H) or less (L)than average problems when exposed to the opposite form of peer difficulties



Pattern E: High levels of discrimination are required. Children with average levels of particular personality characteristics (M),will have average levels of problems regardless of the kinds of peer difficulties they experience; children with high (H) or low (L) levels of these traits will also have average levels of problems when they experience average levels of peer difficulties; but when the level of peer difficulties is extreme, children with high and low levels of these particular traits, will develop either high or low levels of problems, depending on the kinds of difficulties they encounter.

Figure 2. Dimensions of interpersonal circumplex model

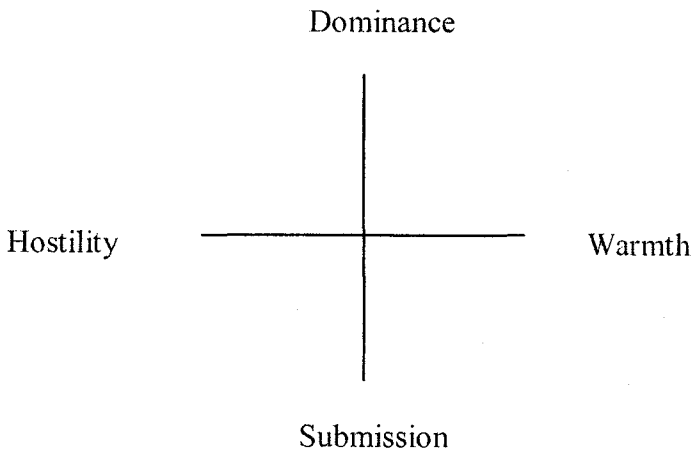


Figure 3. Regions of FFM space for which results are reported

Region Number	FFM Region
1	+N+E+O+A+C
2	+N+E+O+A-C
3	+N+E+O-A+C
4	+N+E+O-A-C
5	+N+E-O+A+C
6	+N+E-O+A-C
7	+N+E-O-A+C
8	+N+E-O-A-C
9	+N-E+O+A+C
10	+N-E+O+A-C
11	+N-E+O-A+C
12	+N-E+O-A-C
13	+N-E-O+A+C
14	+N-E-O+A-C
15	+N-E-O-A+C
16	+N-E-O-A-C

Figure 4. Interaction between composite found in region 9 and deviant peer affiliations in the prediction of delinquency for boys. The composite was weighted as follows; N(.+422), E(-.306), O(+.355), A(+.264), C(+.728).

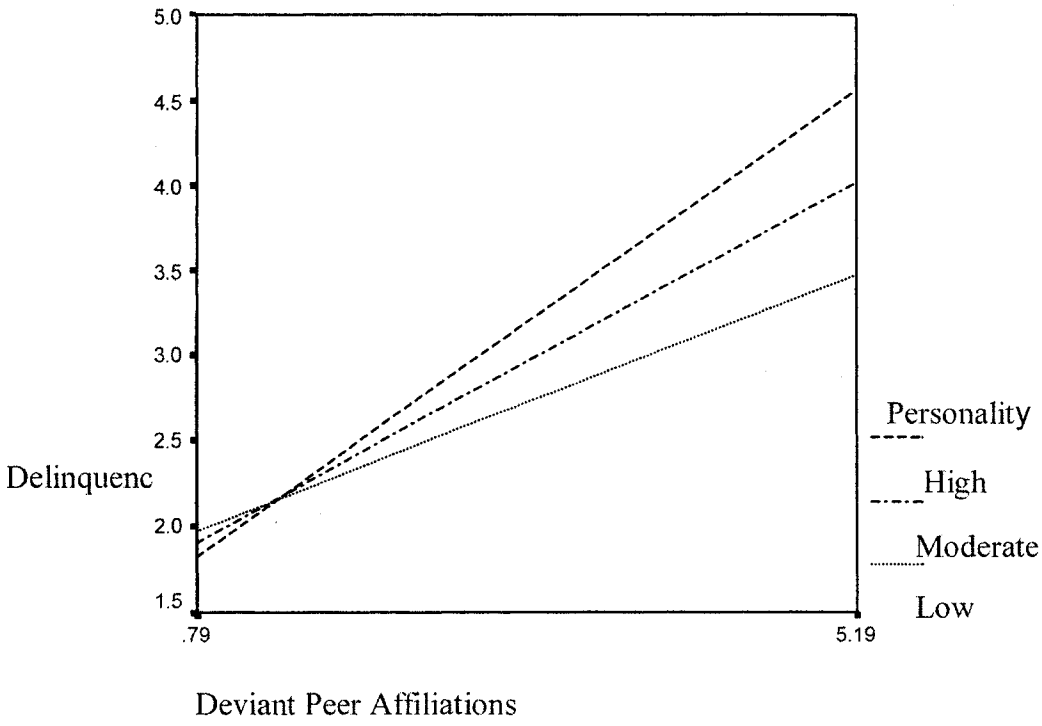


Figure 5. Interaction between rejection and composite score found in region four predicts anxiety scores in girls. The composite was weighted as follows; N(+.143), E(0), O(0), A(-.989), C(0).

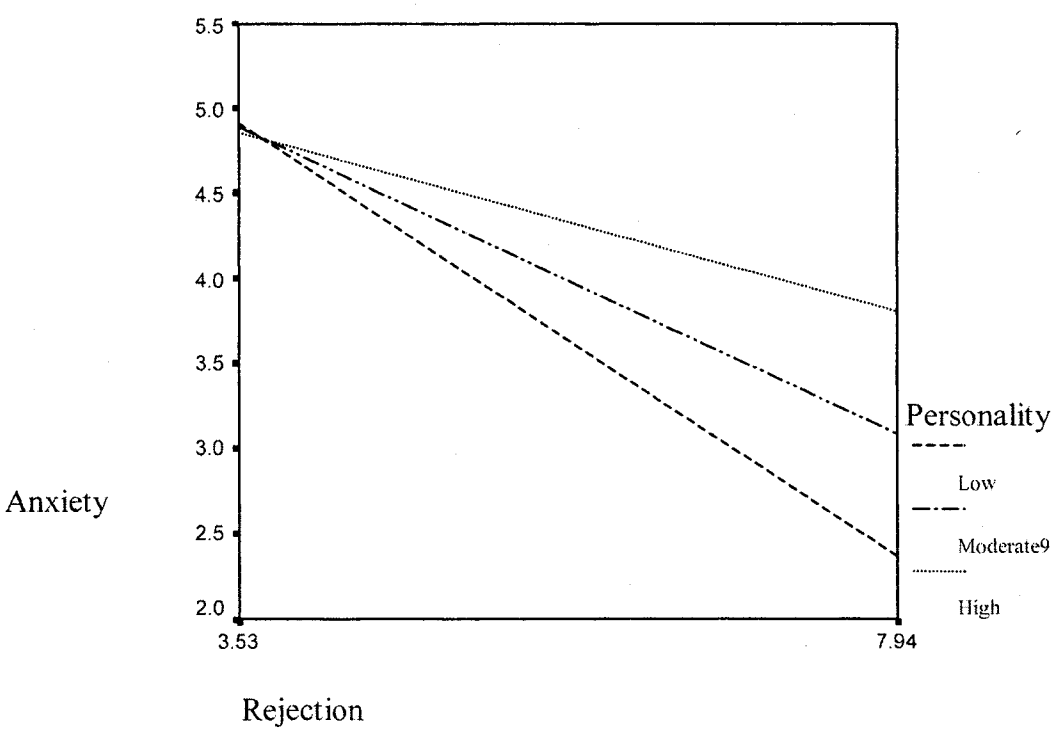


Figure 6. Interaction between social support and composite found in region two, predict depression scores for girls. The composite was weighted as follows; N(+.033), E(0), O(+.621), A(+.760), C(-.182).

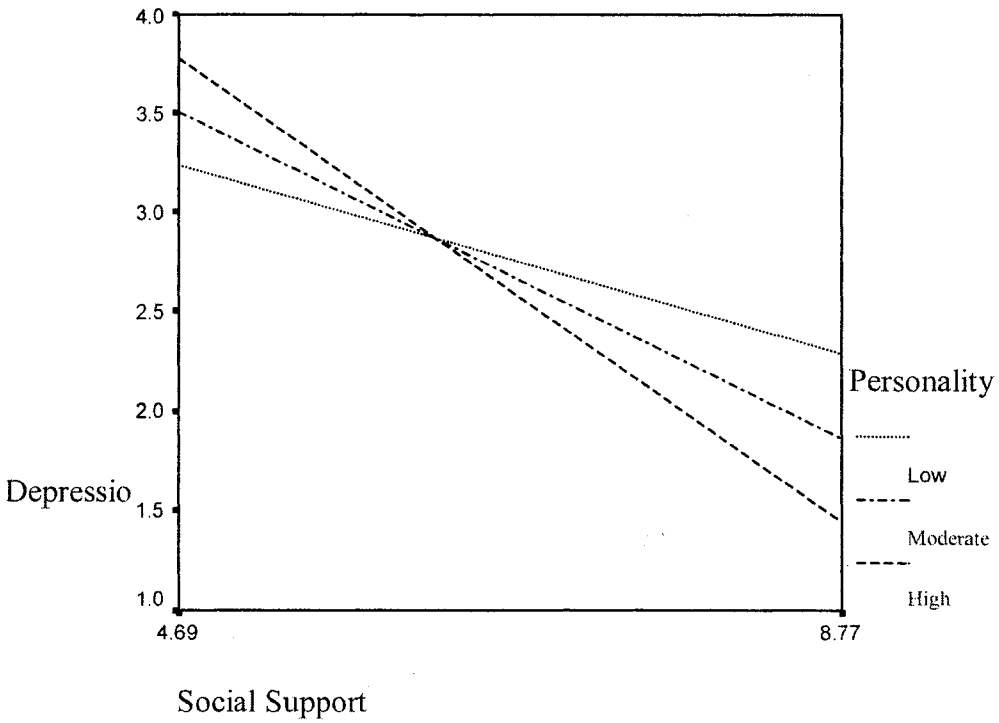
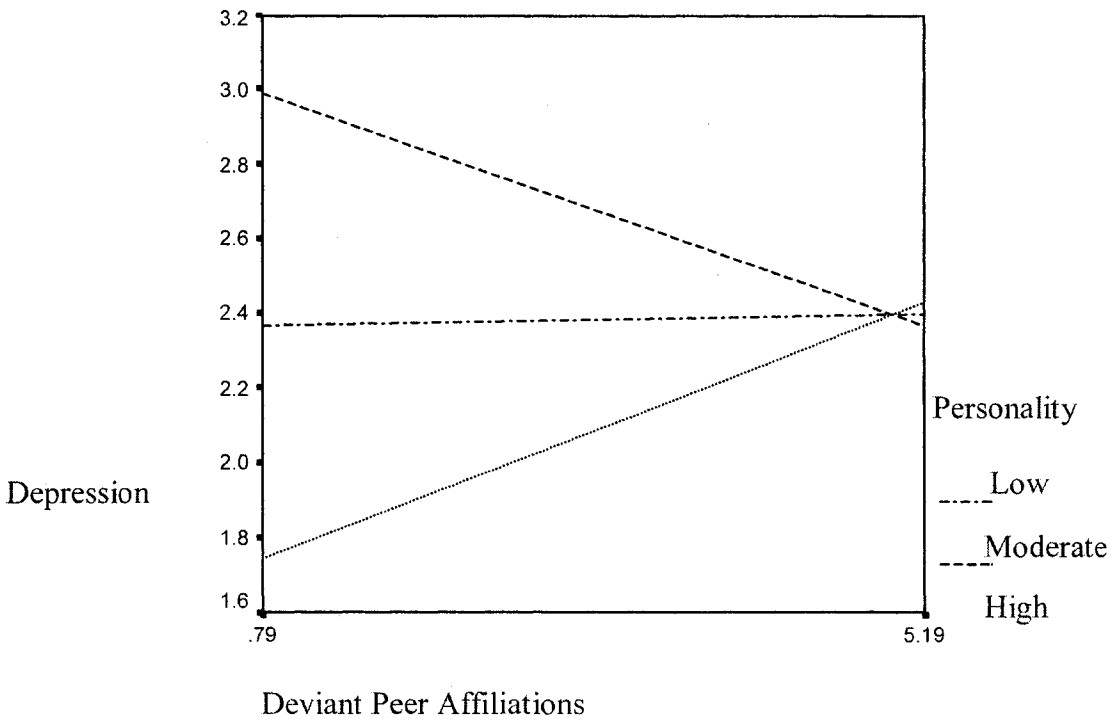


Figure 7. Interaction between deviant peer affiliations and composite found in region 10, predicts depression scores in boys. The composite was weighted as follows; N(+.544), E(-.293), O(+.572), A(+.483), C(-.237).



Appendix A

Information and Consent Form

Dear Participant,

We are from Lakehead University and we would very much appreciate your help in a study we are conducting. It involves completing some questionnaires and should take between about 45 minutes to an hour. The purpose of the study is to examine the relationships between peer behaviours, parents, personality, and the behaviours of adolescents. The study has been approved by the ethics committee of Lakehead University, by your school board, and by your principal. No deception is involved (i.e., we will not be tricking you) and there are no risks. As well, if you consent to participate in the study, you will receive $5, which you will get upon the completion of the data collection. Your contributions will remain entirely confidential and you are free to withdraw at any time. You are also free to inquire about the results at any time, once we have completed the data analyses. If you agree to let us use your responses confidentially, please sign below. As well, if you are under the age of 18, we are required to ensure that your parents have also consented to your participation in this research. If you are under 18, please have your parents complete the parental consent portion of this letter.

I consent to take part in the above study on the relationship between peer behaviour and behaviour of adolescents. I understand that there are no risks to participating in this study. My responses will remain completely anonymous and confidential. I understand that this consent form will be kept separate from my questionnaire responses; that no one but the researchers will be given access to my responses; and that I will never be individually identified on the basis of my responses. My participation in this study is completely voluntary and I may withdraw at any time. I have also bee told that I may obtain a copy of the final results from Dr. Brian O'Connor or Hilary Cartwright, at the Department of Psychology, Lakehead University, Thunder Bay, Ontario, P7B 5E1, 343-8322.

Signature: _____ Phone: _____

Name Printed: _____ Address: _____

Date: _____ School: _____

Parental Consent:
I consent that my child may take part in the above study on the relationship between peer behaviour, parent, personality, and behaviour of adolescents.

Signature: _____ Phone: _____

Name Printed: _____ Date: _____

Appendix B

Debriefing Letter

Personality, Family, and Peer Experiences

The purpose of this study is to examine relationships between peer and family relationships on the one hand, and adolescent behaviour and experiences on the other. We are seeking to clarify and refine results of previous research. The study involves completing a survey consisting of questions from standard tests. A single individual's responses are meaningful only in their statistical relationship to the responses of individual participants. Although some of the questions deal with problem behaviours, responses are placed on continuums of scores people are not categorized into groups. Your results are therefore not "test results" and cannot be used as the basis of any kind of diagnosis. However, if you are personally concerned with your peer relationships or with other issues that may have arisen as a result of responding to the survey, feel free to contact Dr. Brian O'Connor or Hilary Cartwright at the Department of Psychology, Lakehead University, 955 Oliver Road, Thunder Bay, Ontario, P7B 5E1, 807-343-8441 for referral information, or you may directly contact any of the following people/organizations:

Lakehead Regional Family Centre 343-5000

Psychologists/Psychiatrists or other Counsellors: See the yellow pages of the phone book.

Your school social worker

Appendix C
Questionnaire

Questionnaire

Section A

(1) What is your gender? Male Female

(2) How old are you? ____ years

(3) What grade or year level are you in at school? _____

(4) How many children are there in your family? _____

(5) What is your birth order (i.e., 1st born, 2nd born, etc.)? I was my mother's ____ child.

(6) How would you describe your performance in school?

____ failing
____ below average
____ average
____ above average

(7) What is your mother's highest educational degree?

____ elementary school
____ high school
____ college
____ university

(8) Do you live with your mother? yes no

(9) Is your mother alive? yes no

(10) If your mother is not alive, how old were you when she died? ____ years

(11) What is your father's highest educational degree?

____ elementary school

____ high school

____ college

____ university

(12) Do you live with your father? yes no

(13) Is your father alive? yes no

(14) If your father is not alive, how old were you when he died? ____ years

(15) Are your parents divorced? yes no

(16) If your parents are divorced, how old were you when they divorced? ____ years

The following pages contain statements that can be used to describe personality characteristics, attitudes, feelings and behaviors. Do not be concerned if a few statements seem unusual--they are included to describe a wide variety of people. Try to be as honest and serious as you can in your responses. Using the 1-8 scale below, please rate the accuracy each statement by placing the appropriate number on the dash beside each statement.

1	2	3	4	5	6	7	8
extremely inaccurate	**very extremely inaccurate**	**quite inaccurate**	**slightly inaccurate**	**slightly accurate**	**quite accurate**	**very accurate**	**accurate**

Section B

____ (1) I am not a worrier.
____ (2) I like to have a lot of people around me.
____ (3) I don't like to waste my time daydreaming.
____ (4) I try to be courteous to everyone I meet.
____ (5) I keep my belongings clean and neat.
____ (6) I often feel inferior to others.
____ (7) I laugh easily.
____ (8) Once I find the right way to do something, I stick to it.
____ (9) I often get into arguments with my family and co-workers.
____ (10) I'm pretty good about pacing myself so that I get things done on time.
____ (11) When I'm under a great deal of stress, sometimes I feel like I'm going to pieces.
____ (12) I don't consider myself especially "lighthearted".
____ (13) I am intrigued by the patterns I find in art and nature.
____ (14) Some people think I'm selfish and egotistical.
____ (15) I am not a very methodical person.
____ (16) I rarely feel lonely or blue.
____ (17) I really enjoy talking to people.

____ (18) I believe letting students listen to controversial speakers can only confuse and mislead them.
____ (19) I would rather cooperate with others than compete with them.
____ (20) I try to perform all the tasks assigned to me conscientiously.
____ (21) I often feel tense and jittery.
____ (22) I like to be where the action is.
____ (23) Poetry has little or no effect on me.
____ (24) I tend to be cynical and skeptical of others' intentions.
____ (25) I have a clear set of goals and work toward them in an orderly fashion.
____ (26) Sometimes I feel completely worthless.
____ (27) I usually prefer to do things alone.
____ (28) I often try new and foreign foods.
____ (29) I believe most people will take advantage of you if you let them.
____ (30) I waste a lot of time before setting down to work.
____ (31) I rarely feel fearful or anxious.
____ (32) I often feel as if I'm bursting with energy.
____ (33) I seldom notice the moods or feelings that different environments produce.
____ (34) Most people I know like me.
____ (35) I work hard to accomplish my goals.
____ (36) I often get angry at the way people treat me.
____ (37) I am a cheerful, high-spirited person.
____ (38) I believe we should look to our religious authorities for decisions on moral issues.
____ (39) Some people think of me as cold and calculating.
____ (40) When I make a commitment, I can always be counted on to follow through.
____ (41) Too often when things go wrong, I get discouraged and feel like giving up.
____ (42) I am not a cheerful optimist.
____ (43) Sometimes when I am reading poetry or looking at a work of art, I feel a chill or a wave of excitement.
____ (44) I'm hardheaded and tough-minded in my attitudes.
____ (45) Sometimes I'm not as dependable or reliable as I should be.
____ (46) I am very seldom sad or depressed.
____ (47) My life is fast-paced.
____ (48) I have little interest in speculating on the nature of the universe or the human condition.
____ (49) I generally try to be thoughtful and considerate.
____ (50) I am a productive person who always gets the job done.
____ (51) I often feel helpless and want someone else to solve my problems for me.
____ (52) I am a very active person.
____ (53) I have a lot of intellectual curiosity.
____ (54) If I don't like people, I let them know it.
____ (55) I never seem to be able to get organized.
____ (56) At times I have been so ashamed I just wanted to hide.
____ (57) I would rather go my own way than be a leader of others.
____ (58) I often enjoy playing with theories or abstract ideas.
____ (59) If necessary, I am willing to manipulate people to get what I want.
____ (60) I strive for excellence in everything I do.

_____ (61) I get nervous when things do not go the right way for me.
_____ (62) Others seem to do things easier than I can.
_____ (63) I worry a lot of the time.
_____ (64) I get mad easily.
_____ (65) I feel that others do not like the way I do things.
_____ (66) I worry about what other people think about me.
_____ (67) Often I feel sick to my stomach.
_____ (68) My hands feel sweaty.
_____ (69) I worry about what is going to happen.
_____ (70) I have bad dreams.
_____ (71) I feel someone will tell me I do things the wrong way.
_____ (72) I worry when I go to bed at night.
_____ (73) I wiggle in my seat a lot.
_____ (74) A lot of people are against me.
_____ (75) I have trouble making up my mind.
_____ (76) Often I have trouble getting my breath.
_____ (77) I am afraid of a lot of things.
_____ (78) I worry about what my parents will say to me.
_____ (79) It is hard for me to get to sleep at night.
_____ (80) I feel alone even when there are people with me.
_____ (81) My feelings get hurt easily.
_____ (82) I am tired a lot.
_____ (83) Other people are happier than I am.
_____ (84) My feelings get hurt easily when I am fussed at.
_____ (85) I wake up scared some of the time.
_____ (86) It is hard for me to keep my mind on schoolwork.
_____ (87) I am nervous.
_____ (88) I often worry about something bad happening to me.
_____ (89) I look ugly.
_____ (90) I feel alone all the time.
_____ (91) I never have fun at school.
_____ (92) I do not want to be with people at all.
_____ (93) I cannot make up my mind about things.
_____ (94) Things bother me all the time.
_____ (95) I never do what I'm told.
_____ (96) Most days I do not feel like eating.
_____ (97) I feel like crying every day.
_____ (98) Nobody really loves me.
_____ (99) All bad things are my fault.
_____ (100) I have to push myself all the time to do my schoolwork.
_____ (101) I do very badly in subjects I used to be good in.
_____ (102) I do everything wrong.
_____ (103) I am sure that terrible things will happen to me.
_____ (104) I have trouble sleeping every night.
_____ (105) Nothing will ever work out for me.
_____ (106) I am sad all the time.

____ (107) I am bad all the time.
____ (108) I worry about aches and pains all the time.
____ (109) I can never be as good as others.
____ (110) I do not have any friends.
____ (111) I hate myself.
____ (112) I am tired all the time.
____ (113) Nothing is fun at all.
____ (114) I get into fights all the time.
____ (115) On the whole, I am satisfied with myself.
____ (116) I feel that I have a number of good qualities.
____ (117) I feel I do not have much to be proud of.
____ (118) I wish I could have more respect for myself.
____ (119) I take a positive attitude toward myself.
____ (120) At times I think I am no good at all.
____ (121) I am able to do things as well as most other people.
____ (122) I certainly feel useless at times.
____ (123) All in all, I'm inclined to feel that I am a failure.
____ (124) I feel that I'm a person of worth, at least on an equal plane with others.
____ (125) My opinion of myself tends to change a good deal, and does not remain the same for long.
____ (126) I find that on one day I have one opinion of myself and on another day a different opinion.
____ (127) I have noticed that my ideas about myself seem to change quickly.
____ (128) Some days I have a very good opinion of myself; other days I have a very poor opinion of myself.
____ (129) I feel that nothing, or almost nothing, can change the opinion I currently hold of myself.
____ (130) I act too young for my age.
____ (131) I don't get along with other people.
____ (132) I am not liked by other people.
____ (133) I would rather be with younger people than with people my own age.
____ (134) I am too dependent on adults.
____ (135) I get teased a lot.
____ (136) I am poorly coordinated or clumsy.
____ (137) I keep from getting involved with others.
____ (138) I can't get my mind off certain thoughts.
____ (139) I repeat certain actions over and over.
____ (140) I hear sounds or voices that other people think aren't there.
____ (141) I have thoughts that other people would think are strange.
____ (142) I store objects I don't need.
____ (143) I see things that other people think aren't there.
____ (144) I do things other people think are strange.
____ (145) I act without stopping to think.
____ (146) I have trouble concentrating.
____ (147) I have trouble sitting still.
____ (148) I daydream a lot.

____ (149) I am nervous or tense.
____ (150) My schoolwork is poor.
____ (151) I feel confused or in a fog.
____ (152) I don't feel guilty after doing something I shouldn't.
____ (153) I use alcohol or drugs for non-medical purposes.
____ (154) I run away from home.
____ (155) I steal at home.
____ (156) I swear or use dirty language.
____ (157) I would rather be with older people than with people my own age.
____ (158) I hang around with people who get in trouble.
____ (159) I lie or cheat.
____ (160) I set fires.
____ (161) I steal from places other than home.
____ (162) I cut classes or skip school.
____ (163) I argue a lot.
____ (164) I brag.
____ (165) I try to get a lot of attention.
____ (166) I destroy my own things.
____ (167) I destroy things belonging to others.
____ (168) I disobey at school.
____ (169) I am jealous of others.
____ (170) I get in many fights.
____ (171) My moods or feelings change suddenly.
____ (172) I am louder than other people.
____ (173) I scream a lot.
____ (174) I am mean to others.
____ (175) I show off or clown.
____ (176) I physically attack people.
____ (177) I am stubborn.
____ (178) I talk too much.
____ (179) I tease others a lot.
____ (180) I have a hot temper.
____ (181) I threaten to hurt people.

Section C

The next set of questions are concerned with you and your friends and peers.

____ (1) My friends drink beer or alcohol.
____ (2) My friends use marijuana (pot).
____ (3) My friends use drugs, such as crack or cocaine.
____ (4) My friends sell drugs.
____ (5) My friends take part in street gang activity.
____ (6) My friends belong to a gang.
____ (7) My friends steal items worth less than $50.
____ (8) My friends steal items worth more than $50.
____ (9) My friends go to school while high on drugs.
____ (10) My friends fight without a weapon.

____ (11) My friends go joyriding.
____ (12) My friends take part in violent crime with a weapon.
____ (13) My friends vandalize or trash property.
____ (14) My friends skip school.
____ (15) My friends fail school.
____ (16) My friends have become pregnant or fathered a child.
____ (17) My friends have unsafe sex.
____ (18) My friends stay out past midnight.
____ (19) A friend gives me help when I need it.

____ (20) I get hit by a peer at school.

____ (21) A peer leaves me out on purpose when it is time to do an activity or hang out.

____ (22) A peer yells at me and calls me names.

____ (23) A peer tries to cheer me up when I feel sad or upset.

____ (24) A peer who is mad at me tries to get back at me by not letting me be in their group anymore.

____ (25) I get pushed or shoved by a peer at school.

____ (26) A peer does things for me that make me feel happy.

____ (27) A peer tells lies about me to make others not like me anymore.

____ (28) A peer kicks me or pulls my hair.

____ (29) A peer says they won't like me unless I do what they want me to do.

____ (30) My peers say nice things to me.

____ (31) A peer tries to keep others from liking me by saying mean things about me.

____ (32) A peer says they will beat me up if I don't do what they want me to do.

____ (33) My peers let me know that they care about me.

____ (34) There are people at school or in town who I regularly run with, exercise with, or play sports with.

____ (35) I hang out in a friend's room or apartment quite a lot.

____ (36) I can get a date who I enjoy spending time with whenever I want.

____ (37) If I decided at dinnertime to take a study break this evening and go to a movie, I could easily find someone to go with me.

____ (38) People hang out in my room or apartment during the day or in the evening.

____ (39) I belong to a group at school or in town that meets regularly or does things together regularly.

____ (40) I am not a member of any social groups (such as church groups, clubs, teams,

etc.).

____ (41) Lately, I often feel lonely, like I don't have anyone to reach out to.

____ (42) I don't have friends who would comfort me by showing some physical affection (such as a hug, etc.).

____ (43) I don't often get invited to do things with other people.

____ (44) I don't talk to a member of my family at least once a week.

____ (45) I don't usually spend two evenings on the weekend doing something with others.

____ (46) I am accepted by others.

____ (47) I am valued by others.

____ (48) I am ignored by others.

____ (49) I am welcomed by others.

____ (50) I am rejected by others.

____ (51) I am shunned by others.

____ (52) I am approached by others.

____ (53) I am excluded by others.

____ (54) I am avoided by others.

____ (55) I am appreciated by others.

____ (56) A friend has often been with me (physically) in a stressful situation..

____ (57) A friend has often provided me with a place where I could be away for a while.

____ (58) A friend has often watched after my possessions when I was away.

____ (59) A friend has often told me what she/he did in a situation that was similar to mine.

____ (60) A friend has often done some activity with me to help me get my mind off things.

____ (61) A friend has often talked with me about some interests of mine.

____ (62) A friend has often let me know that I did something well.

____ (63) A friend has often gone with me to someone who could provide help.

____ (64) A friend has often told me that I am okay just the way I am.

____ (65) A friend has often asked me to keep the things that we talk about private--just between the two of us.

____ (66) A friend has often assisted me in setting a goal for myself

____ (67) A friend has often made it clear what was expected from me.

____ (68) A friend has often expressed admiration or respect for something I do well or about a personal quality of mine.

____ (69) A friend has often given me some information on how to do something.

____ (70) A friend has often suggested some action that I should take.

____ (71) A friend has often given me over $25.

____ (72) A friend has often comforted me by showing me physical affection.

____ (73) A friend has often given me some information to help me understand a situation I was in.

____ (74) A friend has often provided me with transportation.

____ (75) A friend has often checked back with me to see if I followed the advice I was given.

____ (76) A friend has often given me under $25.

____ (77) A friend has often helped me understand why I didn't do something well.

____ (78) A friend has often listened to me talk about my private feelings.

____ (79) A friend has often loaned or given me something (a physical object other than money) that I needed.

____ (80) A friend has often agreed that what I wanted to do was right.

____ (81) A friend has often said things that made my situation clearer and easier to understand.

____ (82) A friend has often told me how he/she felt in a situation that was similar to mine.

____ (83) A friend has often let me know that he/she will always be around if I need assistance.

____ (84) A friend has often expressed interest and concern in my wellbeing.

____ (85) A friend has often told me that she/he feels very close to me.

____ (86) A friend has often told me whom I should see for assistance.

____ (87) A friend has often told me what to expect in a situation that was about to happen.

____ (88) A friend has often loaned me over $25.

____ (89) A friend has often taught me how to do something.

____ (909) A friend has often given me feedback on how I was doing without saying it was good or bad.____ (91) A friend has often joked and kidded to try to cheer me up.

____ (92) A friend has often provided me with a place to stay.

____ (93) A friend has often pitched in to help me do something that needed to be done.

____ (94) A friend has often loaned me under $25.

Section D

Please rate the accuracy of the next statements about your **mother** using the same scale. Your ratings should be based on how your mother has generally acted towards you. If you have a stepmother or some other maternal-type situation, your answers should be based on whichever mother-type person has been most important to you.

____ (1) My mother speaks to me with a warm and friendly voice.
____ (2) My mother lets me do those things I like doing.
____ (3) My mother appears to understand my problems and worries.
____ (4) My mother likes me to make my own decisions.
____ (5) My mother tries to control everything I do.
____ (6) My mother enjoys talking things over with me.
____ (7) My mother does not seem to understand what I need or want.
____ (8) My mother lets me decide things for myself.
____ (9) My mother can make me feel better when I am upset.
____ (10) My mother tries to make me dependent on her.
____ (11) My mother gives me as much freedom as I want.
____ (12) My mother does not help me as much as I need her to.
____ (13) My mother feels I cannot look after myself unless she is around.
____ (14) My mother is overprotective of me.
____ (15) My mother seems emotionally cold to me.
____ (16) My mother is affectionate to me.
____ (17) My mother does not want me to grow up.
____ (18) My mother invades my privacy.
____ (19) My mother frequently smiles at me.
____ (20) My mother tends to baby me.
____ (21) My mother makes me feel I'm not wanted.
____ (22) My mother does not talk with me very much.
____ (23) My mother lets me dress in any way I please.
____ (24) My mother lets me go out as often as I want.
____ (25) My mother does not praise me.
____ (26) My mother often spanks, slaps, or hits me when I do something wrong.
____ (27) When punishing me, my mother often hits me with a belt, paddle, or something else.
____ (28) My mother yells and screams at me.
____ (29) My mother swears at me.
____ (30) My mother says mean things to me.
____ (31) My mother always gives me reasons for her decisions.
____ (32) When I don't understand why my mother makes a rule for me to follow, she explains the reasons to me.
____ (33) My mother disciplines me by reasoning, explaining, or talking to me.
____ (34) My mother shares many activities with me.
____ (35) My mother enjoys doing things with me.

____ (36) My mother spends little time with me.

Section E

Please rate the accuracy of the next statements about your **father** using the same scale. Your ratings should be based on how your father has generally acted towards you. If you have a stepfather or some other paternal-type situation, your answers should be based on whichever father-type person has been most important to you.

____ (1) My father speaks to me with a warm and friendly voice.
____ (2) My father lets me do those things I like doing.
____ (3) My father appears to understand my problems and worries.
____ (4) My father likes me to make my own decisions.
____ (5) My father tries to control everything I do.
____ (6) My father enjoys talking things over with me.
____ (7) My father does not seem to understand what I need or want.
____ (8) My father lets me decide things for myself.
____ (9) My father can make me feel better when I am upset.
____ (10) My father tries to make me dependent on him.
____ (11) My father gives me as much freedom as I want.
____ (12) My father does not help me as much as I need him to.
____ (13) My father feels I cannot look after myself unless he is around.
____ (14) My father is overprotective of me.
____ (15) My father seems emotionally cold to me.
____ (16) My father is affectionate to me.
____ (17) My father does not want me to grow up.
____ (18) My father invades my privacy.
____ (19) My father frequently smiles at me.
____ (20) My father tends to baby me.
____ (21) My father makes me feel I'm not wanted.
____ (22) My father does not talk with me very much.
____ (23) My father lets me dress in any way I please.
____ (24) My father lets me go out as often as I want.
____ (25) My father does not praise me.
____ (26) My father often spanks, slaps, or hits me when I do something wrong.
____ (27) When punishing me, my father often hits me with a belt, paddle, or something else.
____ (28) My father yells and screams at me.
____ (29) My father swears at me.
____ (30) My father says mean things to me.
____ (31) My father always gives me reasons for his decisions.
____ (32) When I don't understand why my father makes a rule for me to follow, he explains the reasons to me.
____ (33) My father disciplines me by reasoning, explaining, or talking to me.

____ (34) My father shares many activities with me.

____ (35) My father enjoys doing things with me.

____ (36) My father spends little time with me.

____ (37) When my parents tell me to stop doing something and I don't stop, I always get punished.

____ (38) My parents punish me for something at one time, and then at other times don't punish me when I do the same thing.

____ (39) When my parents punish me, the kind of punishment depends on their mood.

____ (40) My parents disagree about when and how to punish me.

____ (41) My parents know where I go at night.

____ (42) My parents know where I am most afternoons after school.

____ (43) My parents know how I spend my money.

____ (44) My parents know what I do with my free time.

____ (45) My parents know who my friends are.

Done! Thanks So Much For Your Help!