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Running head: Attachment and First Nations Adolescents

Attachment and Delinquency Among First Nations Adolescents from a Remote Geographic Location

Patricia Grobe

Department of Educational and Counselling Psychology

McGill University

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Abstract

Attachment theories emphasize the importance of a secure attachment at all stages in life. In secure attachment relationships, individuals are confident that during times of real or perceived distress they can rely on the attachment figure to provide desired security. Conversely, individuals with insecure attachments feel they cannot rely on their attachment figures and thus will not be comforted in times of need. Lack of secure attachments can lead to psychological and behavioral difficulties. In the present study, maternal and peer attachments were investigated and related to levels of self-reported delinquency among 84 First Nations adolescent students, ages 11 to 17 from a reserve in a remote geographic location. The results from the present study appear to be congruent with the literature which reports that insecure attachments in youths lead to higher rates of delinquent behaviors. High levels of secure attachments in the participants resulted in low levels of reported delinquency, however the relationship between attachment and delinquency in adolescent participants was found to be dependent on the grade in school and gender interaction.

Résumé

Les théories de l'attachement démontrent l'importance d'un attachement sécure à toutes les étapes de la vie. Dans une relation comportant un attachement sécure, les individus sont confiants que, durant les moments de détresse, qu'ils soient perçus ou réels, ils peuvent compter sur la personne à qui ils sont attachés pour leur procurer la sécurité désirée. Inversement, les individus vivant des attachements insécures sentent qu'ils ne peuvent compter sur les personnes à qui ils sont attachés et donc ne seront pas réconfortés en temps de besoin. Le manque d'attachement sécure peut conduire à des difficultés psychologiques et comportementales. Dans la présente étude, l'attachement maternel et l'attachement envers les pairs ont été étudié et mis en rapport avec des niveaux de délinquence rapporté au sein des Premières Nations par 84 adolescents, âgés de 11 à 17 ans provenant d'une réserve d'une région éloignée. Les résultats de la présente étude correspondent aux recherches précédentes dans le domaine et qui font mention qu'un attachement insécure chez les jeunes conduit à des taux élevés de comportements délinquents. Un taux élevé d'attachement sécure parmi les participants correspond à un taux peux élevé de délinquence rapportée. Toutefois, la relation entre l'attachement et la délinquence, chez les adolescents participants, dépend de l'interaction entre le niveaux scolaire et le sexe.

Chapter 1

Introduction

Behavioral competence is associated with secure attachment relationships. According to attachment theories early infant-caregiver relationships are cited as influential in determining behaviors at all stages in life (Benenson, 1999; Colin, 1996; Weiss, 1991, 1982). In adolescence, the degree of security in previously formed relationships is vital in determining the quality of new relationships; if pre-existing attachment relationships are secure, new relationships are likely to be secure and lead to adaptive behaviors (Colin, 1996; Weiss, 1991, 1982). Conversely, insecure, weak parental attachment relationships are characteristic of adolescents with increased antisocial and generally maladaptive behaviors (Anolik, 1983; Nada Raja, McGee, & Stanton, 1992; Steinberg & Silverberg, 1986). Although the frequency of maladaptive and delinquent behaviors is evident in adolescence, the highest rates of delinquent acts are noted among adolescents with difficult family backgrounds (Allen, Moore, & Kuperminc, 1997). Thus, positive attachment relationships are considered to be central to overall behavioral competence and an important asset for minority adolescents who are at risk for engaging in less than optimal behavior.

The central focus of this study is the relationship between attachment and delinquency among First Nations adolescents from a remote geographic location in northern Québec. Native youths in North America are at higher risk than majority culture youths for a range of behaviors and outcomes associated with lack of behavioral competence. Risk is significantly heightened for substance abuse (Oetting & Beauvais, 1990), teenage suicide (Kirmayer, 1994; Mao, Moloughney, & Seminciw, 1992), recurrent incarceration and prolonged unemployment (Beiser, Sack, Manson, Redshirt, & Dion, 1998), early school drop out (Armstrong, Kennedy, & Oberle, 1990; LaFramboise & Low, 1991; Yates, 1987), and greater academic failure (Armstrong, Kennedy, & Oberle, 1990; LaFramboise & Low, 1991). As the positive association between the maladaptive behaviors and lack of attachment security is documented in non-Native communities (Allen, Moore, Kuperminc, & Bell,

1998), the intent of the present study was to investigate the relationship between attachment relationships and behavioral competence among at-risk Native adolescents. The aim was to enrich the base of theoretical knowledge surrounding attachment and delinquency in general and to contribute to the greater understanding of the development of Native adolescents from isolated communities who are at risk due to minority status, lack of educational and occupational opportunities, and limited facilities (Banks, 1993; Leacock, 1995; Luthar, 1997).

Chapter 2

Attachment, Adolescence, and Deviance: A Literature Review

Attachment theory will be explored in order to elucidate the elements in attachment research that are considered causal factors in the development of adaptive versus maladaptive behaviors. The literature relating the importance of secure attachments in childhood as well as in adolescence will be reviewed. Findings from research on the relationship between attachment and delinquency in non-Native populations will be used to formulate hypotheses about Native adolescents from remote geographical communities.

The Attachment Story

What is attachment? Attachment is commonly defined as a lasting affectional bond of considerable intensity (Armsden & Greenberg, 1987). The attachment bond in infants, a primary psychological motivation, is an essential need that is met by the infant's primary caregivers who are the attachment figures (Bowlby, 1958). Attachment relationships are realized through a partnership that consists of a hierarchical relationship in which the attachment figure's principle role is to provide the more vulnerable person with security, emotional comfort, and regulation in times of stress (Bretherton, 1985; Holmes, 1993). Bowlby (1958) argued that human infants have an innate need for a primary caregiver, without whom survival would be compromised. The lack of a primary caregiver and real or threatened rupture of the attachment relationships can lead to emotional or psychological disturbances at any age (Ainsworth, 1991; Colin, 1996; Weiss, 1982, 1991). Thus, the interest in attachment theory stems from the negative consequences of insecure attachments on psychological well being and behavioral competence (Bowlby, 1977; Sroufe, 1979).

Attachment categorization. Individual differences in attachment categorization can be due to the behaviors of the primary caregiver, usually the mother, and the caregiver's sensitivity to the infant's signals during feeding, face-to-face play, and episodes of distress (Bretherton, 1985). In accordance with attachment theory, secure relationships are formed if attunement develops during early caregiver-child interactions and these interactions become

synchronous through the process of emotional regulation (Field, 1994). Caregiver-child attunement is achieved through the establishment of matching temporal and affective patterns of the dyad, which in turn leads to similar psycho-physiological states in both partners (Beebe & Lachman, 1988). If attunement and synchronicity are not achieved, then insecure relationships are likely to result.

Attachment categorization is traditionally measured in the first year of life, as attachment relationships that result from the quality of care given to a child are thought to solidify in the second half of the first year of life (Bowlby, 1958). Children are generally categorized as either securely or insecurely attached with the Strange Situation task that was devised by Ainsworth (1973, 1979). By approximately 12 months of age, a recognized secure or insecure attachment classification can be made according to children's reactions to their caregiver in this task. A securely attached child becomes distressed when the caregiver is absent, but welcomes the caregiver when he or she returns and is preferentially responsive to that person. In secure relationships, the child expects the attachment figure to be responsive when the need arises and is confident that the caregiver's response will provide the security desired (Benenson, 1999).

Avoidant, Resistant/Ambivalent, and Disorganized/Disoriented are the three identified forms of insecure attachments. Avoidant children are characterized by shunning contact with the primary caregiver, especially upon reunion following an absence. The stranger and caregiver are apparently not differentiated by the child, reacting to either in an identical manner. Resistant/Ambivalent children are found to display discomfort if the caregiver is absent, but upon return the caregiver is not a source of comfort. These children oscillate between seeking and evading contact with the attachment figure. Disorganized/Disoriented children are described as hesitant in their desire to engage in interactions with the attachment figure and appear confused and apprehensive (Main & Hesse, 1990). Conflicting patterns of simultaneously approaching and avoiding the caregiver are seen in these children. Secure and

insecure attachment patterns are thought to be resistant to change and long-lasting (Bretherton, 1985).

Attachment and internal working models.

According to attachment theory, attachment relationships are formed through early interactions that allow individuals to construct internal working models that are representative of their attachment histories with their caregivers (Holmes, 1993; Main, Kaplan, & Cassidy, 1985). These internal, or representational models, are defined as a person's conscious or unconcious mental representation of the world and of the self in the world (Waters, Hamilton, & Weinfield, 2000). They include both an affective and cognitive component, and are used to discern events, predict the future, devise plans, and select effective strategies (Colin, 1996). Once constructed, these models are activated without conscious awareness, and are used to guide behavior as well as to appraise new situations (Bretherton, 1985). They tend to be resistant to change and any new information is assimilated into the pre-existing models (Bretherton, 1991; Main, 1991; Main, Kaplan, & Cassidy, 1985). However, the increased number of transactions with others allows the developing child to organize increasingly complex internal models of attachment (Bretherton, 1985). Thus, internal working models are subject to environmental influences, can be revised as a result of significant new experiences (Waters et al., 2000), and influence the manner that individuals relate to others by continually affecting relationship experiences and social environments (Colin, 1996; Sroufe & Fleeson, 1988; Waters et al., 2000). These internal working attachment models serve an heuristic function and thus are used as guides in interactions with an individual's expanding environment and as a basis for the construction of new relationships.

Attachment from Infancy to Adolescence

Infancy and middle childhood. Attachment behaviors are most observable in infants and young children as they are dependent on their caregivers for survival. However, infant-caregiver attachment quality is predictive of interpersonal relationships throughout the

lifespan (Holmes, 1993; Parkes, Stevenson-Hinde, & Marris, 1991; Waters et al., 2000; Weinfield, Sroufe, & Egeland, 2000). Weiss (1991, 1982) argued that these attachments are modified throughout development but are an expression of the same emotional system seen in infants. For example, quality of attachment at age one affects ego strength, peer relationships, and social competence in preschool (Arend, Grove & Sroufe, 1979; Easterbrooks & Lamb, 1979; Matas, Arend, & Sroufe, 1978; Waters, Wippman, & Sroufe, 1979). Similarly, attachment relationships formed in early life impact social competence in middle childhood (Elicker, Englund, & Sroufe, 1992). Specifically, children who were securely attached in infancy were more effective within peer groups, emotionally healthier, displayed higher levels of social skills, self-esteem, self confidence, sociability, popularity, and pro-social interactions (Elicker et al., 1992). Thus, the effects of attachment relationships appear to be extended beyond infancy.

Adolescence. Adolescence, a transitional period between childhood and adulthood, is distinguished by significant biological and psychological changes (Barrett et al., 1986; Wade & Tavris, 1993). Typically, the onset of adolescence coincides with the biological changes defined as puberty (Barrett, Abramoff, Kumaran, & Millington, 1986; Slater & Ainsworth, 1991; Wade & Tavris, 1993). The most notable psychological changes in adolescence are the desire and struggle for individuality and independence (Colin, 1996; Weiss, 1982). The separation and differentiation from one's parents that is basic in this struggle allows for the emotional and behavioral autonomy that is central to social development (Allen et al., 1997). Social development and the quest for autonomy in early adolescence are characterized by an increased importance of peers and peer attachment relationships (Steinberg & Silverberg, 1986). The attachments are more reciprocal than they are in childhood and are formed essentially with peers who are of central emotional importance (Colin, 1996; Weiss, 1982). Principle childhood attachments figures, however, typically remain meaningful (Colin, 1996). The growth process and the development of attachment relationships throughout adolescence are affected by the different facets of adolescent's environment including family

of origin, the other people in their environment, and the physical context and society in which the adolescent develops (Weiss, 1982). Adolescents for whom these realities are negatively compromised are more likely to lack behavioral and social competence (Allen et al., 1997; Luthar, 1997).

Adolescent behavior patterns differ depending on an adolescents' attachment history (Allen et al., 1997; Weiss, 1982). Adolescents with insecure parental attachments react negatively to their caregivers, struggle with partental figures, express anger, reject parental beliefs, and demonstrate high levels of oppositional behavior (Colin, 1996). In contrast, youths with secure attachments mature with more confidence, competence, and better judgement (Holmes, 1993). Throughout adolescence, secure attachments formed with surrogate parents (e. g., relatives, teachers) can be a template for revising previously formed representational models of insecure attachment relationships (Colin, 1996). Likewise, peers can be central figures of attachment who provide support in times of crisis.

Armsden and Greenberg (1987) found that adolescents with highly secure attachments to parents were well adjusted, possessed higher self-esteem, and enjoyed frequent and satisfactory communications with their families. Individuals with attachments marked by low security showed feelings of resentment and alienation and were both verbally and emotionally detached from parents. The quality of peer attachments was related to increased well being and general socio-emotional and behavioral wellness (Armsden & Greenberg, 1987).

Adolescence, attachment, and deviance: The research. Problem behaviors dramatically increase in adolescence and adolescent exploration can be taken to such an extreme that serious deviant behaviors ensue (Allen et al., 1997). In this period of increasing exploration, separation, and differentiation security of attachment is focal to healthy development (Berman & Sperling, 1994). Adolescents with secure parental attachments use internal working models constructively, are better able to form secure attachment.

relationships with peers, and are more likely to engage in adaptive behaviors (Allen et al., 1997; Bretherton, 1985).

Differences in the internal working models associated with attachment categorization (Kobak and Sceery, 1988) indicated that adolescents use their internal working models as rules for their concurrent relationships perceptions and as a guide in their response to others. As compared to the autonomous (secure) adolescents, both the dismissive and the preoccupied (insecure) youths showed less ego-resiliency, the ability to respond in a persistently flexible manner when confronted with problem situations. The autonomous group's higher ego-resiliency was associated with an increased ability to constructively cope with problem situations and the security of attachment displayed by this group led to competent peer and parental ties. Since this group copes in a positive manner, they do not need to respond to others using hostile mannerisms (Kobak & Sceery, 1988).

The attachment history of the dismissive group presupposes that the caregivers of these adolescents rejected them and did not seek or enjoy contact with them in infancy (Benenson, 1999). Children who are not shown warmth by the attachment figure internalize the figure's response (Kobak & Sceery, 1988), displace their internalized hostility to peer relationships (Fraiberg, Adelson, & Shapiro, 1975), and are more likely to demonstrate delinquent behaviors (Anolick, 1983). Conversely, children with secure attachments are seen as possessing positive skills in peer interactions and elicit positive responses from peers (Colin, 1996; Grossmann & Grossmann, 1991).

The hypothesis that secure attachment in adolescence has a positive effect on psychosocial functioning was supported by Allen et al.'s (1998) findings that security of attachment was related to peer and maternal reports of fewer problem behaviors. Teens who were insecurely attached showed higher rates of externalizing and delinquent behaviors. Among adolescents with secure attachments, high maternal control was correlated to lower levels of externalizing behaviors, but was unrelated to the externalizing behaviors in the dismissive group. Adolescents with secure attachments were better able to express their

thoughts on the importance of their attachment experiences, were less likely to engage in anti-social acts, and demonstrated the most adaptive behaviors (Allen et al., 1998). Positive functioning evident in these secure adolescents is influenced by genuine family ties and adequate parenting.

Relationships between adolescents and their parents are fundamental in the development of competent behaviors. Adolescents' perceptions of their parents were measured by Pedersen (1994) who found that males generally considered their mothers to be more controlling and overprotective. However, mothers were perceived as more caring than their fathers by adolescents of both genders. Low maternal care was the highest predictor of deviance and the strongest predictor of delinquent acts followed by paternal care, then maternal control, and finally paternal control (Pedersen, 1994). Similarly, Burbach, Kashani, and Rosenberg (1989) found that low care and high control were characteristic of youths with behavioral and oppositional personality disturbances when compared to typical adolescents. Thus, the degree of maternal care and control in relationships between adolescents and their caregivers as well as familial experiences and parental patterns of child-rearing are elements that contribute to the differing types of attachments in adolescents. Child rearing patterns were also found to influence adolescent externalizing behavior problems (Ge et al., 1996; Patterson & Stouthamer-Loeber, 1984). Adolescent conduct problems were significantly associated with parental levels of hostility and paternal levels of warmth. Low levels of parental warmth, harsh and inconsistent disciplinary styles, higher levels of parental hostility, and low parental monitoring were found among adolescents who displayed behavioral problems as compared to adolescents who displayed no problems (Allen et al., 1997; Ge et al., 1996). Parents with effective supervisory and disciplinary practices, who are also affectionate, available, and supportive of their adolescents created environments that were stable and secure. These findings highlight the role of caregiver-adolescent relationships in the association between attachment and deviant behaviors among different groups of adolescents.

The Present Study

Quality of attachment and delinquent behaviors among First Nations adolescents was the focus of the present study. The degree of security in attachment relationships between parents and their children from infancy to adulthood is associated with the development of psychosocial and behavioral competence. The establishment of insecure attachments due to lack of parental caring in infancy leads to maladaptive internal representational models (Bretherton, 1985). These inadequate representations negatively influence the foundation of attachment relationships with peers and adults other than parents (Holmes, 1993; Main, Kaplan, & Cassidy, 1985; Waters et al., 2000) indicating that early parental rejection has detrimental consequences in the establishment of mature, reciprocal attachment relationships (Colin, 1996). Additionally, a lack of positive representational models can lead to problem behaviors throughout adolescence (Colin, 1996). Specifically, adolescents with insecure attachment relationships are at risk for engaging in deviant behaviors. According to the psychosocial perspective, deviant behaviors found in adolescents are a repercussion of inadequate familial socialization patterns (Anolik, 1983).

First Nations youths. The unique cultural realities of First Nations communities is one that is marked by the increased Euro-Canadian influence that highlights the differences in values and lifestyles of this minority group. Traditional Native lifestyles were changed drastically to adapt to western, majority culture (Banks, 1993; Leacock, 1995; Orchard, 1998). Nonetheless, traditional values and practices continue and are transmitted to the younger generations. Limited resources due to isolated geographic location, differences in functional behavior due to band affiliation, and the degree of integration within western culture are likely to influence socialization patterns that lead to attachment relationships and the extent that these relationships contribute to the development of behavioral competence in Native youths.

The studies about the development of competent behaviors in adolescents, in particular the affiliation between attachment and delinquency are generally centered on youths

from urban, industrialized settings. Research on these relationships in other cultural settings is essential in order to establish whether the findings are universally applicable or are limited to certain populations with specific societal structures and expectations. The consideration of these alternative settings will further develop knowledge on attachment relationships and delinquency.

Purpose. The central purpose of the present study was to assess the association between insecure attachment relationships and problem behaviors in First Nations adolescents from a remote geographic location. Adolescents who are at greater risk due to their minority status, degree of acculturation, lack of opportunities, and limited facilities. The Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987) developed to measure parental and peer relationships from the standpoint of the adolescent was chosen to examine attachment relationships in this Native adolescent population. The literature highlights that insecure attachments lead to an increase in deviant behaviors in adolescents from the majority culture (Allen et al., 1998; Ge et al., 1996; Patterson & Stouthamer-Loeber, 1984; Pedersen, 1994). Based on the literature in non-Native populations Native adolescents were expected to display similar behavior trends. Specifically, Native adolescents who manifest insecure attachments were expected to exhibit increased delinquent behaviors. Likewise, secure attachment relationships were expected to be associated with a greater adaptive rather than maladaptive behaviors.

Chapter 3

Method

Participants

Eighty-four adolescents from a Native community school in the Québec-Labrador peninsula, a north eastern region of Canada participated in this study. They included 6 females and 10 males from the sixth grade (M = 11 years, 6 month), 10 females and 16 males from the seventh grade (M = 13 years, 2 months), 6 females and 10 males from the eighth grade (M = 14 years, 4 months), and 12 females and 13 males in high school (M = 16 years, 1 month). Seventy-one participants identified themselves as Native, ten as white and Native, and three as only white.

Measures

The Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987) is a self-report measure developed to assess behavioral and affective/cognitive components of attachment relationships between adolescents and their parents and peers. The IPPA is used to measure attachment globally by assessing the adolescent's proximity and support seeking behaviors and the cognitive expectations that are part of their internal working models (Bretherton, 1985).

The IPPA includes 75 items rated on a 5-point Likert scale (see Appendix A). The values assigned to each possible response range from one to five. These values correspond to each of the following response options: almost never or never true, not very often true, sometimes true, often true, and almost always or always true. A sample is, "My mother/father/friends can tell when I'm upset about something." Items that assessed parental attachment were separately grouped from items that assessed peer attachment. Most parent items were similarly worded to matching peer items, however some items are unique to parental (e.g., "My mother/father has her/his own problems, so I don't bother her/him with mine.") and peer (e. g., "I feel alone or apart when I'm with my friends.") subsections of the IPPA. Responses were scored on a continuum with possible scores ranging from 25 to 125

separately for maternal, paternal, and peer questions. The higher the score on this measure the more secure the attachment.

Adolescent's delinquent behaviors were measured using the Self-Report Delinquency questionnaire (SRD; Elliott, Dunford, & Huizinga, 1987). The instrument includes two parts (see Appendix B). The first part includes 38 items on a 4-point scale with numerical anchors for the frequency of delinquent behaviors. The four possible responses were "never"; "once in a while and 1 to 2 times per year"; "pretty often and 3 to 4 times per year"; and "very often and 5 or more times per year." Possible scores range from 38 to 152 on this section. A variety of behaviors are described such as theft, property damage, illegal services (e.g., selling drugs), status offenses (e.g., running away), public disorder, and index offenses (e.g., assult). A sample is, "How often in the past year have you run away from home?" The second part includes 11 items used to rate the frequency of cigarette, alcohol and drug use throughout the preceeding year. For each item, seven possible answer choices correspond to "never used" to "used 40+ times." Possible scores range from 11 to 77. A sample is "been drunk or very high from drinking alcoholic beverages." High scores on this measure are indicative of high rates of delinquent behaviors.

Procedure

A team of graduate students administered the questionnaires during class sessions to the participants over a four-day period. Questionnaires were administered in group format as part of a larger study and consistently in the same order. The order ensured that testing sessions were initiated and terminated with relatively structured, non-threatening measures. A member of the team read the measures to the students in each class.

Chapter 4

Results

Measuring Attachment and Delinquency

Grade and gender were the independent factors in this investigation. Attachment to mother and attachment to peers were considered as covariates. Delinquency was the dependent variable. The average scores on the attachment to mother, attachment to peers, and delinquency variables according to grade and gender group membership are presented in Tables 1-3.

Table 1

Scores of Attachment to Mother on IPPA as a Function of Grade and Gender

	Females		Males	
Grade	M	SD	M	SD
Sixth Grade	95.97	15.77	98.94	9.91
Seventh Grade	102.79	15.56	101.74	9.09
Eighth Grade	100.49	10.54	98.09	8.60
High School	104.37	13.80	104.99	8.29

Table 2

Scores of Attachment to Peers on IPPA as a Function of Grade and Gender

	Females		Males	
Grade	M	SD	M	SD
Sixth Grade	85.80	12.36	87.69	12.04
Seventh Grade	91.54	11.44	90.74	13.14
Eighth Grade	93.35	10.37	93.19	9.99
High School	101.16	8.13	101.16	10.45

Table 3

Self-Reported Delinquency on the SRD as a Function of Grade and Gender

	Females		Males	
Grade	M	SD	M	SD
Sixth Grade	50.4	2.6	51.2	7.9
Seventh Grade	53.2	9.8	50.4	6.8
Eighth Grade	63.0	18.1	51.3	3.4
High School	48.2	13.6	53.1	6.3

An Analysis of Variance for Delinquency

A 4 x 2 analysis of variance (ANOVA) with grade (6th, 7th, 8th and high school) and gender of the participants as the independent variables and delinquency as the dependent

variable was performed. No significant main effects for grade, F (3, 81) = 1.87, p = .141, or gender of participant F (1, 83) = 1.05, p = .308 were found. The grade by gender interaction indicated a trend towards significance, F (3, 81) = 2.69, p < .052. In order to further investigate more specific underlying developmental differences in the grade by gender interaction, pre-planned contrasts were tested to compare each grade to the next grade (i. e., sixth grade to seventh grade, seventh grade to eighth grade, and eighth grade to high school). For each contrast, the interaction with gender was tested. The contrast between the eighth grade and high school students was significant F (1, 83) = 4.76, p = .0323, likewise the contrast of the interaction between the identical grade pair by gender was significant F (1, 83) = 7.70, p = .0069. These results indicated that the grade by gender interaction in the ANOVA was very close to significant due to the pooling effect over the grade and gender groups.

An Analysis of Covariance for Attachment Variables

The significant grade contrast and grade by gender interaction contrast led to a 4 x 2 analysis of covariance (ANCOVA) to determine if the differences in delinquency were due to the grade and gender of the participants or to the attachment variables. The independent variables were grade and gender of participants, and delinquency was the dependent variable. The covariates were continuous variables for attachment to mother and attachment to peers; these variables were added as predictors of delinquency. The ANCOVA was used to determine the role of attachment in accounting for grade and gender differences in delinquency seen in the contrasts. Through the ANCOVA the effects of attachment as a predictor of delinquency were controlled, thereby eliminating any effects of the attachment variables on delinquency (Frederiksen, 2000). This allowed for the investigation of the possible role of attachment to mother and to peers in predicting delinquency. If the contrast effects found were reduced when the effects of attachment were controlled then these effects could be attributed to the grade and gender differences of the participants. In general, no significant predictions of delinquency from attachment were found. The results from the ANCOVA are presented in Table 4. The contrast effect of grade in the ANCOVA was only

slightly reduced $F = 4.64$, $p = .0345$ as was the contrast effect of the grade by gender interaction $F = 7.31$, $p = .0085$.

Table 4

Results of the ANCOVA for the Dependent Variable of Deliquency

Source	df	F	p
Grade	(3, 81)	1.90	.1373
Gender	(1, 83)	1.04	.3118
Grade x Gender	(3, 81)	2.54	.0631
IPPA MOM: Mother Attachment	(1, 83)	0.33	.5699
FIPPA: Peer Attachment	(1, 83)	0.04	.8481

The Parallelism Assumption of the ANCOVA

The ANCOVA found that the contrast effects were only slightly reduced when the attachment variables were controlled. ANCOVA's include an assumption of parallelism which states that the slope of the regression line is constant across groups, meaning that there are parallel regression planes for the two covariates of attachment to mother and friend attachment (Stevens, 1996). According to this assumption, attachment would have the same relationship, as a predictor of delinquency, consistently across grade and gender.

To test whether the relationship of attachment to delinquency is constant over grade and gender, the parallelism test was performed. The violation of this assumption for delinquency was found to be significant, $F(23, 83) = 2.56$, $p < .002$ indicating that the relationship between attachment and delinquency differed according to group membership and that the relationship of attachment to delinquency varied by grade and gender. The

parallelism assumption highlighted five violations: attachment to mother with grade in school, attachment to friends with grade, attachment to friend with gender, and both attachment to mother and friend with the grade and gender interaction presented in Table 5. These findings were supported by the complete reduction in the grade $\underline{F} = 0.00$, $\underline{p} = .9501$ and grade by gender interaction $\underline{F} = .35$, $\underline{p} = .585$ contrasts effects found in the parallelism assumption. The reduction highlights that the delinquency behaviors are thus completely attributable to attachment to mother and peers, attachments that vary with grade and gender. Finding the source of these parallelism violations was the next appropriate step in the analysis of the data.

Table 5

Results of the Parallelism Assumption Analysis

Source	df	F	p
Grade	(3, 83)	0.57	.639
Gender	(1, 83)	0. 21	.649
Grade x Gender	(3, 83)	0.23	.873
IPPA MOM	(1, 83)	2.95	.091
FIPPA	(1, 83)	2.62	.111
IPPA MOM x Grade	(3, 83)	4.63	.006
FIPPA x GRADE	(3, 83)	5. 56	.002
IPPA MOM x Gender	(1, 83)	2.15	.148
FIPPA x Gender	(1, 83)	4.54	.037
IPPA MOM x Grade x Gender	(3, 83)	4.86	.004
FIPPA x Grade x Gender	(3, 83)	4.55	.006

The Correlations between Delinquency and Attachment According to Grade and Gender Group Membership

In order to identify the grade and gender group combinations that were the cause of the parallelism assumption violation, correlations among the dependent variable of delinquency and attachment to mother and attachment to peers covariates were performed. The correlations were assessed by groups of interest specifically each level of grade and gender. Results indicated that the violation of the parallelism assumption was due to two

significant results. A significant correlation ($r = .96$, $p < .01$) was found between delinquency and attachment to friends for females in the sixth grade. Likewise, a significant result ($r = .58$, $p < .05$) was found between delinquency and attachment to mother for females in high school.

Chapter 5

Discussion

Security of attachment and behavioral competence were examined among First Nations adolescents from a remote geographic location in northern Québec. These adolescents are a unique group as they come from a cultural background that is distinguished by the risk associated with their minority status, lack of educational and occupational opportunities, and limited environmental resources. These risks are related to academic, social, emotional, and behavioral problems among typically developing children. The findings are generally consistent with evidence that levels of attachments among non-Native youths are associated with behavioral competence in adolescents. Exceptions contradicting findings from the majority culture were also attained.

Native adolescents were asked to complete a questionnaire concerning attachment to their mothers and their peers, and provide information about their own delinquent behaviors. Degree of delinquency was predicted by security of attachment and differences in delinquency were associated with levels of attachment in different grade and gender group combinations. The number of self-reported delinquent behaviors was related to their age and gender, and varied with levels of attachment security. Notwithstanding the degree to which Native adolescents engage in acts of social deviance is dependent on the degree of security in their attachment relationships. However, the levels of security reported varied according to gender and developmental maturity.

Attachment security varied according to grade, and interaction between grade and gender. The highest overall rates of delinquency were found in the eighth grade, female students. The rate of delinquency was significantly less in the high school females as compared with eighth grade females.

Contrary to evidence from the general population, the more secure Native adolescents were likely to report higher levels of delinquency. There was a high degree of association between attachment to friends and increased rates of delinquency for females in the sixth

grade. These results make sense intuitively since peers are often an influential factor of behavior. Patterns of aggressive behaviors in disadvantaged youth differ from those of majority culture youths; behavior considered maladaptive in one culture may be normative in another (Luthar & Burack, 2000). Moreover, aggressive behaviors may be adaptive for certain disadvantaged youth since it can lead to a positive valence with peers. A moderate association between attachment to mothers and delinquency was found in high school females. This association may be due to differing conceptualizations of successful developmental outcomes for disadvantaged youths (Luthar & Burack, 2000). Behavioral competence in these youths may be accomplished through the attainment of adult status. Status that is realized via financial independence (by conventional or illegal means) or parenthood (Luthar & Burack, 2000). In general, the results imply that in the present population, an increase in attachment security among females is associated with an increase in delinquent acts. In the majority culture, an increase in security leads to a decrease in acts of social deviance.

The general results imply that relationship between attachment and delinquency may be a function of gender and developmental maturity since the degree of attachment that predicts the levels of delinquency varies with grade and gender of the participants. The relationship found between an increase in attachment security and increase in acts of delinquency in females indicates that the principals of attachment theory may be rooted in western values and may not be applicable universally to individuals of all cultural and ethnic backgrounds (Rothbaum, Weisz, Pott, Miyake, Morelli, 2000). Investigating sociocultural variations in the psychology of attachment is essential as western values and beliefs may carry alternative definitions and ramifications for minority cultures. Identical behaviors can be defined as competent or maladaptive depending on the perspective of being sought. Cross-cultural research has increasingly shown that although competent behaviors can be differentially defined due to different beliefs and practices the ramifications of these behaviors can lead to similar final results (Weisz, McCarty, Eastman, Chaiyasait, & Suwanlert, 1997).

This evidence supports the notion of universal realities across different cultures. Conversely, context specific definitions of adequate behavior due to different perspectives, the importance attributed to different behaviors, alternative attitudes, and varied customs underscores the notion that certain beliefs and practices are culturally specific. The core attachment tenets are innate to Western thought and thus may be context and culture specific (Rothbaum et al., 2000). If these attachment tenets are to be applied to non-Western cultures or minority groups they must be thoroughly investigated and altered to include only global human realities. Evidence from different minority groups, different populations, and different cultures can help elucidate the fundamental human attachment tenets and those that are intrinsically tied to differing sociocultural realities.

Based on the limitations of this study, changes are proposed for subsequent research. Maternal and peer reports for externalizing and delinquent behaviors should be used to corroborate the degree of self reported delinquency (Allen et al. 1997). This approach should lead to more valid results since findings are susceptible to social desirability bias. Although this bias can never be eliminated completely it may be more evident in this community due to the reduced size of the population and close ties amongst community members. A larger participant pool would likewise increase the validity of the study. Finally, this study should be replicated in other First Nations adolescent populations to assess whether the present findings are specific to the study's participants or common to Native adolescents. Minority groups are differentially affected by the dominant majority culture. Although the histories of Native populations across North America may be similar, individual First Nations bands can have different perspectives on their past and present realities due to specific characteristics of the group. Variations due to band affiliation, language, geographic locations, available resources, and economic and educational opportunities can lead to different results. The results from these new research interests will be useful and informative, and will be a determining factor in building attachment theory on universally fundamental tenets.

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Appendix A

ID:_____ **Date:**_____ **IPPA**

This questionnaire asks you about your relationships with important people in your life — your **mother**, your **father**, and your **close friends**. Please read the directions to each part carefully.

Part I Each of the following statements ask about your feelings about your **MOTHER** or the woman who has acted as your mother, and your **FATHER**, or the man who has acted as your father. If you have more than one person who has acted as your mother (like your natural mother and your stepmother), answer the questions for the one you feel has most influenced you. If you have more than one person who has acted like your father (like your natural father and a stepfather), answer the questions for the one you feel has most influenced you.

Please read each statement and circle the **ONE** number that tells how true the statement is for you now.

	Almost Never or Never True	**Not Very Often True**	**Some-Times True**	**Often True**	**Almost Always Or Always True**
1A. My **mother** respects my feelings.	1	2	3	4	5
1B. My **father** respects my feelings.	1	2	3	4	5
2A I feel my **mother** does a good job as my mother.	1	2	3	4	5
2B. I feel my **father** does a good job as my father.	1	2	3	4	5
3A I wish I had a different **mother**.	1	2	3	4	5
3B. I wish I had a different **father**	1	2	3	4	5
4A My **mother** accepts me as I am	1	2	3	4	5
4B. My **father** accepts me as I am.	1	2	3	4	5
5A. I like to get my **mother's** point of view on things I'm concerned about	1	2	3	4	5
5B. I like to get my **father's** point of view on things I'm concerned about	1	2	3	4	5
6A. I feel it's no use letting my feelings show around my **mother**	1	2	3	4	5
6B. I feel it's no use letting my feelings show around my **father**.	1	2	3	4	5
7A. My **mother** can tell when I'm upset about something.	1	2	3	4	5
7B. My **father** can tell when I'm upset about something.	1	2	3	4	5
8A. Talking over my problems with my **mother** makes me feel ashamed or foolish.	1	2	3	4	5

	Almost Never or Never True	Not Very Often True	Some-Times True	Often True	Almost Always Or Always True
8B. Talking over my problems with my **father** makes me feel ashamed or foolish.	1	2	3	4	5
9A. My **mother** expects too much from me.	1	2	3	4	5
9B. My **father** expects too much from me.	1	2	3	4	5
10A. I get upset easily around my **mother**.	1	2	3	4	5
10B. I get upset easily around my **father**.	1	2	3	4	5
11A. I get upset a lot more than my **mother** knows about.	1	2	3	4	5
11B. I get upset a lot more than my **father** knows about.	1	2	3	4	5
12A. When we discuss things, my **mother** cares about my point of view.	1	2	3	4	5
12B. When we discuss things, my **father** cares about my point of view.	1	2	3	4	5
13A. My **mother** trusts my judgement.	1	2	3	4	5
13B. My **father** trusts my judgement.	1	2	3	4	5
14A. My **mother** has her own problems, so I don't bother her with mine.	1	2	3	4	5
14B. My **father** has his own problems, so I don't bother him with mine.	1	2	3	4	5
15A. My **mother** helps me to understand myself better.	1	2	3	4	5
15B. My **father** helps me to understand myself better.	1	2	3	4	5
16A. I tell my **mother** about my problems and troubles.	1	2	3	4	5
16B. I tell my **father** about my problems and troubles.	1	2	3	4	5
17A. I feel angry with my **mother**.	1	2	3	4	5
17B. I feel angry with my **father**.	1	2	3	4	5
18A. I don't get much attention from my **mother**.	1	2	3	4	5
18B. I don't get much attention from my **father**.	1	2	3	4	5

	Almost Never or Never True	Not Very Often True	Some-Times True	Often True	Almost Always Or Always True
19A. My **mother** helps me to talk about my difficulties.	1	2	3	4	5
19B. My **father** helps me to talk about my difficulties.	1	2	3	4	5
20A. My **mother** understands me.	1	2	3	4	5
20B. My **father** understands me.	1	2	3	4	5
21A. When I am angry about something, my **mother** tries to be understanding.	1	2	3	4	5
21B. When I am angry about something, my **father** tries to be understanding.	1	2	3	4	5
22A. I trust my **mother**.	1	2	3	4	5
22B. I trust my **father**.	1	2	3	4	5
23A. My **mother** doesn't understand what I'm going through these days.	1	2	3	4	5
23B. My **father** doesn't understand what I'm going through these days.	1	2	3	4	5
24A. I can count on my **mother** when I need to get something off my chest.	1	2	3	4	5
24B. I can count on my **father** when I need to get something off my chest.	1	2	3	4	5
25A. If my **mother** knows something is bothering me, she asks me about it.	1	2	3	4	5
25B. If my **father** knows something is bothering me, he asks me about it	1	2	3	4	5

Part II This part asks about your feelings about your relationships with your **CLOSE FRIENDS.** Please read each statement and circle the **ONE** number that tells how true the statement is for you now.

	Almost Never or Never True	Not Very Often True	Some-Times True	Often True	Almost Always Or Always True
1. I like to get my friend's point of view on things I'm concerned about.	1	2	3	4	5
2. My friends can tell when I'm upset about something.	1	2	3	4	5
3. When we discuss things, my friends care about my point of view.	1	2	3	4	5
4. Talking over my problems with my friends makes me feel ashamed or foolish.	1	2	3	4	5
5. I wish I had different friends.	1	2	3	4	5
6. My friends understand me.	1	2	3	4	5
7. My friends help me to talk about. my difficulties.	1	2	3	4	5
8. My friends accept me as I am.	1	2	3	4	5
9. I feel the need to be in touch with my friends more often.	1	2	3	4	5
10. My friends don't understand what I'm going through these days.	1	2	3	4	5
11. I feel alone or apart when I'm with my friends.	1	2	3	4	5
12. My friends listen to what I have to say.	1	2	3	4	5
13. I feel my friends are good friends.	1	2	3	4	5
14. My friends are fairly easy to talk to.	1	2	3	4	5
15. When I am angry about something, my friends try to be understanding.	1	2	3	4	5
16. My friends help me to understand myself better.	1	2	3	4	5
17. My friends care about how I am.	1	2	3	4	5
18. I feel angry with my friends.	1	2	3	4	5
19. I can count on my friends when I need to get something off my chest.	1	2	3	4	5
20. I trust my friends.	1	2	3	4	5
21 My friends respect my feelings.	1	2	3	4	5

	Almost Never or Never True	Not Very Often True	Some-Times True	Often True	Almost Always Or Always True
22. I get upset a lot more than my friends know about.	1	2	3	4	5
23. It seems as if my friends are irritated with me for no reason.	1	2	3	4	5
24. I can tell my friends about my problems and troubles.	1	2	3	4	5
25. If my friends know something is bothering me, they ask me about it	1	2	3	4	5

Appendix B

SRD

For each item, please circle the number that best describes your behavior in the last year and also write the exact number of times you have done the behavior in the last year.

HOW OFTEN IN THE LAST YEAR HAVE YOU:

	NEVER	ONCE IN A WHILE (1-2 times/year)	PRETTY OFTEN (3-4 times/year)	VERY OFTEN (5/more times/yr)
1. damaged or destroyed something on purpose that belongs to your parents, brothers or sisters, (or other family members)?	1	2	3	4
2. damaged or destroyed something on purpose that belongs to a school?	1	2	3	4
3. damaged or destroyed something on purpose that does not belong to you (besides the times mentioned above)?	1	2	3	4
4. stolen or tried to steal a car, a motorcycle or any other major vehicle?	1	2	3	4
5 used alcohol such as beer, wine, or hard liquor (like whiskey or gin)?	1	2	3	4
6. stolen or tried to steal something that's worth more than $50?	1	2	3	4
7. bought or sold something or tried to buy or sell something that you knew was stolen?	1	2	3	4
8. thrown objects such as rocks, snowballs, or bottles at cars, people, or windows?	1	2	3	4
9. set fire or tried to set fire to a building, car or other property on purpose	1	2	3	4
10. run away from home?	1	2	3	4
11. lied about your age to get in somewhere (such as an R or X-rated movie) or in order to buy something (such as alcohol))?	1	2	3	4
12. carried a hidden weapon other than a plain pocket knife?	1	2	3	4
13. stolen or tried to steal something that is worth $5.00 or less?	1	2	3	4
14. attacked someone because you wanted to seriously hurt or kill them?	1	2	3	4
15. been involved in gang fights?	1	2	3	4
16. used fake money to pay for something?	1	2	3	4
17. sold marijuana (pot)?	1	2	3	4
18. cheated on tests in school?	1	2	3	4
19. hitch-hiked where it was against the law to do so?	1	2	3	4
20. stolen money or anything else from parents or brothers and sisters?	1	2	3	4
21. hit or threatened to hit a teacher or other adult at school?	1	2	3	4
22. hit or threatened to hit one of your parents?	1	2	3	4
23. hit or threatened to hit other students?	1	2	3	4
24. been loud, rowdy, or out of control in a public place so that it bothered those around you?	1	2	3	4
25. sold hard drugs such as cocaine, crack, speed, heroin, or anything else other than pot/marijuana?	1	2	3	4
26. tried to rip someone off by selling them something that had no value or it was not what you said it was?	1	2	3	4

27. taken a car, motorcycle or any other vehicle for a ride without asking the owner first?	1	2	3	4
28. used force or threats to get money or things from people?	1	2	3	4
29. gotten away with not paying for things such as movies, bus rides or food?	1	2	3	4
30. been drunk in a public place?	1	2	3	4
31. stolen or tried to steal things worth between $5.00 and $50.00?	1	2	3	4
32. stolen or tried to steal something at school such as someone's coat from a classroom, locker or cafeteria, or a book from the library?	1	2	3	4
33. asked for money or things from strangers?	1	2	3	4
34. skipped classes or school without an excuse?	1	2	3	4
35. kept extra change on purpose that a cashier gave you by mistake?	1	2	3	4
36. been suspended from school?	1	2	3	4
37. made obscene telephone calls, such as calling someone and saying dirty things?	1	2	3	4
38. held or delivered drugs for someone else?	1	2	3	4

The next section of this survey is a short list of questions about your use of cigarettes, alcohol, and other drugs you may have used **during the past year**. Please answer each question honestly. Remember your answers will be kept private, and the information you give us will help us understand what is happening with young people during their teenage years.

During the **past 12 months**, how many times (if any) have **you**.

	Never	1-2 Times	3-5 Times	6-9 Times	10-19 Times	20-39 Times	40+ Times
1. Smoked cigarettes	•	•	•	•	•	•	•
2. Sniffed glue, or breathed the contents of aerosol spray cans or inhaled other gases, fumes, or sprays to get high	•	•	•	•	•	•	•
3. Had alcoholic beverages (including beer, wine, and liquor) to drink--more than just a few sips	•	•	•	•	•	•	•
4. Be... drunk or very high from drinking alcoholic beverages		•	•	•	•	•	•
5. Used marijuana (grass, pot, weed, herb, SES, woollies) or hashish (hash, hash oil)	•	•	•	•	•	•	•
6. Used crack cocaine	•	•	•	•	•	•	•
7. Used cocaine in any other form	•	•	•	•	•	•	•
8. Used LSD (acid)	•	•	•	•	•	•	•
9. Used heroin	•	•	•	•	•	•	•
10. Used ecstacy	•	•	•	•	•	•	•
11. Used Ritalin (not prescribed by a doctor for a specific medical purpose)	•	•	•	•	•	•	•