

**DETERMINANTS OF DEVIANCE: EXPLORING ASSOCIATIONS BETWEEN
ATTACHMENT, ADVERSITY, AND CRIMINAL BEHAVIOUR**

A Thesis Submitted to the Committee of Graduate Studies in Partial Fulfillment of the
Requirements for the Degree of Master of Science in the Faculty of Arts and Science

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Abstract

Determinants of Deviance: Exploring Associations Between Attachment, Adversity, and Criminal Behaviour

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Background: Researchers have provided evidence that attachment may be independently linked to early adversity and criminal behaviour. In this study, I examined the combined associations among these variables in a student and community sample. **Method:** The first study consisted of undergraduate students ($n = 590$) who completed surveys to assess early adversity (Felitti, et al., 1988), attachment (Scharfe, 2016), and criminal behaviours. Participants were grouped based on their reports of adverse experiences and engagement in criminal behaviour. The second study was a replication of the first using a community sample ($n = 294$). **Results:** My hypotheses were partially supported, and my findings were consistent across Study 1 and Study 2. As I expected, there was a significant main effect for adversity when examining the mean scores of the attachment representations for attachment to mothers (Study 1 $F(16, 1763.402) = 3.61, p < .001$; Study 2 ($F(16, 849.942) = 2.377, p = .002$) and attachment to fathers (Study 1 $F(16, 1763.402) = 4.349, p < .001$; Study 2 ($F(16, 840.776) = 3.067, p < .001$)). From examining the means, I concluded that participants who reported greater adversity reported higher insecure-avoidant and lower secure attachment to mothers and fathers. There were no significant main effects for criminal behaviour or significant interaction effects. **Impact:** To date, no study has explored all three variables explicitly. My findings are able to highlight the critical importance of secure attachment relationships and add further comprehension to exploring factors associated to criminal behaviour.

Key words: attachment, early adversity, criminal behaviour

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Introduction

Social science researchers have explored factors that lead to criminal behaviour over the last few decades. Psychologists have suggested that abuse and maltreatment contribute to individuals' engagement in deviant behaviour. The association between the two variables is strengthened when accompanied by insecure attachments (Baer & Martinez, 2006; Corcoran & McNulty, 2018; Erozkhan, 2016; Murphy et al., 2014). Criminologists have found similar patterns. Specifically, individuals' lived experiences and interpersonal relationships relate to deviance (Butler et al., 2007; Savage, 2014). To date, no one has explored attachment, adversity, and criminal behaviour collectively. Therefore, I will explore the relevant research of both disciplines together. The goal of the current study is to increase understanding of the development of criminal behaviour.

Attachment Theory

The concept of attachment was first introduced in the 1940s (Bowlby, 1944) when Bowlby began writing about his observations of juvenile youth and their early life experiences. Formalizing his theory in the 1960's Bowlby proposed that humans innately bond with their caregivers when "tired, ill, or distressed" (Bowlby, 1969, p. 313). He theorized that the initial bond functioned as the framework for attachment representations throughout one's life. Attachments are formed based on underlying dimensions of self and other perceptions. The model of the self is characterized by a degree of self-worth and anxiety experienced between a child and caregiver. The model of the other is characterized by tendencies to approach or avoid a caregiver when in need of support (Bowlby, 1988). A key principle of Bowlby's theory is that attachment representations

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guide responses to the social world. The behaviours can be both adaptive and maladaptive. In developing attachment theory further, Bartholomew and Horowitz (1991) expanded Bowlby's (1973) model of attachment and internal working models (p. 236). Bartholomew and Horowitz (1991) identified four attachment representations (secure, fearful, preoccupied, and dismissing) by combining the underlying dimensions of self and other views as positive or negative, and characterized it by approach and avoidance tendencies. See Figure 1. The researchers stated the combination of positive self and other views resulted in secure attachment. Secure attachment is a product of consistent and sensitive parenting. Individuals have a sense of worthiness and an expectation that others are responsive and caring. The remaining three attachment representations combined are referred to as insecure attachment. Preoccupied attachment is characterized by a positive view of others; however, it is combined with a negative view of self. Preoccupied attachment is the product of inconsistent and insensitive parenting. It is associated with a belief that unworthiness is associated to a lack of received love and care. Next, is fearful attachment. Fearful attachment is a combination of negative self and other views.

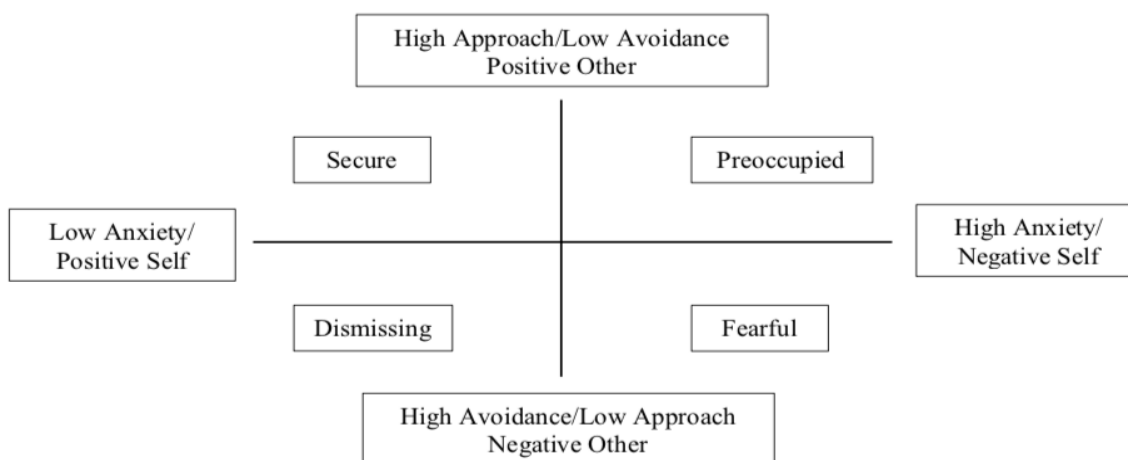


Figure 1. Four-Category Model of Adult Attachment (Bartholomew, 1990).

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Fearful attachment is also a product of insensitive parenting. It is characterized by a desire for social intimacy as well as distrust and fear of rejection. Lastly, dismissing attachment is characterized by the combination of a positive view of self and a negative view of others. Common experiences of dismissing attachment include independence and disinterest in intimacy. A key consideration of Bartholomew and Horowitz's (1991) four category model is that attachment is continuous. In other words, individuals receive a score on all four dimensions to allow for acknowledgement of the sophistication and of evolving and complex attachment relationships experienced in adulthood (Scharfe, 2017).

Bowlby's Theory of Adversity

Bowlby (1982) primarily discussed adversity in the context of unstable homes, abuse, neglect, and separation. Unstable homes included any family dynamic uncharacteristic of nuclear families. Examples included single parent households, foster homes, blended families, or homes with an ill family member. Bowlby discussed examples of case studies involving unstable homes in his observations. One specific case study example related to a young woman by the name of Ms. Y. Ms. Y credited her lack of mourning over her husband's death with having to bottle up her feelings as a child (Bowlby, 1982, p. 116). Specifically, as a child Ms. Y was encouraged that emotional outburst was impolite and therefore, she began to internalize all emotions. Over an extended period of time internalizing emotions transitioned into an inability to express emotion, including mourning her husband. Bowlby's earlier example is one of many used to highlight that unstable homes have an impact on an individual throughout their lifespan, as do other forms of adversity.

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Another form of adversity Bowlby (1982) discussed was abuse. He stated there are common outcomes of abuse that remain consistent regardless of duration, frequency, and form of abuse experienced. Physical (e.g., spanking), verbal (e.g., yelling), and sexual abuse (e.g., shaming children for natural sexual behaviours) are equally damaging to the model of self and others. As an example, Bowlby discussed the experience of two individuals. Both individuals displayed the same disordered mourning behaviour. However, they had different abuse experiences. One individual was sexually assaulted by her father on one occasion. The other individual was physically assaulted by a partner for a prolonged period (Bowlby, 1982, p. 167). In both scenarios, the victims experienced betrayal and distrust. Although the duration and form of abuse was different, the outcomes were similar. Both individuals developed a negative view of their abuser that influenced later behaviour. Therefore, solitary experiences of abuse are equally impactful as chronic abuse (Bowlby, 1990, p. 150).

Bowlby (1982) stated outcomes of neglect paralleled abuse. Neglect includes the commonly thought of experiences of inactively caring for a child by not supplying food or shelter. However, Bowlby (1983) discussed neglect in subtler forms. For example, being inattentive to a distressed child is considered neglectful as it does not acknowledge the basic emotional support needed by that child. Research has shown that active and passive neglect is equally traumatizing (Bowlby, 1983). Furthermore, neglect results in poorer quality parent child relations (Bowlby, 1976). Specifically, a child whose mother appears passive, unresponsive, and inattentive may infer her actions as unloving. For example, Bowlby (1976) discussed the case of a young girl Addie, who experienced active neglect, specifically inadequate food, and passive neglect from a dismissive parent.

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Research shows that in response to neglect a child may act in avoidance or aggression towards their caregiver. For example, Addie was disobedient, aggressive, lethargic, and required psychiatric care. Therefore, suggesting that neglect has an impact on the view of self and others.

Finally, Bowlby (1976) discussed separation. There are two ways in which children can experience separation. First, via physical separation defined by a physical absence. Examples of physical separation include children in residential nurseries or reared by relatives. Second, Bowlby discussed emotional separation. For example, children who had proxy caregivers within a home such as a nanny. Parents were often present but held an inactive care role. The absence of an active role in daily routines is similar to being physically separated. In each of the above scenarios, the resulting impact on children had outcomes of ambivalence, aggression, and anxiety. Children who experienced separations of any type or duration displayed increased socialization difficulties compared to similar aged peers who had stable household environments (Bowlby, 1976). From his various observations between the 1960s and 1990s Bowlby proposed that adversity in any form and duration had a negative impact on a child's development of internal working models and later adult life.

In addition to identifying adversity in its various forms there are two key concepts to understand about the impacts of adversity. The first concept is the relationship of vulnerability to adversity. Bowlby (1983) first introduced vulnerability and resilience as it related to personality. He observed that one adverse experience can lead to circumstances that allow for repeated occurrences. For example, Bowlby (1990) discussed the case of a woman who lost her mother at an early age. Suffering the loss of

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her primary caregiver the women was described as having entered various relationships in which her basic needs could hopefully be met. However, a desire to fulfill a need for care whilst having little experience with healthy boundaries ultimately lead to a repeated pattern of poor and abusive relationships (Bowlby, 1990, p. 175).

The second key concept of adversity is likelihood of comorbidity. Bowlby (1990) hypothesized that environmental conditions push an individual towards greater forms of vulnerability. Greater vulnerability to adversity may occur in two primary ways. First, it is likely that there will be two or more simultaneous adverse events being experienced by an individual. For example, an individual living in a one parent-household may also be experiencing abuse within the home. Often, single parents experience increased pressure combined with a lack of resources that may lead them to become disproportionately assertive or neglectful towards children (Bowlby, 1990). Second, children experiencing adversity in a home environment with absent parents often experience added adverse environments in school or in other aspects of their home life. Bowlby (1944) noted this scenario in his initial observations of juvenile youth. Many of the incarcerated youth that Bowlby (1944) observed had experienced unstable living environments characterized by unstable homes, challenges at school, and community segregation. Although Bowlby explored adversity primarily from an observational perspective, various other researchers such as Felitti et al. (1988) were simultaneously examining adversity from an experimental perspective.

Felitti et al. (1988) supported Bowlby's (1990) proposal that adversity can have exponential effects. In a study of health outcomes, the researchers demonstrated a critical adversity cut off. Four or more experiences of adversity were considered high. Three or

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fewer experiences of adversity were considered low. The researchers stated higher reported adversity had worsening outcomes compared to fewer reported adversities. For example, higher adversity was related to alcoholism, substance abuse, and depression. The more adversity experienced contributed to people experiencing added risks. The acknowledgment of an adversity cut off supports Bowlby's (1990) key concepts of vulnerability and comorbidity. Thus, Felitti et al.'s study (1988) has become of critical importance to understanding the outcomes of individuals who report early childhood adversity.

Attachment and Adversity

Bowlby (1976) stated attachment forms despite poor care. Poor care is a cornerstone of insecure attachment formation and a common outcome of adversity. In other words, adversity and insecure attachment are related. There are many common outcomes of the two variables, one such example being maladaptive behaviours. Adults reporting insecure attachment and adversity also share a lack of empathy and increased deviance. Scharfe (2002) also stated a relationship between insecure attachment and maladaptive behaviours. The majority (96%) of adolescents in her clinical sample were insecurely attached. Further, these adolescents reported one or more significant behavioural problems. Each of the given examples demonstrate that there is empirical evidence that adversity and insecurity coexist.

Individuals who grow up in unstable homes often report higher insecure attachment relationships compared to secure attachment relationships (Bowlby, 1969). In contrast, individuals in stable homes often report higher secure attachment. In general, Bowlby (1990) suggested that adults reporting higher secure attachment and no adversity

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may be more likely to be resilient. Therefore, there is higher likelihood for stable jobs, marriages, and homes. Furthermore, adults reporting higher secure attachment and adversity are likely to cope in adaptive manners. Individuals are more likely to seek ongoing support and use healthy coping mechanism. As a result, it is uncommon for individuals reporting higher secure attachment to experience environments that favour the development of criminal behaviour.

Researchers have supported Bowlby's (1969) proposal that attachment and adversity are related (Baer & Martinez, 2006; Corcoran & McNulty, 2018; Erozkhan, 2016; Murphy et al., 2014). One example of research exploring attachment and adversity includes a 25 study meta-analysis with studies published between 1988 and 2005 exploring abuse and neglect (Baer & Martinez, 2006). In the meta-analysis topics of neglect that were discussed included maltreatment, malnutrition, and failure to thrive. Topics of abuse included physical, sexual, and emotional trauma. The researchers made two conclusions in their literature review. First, childhood adversity affected adult attachment relationships. This pattern persisted regardless of the age that adversity was first experienced. Second, insecure attachment relationships influenced developmental outcomes. Specifically, attachment influenced relationship formation and risk behaviours (Baer & Martinez, 2006). For example, participants reporting predominantly insecure attachments were more likely to experience externalized behaviour problems. Specifically, irritability, attention difficulties, and inappropriate conduct such as yelling, hitting, and biting. The results were consistent across reported experiences of maltreatment of infants as well as children. The researchers' findings demonstrated support for Bowlby's (1969) proposal across participants and adverse experiences.

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Researchers have also suggested that there are two adversity outcomes related to insecure attachment. First, early adversity leads to attachment anxiety. Individuals view themselves as incompetent in navigating distress and rely on others. For example, one group of researchers demonstrated that the pattern of attachment anxiety transcends to hypervigilance for rejection or abandonment in adult relationships (Van Assche et al., 2019). Second, early adversity can lead to avoidance of a caregiver. In adulthood, avoidance leads to compulsive autonomy characterized by suppressing negative emotions (Neumann, 2017; Van Assche et al., 2019). Both discussed outcomes related to insecurity are considered maladaptive (Bowlby, 1990).

While adversity at any age can influence attachment (Felitti et al., 1998; Murphy et al., 2014), childhood adversity is related to adult attachment more so than later adversity (Van Assche et al., 2019). To explain, Murphy et al. (2014) suggested children do not have the capacity to understand their trauma. The result is stability of negative internal working models, or in other words, the foundation of insecure attachment. Corcoran and McNulty (2018) found further support for this event. The researchers stated adult attachment anxiety and avoidance were related to childhood adversity. With the acknowledgement that early childhood adversity is critical in attachment formation, many other researchers have begun exploring the role of specific early adversities and their associations to specific attachment representations (Corcoran & McNulty, 2018; Erozkhan, 2016).

To quantify the later adult outcomes of children who had experienced adversity, Erozkhan (2016) explored adversity and the relationship to specific attachment subscales. The researcher explained that children facing adversity had difficulty developing trust.

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The children also struggled with intimacy and affection. These characteristics were stable into adulthood and are common among the three insecure attachment subscales (preoccupied, fearful, and dismissing). Further, Corcoran and McNulty (2018) suggested that abuse and neglect fostered fear of abandonment. The researchers proposed that in adulthood, fear of abandonment contributed to unhealthy or failed relationships. Individuals described how fear of being abandoned by their romantic partners contributed to unhealthy boundaries, increased codependency, and increased feelings of jealousy and lack of trust. In examining the four-category model of attachment (Bartholomew & Horowitz, 1991), fear of abandonment is also a characteristic of fearful attachment. Corcoran and McNulty (2018) highlighted this connection between adversity and attachment subscales and concluded that the pattern of early adversity influencing adult attachment exists across student, community, and clinical samples (Corcoran & McNulty, 2018; Erozkhan, 2016).

Attachment and Criminal Behaviour

Bowlby (1976) proposed that our response to distress may be associated with criminal behaviour which develops as a result of negative internal working models. Specifically, the internal working models are characterized by viewing the world as comfortless and unpredictable. Bowlby (1944) first made observations of the association between attachment and criminal behaviour when examining a group of 44 juvenile delinquents. In a study of young thieves, Bowlby (1944) observed that majority of the participants lived in unstable homes. The lived experiences of these participants were related to higher insecure attachment. For example, most participants experienced rejection and abuse from a parent and as a result participants discussed feelings of anger

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towards their social world. From the interviews with these juveniles, Bowlby made two determinations. First, individuals with poor-quality relationships were likely to report insecure attachment. Second, individuals reporting insecure attachment were likely to engage in criminal behaviours.

Bowlby's (1944) proposal that attachment and criminal behaviour are associated has been studied by researchers in both psychology and criminology (Gerhardt, 2015; Lindberg et al., 2014). For example, Gerhardt (2015) discussed the importance of understanding the lived experiences of offenders. She stated that an absence of meaningful relationships contributed to criminality. Support for an attachment-criminal behaviour association has also been found within criminology studies. For example, Lindberg et al. (2014) explored developmental models of crime. The researchers stated attachment predicted type and frequency of committed offenses. This pattern was found for attachment to mothers and fathers. Other parallels between research in criminology and psychology focused on attachment and criminal behaviour proxies.

Researchers often use proxies within their studies when examining variables of interest. The purpose of a proxy is to measure a desired outcome with other variables that are correlated to the variable of interest (Baer & Martinez, 2006). The study of human nature which can be complex to quantify and observe is a common field of research that uses proxy measures. A proxy to attachment often used by researchers is parenting behaviour. One example of parenting behaviour discussed by Bowlby (1976) was inconsistent, coercive, and hostile parenting. He stated inconsistency increased the chances of raising antisocial children. Other examples of attachment proxies found in literature on attachment included parental sensitivity (Felitti et al., 2019), present and

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absent parents (Erozkan, 2016; Murphy et al., 2016), parental responsiveness (Corcoran & McNulty, 2018; Felitti et al., 2019; Savage, 2014), and attachment defined by earlier researched parameters of anxious and ambivalent categorization (Baer & Martinez, 2006; Barbaro et al., 2018). The purpose of exploring research containing proxies was to draw inferences and conclusions of similar events to my variables of interest.

The other variable of interest for my research is criminal behaviour. In the literature I noted that many researchers have used antisocial behaviour as a proxy of criminal behaviour (Lindberg et al., 2014; Wampler & Down, 2010). For example, Lindberg et al. (2014) examined the attachment representations of 61 adolescent male offenders. The researchers used interchangeable vocabulary when describing their variable of interest and included terms such as deviance, criminal behaviour, and antisocial behaviour. Other examples of proxy variables that I found when examining literature on criminal behaviour included antisocial cognition (Walters et al., 2013) and deviance (Lindberg et al., 2014). Despite the variance in terminology research supports an association between attachment and criminal behaviour regardless of proxies and samples explored.

Researchers have found various patterns while exploring the associations between attachment and criminal behaviour. First, there is higher reported insecure attachment among offenders in general (Lindberg et al., 2014; Wampler & Downs, 2009). Second, researchers have proposed that attachment differences differentially predicted crime (Walters & DeLisi, 2013; Wampler & Downs, 2009). Examples of commonly researched crimes included crimes against property and crimes against people. Specific predictions were made for vandalism, substance use, theft (Walters & DeLisi, 2013; Wampler &

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Down, 2010), and violence (Lindberg et al., 2014; Walters & DeLisi, 2013). The researchers found that participants who were convicted of crimes against property (vandalism, theft, and fraud) reported isolated attachments; synonymous with preoccupied and fearful attachment (Walters & DeLisi, 2013; Wampler & Down, 2010). Participants convicted of crimes against people, such as violent crimes, reported higher disconnected attachment; synonymous with dismissing attachment (Lindberg et al., 2014; Walters & DeLisi, 2013; Wampler & Down, 2010). The findings from studies with forensic populations mirror the findings of studies with student populations. Although attachment measures differed across fields of research conclusions were similar. Therefore, there is consistent evidence that attachment insecurity may predict higher reported engagement in criminal behaviour.

Attachment, Adversity, and Criminal Behaviour

To the best of my knowledge no study has specifically explored attachment, adversity, and criminal behaviour collectively. However, researchers have explored similar variables in other research objectives (Butler, et al., 2007; Savage, 2014; Scharfe, 2002). For example, Butler et al. (2007) explored early life experiences of 85 young offenders. The researchers discussed an association between parent-child relationships and social adversities. Adversity included unstable homes and living in high crime neighbourhoods. Further, higher reported delinquency was associated with higher alienation from parents. The researchers also discussed lower communication with parents and elevated risk of social adversity.

In a review exploring attachment and aggression, Savage (2014) stated children who failed to bond with caregivers developed negative internal working models.

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Specifically, these children reported a lack of trust and empathy. In adulthood, insecure attachment predicted severity and frequency of deviance. Lindberg et al. (2014) also supported Savage's (2014) claims. Lindberg et al. (2014) stated abuse and maltreatment played a role in developing criminal behaviour. The association was strengthened when coupled with attachment insecurities.

Regardless of the type of adversity (e.g., physical, sexual, and mental abuse) the researchers' findings were supported. There was a strong association between poor relationships and deviance.

As mentioned in previous sections the conclusions made by criminologists paralleled the conclusions of psychologists. First, both Savage (2014) and Scharfe (2002) concluded poor relationships contributed to delinquency. Second, researchers highlighted the small portion of reported secure attachment in forensic populations (Savage, 2014; Scharfe, 2002). Acknowledging the results, Savage (2014) made suggestions for future research. He stated that more distinction in attachment measures was needed. Further, researchers may be interested to explore adversity not centered on abuse. Therefore, inclusive measures of adversity should be examined.

To date, research on attachment, adversity and criminal behaviour has covered three areas. First, researchers often focused on two of the three variables at a time. Second, when studied collectively, researchers have explored proxies of the three variables. Last, researchers have discussed the specific variables while pursuing other research goals. For example, Scharfe (2002) explored reliability and validity of a new attachment interview. However, in the discussion the researcher highlighted that majority of the participants reported insecure attachment and deviance. Overall, there is emerging

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evidence that there are plausible associations between attachment, adversity, and criminal behaviour, while there are still various research gaps. As a result, it is my goal to combine the divergent areas of research by testing the association between attachment, early adversity, and criminal behaviour.

Present Studies

There are three specific aims of this research. First is to test the associations between attachment, adversity, and criminal behaviour to further support existing research. Next, is to expand the literature on attachment, early adversity, and criminal behaviour by exploring various forms of adversity and criminal behaviours. The last goal of this research is to explore a new avenue of inquiry and compare across sample populations to test a replication. Majority of the literature appears to suggest that there are similar associations between the variables regardless of sample demographics. Therefore, the last goal of my research is to replicate the findings from an undergraduate student sample in a community sample.

Hypotheses

To address the specific goals of the research I have identified four hypotheses. First, I hypothesize that there will be an association between parental attachment and criminal behaviours. Specifically, I expect that participants who have engaged in criminal behaviour, as compared to participants who have not engaged in criminal behaviour, will report higher insecure and lower secure attachment to mothers and fathers. Second, it is expected that participants reporting greater adversity as compared to participants reporting fewer adverse experiences, will report higher insecure and lower secure attachment to mothers and fathers. Third, I expect that the interaction term

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between criminal behaviour and adversity will predict differences in reported attachment to mothers and fathers. Specifically, I expect individuals reporting high adversity and criminal behaviour, as compared to individuals reporting low adversity and no criminal behaviour, to report higher insecure and lower secure attachment to mothers and fathers. Lastly, these hypotheses will be tested in Study 1 using a student sample and in Study 2 using a community sample.

Study 1

Data Screening

Prior to completing the proposed analyses, I screened participants' data for completeness and accuracy. See Figure 2. A new variable called *use?* was created and coded as either 1 or 0. A code of 1 indicated that participants had paid attention while completing the survey, completed all the measures, and consented to their data being used ($n = 590$). A code of 0 indicated that at least one of several conditions were not met ($n = 277$). The decision tree in Figure 2 outlines the process that I used to screen participants to identify useable data. First, I screened participants to determine their degree of attention when completing the surveys. Of the initial sample of 867 surveys, when asked to select '5' 795 participants selected '5' and 72 participants did not select '5'. I excluded the data from analyses for participants who did not answer the 'pick 5' question appropriately. Next, participants were asked if aliens had abducted them while completing the surveys. Participants who did not "disagree strongly" with the alien abduction statement were assumed to be inattentive or dishonest when completing the surveys. For this question, 661 participants responded appropriately by selecting "disagree strongly" and their data were maintained. The 26 participants who did not

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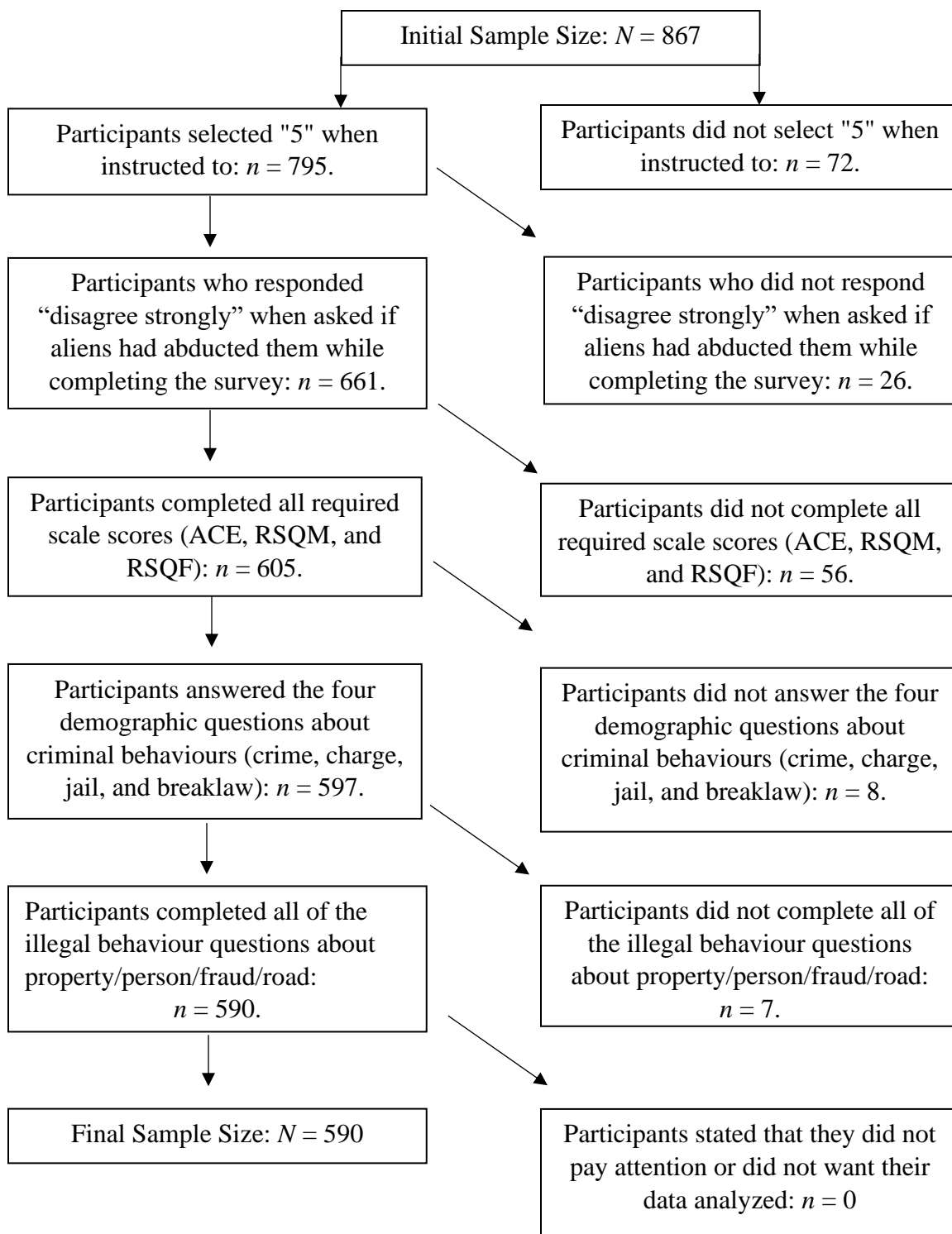


Figure 2. Decision Tree Outlining Participant Screening Process for Study 1

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respond appropriately had their data excluded from analyses.

Second, I screened participant data to determine if participants failed to complete at least one of the scales included in the survey. I considered a scale to be incomplete if participants did not respond to a minimum of 70% of the items on each scale measure. Of the remaining 661 participants at this step in the decision tree majority ($n = 605$) had completed all three of the scale scores (RSQ-M, RSQ-F, and ACE10) and their data were maintained. However, 56 participants did not complete all the required scale scores and their data were removed from use in the analyses. Specifically, 48 participants did not answer a minimum 70% of the RSQ-M questions and an additional eight participants did not answer 70% the RSQ-F questions. After excluding participants who did not complete the attachment scales, there were no additional participants who did not complete the ACE10.

The next step in the decision tree (see Figure 2) was to screen participants' data for completion of responses related to criminal behaviours. Of the remaining 605 participants whose data had been maintained at this stage, eight participants did not answer the four demographic questions about criminal behaviours. An additional seven participants did not complete all the illegal behaviour questions about property, person, fraud, and road. For this stage of the screening process, 15 participants had their data excluded and the 590 participants who did answer the criminal behaviour questions had their data maintained. The last step in my screening process was to confirm that participants consented to their data being used. The remaining participants ($n = 590$) all stated that they paid attention and consented to having their data included. See Figure 2.

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To test for differences among participants whose data were included in the analyses compared to participants whose data were excluded from analyses I compared the participant groups. First, I performed Pearson chi-squared tests. There were no significant differences among participants in the use versus non-use group across variables of: gender, ethnicity, year of study, relationship status, engagement in crime, conviction of crime, or incarceration for crime. Next, I performed independent t-tests to test for differences among participants in the use versus non-use group across age and the scale scores. Significant differences were found across the age of participants in the use versus non-use group, $t(865) = 3.39, p < .001$. Individuals who completed all the surveys (used in the final sample; $n = 590$) were younger than individuals who did not complete all the surveys (not used in the final sample; $n = 277$). There were no significant differences among participants in the use versus non-use group across the scale scores for attachment to mothers, attachment to fathers, or adverse experiences.

Method

Participants

For Study 1, a sample of undergraduate psychology students at Trent University in Peterborough were recruited using the online PSYC SONA system by way of voluntary sign up ($n = 867$). Two-hundred-seventy-seven participants were not included in the analyses due to incomplete survey data (see Data Screening section). The final sample ($n = 590$) of participants was typical of a university sample: predominately female ($n = 493, 83.56\%$), Caucasian ($n = 388, 65.76\%$), and in their first ($n = 376, 63.73\%$) or second year of study ($n = 159, 26.95\%$). Fifty four percent of the participants were not in

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a relationship and 39% were in a committed relationship. See Appendix A for participant demographic survey.

Measures

Trent Relationship Scales Questionnaire (T-RSQ, Scharfe, 2016; See Appendix B & C). Participants' attachment representations were measured using the Trent Relationship Scales Questionnaire (T-RSQ; Scharfe, 2016). The T-RSQ is expanded from the original RSQ (Griffin & Bartholomew, 1994) and assesses Bartholomew's (1990) four category model of attachment. In the current study, I measured attachment to mothers and fathers. See Table 1 for the means, standard deviations, and reliability scores for the T-RSQ. Participants were instructed to respond to the T-RSQ questionnaire based on the extent to which each item best described their feelings towards each attachment figure (mothers and fathers). The questionnaire contains 10 items for each of the four subscales rated on a 7-point Likert scale ranging from 1 (*not at all like me*) to 7 (*very much*

Table 1

Tables of Means, Standard Deviations and Reliability Scores for the T-RSQ and the ACE

	<i>M</i>	<i>SD</i>	<i>Range</i>	<i>α</i>
Attachment to Mothers				
Secure	4.72	1.10	1.00-7.00	0.76
Fearful	2.71	1.25	0.00-6.56	0.86
Preoccupied	3.35	0.79	1.30-5.80	0.47
Dismissing	3.52	1.23	0.00-7.00	0.84
Attachment to Fathers				
Secure	4.10	1.20	1.40-7.00	0.78
Fearful	2.96	1.36	1.00-7.00	0.85
Preoccupied	3.10	0.85	1.00-7.00	0.49
Dismissing	3.85	1.42	1.00-7.00	0.86
ACE	1.61	1.70	0.00-8.00	0.84

Note. *N* = 590. ACE = Adverse Childhood Experiences

like me). Participants' responses to items were used to calculate a score on each of the four subscales within the T-RSQ: secure (e.g., *I am comfortable having others depend on*

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me), preoccupied (e.g., *I worry that others do not value me as much as I value them*), fearful (e.g., *I am somewhat comfortable being close to others*), and dismissing (e.g., *I am comfortable without close emotional relationships with my closest or best friend*).

Adverse Childhood Experiences Questionnaire (ACE, Felitti et al., 1998; Ports et al., 2016; See Appendix D). Assessment of adversity was evaluated using the adverse childhood experiences questionnaire (Felitti et al., 1998; Ports et al., 2016). See Table 1 for the means, standard deviations, and reliability of the ACE. The ACE consists of 28-items that explore seven categories of adverse experiences: psychological abuse, physical abuse, sexual abuse, violence against mother, household substance abuse, household mental illness, and household incarceration. For the current study only the first 10 questions were used. The first 10 questions asked participants to report “yes” or “no” to various questions that address the home environment in which they lived during the first 18 years of their life (e.g., *was anyone in your household depressed or mentally ill?*). Researchers found that individuals reporting 4 or more adverse experiences had higher reported health risks than individuals reporting none, one, two, and three adverse experiences (Felitti et al., 1998). Therefore, participants reporting four or more experiences of adversity were grouped together ($n = 89$). Participants reporting none ($n = 202$), one ($n = 130$), two ($n = 117$), and three ($n = 52$) adverse experiences maintained their individual grouping.

Criminal Behaviour (See Appendix E). Assessment of criminal behaviour was evaluated based on participants’ responses to various questions created for the purpose of this study. The questions were created using the concept of formal deviance as discussed

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within criminological and social research (Becker, 1963; Erikson, 1962). Criminal behaviour and deviance are socially constructed concepts. Therefore, the questions were created based on the textbook definition of formal deviance. Formal deviance is defined as an act violating social norm which includes criminal violation of formally enacted laws such as robbery, theft, and assault (Schmallegger & Volk, 2014). Participants were asked if they have committed behaviours associated to a specific series of four types of crimes. The specific behaviour questions included actions considered to be formally deviant within Canada as per the *Criminal Code of Canada*. Examples included acts against property, person, public order, and road safety. If a participant responded “yes” to any of the above four categories of crime engagement, they were placed in the “criminal behaviour” group ($n = 170$). If a participant responded “no” to all of the questions they were placed in the “no criminal behaviour” group ($n = 420$).

Procedure

The study was visible to Trent University students who had chosen to sign up for the SONA research portal. Any student who had access to SONA had the option to choose to participate in the study from a given list of ongoing research studies. Students enrolled in first-year undergraduate psychology courses and second year psychology statistics courses received 1% credit for their participation, as is standard practice at Trent University. The estimated length of time for the survey was one hour and participants could complete it wherever they had access to the internet. To begin the study participants were provided the informed consent form which had to be agreed to prior to being able to view or answer any of the questions (see Appendix F). Participants

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were then provided a feedback form upon survey completion (See Appendix G). Trent University's Research Ethics Committee approved the current study.

Results

To test whether there were attachment differences for participants who reported their level of engagement in criminal behaviours and early childhood adverse experiences I first examined the dependant variables. Bartholomew and Horowitz (1991) highlighted that theoretically the four attachment subscales are correlated and therefore the data I collected were most appropriately analyzed using MANOVA. Prior to conducting my statistical analyses, I tested the assumptions for MANOVA-multivariate normality and homogeneity of covariances and found no concerns.

I then conducted a 5x2 MANOVA using the four attachment dimensions as dependant variables with experiences of adversity (5 groups) and criminal behaviour (2 groups) as the independent variables. My hypotheses were partially supported. As I expected, there was a significant main effect for adversity when examining the mean scores of the attachment representations to mothers ($F(16, 1763.402) = 3.61, p < .001$).

Table 2

Average scores on attachment dimensions for the significant main effect of adversity

	0 ACE (n = 202)	1 ACE (n = 130)	2 ACE (n = 117)	3 ACE (n = 52)	4+ACE (n = 89)	F
Mother						
Secure	4.93 _a	4.83 _{ab}	4.50 _{bc}	4.64 _{abc}	4.31 _c	7.34*
Fearful	2.32 _a	2.50 _a	3.05 _b	3.30 _b	3.13 _b	14.77*
Preoccupied	3.30 _a	3.35 _a	3.37 _a	3.48 _a	3.36 _a	0.65
Dismissing	3.18 _a	3.36 _{ab}	3.78 _{bc}	3.80 _{bc}	4.00 _c	10.45*
Father						
Secure	4.50 _a	4.26 _{ac}	3.77 _b	3.85 _{bc}	3.51 _b	15.92*
Fearful	2.51 _a	2.72 _a	3.33 _b	3.54 _b	3.52 _b	16.59*
Preoccupied	3.14 _a	3.11 _a	3.07 _a	3.14 _a	2.99 _a	0.61
Dismissing	3.35 _a	3.68 _{ab}	4.19 _{bc}	4.36 _{bc}	4.49 _c	15.89*

Note: Means in the same row with different subscripts are significantly different $p < .05$. * Denotes significant F values at $p < .001$.

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and to fathers ($F(16, 1763.402) = 4.349, p < .001$). There were no significant main effects for criminal behaviour, or significant interaction effects. The means for the significant main effects can be found in Table 2. From examining the means, I concluded that participants who reported greater adversity reported higher insecure-avoidant and lower secure attachment to mothers and fathers. As demonstrated in Figure 1, insecure-avoidant attachment refers specifically to dismissing and fearful attachment and is characterized by negative views of others. Although not statistically significant, there appeared to be a pattern. Individuals who reported greater than three adverse experiences reported significantly lower secure attachment, higher dismissing attachment, and higher fearful attachment to mothers and fathers. I compared the results to individuals reporting one or fewer adverse experiences. Individuals reporting fewer adversities reported significantly higher secure attachment, lower dismissing attachment, and lower fearful attachment to mothers and fathers. There were no significant differences between mean reported preoccupied attachment scores to mothers and fathers.

Study 2

Data Screening

Study 2 was a direct replication of Study 1, with the only difference being sample population. Study 1 was conducted with a student sample while Study 2 was conducted with a community sample. As the purpose of Study 2 was to be a direct replication of the analyses in a different sample, the processes and analyses are identical to Study 1. Prior to completing the proposed analyses, I screened participants' data for completeness. See Figure 3. A new variable called *use?* was created and coded as either 1 or 0. A code of 1

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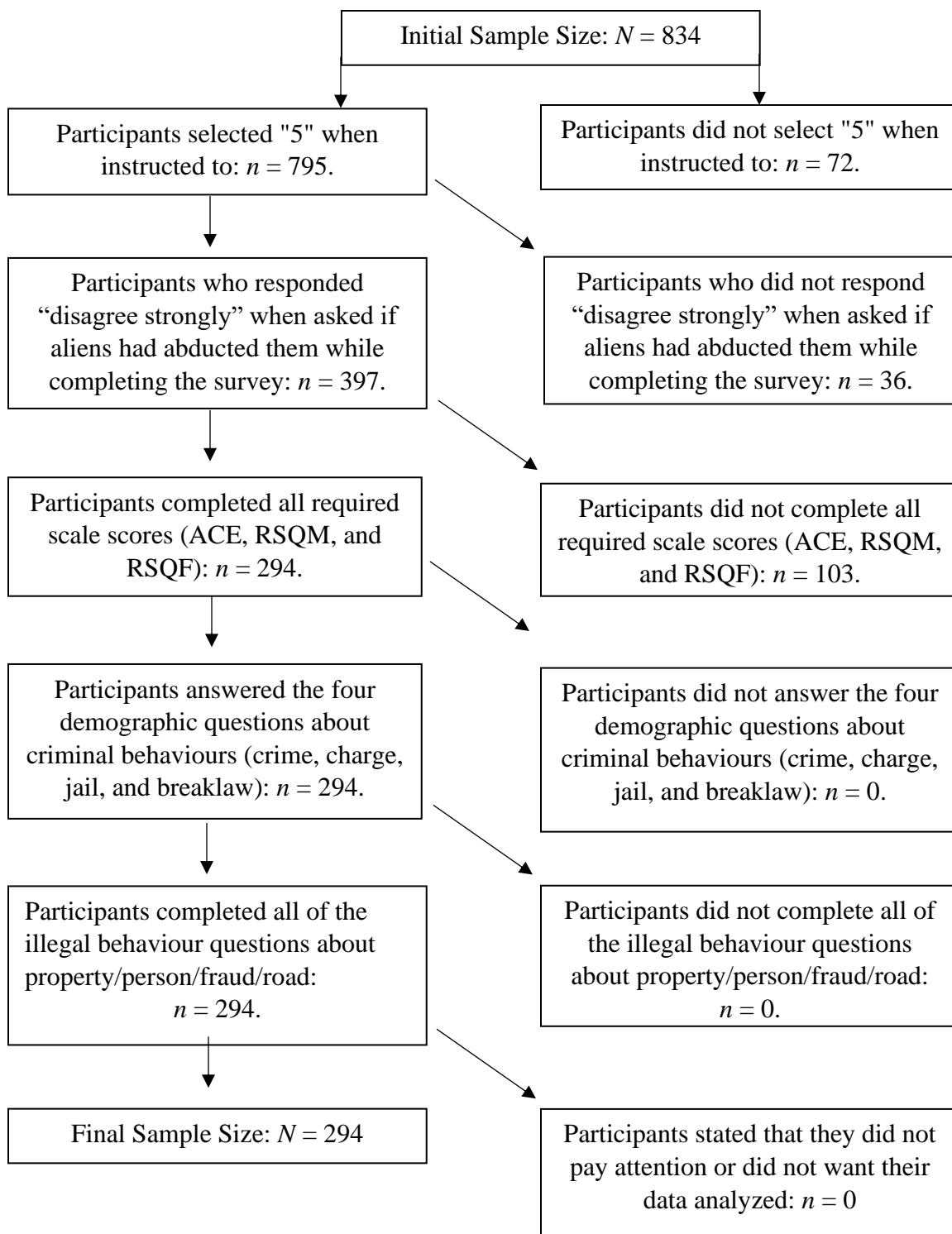


Figure 3. Decision Tree Outlining Participant Screening Process for Study 2

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indicated that participants had paid attention while completing the survey, completed all the measures, and consented to their data being used ($n = 294$). A code of 0 indicated that at least one of several conditions were not met ($n = 542$). The decision tree in Figure 3 outlines the process I used to screen participants to identify useable data. First, I screened participants to determine their degree of attention when completing the surveys. Of the initial sample of 834 surveys, approximately half ($n = 433$) of the participants selected '5' when they were asked to and approximately half ($n = 401$) did not select '5'. I excluded the data from analyses for participants who did not answer the 'pick 5' question appropriately. Next, participants were asked if aliens had abducted them while completing the surveys. Participants who did not "disagree strongly" with the alien abduction statement were assumed to be inattentive or dishonest when completing the surveys. For this question, 397 participants responded appropriately by selecting "disagree strongly" and their data were maintained. The 36 participants who did not respond appropriately had their data excluded from analyses.

Second, I screened participant data to determine if participants did not complete at least one of the scales included in the survey (See Figure 3). I considered a scale to be incomplete if participants did not respond to a minimum of 70% of the questions for each scale measure. Of the 397 participants remaining at this stage, 294 participants had completed all three of the scale scores (RSQ-M, RSQ-F, and ACE10) and their data were maintained. However, 103 participants did not complete all the required scale scores and their data were removed from use in the analyses. Specifically, 91 participants did not answer a minimum 70% of the RSQ-F questions and an additional 12 participants did not

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answer 70% the RSQ-F questions. After excluding participants who did not complete the attachment scales there were no additional participants who did not complete the ACE10.

The next step in the decision tree (see Figure 3) was to screen participants' data for completion of responses related to criminal behaviours. Of the remaining 294 participants whose data had been maintained at this stage, all of them answered the four demographic questions about criminal behaviours and completed all the illegal behaviour questions about property, person, fraud, and road. For this stage of the screening process the 294 participants had their data maintained. The last step in my screening process was to confirm that participants consented to their data being used. The remaining participants ($n = 294$) all stated that they paid attention and consented to having their data included. See Figure 3.

To test for differences among participants whose data were included in the analyses compared to participants whose data were excluded from analyses, I compared the two groups. First, I performed Pearson chi-squared tests for categorical data. There were no significant differences among participants in the use versus non-use group across: gender, ethnicity, relationship status, education level, employment status, engagement in crime, conviction of crime, and incarceration for crime. Next, I performed independent t-tests to test for differences among participants in the use versus non-use group across age and the continuous data. Significant differences were found across the age of participants in the use versus non-use group, $t(713) = 3.95, p < .001$. Interestingly, consistent with Study 1, individuals who completed all the surveys (used in the final sample; $n = 294$) were younger than individuals who did not complete all the surveys (not used in the final sample; $n = 543$). There were no significant differences among

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participants in the use versus non-use group across the scale scores for attachment to mothers, attachment to fathers, or adverse experiences apart from reported secure attachment to fathers, $t(373) = 2.29, p < .001$. Individuals who completed all the surveys (used in the final sample; $n = 294$) reported lower secure attachment to fathers when compared to individuals who did not complete all the surveys (not used; $n = 543$).

Method

Participants

In Study 2, a community sample was recruited from online social media platforms (Facebook, Reddit, Twitter, and Instagram) by way of voluntary sign up (See Appendix H). Five-hundred-forty-three participants were not included in the analyses due to incomplete survey data (see Data Screening). See Table 3 for the demographic data for the final sample ($N = 294$). See Appendix A for participant demographics survey. Location data was available for 292 participants. The majority were located in USA (43%) or Canada (32%), but participants were also located in Europe (8.6%), UK (8.6%), Australia (2.4%), and South and Central America (2%).

Measures

Trent Relationship Scales Questionnaire (T-RSQ, Scharfe, 2016; See Appendix B & C). As in Study 1, participants' attachment representations were measured using the Trent Relationship Scales Questionnaire (T-RSQ; Scharfe, 2016). Once again, both attachment to mothers and fathers was assessed. See Table 4 for the means, standard deviations, and reliability scores for the T-RSQ. Participants were instructed to respond to the T-RSQ questionnaire based on the extent to which each item best described their feelings towards each attachment figure (mothers and fathers).

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Similar to Study 1, this questionnaire contains 10 items for each of the four subscales (secure, fearful, preoccupied, and dismissing) rated on a 7-point Likert scale ranging from 1 (*not at all like me*) to 7 (*very much like me*).

Table 3
Participant Demographic Information for Study 2

Variable	<i>n</i>	%
Gender		
Female	214	72.79
Male	60	20.41
Non-Binary	15	5.10
Other	5	1.70
Ethnicity		
White/Caucasian	218	74.15
First Nations	8	2.72
South Asian/East Asian/South East Asian/Filipino/West Asian	35	12.00
Latin American/Hispanic/West Indian/Black	23	7.82
Other	10	3.40
Relationship Status		
Single, not seeing someone/Single, seeing someone	115	39.11
In a committed relationship/In an open relationship	82	27.89
Engaged/Married/Common-Law	87	29.59
Separated/divorced	10	3.40
Sexual Orientation		
Heterosexual	175	59.52
Homosexual/Gay/Lesbian/Bisexual	72	24.49
Pansexual/Queer	22	7.48
Questioning/Asexual/Other	25	8.50
Highest level of education		
High school or less	39	13.27
Some college or university	95	32.31
Completed college/undergraduate degree/graduate degree	160	54.41
Employment status		
Employed full-time/employed part-time	167	56.80
Unemployed	25	8.50
Student employed part-time/full-time/not employed	71	26.18
Retired/Homemaker/Other	31	10.30

Note. *N* = 294.

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Table 4

Tables of Means, Standard Deviations and Reliability Scores for the T-RSQ and the ACE

	<i>M</i>	<i>SD</i>	<i>Range</i>	<i>α</i>
Attachment to Mothers				
Secure	4.11	1.12	1.00-7.00	0.72
Fearful	3.26	1.42	0.00-6.56	0.86
Preoccupied	3.17	0.84	1.00-6.00	0.52
Dismissing	4.22	1.36	1.00-7.00	0.86
Attachment to Fathers				
Secure	3.70	1.19	1.00-7.00	0.75
Fearful	3.37	1.40	1.00-7.00	0.83
Preoccupied	3.01	0.92	1.00-6.00	0.55
Dismissing	4.39	1.49	1.00-7.00	0.88
ACE	2.32	2.01	1.00-10.00	0.89

Note. *N* = 294. ACE = Adverse Childhood Experiences

me) to 7 (*very much like me*). Participants' responses to items were used to calculate a score on each of the four subscales within the T-RSQ: secure (e.g., *I am comfortable having others depend on me*), preoccupied (e.g., *I worry that others do not value me as much as I value them*), fearful (e.g., *I am somewhat uncomfortable being close to others*), and dismissing (e.g., *I am comfortable without close emotional relationships with my closest or best friend*).

Adverse Childhood Experiences Questionnaire (ACE, Felitti et al., 1998; Ports et al., 2016; See Appendix D). As in Study 1, assessment of adversity was evaluated using the adverse childhood experiences questionnaire (Felitti et al., 1998; Ports et al., 2016). See Table 4 for the means, standard deviations, and reliability of the ACE. The first 10 questions asked participants to report “yes” or “no” to various questions that address the home environment in which they lived during the first 18 years of their life (e.g., *was anyone in your household depressed or mentally ill?*). Researchers found that individuals reporting four or more adverse experiences had higher reported health risks than individuals reporting none, one, two, and three adverse experiences

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(Felitti et al., 1998). Therefore, participants reporting four or more experiences of adversity were grouped together ($n = 64$). Participants reporting none ($n = 56$), one ($n = 67$), two ($n = 58$), and three ($n = 49$) adverse experiences maintained their individual grouping.

Criminal Behaviour (See Appendix E). Assessment of criminal behaviour was evaluated following the same procedures outlined in Study 1. Participants were asked if they have committed behaviours associated to acts against property, person, public order, and road safety. If a participant responded “yes” to any of the above four questions they were placed in the “criminal behaviour” group ($n = 183$). If a participant unanimously responded “no” to the questions they were placed in the “no criminal behaviour” group ($n = 111$). Participants who responded “yes” to any of the four questions were provided the opportunity to share insight into their criminal behaviours. A text box invited participants to provide further details about the rationalization of their criminal behaviours.

Procedure

Study 2 was visible to any individual who explored any of the four social media platforms where the survey was posted (Facebook, Reddit, Twitter, and Instagram) (See Appendix H). Posting on social media platforms began March 17th, 2021, and concluded on July 27th, 2021, when the minimum number of participant responses was met. In total the survey was posted in 39 Facebook groups, four Instagram pages, three Twitter pages and 70 Reddit pages. On each social media platform, the posts were made to groups that were considered public and non-private. Participation was not compensated. The estimated length of time for the survey was one hour and participants could complete it wherever they had access to the internet. To begin the study, participants were provided

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the informed consent form which had to be agreed to prior to being able to view or answer any of the questions (see Appendix I). Upon completion of the survey participants were provided a feedback form (See Appendix J). Trent University's Research Ethics Committee approved this study.

Results

To test whether there were attachment differences for participants who reported their level of engagement in criminal behaviours and early childhood adverse experiences, I first examined the dependant variables. To replicate Study 1, the data were analyzed using MANOVA. Prior to conducting my statistical analyses, I tested the assumptions for MANOVA-multivariate normality and homogeneity of covariances and found no concerns.

Consistent with analyses in Study 1, I conducted a 5x2 MANOVA using the four attachment dimensions as dependant variables, with experiences of adversity (5 groups) and criminal behaviour (2 groups) as the independent variables. Once again, my hypotheses were partially supported. Consistent with the results of Study 1, there was a significant main effect for adversity when examining the mean scores of the attachment representations to mothers ($F(16, 849.942) = 2.378, p = .002$) and to fathers ($F(16, 840.777) = 3.067, p < .001$). Interestingly, there was a trend for the effect of criminal behaviour which did approach significance that was not found in Study 1. As in Study 1, there were no significant interaction effects. The means for the significant main effect of adversity groups can be found in Table 5. Participants who reported greater adversity reported higher insecure-avoidant and lower secure attachment to mothers and fathers. Although not statistically significant, there appeared to be a pattern where individuals

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reporting greater than three adverse experiences reported significantly lower secure attachment, higher dismissing attachment, and higher fearful attachment to mothers and fathers. I compared the results to individuals reporting one or fewer adverse experience. Individuals reporting fewer adversities reported significantly higher secure attachment, lower dismissing attachment, and lower fearful attachment to mothers and fathers.

Table 5

Average scores on attachment dimensions for the significant main effect of adversity

	0 ACE (n = 56)	1 ACE (n = 67)	2 ACE (n = 58)	3 ACE (n = 49)	4+ACE (n = 64)	<i>F</i>
Mother						
Secure	4.93 _a	4.20 _{ac}	4.14 _{ac}	4.07 _{ac}	3.61 _{bc}	6.87*
Fearful	2.69 _a	3.33 _{ab}	3.06 _a	3.28 _{ab}	3.94 _b	6.62*
Preoccupied	3.10 _a	3.19 _a	3.17 _a	3.22 _a	3.16 _a	0.17
Dismissing	3.51 _a	4.18 _{ac}	4.23 _{ac}	4.19 _{ac}	4.88 _{bc}	8.30*
Father						
Secure	4.41 _a	3.76 _b	3.74 _b	3.47 _b	3.15 _b	9.96*
Fearful	2.50 _a	3.25 _b	3.40 _{bc}	3.71 _{bc}	4.00 _c	10.49*
Preoccupied	3.10 _a	2.94 _a	3.00 _a	3.15 _a	3.00 _a	0.35
Dismissing	3.48 _a	4.35 _b	4.58 _b	4.68 _b	4.85 _b	8.09*

Note: Means in the same row with different subscripts are significantly different $p < .05$. * Denotes significant *F* values at $p < .001$.

The final part of my analysis for Study 2 was to examine participants' insights into criminal behaviours. Of the 294 participants whose data were maintained for analysis, 183 participants reported having engaged in at least one type of criminal behaviour. Examples of crimes included acts against property, person, public order, and road safety. If a participant responded "yes" to any of the above four questions they were provided a text box and instructed to voluntarily provide insight into why they may have engaged in their criminal behaviours. Majority (85%) of the participants provided insights that allowed me to identify themes for engaging in criminal behaviour. By examining the statements provided by participants, I listed themes that re-occurred and in doing so identified five themes. Several participants reported engaging in criminal

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behaviour while exploring boundaries, meeting survival needs, responding to peer pressure, navigating mental health conditions, and because they simply could.

First, participants reported that they engaged in criminal behaviour while exploring boundaries. For example, one participant stated that “the reasons for the activity were the intentionally harmless exploration of boundaries and seeking spaces to explore with friends” (participant scores: secure = 5.6 (mother), 6 (father); fearful = 1.3 (mother), 1.3 (father); preoccupied = 3.7 (mother), 3.7 (father); dismissing = 2.7 (mother), 2 (father) ; ACE = 0). As Bowlby (1988) stated, exploring boundaries is typical of development and can be indication of secure attachment relationships. Another participant stated that as “a small child [they] didn’t know any better [and] it didn’t cause harm to anyone” (participant scores: secure = 5.7 (mother), 4.1 (father); fearful = 1.3 (mother), 3.1 (father); preoccupied = 3.5 (mother), 4.5 (father); dismissing = 2.2 (mother), 2.9 (father) ; ACE = 4). In the examples provided, both participants reported higher secure attachment compared to insecure-avoidant attachment. Participants who reported engagement in criminal behaviour while exploring boundaries also reported lower secure and higher insecure-avoidant attachment. However, a belief that they may not be caught was the most common provided response by participants who reported a desire to explore boundaries and lower secure attachment. Examples of statements included, “[there was a] very low likelihood of being caught, everybody else was doing it, [and my] personal view is that the crime is minor and should not be a crime” (participant scores: secure = 3.6 (mother), 3.8 (father); fearful = 5.3 (mother), 5.5 (father); preoccupied = 3.3 (mother), 2.2 (father); dismissing = 4.7 (mother), 4.5(father) ; ACE = 1).

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Next, participants reported that they engaged in criminal behavior as a mechanism of survival. For some participants survival included acquiring necessities such as food or shelter:

I've shoplifted in the past (rarely, but still did it) for items that I needed. My parents wouldn't provide them to me or money to get them. They did everything they could to keep me from earning my own money and would take what I did earn. There was no one I could ask to get these things for me, so I had to get them for myself. Survival. I needed to eat (participant scores: secure = 3 (mother), 3.5 (father); fearful = 5.3 (mother), 5.3 (father); preoccupied = 2.2 (mother), 2.6 (father); dismissing = 6.2 (mother), 5.8 (father); ACE = 4).

For other participants survival-based decisions included acting in response to physical dangers. In response to an assault, one participant disclosed that they were convicted of “causing bodily harm [that] was in self defense of a mugging” (participant scores: secure = 3 (mother), 3.5 (father); fearful = 5.3 (mother), 5.3 (father); preoccupied = 2.2 (mother), 2.6 (father); dismissing = 6.2 (mother), 5.8 (father) ; ACE = 4). Other participants stated that they acted in response to preventing physical abuse, “I was forced to speed by my father. He hit me when I didn't follow him closely” (participant scores: secure = 3.4 (mother), 3.7 (father); fearful = 5.3 (mother), 5 (father); preoccupied = 4.6 (mother), 4.5 (father); dismissing = 4.3 (mother), 4.8 (father) ; ACE = 1) or sexual abuse, “I stole a door lock to help protect my younger sibling and I from being molested” (participant scores: secure = 3.3 (mother), 3.2 (father); fearful = 3.2 (mother), 3.6 (father); preoccupied = 2.6 (mother), 2.9 (father); dismissing = 5.7 (mother), 5.7 (father) ; ACE = 4).

Next, participants stated they engaged in criminal behaviour while being peer pressured. Participants made statements that, “[while in] High school and elementary school I did a few minor dumb things. The biggest thing I did was... simply because I

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wanted to be accepted and not feel alone anymore” (participant scores: secure = 3.2 (mother), 3.9 (father); fearful = 3.1 (mother), 3.2 (father); preoccupied = 3.7 (mother and father); dismissing = 5.2 (mother), 3.7 (father); ACE = 0). Another participant stated that they engaged in illegal substance use because “many of my classmates were doing them and it was easier to make friends if I joined in. I was experiencing undiagnosed mental health issues (bipolar disorder type 2, general anxiety disorder, ADD, PTSD), childhood trauma, a recent violent sexual assault, and substance abuse issues” (participant scores: secure = 5 (mother), 4.7 (father); fearful = 3.3 (mother), 3.3 (father) ; preoccupied = 3.5 (mother), 2.5 (father); dismissing = 5 (mother), 5 (father) ; ACE = 4).

The previous participant statement also demonstrated the theme of engaging in criminal behaviour while navigating complex mental health needs. Participants stated they stated they engaged in criminal behaviour while experiencing a mental health crisis or as a result of common symptoms associated to a diagnosis. For example, one participant stated that they “felt suicidal and the adrenaline kick helped me to want to stay alive” (participant scores: secure = 3.6 (mother), 4.8 (father) ; fearful = 3.3 (mother), 3.8 (father) ; preoccupied = 2.3 (mother), 2.2 (father); dismissing = 5 (mother), 4.3 (father) ; ACE = 1). Another participant stated that they had engaged in criminal behaviour while navigating addiction:

I grew up in a household where almost all individuals struggled with addiction, as a recovering addict I also made some poor choices that often led me to not only drug related charges but theft also. I would steal from friends and family to help settle dealer debts, get my next fix. [I am] in recovery now, I look back and regret a lot of my choices and the relationships lost because of that. Two years clean. Addiction changes your priorities and often times you do not consider how your actions hurt others (participant scores: secure = 2.9 (mother), 4.4 (father); fearful = 3.1 (mother), 3.8 (father); preoccupied = 3.3 (mother), 3.7 (father); dismissing = 4.8 (mother), 5.2 (father); ACE = 4).

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Lastly, several participants stated that they engaged in criminal behaviour either because “they didn’t care” (participant scores: secure = 4.9 (mother), 2.5 (father) ; fearful = 3.3 (mother), 4.8 (father) ; preoccupied = 2.2 (mother), 2.2 (father); dismissing = 2.1 (mother), 5.9 (father) ; ACE = 3) or because “they could” (participant scores: secure = 3.3 (mother), 2.8 (father) ; fearful = 3.2 (mother), 3.6 (father) ; preoccupied = 1.6 (mother), 2.1 (father); dismissing = 6.1 (mother), 6.4 (father) ; ACE = 4). Interestingly, across each of the presented themes the participants varied in their reports of adverse childhood experiences, attachment to mothers, and attachment to fathers.

Discussion

Summary of Findings

The purpose of the present study was to further understand the development of criminal behaviour through examining individuals’ early life experiences. Specifically, the first goal was to examine the associations between individuals’ reports of early childhood adversity, engagement in criminal behaviours, and attachment to mothers and fathers. The second main goal of my research was to replicate findings in two diverse groups. Study 1 explored the associations between attachment, adversity, and criminal behaviour in a student population. Study 2 was a direct replication of the processes in Study 1 using a community population. Results from both Study 1 and Study 2 were consistent and indicated that there was an association between adversity and attachment. Participants who reported greater adversity compared to participants reporting fewer adverse experiences reported higher insecure-avoidant attachment and lower secure attachment. The results from both Study 1 and Study 2 did not support my remaining hypotheses. There were no existing patterns to highlight that engagement in criminal

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behaviour was associated to participants' reported attachment to mothers and fathers.

Additionally, there were no reported attachment differences when examining adversity and criminal behaviour collectively.

In Study 1, I examined my hypotheses using a student sample which does present some challenges to generalizability when exploring attachment research. Students tend to be disproportionately higher in their reports of secure attachments compared to the general public (Bernier et al., 2004; Dereli & Karakus, 2011). This occurrence is due to the academic nature and environment of post-secondary education requiring individuals to be willing to explore beyond their secure base (Bartholomew & Horowitz, 1991). Researchers have suggested that individuals who attend post-secondary education and remain enrolled beyond their first semester, report higher secure attachment than peers who do not remain enrolled (Dereli & Karakus, 2011). To address the limitation of generalizability to a greater population, I replicated Study 1 using a community sample in Study 2. The participants in Study 1 and Study 2 were predominately female (Study 1 = 83.56%, Study 2 = 72.79%), and Caucasian (Study 1 = 65.76%, Study 2 = 74.15%). The largest difference between my two sample populations was that the entirety of my student sample had attended post-secondary education and majority of the community sample (67.69%) had not. As in Study 1, Study 2 explored the associations of attachment, adversity, and criminal behaviour.

For both Study 1 and Study 2, I first hypothesized that participants who had experienced multiple adversities throughout their early life would report higher insecure and lower secure attachment. Bowlby (1982) first discussed adversity in the context of individuals growing up in single parent households, foster homes, blended families, or

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homes with an ill family member. He proposed that individuals having experienced any of the listed forms of adversity were increasingly likely to experience poorer quality relationships with their parents. As expected, there were specific attachment differences when comparing the number of adverse experiences that participants in Study 1 reported. Specifically, participants who reported greater adversity reported higher insecure-avoidant attachment and lower secure attachment. The findings of Study 2 mirrored the findings of Study 1. Participants who reported having experienced multiple early childhood adversities reported higher insecure-avoidant attachment and lower secure attachment. In both Study 1 and Study 2, the data from these participants was compared to participants who reported few adverse childhood experiences and higher reported secure attachment to mothers and fathers. Interestingly, in Study 1 and Study 2 when I compared across the number of participants reported adverse experiences there were no differences in participants reported preoccupied attachment scores.

In addition to attachment and adversity, I also independently examined attachment and criminal behaviour. In his initial observations of juvenile youth, Bowlby (1944) proposed that responses to distress may be associated with criminal behaviour. Bowlby suggested that criminal behaviour develops as a result of negative internal working models. Individuals with negative internal working models often view the world as comfortless and unpredictable, a cornerstone of insecure attachment. Therefore, I had predicted that poorer quality parent relationships, in other words higher reported insecure attachment, may be associated with a higher likelihood that individuals may have engaged in criminal behaviour. In contrast, I predicted that participants reporting higher secure attachment to mothers and fathers may be more likely to report abiding by the law.

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Unexpectedly, my results were inconsistent with majority of the theoretical research I based my predictions on.

The results of Study 1 and Study 2 did not support my hypotheses that there was an association between attachment and criminal behaviour. However, the results of Study 2 indicated a trend for the effect of criminal behaviour which did approach significance. In Study 2, participants who responded “yes” to any of the four questions exploring criminal behaviours were provided the opportunity to share some qualitative information. A text box invited participants to provide further details about the rationalization of their criminal behaviours. To explore the trend towards significance between criminal behaviour and attachment representations, I examined the participants’ insights.

Interestingly, participants’ insights into why they engaged in criminal behaviours corresponded to characteristics and motivations suggested by attachment researchers (cf. Bartholomew & Horowitz, 1991). In the four-category model of attachment, individuals who have higher reported secure attachment have an expectation that others are responsive and caring. Additionally, they are increasingly likely to explore beyond their secure base (Bowlby, 1968). In both Study 1 and Study 2, participants who reported engagement in criminal behaviour and reported higher secure attachment stated that they engaged in such behaviours as “harmless exploration of boundaries” (participant scores: secure = 5.6 (mother), 6 (father); fearful = 1.3 (mother), 1.3 (father); preoccupied = 3.7 (mother), 3.7 (father); dismissing = 2.7 (mother), 2 (father) ; ACE = 0). The participants’ statement suggests that benign intentions may contribute to engagement in behaviours that are deemed criminal from a legal perspective.

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Next, fearful attachment is a combination of negative self and other views. It is characterized by a fear of rejection (Bartholomew & Horowitz, 1991). Participants who reported engagement in criminal behaviour and higher insecure-avoidant attachment, such as higher fearful attachment, stated they did so as a result of peer pressure. One participant stated that “[while in] high school and elementary school I did a few minor dumb things. The biggest thing I did was... simply because I wanted to be accepted and not feel alone anymore” (participant scores: secure = 3.2 (mother), 3.9 (father); fearful = 3.1 (mother), 3.2 (father); preoccupied = 3.7 (mother and father); dismissing = 5.2 (mother), 3.7 (father); ACE = 0). Another participant stated that they engaged in illegal substance use because “many of my classmates were doing them and it was easier to make friends if I joined in” (participant scores: secure = 5 (mother), 4.7 (father) ; fearful = 3.3 (mother), 3.3 (father) ; preoccupied = 3.5 (mother), 2.5 (father); dismissing = 5 (mother), 5 (father) ; ACE = 4). Both statements demonstrate a fear of rejection.

Lastly, dismissing attachment is characterized by the combination of a positive view of self and a negative view of others. Individuals who have higher reported dismissing attachment tend to disregard how actions affect others and prioritize the outcome for themselves (Bartholomew & Horowitz, 1991). One participant stated that on many occasions they engaged in criminal activity for self gain:

It was either a necessity at the time i.e.) I didn't want to leave my car downtown and even though illegal I know I can drive with a few in me. Someone wouldn't leave me alone and calling the cops would have taken too long, so I simply lifted the douche up and tossed him. He learned, simple. Pirating video games from time to time to kill my boredom, If I enjoy the game, I will actually purchase so think of it as renting first. I always think of the pros and cons before I do anything and unfortunately sometimes committing a crime to prevent bad things from happening has to happen (participant scores: secure = 4.6 (mother), 3.4 (father); fearful = 4.3 (mother), 4.7 (father); preoccupied = 2.4 (mother), 4.5 (father); dismissing = 6.3 (mother), 5.7 (father); ACE = 3).

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The inclusion of participants' rationales for engaging in criminal behaviour helped support my findings. Specifically, the results of Study 1 and Study 2 suggested that there was evidence to support an association between attachment and early childhood adversity. The statements of participants reflected what attachment researchers have suggested about predictable outcomes for individuals who experience early childhood adversity. For example, Bowlby (1976) stated attachment forms despite poor care which is a cornerstone of insecure attachment formation. Furthermore, Bowlby suggested that maladaptive behaviour is a common outcome of an individual who had experienced early childhood adversity and developed insecure attachment relationships.

The childhood events that Bowlby discussed also paralleled the childhood events in Felitti et al.'s (1988) study of early childhood adversity. For example, both Bowlby (1982) and Felitti et al. (1988) discussed household dysfunction, physical abuse, and sexual abuse as experiences that contributed to adverse outcomes in adulthood. In their study of health outcomes, Felitti et al. (1988) demonstrated a critical adversity cut off of four adverse experiences. The researchers stated higher adversity (i.e., 4+ events) contributed to poorer life outcomes in adulthood when compared to outcomes associated to fewer adversities. Examples of poorer life outcomes included alcoholism, substance abuse, and depression. Like Felitti et al. (1988), the results of Study 1 and Study 2 both demonstrated a threshold of adverse experiences related to significant differences in attachment scores. Specifically, participants who reported having experienced three or greater adversities in childhood reported higher fearful and higher dismissing attachment scores to mothers and fathers. In contrast, participants reporting fewer than two adversities in childhood reported higher secure attachment to their mothers and fathers.

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As I previously mentioned, in Study 1 and Study 2 there were no differences in participants' reports of preoccupied attachment. A plausible explanation for preoccupied attachment having no impact on the association between participants' reports of adverse experiences and attachment may be related to validity of the measure. Attachment researchers have recently proposed that preoccupied attachment may be measuring two varied factors (Laverdière et al., 2019; Scharfe, 2016). Specifically, Scharfe (2016) reminded researchers that each of the four categories are a combination of anxiety and approach tendencies and demonstrated that preoccupied attachment is more reliably measured by considering these two dimensions. Similarly, Raby et al. (2021) reported that, for infant attachment, there were two latent factors within preoccupied attachment. In conclusion, it may be that preoccupied attachment is not reliably measured in this study. Alternatively, it may be that preoccupied or anxious attachment simply is not associated with criminal behaviour.

In Study 1 and Study 2, criminal behaviour was defined specifically by whether an individual had committed a certain action. The types of crime I examined included criminal acts against property, person, public order, and road safety. Each of the categories of criminal behaviour were discussed by researchers in the literature I examined. For example, Walters and DeLisi (2013) stated that participants who were convicted of vandalism and theft reported higher insecure attachment. Vandalism and theft were provided as examples of crimes committed against property to participants who completed the research survey. Individuals convicted of assault also reported higher insecure attachment (Wampler & Downs, 2009). Assault and violence were provided as examples of crimes against people to the current research participants. However, majority

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of the research I examined did not measure criminal behaviour using criminal convictions. For example, Lindberg et al. (2014) explored developmental models of crime and measured criminal behaviour based on observed displays of antisocial behaviour such as aggression. Savage (2014) also used observations of behaviours as a measure of criminal behaviour. The researchers stated that displays of behaviours that lacked empathy towards others reflected evidence of deviance.

The contrast in how I measured criminal behaviour compared to how other researchers measured in the studies I reviewed may explain the difference in research findings. This method of measuring criminal behaviour did not take into consideration criminogenic thinking patterns. In other words, the measure of criminal behaviour I used did not account for participants' reasons for behaviour. The participants may have engaged in criminal activities without criminal intent. The insights provided by participants highlighted a principal factor related to the measurement of criminal behaviour that I discuss in the limitations section below.

Limitations

From examining the findings of Study 1 and Study 2, it was evident that there were limitations within the study design. Specifically, there were limitations of measurement, research sample, and research method. Through examining the existing research on attachment, adversity, and criminal behaviour there are a few possible rationales for the divergence with my research findings and the research findings in which my hypotheses were based.

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Measurement

The greatest limitation was related to how I defined and measured the variables. First, I measured attachment using Bartholomew and Horowitz's (1991) four category model of attachment. However, majority of the research I examined measured attachment using proxy variables such as parental responsivity and attentiveness (Corcoran & McNulty, 2018; Erozkan, 2016; Felitti et al., 2019; Murphy et al., 2016) or measured attachment using categorical language (Baer & Martinez, 2006; Barbaro et al., 2018; Savage, 2014; Van Assche et al., 2019). Through examining how I measured the variable of attachment compared to other researchers, I identified a possible explanation for my unexpected findings. For example, Van Assche et al. (2019) measured attachment using the dichotomy of anxiety and approach dimensions. In examining the findings, I stated that underlying factors of anxiety and approach tendencies may explain the continued lack of statistical significance related to preoccupied attachment.

Next, I defined criminal behaviour according to the Criminal Code of Canada. However, majority of the literature I explored was published in the United States of America whose laws differ from Canada. Additionally, not a single study that used a community sample explored criminal behaviour using law-based terminology. Instead of asking participants if they had engaged in criminal behaviour many researchers used self-report assessments of antisocial cognition (Walters et al., 2013; Wampler & Down, 2010) and deviance (Lindberg et al., 2014). Using different operational definitions and measures to assess the same variables has yielded different findings in other research disciplines (Slife et al., 2016).

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Research Sample

Another limitation of my research related to the sample population. Majority of the existing research on criminal behaviour is conducted with forensic samples. However, the current study explored the associations of attachment, adversity, and criminal behaviour in a student and community sample. I made theoretical predictions about the association of attachment and criminal behaviour using research conducted with different groups than I expected to explore. Although studying the same phenomenon in different groups is not inherently wrong, it may have contributed to differences in my research findings compared to the research findings I used to formulate my hypotheses. Specifically, all the research I examined suggested that participants who reported higher adversity and engagement in criminal behaviour would have reported higher insecure attachment. However, findings from both Study 1 and Study 2 did not support that hypothesis. The only association that was supported was that participants who reported higher adversity reported higher insecure-avoidant attachment.

The debate of researchers using targeted populations compared to other sample populations has been of interest to researchers in the clinical field of psychology (Hammer, 2011; Kyrios et al., 2018). Hammer (2011) stated that without transparency around sample demographics, researchers may risk assuming that the phenomenon of interest is the same across diverse groups of people. However, when examining factors such as race, culture, socioeconomic status, and clinical versus nonclinical representations it is evident across literature that it may not be appropriate to expect the findings to be consistent across these diverse groups. A common example relates to the research of mental health diagnosis and symptomology in clinical and non-clinical

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samples. For example, researchers have suggested that studying depression in clinical and non-clinical samples yields different outcomes (Kyrios et al., 2018). Specifically, participants in clinical samples report higher consistency of symptomology over longer periods of time when compared to persistent symptomology of non-clinical participants. Additionally, when examining the phenomenon of interest most participants in clinical samples report higher rates of occurrence than participants in non-clinical samples. Therefore, it is possible that examining research on criminal behaviour when not using a forensic population may have similar effects.

In examining the demographics of my participants compared to the demographics of typical offender groups there are major differences. For example, majority of the participants in Study 1 and Study 2 were Caucasian (Study 1 = 65.76%, Study 2 = 74.15%). In Canada, majority of incarcerated participants are not Caucasian (45.8%) (Jeudy, 2021). For example, Indigenous people are disproportionately represented in Canada's judicial system (Chartrand, 2019). Therefore, to have generalizability of my findings exploring contributing factors to criminal behaviour, it may be pertinent to include participants of greater demographic diversities and include specific offender populations.

Research Method

An added limitation to my research and online recruitment in general is related to sample method. Online research using social media platforms has significant advantages to accessing large populations of people to take part in research surveys. However, researchers have cautioned that with online data collection there is the risk of "bots" (Yarrish et al., 2019). Online bots are able to complete online forms automatically and

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repeatedly at a faster rate than actual participants. In Study 1, 590 participants of the original 867 had their data maintained and used for analyses. In Study 2, only 294 participants of the original 834 had their data maintained and used for analyses. The difference in useable data across Study 1 and Study 2 may be a result of bots in the online social media platforms where I posted the research survey for Study 2. It is possible that the small number of community respondents whose data were useable is a result of majority of the original 834 respondents being bots. To address this in future, I may suggest researchers continuing participant recruitment using online social media platforms until they have a large enough sample to account for bots.

Yarrish et al. (2019) stated that using attention checking and trap questions are beneficial to removing bot data. Prior to conducting any analyses, I screened participant data. In the data screening for Study 1 and Study 2, I removed participants who did not “select 5” when instructed to. Additionally, I removed participants who did not respond “disagree strongly” when asked if aliens had abducted them while completing the survey. The first of the listed statements is an example of attention checking and the second statement an example of trap questions. Both questions would have been able to find and remove any bot participation. Therefore, it is possible that the method of recruitment using online social media platforms where bots frequent may account for the difference in sample population across Study 1 and Study 2.

Future Directions

The field of research exploring attachment, adversity, and criminal behaviour is relatively new. In my initial database search the oldest found publication exploring all three variables simultaneously was dated from the early 2000s (Butler, et al., 2007). As it is a

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new field of inquiry both novel research that supports hypotheses and research that does not support hypotheses are essential. Although my research did not support my claim that adversity and attachment contribute to criminal behaviour collectively, there was a trend towards participants who had engaged in criminal activity having reported greater adversity and higher insecure-avoidant attachment. In examining the participants' insights related to engagement in criminal behaviours a few added variables were identified. For example, some participants stated they engaged in illegal activity to protect others from harm. One participant stated that they, "stole a door lock to help protect my younger sibling and I from being molested" (participant scores: secure = 3.3 (mother), 3.2 (father); fearful = 3.2 (mother), 3.6 (father); preoccupied = 2.6 (mother), 2.9 (father); dismissing = 5.7 (mother), 5.7 (father) ; ACE = 4). This statement is one of many that highlights the importance of acknowledging the underlying thought patterns and reasons why an individual may engage in criminal behaviour. Therefore, future research exploring attachment, adversity, and criminal behaviour may require examining criminogenic thinking patterns and rationales for engagement in criminal behaviour.

When examining participants' insights into the rationale for engaging in criminal behaviour, many participants stated they engaged in illegal behaviours to fit in with peers. Bowlby (1982) proposed that as individuals grow up primary attachment figures transition away from parents. In a study exploring adult attachment relationships, Murphy et al. (2014) stated that, in adolescence, primary attachment figures become peer and romantic partner based. Researchers have suggested that criminal behaviour, particularly youth deviance, often exists despite secure parent relationships. This occurrence is due to additional attachment relationships becoming primary while individuals explore their

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identity (Baer & Martinez, 2006; Barbaro et al., 2018 Savage, 2014). Therefore, if this research were to be replicated, I recommend examining the association between attachment, adversity, and criminal behaviour using additional attachment relationships. Specifically, I would explore attachment to peers and to romantic partners. Exploring peer attachment relationships may explain why individuals engaged in criminal behaviour “in order to fit in with peers” (participant scores: secure = 3.2 (mother), 3.9 (father); fearful = 3.1 (mother), 3.2 (father) ; preoccupied = 3.7 (mother and father) ; dismissing = 5.2 (mother), 3.7 (father); ACE = 0) reported secure attachment to parents.

The goal of the current study was to examine contributing factors that lead to the development of criminal behaviour. However, when I examined the findings there were challenges related to how I measured criminal behaviour. To address the limitation of measurement, future research requires the development of a consistent and structured measurable tool for criminal behaviour. I measured criminal behaviour using legally documented definitions within the *Criminal Code of Canada*. However, majority of the research I explored when formulating my hypotheses conflated criminal behaviour with proxies of social deviance. For example, antisocial cognition and aggression were used synonymously by researchers to explore determinants of deviance (Lindberg et al., 2014; Wampler & Down, 2010). Wherever possible, researchers should avoid using proxies of human behaviour to identify criminal engagement. As is challenging with research involving human behaviour, avoidance of proxies may not always be the case. However, I believe that transparency and consistent language should be used. Measuring criminal behaviour using the criminal code allows for less ambiguity when describing developmental determinants of criminality. Future researchers may want to examine the

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validity of using *Criminal Code* definitions as synonymous with proxy variables.

Examining validity of the measures may allow researchers to identify if there are differences in findings related to how attachment and adversity contribute to deviant outcomes.

An added measurement limitation that I identified was related to the measure of preoccupied attachment. Across both Study 1 and Study 2 there were no statistically significant associations between adversity or criminal behaviour and preoccupied attachment. Attachment researchers have continued to experience preoccupied attachment as a challenge when conducting research. Raby et al. (2021) found that there were two latent factors within preoccupied attachment related to the approach and avoidance tendencies as suggested by Scharfe (2016). Therefore, future research may want to examine my findings using the approach-anxiety factors related to preoccupied attachment. Specifically, I would suggest conducting a replication and examining the findings related to preoccupied attachment using a factor analytic method. Using factor analysis may allow researchers to identify if there are significant differences in participants' reported engagement in criminal behaviours that can be accounted for based on approach and anxiety tendencies. Additionally, replication in general is an important aspect within research of all disciplines when making theoretical determinations.

Replication may also provide insight to explain why the findings of Study 1 and Study 2 were consistent despite striking differences in participants' reports of adverse childhood experiences and criminal behaviour. In Study 1, participants had greater diversity in their reports of none ($n = 202$), one ($n = 130$), two ($n = 117$), three ($n = 52$), and four or more ($n = 89$) adverse experiences. This was compared to Study 2 whose

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participants reported less diversity in group membership with none ($n = 56$), one ($n = 67$), two ($n = 58$), three ($n = 49$), and greater than four ($n = 64$) adverse experiences being reported. Study 1 and Study 2 also differed in participants reported engagement in criminal behaviour. For example, only 29% of participants in Study 1 reported engaging in criminal behaviour compared to the 62% who reported criminal behaviour in Study 2. Interestingly, despite having two sample populations with vastly different experiences the findings of Study 1 and Study 2 were similar. If the current study were to be replicated it may provide researchers opportunity to discern if what occurred in my study was chance occurrence or novel research related to the development of criminal behaviour.

If my research were to be replicated, I would encourage researchers to include a forensic sample population. As Hammer (2011) stated, participant demographics are important when examining human behaviour from a research perspective. To support a theory, researchers need to ensure that the phenomenon of interest occurs similarly within diverse groups of people. As a result, it is important that research be conducted within targeted sample groups that are representative of variables of interest. Conducting a replication using a student, community, and forensic population may provide researchers a more comprehensive understanding of the associations between attachment, adversity, and criminal behaviour. If the results were consistent across all three sample groups, it may highlight plausible and testable events that explain why I was unable to support all my hypotheses. If the results were inconsistent when examined in a forensic population it may require researchers to examine additional confounding factors that may contribute to the association of attachment, adversity, and criminal behaviour.

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One added area of research that researchers may want to examine when exploring the associations of attachment, adversity and criminal behaviour includes a more thorough understanding of adversity. For example, Baglivio et al. (2020) stated that exposure to adverse experiences alone was not a significant factor when exploring the combined associations of attachment, adversity, and criminal behaviour. The researchers suggested that prolonged and chronic exposure to adversity was associated to criminal behaviour and attachment. In other words, a consistent environment of adversity was necessary to be found impactful. The publication of this research occurred after data collection for the current study had already begun. However, if I had this knowledge prior to collecting data I may have asked participants to report additional details. Specifically, I may have asked what experiences occurred after the adverse event. For example, I may ask participants if the adverse event was reoccurring and if they had support and resources to navigate the experience. The publication of newer research that is not as wholly aligned with the research I based my predictions on highlights that research continually evolves. Other factors when explored more may provide greater insight into the combined associations of attachment, adversity, and criminal behaviour.

Implications

Although the results of the current study were unexpected there are valuable implications that can be applied to understanding the development of criminal behaviour. Specifically, understanding what the common lived experiences are of individuals who do engage in criminal behaviour can help inform approaches to preventative and rehabilitative measures. Beginning with preventative measures the findings of Study 1 and Study 2 indicated a trend. Participants who had engaged in criminal behaviour

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reported higher adversity and higher insecure-avoidant attachment relationships.

Preventing early adverse experiences in an individual's life may not be possible.

However, encouraging the development of secure attachment relationships may be possible. Bowlby (1976) stated that secure attachment relationships can exist beyond primary caregivers such as parents. For example, researchers have suggested that secure attachment relationships can exist with extended family including grandparents, or aunts and uncles, teachers, and coaches (Robertson et al., 2021). The importance secure attachment relationships with adults who are not parents is the foundation of many community-based prevention programs.

Community-based prevention programs often exist for individuals who are of lower socioeconomic status, experience mental health difficulties or addictions, and have a family history of involvement within the criminal justice system (Robertson et al., 2021). Many of these programs fall within the realm of non-profit organizations that are severely underfunded and understaffed. Researchers have demonstrated that individuals who meaningfully engage with community-based programs are less likely to become involved in the criminal justice system compared to those who do not (Lindberg et al., 2014; Wampler & Down, 2010). Meaningful engagement requires an environment that allows individuals to have a sense of worthiness and an expectation that others are responsive and caring. In other words, interventions require providing individuals with opportunities to develop secure attachment relationships (Bartholomew & Horowitz, 1991). Therefore, there is enough evidence to further support the need to continue providing access and funding to community-based prevention programs to vulnerable individuals.

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The consistency in findings across Study 1 and Study 2 also provide implications for exploring rehabilitative measures that reduce recidivism. Recidivism is defined as the tendency for an individual convicted of a criminal offence to reoffend (Fazel & Wolf, 2015). A group of researchers conducted a review of global recidivism and stated that, in Canada, 44% of offenders commit a second offence within two years. In applying the best practices for reducing recidivism, the researchers stated that one of the critical components to addressing recidivism is providing adequate resources and support to justice involved individuals (Fazel & Wolf, 2015). Specifically, people who are incarcerated require access to mental health supports and supportive living. A cornerstone of providing resources and support to individuals who have engaged in criminal behaviour is trauma informed care which is defined as the assumption all individuals have experienced a history of trauma or adversity (Robertson et al., 2021).

Majority of individuals who reported engagement in criminal behaviour have experienced a lifetime of criminality and adversity. Therefore, the application of trauma informed care with incarcerated individuals allows for professionals to understand illegal behaviours as survival-based choices that were often deviant. For example, an individual who has committed an offence may have done so in response to a traumatic event. This was demonstrated by many of the participant insights throughout Study 2. Researchers have suggested that the successful application of trauma informed practices requires the development of secure therapeutic relationships. The findings of the current study further highlight the need to develop secure relationships in any intervention. In general, the present study shed light on the importance of fostering early and supportive relationships

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with all individuals to foster development of positive life outcomes despite potential early negative life experiences.

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Appendix A

Demographic Information

Your age: _____

Indicate your gender:

- Male
- Female
- Non-binary
- I prefer _____
- Prefer not to disclose

Ethnicity (please fill in all that apply)

- White/Caucasian (please specify: _____)
- First Nations, Métis, Inuit (please specify: _____)
- East Asian (e.g., Chinese, Japanese, Korean; please specify: _____)
- South East Asian (e.g., Cambodian, Indonesian, Laotian, Vietnamese; please specify: _____)
- Filipino
- Latin American/Hispanic (please specify: _____)
- West Indian (e.g., Guyanese, Trinidadian; (please specify: _____)

- Black (e.g., African, Haitian, Jamaican, Somali; please specify: _____)
- Arab / West Asian (e.g., Armenian, Egyptian, Iranian, Lebanese, Moroccan; please specify: _____)
- Other (please specify) _____

Growing up, what was the primary language(s) spoken at home? _____

Relationship Status (check option that best describes your *current* situation):

- Single, not seeing someone
- Single, seeing someone
- In a committed relationship
- In an open relationship
- Engaged
- Married/ Common law/ Domestic Partnership
- Separated/divorced
- Widowed

How long have you been in the relationship? _____

Is this a sexual relationship?

- Yes
- No

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Are you living together?

- Yes
- No

Sexual Orientation:

- Heterosexual
- Homosexual/Gay/Lesbian
- Bisexual
- Pansexual
- Queer
- Questioning
- Asexual
- Other _____

What is your highest level of education? (choose all that apply)

- High school or less
- Some college or university
- Completed college
- Complete undergraduate degree
- Completed a professional degree (e.g., BEd, LLB, MD)
- Completed a graduate degree (e.g., MA, MSc, PhD)

What is your current employment status?

- Employed full-time (30 or more hours/week)
- Employed part-time (less than 30 hours/week)
- Unemployed (out of work but looking for work)
- Student employed part-time
- Student employed full-time
- Student not employed
- Retired
- Homemaker
- Other (please specify) _____

What type of contact do you **currently** have with your biological/adopted mother (Check all that apply)? NOTE to REB members, if participants parent is deceased, we will not ask T-RSQ questions later in the survey

- No contact, my mother is deceased
- No contact, my mother is living but I do not have contact with her
- Letters or emails
- Skype
- Phone calls or texts
- Visits during the day

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- Overnight visits
- I live with my mother
- My mother lives far away but I have visited her at least once in the past year

If applicable How often do you have contact with your biological/adopted mother **now**?

- Never or rarely
- Once year or less
- Twice/year
- Three or four times each year
- At least once month
- At least once week
- Daily or almost every day

What type of contact do you **currently** have with your biological/adopted father (Check all that apply)? NOTE to REB members, if participants parent is deceased, we will not ask T-RSQ questions later in the survey

- No contact, my father is deceased
- No contact, my father is living but I do not have contact with him
- Letters or emails
- Skype
- Phone calls or texts
- Visits during the day
- Overnight visits
- I live with my father
- My father lives far away but I have visited him at least once in the past year

If applicable How often do you have contact with your biological/adopted father **now**?

- Never or rarely
- Once year or less
- Twice/year
- Three or four times each year
- At least once month
- At least once week
- Daily or almost every day

What is your parent's relationship status now?

- Never married
- Married or common-law
- Separated
- Divorced
- Widowed

Were you separated from one or both of your parents for at least one month at anytime before you finished your high school education?

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- Yes No

If yes, they will get the following questions (see below). If they say NO, they will be taken to the T-RSQ-mother (see page 3)

Were you separated from your mother for at least one month at any time before you finished your high school education?

- Yes No

If yes, they will get the questions below; if no they will be taken to father separation questions (see page 3)

Were you separated from your mother because (check all that apply)

- Your mother was in jail
 Your mother was deployed (in the armed forces)
 Your mother was working
 Your mother was hospitalized
 Your mother went to live somewhere else
 You were in jail
 You were away at school
 You were away at camp
 You were hospitalized
 You went to live somewhere else
 - i. with relatives
 - ii. with friends
 - iii. in a foster home
 - iv. in a group home Other _____

Were you separated from your father for at least one month at any time before you finished your high school education?

- Yes No

If yes, they will get the questions below; if no they will be taken to next questions (see below)

Were you separated from your father because (check all that apply)

- Your father was in jail
 Your father was deployed (in the armed forces)
 Your father was working
 Your father was hospitalized
 Your father went to live somewhere else
 You were in jail
 You were away at school
 You were away at camp

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- You were hospitalized
- You went to live somewhere else
 - with relatives
 - with friends
 - in a foster home
 - in a group home
- Other _____

Have you ever committed a crime that would be considered going against a formally-enacted law?

- Yes
- No
- I do not wish to respond to this question

Have you ever been charged by the police for committing a crime that would be considered going against a formally-enacted law?

- Yes
- Yes, but I was not found to be guilty and/or the charges were dropped
- No
- I do not wish to respond to this question

If applicable, have you ever been incarcerated?

- Yes
- No
- I do not wish to respond to this question

1	2	3	4	5	6	7
never okay			sometimes okay			always okay

Using the scale above, how likely are you to agree with the following statement –
 _____ In some circumstances, I think it is okay to commit a crime that would be considered going against a formally-enacted law.

Using the scale below rate how likely are you to agree with the following statements about COVID health directives

1	2	3	4	5	6	7
always			sometimes			never

- _____ 1. How likely are you to wear a face mask when indoors (e.g., inside campus buildings or inside stores)?
- _____ 2. How likely are you to wear a face mask when outdoors (e.g., walking in your neighbourhood, waiting for the bus)?
- _____ 3. How likely are you to adhere to 2 metre social distancing requirements when indoors (e.g., inside campus buildings or inside stores)?

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- _____ 4. How likely are you to adhere to 2 metre social distancing requirements when outdoors (e.g., walking in your neighbourhood, waiting for the bus)?
- _____ 5. How likely are you to use hand sanitizers when entering and leaving a building/store/restaurant?
- _____ 6. How likely are you to adhere to the current guidelines around the size of your social bubble?
- _____ 7. How likely are you to adhere to the current shelter in place guidelines?

Using the sliding scale from 0 to 100% rate how likely are you to agree with the following statements about COVID health directives.

- _____ 1. What % of time did you stay home last week? (range from 0 to 100% of the time)
- _____ 2. How likely are you to get a flu vaccine this year? (range from 0 to 100% likely)
- _____ 3. How likely are you to get a COVID vaccine when it is available? (range from 0 to 100% likely)

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Appendix B

Trent Relationship Scales Questionnaire (T-RSQ ; Scharfe, 2016) – Mother

Please read each of the following statements and rate the extent to which it describes your feelings about your **relationship with your mother (or your most significant mother figure)** on the 7-point scale. Please think about your relationship with your mother, past and present, and respond in terms of how you generally feel in this relationship. If you do not have a mother or mother-figure please skip to the next survey.

1	2	3	4	5	6	7
Not at all			Somewhat			Very much
Like me			Like me			Like me

- _____ 1. I find it difficult to depend on my mother.
- _____ 2. It is very important to me to feel independent from my mother.
- _____ 3. I find it easy to get emotionally close to my mother.
- _____ 4. I worry that I will be hurt if I allow myself to become too close to my mother.
- _____ 5. I am comfortable without a close emotional relationship with my mother.
- _____ 6. I want to be completely emotionally intimate with my mother.
- _____ 7. I worry about being alone.
- _____ 8. I am comfortable depending on my mother.
- _____ 9. I find it difficult to trust my mother completely.
- _____ 10. I am comfortable having my mother depend on me.
- _____ 11. I worry that my mother does not value me as much as I value her.
- _____ 12. It is very important to me to feel self-sufficient from my mother.
- _____ 13. I prefer not to have my mother depend on me.
- _____ 14. I am somewhat uncomfortable being close to my mother.
- _____ 15. I find that my mother is reluctant to get as close as I would like.
- _____ 16. I prefer not to depend on my mother.
- _____ 17. I worry about having my mother not accept me.
- _____ 18. I tend to let problems build up with my mother before dealing with them.
- _____ 19. I would like to spend more time with my mother, but she does not have enough time for me.
- _____ 20. It took a long time for me to become close to my mother.
- _____ 21. I am affectionate in my relationship with my mother.
- _____ 22. I am too busy to form a close relationship with my mother.
- _____ 23. I tend to be emotionally expressive in my relationship with my mother.
- _____ 24. I am honest and open in my relationship with my mother.
- _____ 25. I am shy in social situations with my mother.
- _____ 26. When I disagree with my mother, I find that she is often defensive.
- _____ 27. I do not disclose personal information to my mother.
- _____ 28. It is difficult to accept advice from my mother because her views are so different from mine.
- _____ 29. I like to deal with conflict with my mother immediately, regardless of how long it takes to resolve the conflict.

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- _____ 30. I am usually a good judge of how my mother is feeling.
- _____ 31. I cry easily with my mother.
- _____ 32. I handle conflicts differently with my mother.
- _____ 33. I do not express my feelings openly for fear that my mother might disagree with me.
- _____ 34. I believe that it is a waste of time to argue/disagree with my mother.
- _____ 35. I am comfortable crying in front of my mother.
- _____ 36. Many of the problems in my relationship with my mother are primarily my fault.
- _____ 37. When I am upset, I go to my mother for comfort or support.
- _____ 38. I do not go to my mother when I am upset because I like to deal with problems on my own.
- _____ 39. Although I want to be accepted, sometimes I feel like I do not fit in with my mother.
- _____ 40. I wish that I could be more open in my relationship with my mother, but I do not know how to change.
- _____ 41. I can go to my mother to help me feel better when I am upset or when something bad happens.
- _____ 42. I can count on my mother to always be there for me and care about me no matter what.
- _____ 43. I need to see or talk regularly with my mother.
- _____ 44. I would be upset if I knew that I was not going to see my mother for a long time.
- _____ 45. I am anxious and I worry when I cannot have immediate contact with my mother.
- _____ 46. I know that my mother will always accept me, no matter what I say or do.
- _____ 47. My resolution of conflicts with my mother changes depending on the situation.
- _____ 48. My resolution of conflicts with my mother is always the same – we always do the same thing when we disagree.
- _____ 49. I prefer to deal with problems on my own so I do not go to my mother for support or advice.
- _____ 50. I am comfortable not having a close emotional relationship with my mother.

Who did you think about when you completed the questions above? (Select all that apply)

- Your biological mother
- Your adopted mother
- Your step mother
- Your foster mother
- A relative who fulfilled a mother role (specify who): _____

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Appendix C

Trent Relationship Scales Questionnaire (T-RSQ ; Scharfe, 2016) - Father

Please read each of the following statements and rate the extent to which it describes your feelings about your **relationship with your father (or your most significant father figure)** on the 7-point scale. Please think about your relationship with your father past and present, and respond in terms of how you generally feel in this relationship. If you do not have a father or father-figure, please skip to the next survey.

1	2	3	4	5	6	7
Not at all			Somewhat			Very much
Like me			Like me			Like me

- _____ 1. I find it difficult to depend on my father.
- _____ 2. It is very important to me to feel independent from my father.
- _____ 3. I find it easy to get emotionally close to my father.
- _____ 4. I worry that I will be hurt if I allow myself to become too close to my father.
- _____ 5. I am comfortable without a close emotional relationship with my father.
- _____ 6. I want to be completely emotionally intimate with my father.
- _____ 7. I worry about being alone.
- _____ 8. I am comfortable depending on my father.
- _____ 9. I find it difficult to trust my father completely.
- _____ 10. I am comfortable having my father depend on me.
- _____ 11. I worry that my father does not value me as much as I value them.
- _____ 12. It is very important to me to feel self-sufficient from my father.
- _____ 13. I prefer not to have my father depend on me.
- _____ 14. I am somewhat uncomfortable being close to my father.
- _____ 15. I find that my father is reluctant to get as close as I would like.
- _____ 16. I prefer not to depend on my father.
- _____ 17. I worry about having my father not accept me.
- _____ 18. I tend to let problems build up with my father before dealing with them.
- _____ 19. I would like to spend more time with my father, but he does not have enough time for me.
- _____ 20. It took a long time for me to become close to my father.
- _____ 21. I am affectionate in my relationship with my father.
- _____ 22. I am too busy to form a close relationship with my father.
- _____ 23. I tend to be emotionally expressive in my relationship with my father.
- _____ 24. I am honest and open in my relationship with my father.
- _____ 25. I am shy in social situations with my father.
- _____ 26. When I disagree with my father, I find that he is often defensive.
- _____ 27. I do not disclose personal information to my father.
- _____ 28. It is difficult to accept advice from my father because his views are so different from mine.
- _____ 29. I like to deal with conflict with my father immediately, regardless of how long it takes to resolve the conflict.

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- _____ 30. I am usually a good judge of how my father is feeling.
- _____ 31. I cry easily with my father.
- _____ 32. I handle conflicts differently with my father compared to others.
- _____ 33. I do not express my feelings openly for fear that my father might disagree with me.
- _____ 34. I believe that it is a waste of time to argue/disagree with my father.
- _____ 35. I am comfortable crying in front of my father.
- _____ 36. Many of the problems in my relationship with my father are primarily my fault.
- _____ 37. When I am upset, I go to my father for comfort or support.
- _____ 38. I do not go to my father when I am upset because I like to deal with problems on my own.
- _____ 39. Although I want to be accepted, sometimes I feel like I do not fit in with my father.
- _____ 40. I wish that I could be more open in my relationship with my father, but I do not know how to change.
- _____ 41. I can go to my father to help me feel better when I am upset or when something bad happens.
- _____ 42. I can count on my father to always be there for me and care about me no matter what.
- _____ 43. I need to see or talk regularly with my father.
- _____ 44. I would be upset if I knew that I was not going to see my father for a long time.
- _____ 45. I am anxious and I worry when I cannot have immediate contact with my father.
- _____ 46. I know that my father will always accept me, no matter what I say or do.
- _____ 47. My resolution of conflicts with my father changes depending on the situation.
- _____ 48. My resolution of conflicts with my father is always the same – we always do the same thing when we disagree.
- _____ 49. I prefer to deal with problems on my own so I do not go to my father for support or advice.
- _____ 50. I am comfortable not having a close emotional relationship with my father.

Who did you think about when you completed the questions above? (Select all that apply)

- Your biological father
- Your adopted father
- Your step father
- Your foster father
- A relative who fulfilled a father role (specify who): _____

Is this the first time you have completed this survey?

- Yes, this is the first time I have completed these surveys
- No, I have completed surveys like these surveys before
- I am not sure, they do seem familiar

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Appendix D

Adverse Childhood Experiences Questionnaire (ACE; Felitti et al., 1998; Ports et al., 2016)

For the following questions, please respond to them with either a yes or a no

During your first 18 years of life:

- _____ 1. Did you live with anyone who was a problem drinker or an alcoholic?
 _____ 2. Did you live with anyone who used street drugs?
 _____ 3. Was anyone in your household depressed or mentally ill?
 _____ 4. Did anyone in your household attempt to commit suicide?
 _____ 5. Were your parents ever separated or divorced?
 _____ 6. Did anyone in your household ever go to prison?
 _____ 7. Touch or fondle your body in a sexual way?
 _____ 8. Have you touched their body in a sexual way?
 _____ 9. Attempt to have any type of sexual intercourse (oral, anal or vaginal) with you?
 _____ 10. Actually, have any type of sexual intercourse with you (oral, anal, or vaginal) with you?

For the following questions, please rate them on the following 5-point scale.

Sometimes parents or other adults hurt children. While you were growing up, during your first 18 years of life, how often did a parent, stepparent, or adult living in your home:

1	2	3	4	5
Never	Once or twice	Sometimes	Often	Very Often

- _____ 1. Swear at you, insult you, or put you down?
 _____ 2. Act in a way that made you afraid that you might be physically hurt?
 _____ 3. Actually push, grab, shove, slap you or throw something at you?
 _____ 4. Hit you so hard that you had marks or were injured?
 _____ 5. Pick 5 for this question

Sometimes there are physical blows that occur between parents. While you were growing up in your first 18 years of life, how often did your father (or stepfather) or mother's boyfriend/girlfriend do any of these things to your mother (or stepmother)?

1	2	3	4	5
Never	Once or twice	Sometimes	Often	Very Often

- _____ 1. Push, grab, slap or throw something at her?
 _____ 2. Kick, bite, hit her over at least a few minutes?
 _____ 3. Repeatedly hit her over at least a few minutes?

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_____ 4. Threaten her with a knife or gun, or use a knife or gun to hurt her?

While you were growing up in your first 18 years of life, how often did your mother (or stepparent) or father's girlfriend/ boyfriend do any of these things to your father (or stepfather)?

1	2	3	4	5
Never	Once or twice	Sometimes	Often	Very Often

- _____ 1. Push, grab, slap or throw something at him?
 _____ 2. Kick, bite, hit him over at least a few minutes?
 _____ 3. Repeatedly hit him over at least a few minutes?
 _____ 4. Threaten him with a knife or gun, or use a knife or gun to hurt him?

For the following questions, please rate them on the following 5-point scale

While you were growing up, during your first 18 years of life:

1	2	3	4	5
Never true	Rarely true	Sometimes true	Often true	Very Often

- _____ 1. You didn't have enough to eat.
 _____ 2. You know there was someone to take care of you and protect you.
 _____ 3. Your parents were too drunk or high to take care of the family.
 _____ 4. You had to wear dirty clothes.
 _____ 5. There was someone to take you to the doctor if you needed it.
 _____ 6. There was someone in your family who helped you to feel important or special.
 _____ 7. You felt loved.
 _____ 8. People in your family looked out for each other.
 _____ 9. People in your family felt close to each other.
 _____ 10. Your family was a source of strength and support.
 _____ 11. Pick 5 as the answer to this question.

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Appendix E

Illegal Behaviour Questions

Have you ever committed an act against the right to property that you could have been arrested and/or convicted of if you had been caught? (e.g., stealing)

- Yes
- No
- I do not know if what I have done would be considered committing a property offence
- Prefer not to disclose

Have you ever committed an act against a person or their reputation that you could have been arrested and/or convicted of if you had been caught? (e.g., physical aggression, bodily harm)

- Yes
- No
- I do not know if what I have done would be considered committing an offence against a person
- Prefer not to disclose

Have you ever committed an act against public order that you could have been arrested and/or convicted of if you had been caught? (e.g., fraud or piracy)

- Yes
- No
- I do not know if what I have done would be considered committing an offence against public order
- Prefer not to disclose

Have you ever committed an act against road safety that you could have been arrested and/or convicted of if you had been caught? (e.g., driving under the influence, excessive speeding)

- Yes
- No
- I do not know if what I have done would be considered committing an offence against road safety
- Prefer not to disclose

Please consider the illegal behaviours that you reported above. In the textbox below, please elaborate if you have any insights into the reasons for engaging in these behaviours. We do not want details about the illegal activity, just the reasons why it may have happened (note to REB members -- these data are completely anonymous, and we will not be able to identify participants).

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NOTE to REB members. Participants will see this message, at the end of the survey on a separate page.

I was abducted by aliens while completing this survey.

- Yes
- No

Thank you for completing this survey. We rely on participants to read the survey questions carefully and answer to the best of their ability. In other words, the results of our study are only as good as the responses we receive from our participants. We understand that people sometimes find it difficult to give online survey questions their complete attention throughout and to answer the questions carefully and honestly. You can help us maximize the quality and integrity of our data--and thus our results--by responding honestly to the question below.

Is this the first time you have completed this survey?

- Yes, this is the first time I completed this survey
- No, I complete this survey earlier

Given the attention you gave to this survey, and how carefully and thoughtfully you answered the questions, please answer the following question. Did you read the survey questions carefully and answer to the best of your ability?

- Yes, I did.
- No, I did not read the questions carefully or answer honestly.
- Yes, I did but I would rather you did not use my data in your final analyses.

NOTE to REB members. When participants answer the question above, they will be automatically taken to the participant feedback.

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Appendix F

Student Information and Consent Form

**Consent Agreement**

You are being invited to participate in a research study. Please read this consent form so that you understand what your participation will involve. Before you consent to participate, ask any questions you need to be sure you understand what your participation will involve.

Title: The price of good behaviour: The effects of individual differences of attachment, childhood adversity and stress symptoms on behaviour

Faculty Researcher: Elaine Scharfe, PhD., Department of Psychology, 705-748-1011 ext. 7354, escharfe@trentu.ca

Psychology MSc student researchers

Hannah Cahill (hannahcahill@trentu.ca), Scottie Curran (scottiecurran@trentu.ca), Emmilie Lindon (emmilielindon@trentu.ca)

If you have any questions or concerns about the research, please feel free to contact Dr. Elaine Scharfe, 705-748-1011 ext. 7354 or escharfe@trentu.ca

THE PURPOSE OF THIS RESEARCH:

It has long been accepted that personality influences our tendency to follow the rules. For example, researchers using the “Big 5” personality traits (you can find an explanation of this model of personality in your first year PSYC textbook) have demonstrated that individuals with higher levels of openness to experience and conscientiousness and lower levels of neurotism are more likely to “obey the rules”. In this study, we will expand the examination of these findings by exploring the effect of a number of additional variables that we believe may also be important. First, we believe that the quality of our close relationships may be important. In particular, our view of ourselves and our view of others may be associated with a disregard of some rules or our perceptions of breaking rules. These effects may be exacerbated depending on our childhood experiences (e.g., abuse or neglect) or our current symptoms (e.g., feelings of distress after a particularly traumatic experience). The purpose of this study is to explore how our views of our relationships, our childhood experiences, and our feelings of distress influence our

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tendency to follow the rules. Some of the data will be analyzed by the student researchers (listed above) to fulfill the requirements of their MSc thesis.

WHAT YOU WILL BE ASKED TO DO:

If you volunteer to participate in this study, you will be asked to complete an online survey which will include demographic questions and surveys about your relationships with others, including your relationships with your parents and adverse events that may have happened in your childhood, your feelings and perceptions of criminal acts, your COVID related behaviour, and your current distress and symptoms of stress following traumatic events. If you would like to review these questionnaires before you decide to participate email escharfe@trentu.ca for a copy of the survey. It will take approximately 50-55 minutes to complete the online questionnaires but will be open and available to you for up to 4 hours in case you need a break.

WHAT ARE THE POTENTIAL BENEFITS FOR YOU AS A PARTICIPANT:

Some people report that the survey gets them to think about their behaviors, feelings, experiences in childhood, and their relationships with others more deeply than they might do otherwise and that may be a benefit or a risk depending on the nature of your behaviours and relationships. You may also feel that the opportunity to participate in research and learn a bit more about the research process is a benefit to you. I cannot guarantee, however, that you will receive any benefits from participating in this study.

WHAT ARE THE POTENTIAL RISKS TO YOU AS A PARTICIPANT:

There is no expected harm from completing these questionnaires, however, the purpose of the study requires us to ask about potentially unsavory parts of humanity. For instance, some questions in this survey will ask you about your participation or beliefs about antisocial and/or illegal behaviours. It is important to note that all survey responses are confidential unless required by law (i.e., a subpoena). Furthermore, some of the questions about your relationships or your childhood experiences may be viewed as personal and potentially triggering for some participants. You can skip any question(s) without penalty and may stop participating at any time. While there are no known harms associated with reporting your experiences on a survey, a small possibility exists that some participants may experience an emotional reaction when completing the questionnaire.

CONFIDENTIALITY:

Your responses will be completely confidential and you can skip any question(s) that you are not comfortable answering. Your data will be identified by a SONA id number and that number will be recorded on all data – your name will never be linked to your SONA data for the purposes of this study. No information regarding your identity will ever appear in any reports, presentations or publications. All data from the questionnaires will be completely anonymous and will be stored in a computer file using the SONA ID number for identification purposes. As stated above, your responses will remain confidential and will not be revealed to anyone unless required by law (i.e., a subpoena).

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Electronic questionnaire data will be hosted on the servers of the survey hosting company Qualtrics. Qualtrics servers are both anonymous and secured/encrypted (i.e., via Transport Layer Security and an Intrusion Detection System). Qualtrics will not make this data available to any party unless required by a valid court order, search warrant, or subpoena. The data stored on Qualtrics is anonymous and could not be linked to your identity without considerable assistance from Trent University (which, once again would require a subpoena). During data analysis, the researchers will store the anonymous data on a secured/password-protected computer. This anonymous data will be analyzed by members of Dr. Scharfe's research lab which will include Dr. Scharfe, her research collaborators, and graduate and undergraduate students working in her research lab. The anonymous data will be kept for at least five years after publication of the results and may be archived if required by journals for publication. All of the data will be used for research and teaching purposes by Dr. Elaine Scharfe. Some of the data will be used by Hannah Cahill, Scottie Curran, and Emmilie Lindon for their MSc thesis. The data will be published in journals, chapters, books or other venues."

INCENTIVES FOR PARTICIPATION:

Participants who continue to the end of the survey will be awarded 1% credit bonus toward their psychology course grade. If you stop the survey part way through, your credit will be prorated but if you continue to the end of the survey, regardless of how many questions you complete, you will receive the full credit.

COSTS TO PARTICIPATION:

There are no costs associated with participation in this study with the exception of your time. Participants who continue to the end of the survey will be awarded 1% credit bonus toward their psychology course grade. If you stop the survey part way through your credit will be prorated but if you continue to the end of the survey, regardless of how many questions you complete, you will receive the full credit.

VOLUNTARY PARTICIPATION AND WITHDRAWAL:

Participation in this study is completely voluntary. You can choose whether to participate or not. You can refuse to answer any question or quit participating at any time and there will be no negative consequences to you whatsoever. You may stop participating at any time and you will still be given the incentives and reimbursements described above. At the end of the survey you will be given an opportunity to decide if you would like your data to be retained and analyzed. If you decide at a later date that you would not like your data to be used in this study, you will need to email that request and your SONA ID to Dr. Elaine Scharfe (escharfe@trentu.ca). Your choice of whether to participate will not influence your future relations with Trent University or the investigators (Dr. Elaine Scharfe, Hannah Cahill, Scottie Curran, and Emmilie Lindon) involved in the research.

QUESTIONS ABOUT THE STUDY:

ATTACHMENT, ADVERSITY, AND CRIMINAL BEHAVIOUR

If you have any questions about this study, you can take this opportunity to ask questions now, so that your concerns are addressed to your satisfaction before you agree to participate, by emailing Dr. Elaine Scharfe (escharfe@trentu.ca; 748-1011 ext. 7354). A summary of the data will be posted on Dr. Elaine Scharfe's website (www.attachmentmatters.ca) when the study is completed (Fall 2021). If you would like clarification regarding any part of this research, you can contact Dr. Elaine Scharfe.

This study has been reviewed by the Trent University Research Ethics Board, the study number is REB 26416. If you have questions regarding your rights as a participant in this study, please contact:

Michele J McIntosh, Chair Research Ethics Board
 c/o Office of the Vice President, Research and Innovation
 Trent University
 1600 West Bank Dr
 Peterborough, ON K9L 0G2
 705-748-1011 ext. 7896
 jmuckle@trentu.ca

CONFIRMATION OF AGREEMENT:

By agreeing to participate in this research, you are not giving up or waiving any legal right in the event that you are harmed during the research.

“I have read and given consent to completing the following questionnaire. I agree to participate in this study and I understand that by proceeding I am giving informed consent. I understand that I should print a copy of my consent form—now before I continue—for my records.”

To confirm that I agree to the consent form I will check the boxes below:

- I have read the information in this agreement;
- I have asked any questions I have about the study;
- I agree to participate in the study;
- I am aware I can change my mind and withdraw consent to participate at any time;
- I understand that these data will be used for research purposes; and
- I understand that these data will be used for educational purposes; and
- I have printed a copy of this agreement; and
- I am not giving up any legal rights by signing this consent agreement.

If you do not wish to participate, do not continue and please close your

ATTACHMENT, ADVERSITY, AND CRIMINAL BEHAVIOUR

Appendix G

Student Participant Feedback Form



Title: The price of good behaviour: The effects of individual differences of attachment, childhood adversity and stress symptoms on behaviour

Faculty Researcher: Elaine Scharfe, PhD., Department of Psychology, 705-748-1011 ext. 7354, escharfe@trentu.ca

Psychology MSc student researchers

Hannah Cahill (hannahcahill@trentu.ca), Scottie Curran (scottiecurran@trentu.ca), Emmilie Lindon (emmilielindon@trentu.ca)

If you have any questions or concerns about the research, please feel free to contact Dr. Elaine Scharfe, 705-748-1011 ext. 7354 or escharfe@trentu.ca

Participant Feedback

It has long been accepted that personality influences our tendency to follow the rules. In this study, we are particularly interested in who is likely to break the rules and why. We expect that the quality of your close relationships will be associated with your views of rules about antisocial or illegal activities and more recently COVID restrictions. In particular, our view of ourselves and our view of others may be associated with a disregard of some rules or our perceptions that it is okay to break some rules, sometimes. These effects may be exacerbated depending on your childhood experiences (e.g., abuse or neglect) or your current symptoms (e.g., feelings of distress after a particularly traumatic experience). We expect that participants with negative childhood experiences may be more likely to report a higher tolerance to some rule breaking. Similarly, your current levels of distress may also be associated with a higher tolerance with rule breaking.

If you have any questions about this study, or you would like clarification regarding any part of this research, please email Dr. Elaine Scharfe (escharfe@trentu.ca). A summary of the data will be posted on Dr. Elaine Scharfe's website (www.attachmentmatters.ca) when the study is completed (Fall 2021). If you have any problems or concerns as a result of your participation in this study, please contact Trent Research Ethics Board by either phoning Jamie Muckle at 748 1011 x 7050 or e-mailing him at jmuckle@trentu.ca

Thank you for your participation.

ATTACHMENT, ADVERSITY, AND CRIMINAL BEHAVIOUR

Suggested Readings

- Bartholomew, K., & Horowitz, L. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, *61*, 226-244. doi: 10.1037/0022-3514.61.2.226
- Götz, F. M., Gvirtz, A., Galinsky, A. D., & Jachimowicz, J. M. (2020). How personality and policy predict pandemic behavior: Understanding sheltering-in-place in 55 countries at the onset of COVID-19. *American Psychologist*, doi:10.1037/amp0000740
- Simha, A., & Parboteeah, P. K. (2019). The big 5 personality traits and willingness to justify unethical behavior—a cross-national examination. *Journal of Business Ethics*, doi:10.1007/s10551-019-04142-7

If you have experienced any distress while completing the study, personal counselling is available to all students through the Counselling Centre. Many students seek support for specific concerns related to anxiety, depression, grief, and relationship challenges. Other students come to the Centre with less clearly defined difficulties such as low motivation, poor self-image/esteem, stress, loneliness and adjustment issues, all of which can seriously interfere with one's daily functioning and academic performance. Through discussion and goal-setting, counsellors can help students to more fully understand themselves, their concerns and to learn effective coping strategies. A few sessions of individual counselling are often sufficient to find a solution or at least to view the problem from a more manageable perspective. The opportunity to speak freely about one's concerns in a confidential and non-judgemental atmosphere can provide a source of comfort and relief. Relevant referrals within the Trent and Peterborough communities can be arranged as appropriate. Group therapy and workshops on selected topics are offered throughout the year. Limited psychiatric services are also provided. To book an appointment, please call (705) 748-1386 or drop by Blackburn Hall, Suite 113.

Counselling Centre
Blackburn Hall, Suite 113
Telephone: (705) 748-1386 Fax: 705: 748-1137
E-mail: counselling@trentu.ca
appointment

Web: www.trentu.ca/counselling
Office Hours: Monday - Friday
9:00-12:00, 1:00-4:00
Please phone ahead for an

You may also find some of the resources below helpful

Kids Help Phone: www.kidshelpphone.ca

Canadian Mental Health Association: www.ontario.cmha.ca

Telehealth Ontario: This is a confidential phone service, where you can talk to a Registered Nurse for free 24 hours a day, 7 days a week. Phone Number: 1-866-797-0000

ATTACHMENT, ADVERSITY, AND CRIMINAL BEHAVIOUR

Appendix H

Social Media Platform Posting Log

Platform	Name of Group	Date Posted
Facebook	Attachment Matters	March 17 th and June 15 th 2021
Facebook	Families for Criminal Justice	March 23 rd and June 15 th 2021
Facebook	Criminal Injustice and Reform	March 23 rd and June 15 th 2021
Facebook	Justice for All	Match 17 th and June 15 th 2021
Facebook	Friends and Families of Incarcerated Persons	March 17 th and June 15 th 2021
Facebook	Criminal Behaviours	March 23 rd and June 15 th 2021
Facebook	Incarceration to Inspiration	March 26 th and June 15 th 2021
Facebook	Separated by Incarceration	March 17 th and June 15 th 2021
Facebook	Incarceration to Incorporation	March 24 th and June 15 th 2021
Facebook	Deviance Unlimited	March 23 rd and July 7 th 2021
Facebook	Deviance Forum	March 24 th and July 7 th 2021
Facebook	Sweet Sample Size	March 24 th and July 7 th 2021
Facebook	Student Survey Exchange	March 24 th and July 7 th 2021
Facebook	Survey Sharing 2020	March 23 and July 7 th 2021
Facebook	Survey Exchange and Swap 2020	March 24 th and July 7 th 2021
Facebook	Survey Only	March 24 th and July 7 th 2021
Facebook	Survey Exchange and Swap 2021	March 23 rd and July 7 th 2021
Facebook	Do My Survey	March 26 th and July 7 th 2021
Facebook	Research Survey Exchange Group	March 23 rd and July 7 th 2021
Facebook	Research Participation: Dissertation/Thesis	March 26 th and July 7 th 2021
Facebook	Survey Sharing 2020-2021	March 26 th and July 7 th 2021
Facebook	Survey Sharing: Survey Exchange	March 23 rd and July 7 th 2021
Facebook	Student Survey Swap	March 24 th and July 7 th 2021

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Facebook	Survey 4 Survey	March 26 th and July 27 th 2021
Facebook	PhD, Master (MS, MSc, MA, MBA) Support	March 26 th and July 27 th 2021
Facebook	Thesis/Survey Questionnaire Filling	March 23 rd and July 27 th 2021
Facebook	Parenting	June 6 th and July 27 th 2021
Facebook	Positive Parenting	March 25 th and July 27 th 2021
Facebook	Developmental Parenting	April 14 th and July 27 th 2021
Facebook	Survey Focus Group Canada	April 14 th and July 27 th 2021
Facebook	Rising from Adversity	April 14 th and July 27 th 2021
Facebook	Conquering Adversity	April 14 th and July 27 th 2021
Instagram	Attachment Matters	March 17 th and July 27 th 2021
Instagram	Hannah Cahill: Personal	March 17 th and July 27 th 2021
Twitter	Attachment Matters	March 17 th and July 27 th 2021
Twitter	Hannah Cahill: Personal	March 17 th and July 27 th 2021
Reddit	r/samplesize	March 17 th and July 27 th 2021
Reddit	r/science	March 17 th and July 27 th 2021
Reddit	r/psychology	March 17 th and July 27 th 2021
Reddit	r/surveyexchange	March 17 th and July 27 th 2021
Reddit	r/takemysurvey	March 17 th and July 27 th 2021
Reddit	r/studies	March 23 rd and May 7 th 2021
Reddit	r/bored	March 23 rd and May 7 th 2021
Reddit	r/traumatoolbox	March 23 rd and May 7 th 2021
Reddit	r/secondarysurvivors	March 23 rd and May 7 th 2021
Reddit	r/survivorsofabuse	March 27 th and June 3 rd 2021
Reddit	r/relationship	April 2 nd and June 5 th 2021
Reddit	r/endmassincarceration	April 2 nd and June 5 th 2021
Reddit	r/excons	April 2 nd and June 5 th 2021
Reddit	r/prison	March 27 th and June 3 rd 2021

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Reddit	r/legaladvice	March 27 th and June 3 rd 2021
Reddit	r/narcassisticparents	March 27 th and June 3 rd 2021
Reddit	r/AskReddit	April 2 nd and June 5 th 2021
Reddit	r/AsianParentStories	April 2 nd and June 5 th 2021
Reddit	r/AskParents	April 2 nd and June 5 th 2021
Reddit	r/raisedbynarcissists	April 2 nd and June 5 th 2021
Reddit	r/raisingkids	April 2 nd and June 5 th 2021
Reddit	r/AttachmentParenting	April 2 nd and June 5 th 2021
Reddit	r/attachmenttheory	March 27 th and June 3 rd 2021
Reddit	r/abuseinterrupted	April 5 th and July 9 th 2021
Reddit	r/AnxiousAttachment	April 5 th and July 9 th 2021
Reddit	r/MentalHealthUK	April 5 th and July 9 th 2021
Reddit	r/anxiety	April 5 th and July 9 th 2021
Reddit	r/malementalhealth	April 5 th and July 9 th 2021
Reddit	r/EverythingScience	April 5 th and July 9 th 2021
Reddit	r/attachment_theory	April 5 th and July 9 th 2021
Reddit	r/dismissiveavoidants	April 5 th and July 9 th 2021
Reddit	r/CPTSD	March 27 th and June 3 rd 2021
Reddit	r/psychotherapy	March 27 th and June 3 rd 2021
Reddit	r/healthanxiety	March 27 th and June 3 rd 2021
Reddit	r/mentalhealthsupport	April 5 th and July 9 th 2021
Reddit	r/braincancer	April 5 th and July 9 th 2021
Reddit	r/bad_cop_no_donut	April 5 th and July 9 th 2021
Reddit	r/crime	April 2 nd and June 5 th 2021
Reddit	r/cartels	April 2 nd and June 5 th 2021
Reddit	r/craftofintelligence	April 5 th and July 9 th 2021
Reddit	r/organizedcrime	April 5 th and July 9 th 2021

ATTACHMENT, ADVERSITY, AND CRIMINAL BEHAVIOUR

Reddit	r/terrorism	April 5 th and July 9 th 2021
Reddit	r/HumanRights	April 14 th and July 27 th 2021
Reddit	r/HumanTrafficking	April 14 th and July 27 th 2021
Reddit	r/corrections	April 14 th and July 27 th 2021
Reddit	r/OnTheBlock	April 14 th and July 27 th 2021
Reddit	r/thesis	April 14 th and July 27 th 2021
Reddit	r/gradschool	April 14 th and July 27 th 2021
Reddit	r/theft	April 14 th and July 27 th 2021
Reddit	r/Identitythief	April 2 nd and June 5 th 2021
Reddit	r/SocialJusticeInAction	April 14 th and July 27 th 2021
Reddit	r/JusticePorn	April 14 th and July 27 th 2021
Reddit	r/marijuana	April 14 th and July 27 th 2021
Reddit	r/prisonreform	April 26 th and July 27 th 2021
Reddit	r/law	April 26 th and July 27 th 2021
Reddit	r/LawCanada	April 26 th and July 27 th 2021
Reddit	r/Police	April 26 th and July 27 th 2021
Reddit	r/PoliceUK	April 14 th and July 27 th 2021
Reddit	r/forensics	April 26 th and July 27 th 2021
Reddit	r/forensicpsych	April 26 th and July 27 th 2021
Reddit	r/guiltyorinnocent	April 26 th and July 27 th 2021
Reddit	r/coldcase	April 26 th and July 27 th 2021
Reddit	r/SolvedCases	April 26 th and July 27 th 2021
Reddit	r/examinedeath	April 26 th and July 27 th 2021
Reddit	r/morbidreality	April 26 th and July 27 th 2021
Reddit	r/TraumaNerds	April 26 th and July 27 th 2021
Reddit	r/Criminology	April 26 th and July 27 th 2021

ATTACHMENT, ADVERSITY, AND CRIMINAL BEHAVIOUR

Appendix I

Community Information and Consent Form



You are being invited to participate in a research study. Please read this consent form so that you understand what your participation will involve. Before you consent to participate, ask any questions you need to be sure you understand what your participation will involve.

Title: Determinants of deviance: Exploring associations of attachment, adversity, and criminal behaviour.

Psychology MSc student researcher

Hannah Cahill, MSc candidate, Department of Psychology, Trent University, Peterborough, ON, Canada, hannahcahill@trentu.ca

Faculty Researcher: Elaine Scharfe, PhD., Department of Psychology, Trent University, Peterborough, ON, Canada, 705-748-1011 ext. 7354, escharfe@trentu.ca

If you have any questions or concerns about the research, please feel free to contact Hannah Cahill hannahcahill@trentu.ca or Dr. Elaine Scharfe escharfe@trentu.ca

THE PURPOSE OF THIS RESEARCH:

This study will bring together two areas of research. Researchers who study criminal behaviours are interested in what qualities and experiences of individuals contribute to deviance. Researchers suggest that attachment relationships explain why individuals engage in deviant acts. Researchers who study deviant behaviour suggest that experiencing adversity will explain why individuals engage in deviant acts. Both areas have shown progress in understanding deviant behaviours, but no research has explored these ideas together. We believe that the combined influence of attachment relationships and adversity may be linked to engagement in criminal behaviours. The purpose of this study is to explore how attachment and adversity can inform the development of deviance.

WHAT YOU WILL BE ASKED TO DO:

If you volunteer to participate in this study, you will be asked to complete an online survey. The survey includes demographic questions and surveys about your relationships. Questions about your relationships with your parents will be asked if you have contact

ATTACHMENT, ADVERSITY, AND CRIMINAL BEHAVIOUR

with them. Next, you will be asked about your participation in some deviant acts and your views of illegal acts. You will also be asked about your COVID related behaviour. If you would like to view these questionnaires before you decide to participate, email attachmentmatters@trentu.ca for a copy of the survey. It will take approximately 20-30 minutes to complete the online questionnaires. The survey will be open and available to you for as long as you need. This way, you can take a break if you want to.

WHAT ARE THE POTENTIAL BENEFITS FOR YOU AS A PARTICIPANT:

Some people report that the survey gets them to think more deeply about their behaviours. You may also think more deeply about your feelings and relationships with others. These thoughts may be a benefit or a risk to you. You may also feel that the opportunity to participate in research and learn more about the process is a benefit to you. However, I cannot guarantee that you will receive any benefits from participating in this study.

WHAT ARE THE POTENTIAL RISKS TO YOU AS A PARTICIPANT:

There is no expected harm from completing these questionnaires. However, the purpose of the study requires us to ask questions about human behaviour. For example, some questions in this survey will ask you about your views of illegal behaviours. It is important to state that all survey responses are completely anonymous. Even if required by law (i.e., a subpoena), we would have no way to identify you. Furthermore, some of the questions about your relationships may be viewed as personal. You can skip any question(s) and may stop participating at any time. There are no known harms associated with reporting your experiences on a survey. A small possibility still exists that some participants may experience an emotional reaction when completing the questionnaire. We have provided some links to supports at the end of the survey.

CONFIDENTIALITY:

Your responses will be completely anonymous. You can skip any question(s) that you are not comfortable answering. No identifying information will ever appear in any reports, presentations and publications. All data from the questionnaires will be completely anonymous. Your responses will remain anonymous and will not be revealed to anyone.

Electronic questionnaire data will be hosted on the servers of the survey hosting company Qualtrics. Qualtrics servers are both anonymous and secured/encrypted (i.e., via Transport Layer Security and an Intrusion Detection System). Qualtrics will not make this anonymous data available to any party unless required by a valid court order, search warrant, or subpoena. The data stored on Qualtrics is anonymous and could not be linked to your identity. During data analysis, the researchers will store the anonymous data on a secured/password-protected computer. Members of Dr. Scharfe's research lab will analyze this anonymous data. These members include Dr. Scharfe, her research collaborators, graduate students, and undergraduate students working in her research lab. The anonymous data will be kept for at least five years after publication of the results. The data may be archived if required by journals for publication. The data will be used for research and teaching purposes by Dr. Elaine Scharfe. The data will also be used by

ATTACHMENT, ADVERSITY, AND CRIMINAL BEHAVIOUR

Hannah Cahill for her MSc thesis. The data will be published in journals, chapters, books or other venues.

INCENTIVES FOR PARTICIPATION:

You may feel that the participating in research is a beneficial opportunity. You may also learn more about the research process. This was stated above as a potential benefit as well. I cannot guarantee that you will receive any benefits from participating in this study. There are no financial incentives for participation.

COSTS TO PARTICIPATION:

There are no costs associated with participation in this study with the exception of your time.

VOLUNTARY PARTICIPATION AND WITHDRAWAL:

Participation in this study is completely voluntary. You can choose whether to participate or not. You can refuse to answer any question. You can also quit participating at any time. There will be no negative consequences to you whatsoever if you stop participating. At the end of the survey you will be given an opportunity to decide if you would like your data to be used in the study. Your choice of whether to participate will not influence your future relations with Trent University or the investigators (Dr. Elaine Scharfe and Hannah Cahill) involved in the research.

QUESTIONS ABOUT THE STUDY:

If you have any questions about this study, you can ask questions now. To ask questions and address any concerns before you agree to participate, email Dr. Elaine Scharfe (escharfe@trentu.ca). A summary of the data will be posted on Dr. Elaine Scharfe's website (www.attachmentmatters.ca) when the study is completed (Fall 2021). If you would like clarification regarding any part of this research, you can contact Dr. Elaine Scharfe.

This study has been reviewed by the Trent University Research Ethics Board, the study number is 26558 If you have questions regarding your rights as a participant in this study please contact:

Michele J McIntosh, Chair Research Ethics Board
c/o Office of the Vice President, Research and Innovation
Trent University
1600 West Bank Drive
Peterborough, ON K9L 0G2
705-748-1011 ext. 7896
jmuckle@trentu.ca

CONFIRMATION OF AGREEMENT:

By agreeing to participate in this research, you are not giving up or waiving any legal right in the event that you are harmed during the research.

ATTACHMENT, ADVERSITY, AND CRIMINAL BEHAVIOUR

“I have read and given consent to completing the following questionnaire. I agree to participate in this study, and I understand that by proceeding I am giving informed consent. I understand that I should print a copy of my consent form—now before I continue—for my records.”

To confirm that I agree to the consent form I will check the boxes below:

- I have read the information in this agreement;
- I have asked any questions I have about the study;
- I agree to participate in the study;
- I am aware I can change my mind and stop participating at any time;
- I am aware that the data are completely anonymous and once I complete the survey it will not be possible to delete my personal data;
- I understand that these data will be used for research purposes;
- I understand that these data will be used for educational purposes;
- I have printed a copy of this agreement;
- I am not giving up any legal rights by signing this consent agreement; and
- I am 18 years of age or older.

If you do not wish to participate, do not continue and please close your browser

ATTACHMENT, ADVERSITY, AND CRIMINAL BEHAVIOUR

Appendix J

Community Participant Feedback Form



Title: Determinants of deviance: Exploring associations of attachment, adversity, and criminal behaviour.

Psychology MSc student researcher: Hannah Cahill, MSc candidate, Department of Psychology, Trent University, Peterborough, ON, Canada, hannahcahill@trentu.ca

Faculty Researcher: Elaine Scharfe, PhD., Department of Psychology, Trent University, Peterborough, ON, Canada, 705-748-1011 ext. 7354, escharfe@trentu.ca

If you have any questions or concerns about the research, please feel free to contact Hannah Cahill hannahcahill@trentu.ca or Dr. Elaine Scharfe escharfe@trentu.ca

Participant Feedback

This study will bring together two areas of research. Researchers who study criminal behaviours are interested in what qualities and experiences of individuals contribute to deviance. Researchers suggest that attachment relationships explain why individuals engage in deviant acts. Researchers who study deviant behaviour suggest that experiencing adversity will explain why individuals engage in deviant acts. Both areas have shown progress in understanding deviant behaviours, but no research has explored these ideas together. We believe that the combined influence of attachment relationships and adversity may be linked to engagement in criminal behaviours. The purpose of this study is to explore how attachment and adversity can inform the development of deviance.

If you have any questions about this study, please email Hannah Cahill (hannahcahill@trentu.ca) or Dr. Elaine Scharfe (escharfe@trentu.ca). Please email if you would like related readings or clarification about this research as well. A summary of the data will be posted on Dr. Elaine Scharfe's website (www.attachmentmatters.ca) when the study is completed (Fall 2021). If you have any problems or concerns as a result of your participation in this study, please contact Trent Research Ethics Board by either phoning Jamie Muckle at 748 1011 x 7050 or e-mailing him at jmuckle@trentu.ca.

Thank you for your participation.

Suggested Reading

To learn more about Attachment Relationships, click this link to a PDF version of an academic research article (Bartholomew & Horowitz, 1991):

ATTACHMENT, ADVERSITY, AND CRIMINAL BEHAVIOUR

https://pdfs.semanticscholar.org/6b60/00ae9911fa9f9ec6345048b5a20501bdcedf.pdf?_ga=2.196618028.1804098414.1612926596-7237194.1598319302

To learn more about the research on the effects of Adverse Childhood Experiences (ACE), click this link to a PDF Resource Packet created by health professionals:

https://www.childhealthdata.org/docs/default-source/cahmi/aces-resource-packet_all-pages_12_06-16112336f3c0266255aab2ff00001023b1.pdf

You may also find some of the resources below helpful

If you have experienced any distress while completing the study, please refer to the information listed below for resources to deal with this distress.

Resources in Canada

Canadian Mental Health Association: www.ontario.cmha.ca

Telehealth Ontario: This is a confidential phone service, where you can talk to a Registered Nurse for free 24 hours a day, 7 days a week. Phone Number: 1-866-797-0000

Kids Help Phone: www.kidshelpphone.ca

Canadian Association of Elizabeth Fry Societies: <https://www.caefs.ca/>

John Howard Society of Canada: <http://www.johnhoward.ca/>

Resources in the United States

The Osborne Association: www.osborneny.org

National Suicide Prevention Lifeline: This resource is a national helpline that offers support for anyone that requires emotional support. Emotional support is available whether you are thinking about suicide or need someone to talk to for any other reason. This resource also provides specific options for individuals that are deaf or hard of hearing. <https://suicidepreventionlifeline.org/talk-to-someone-now/>

Centre for Suicide Awareness Hopeline: You can text this service at any time to receive emotional support. Text HOPELINE to 741741 to talk with a trained specialist that can help you with any stressful or emotional experiences you may have. <https://centerforsuicideawareness.org/hopeline>

Additional Resources

World Health Organization: This organization provides global resources that promote access to mental health supports and guides to managing your own mental stress <https://www.who.int/teams/mental-health-and-substance-use>