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ABSTRACT

Previous research suggests there is a relationship between individuals' insecure attachment and level of psychopathy. However, there is little evidence indicating whether anxious or avoidant attachment is more predictive of psychopathy generally, or the two factors of psychopathy (meanness and impulsivity) specifically. A convenience sample of 137 participants was gathered to test two hypotheses. We first hypothesized that anxious and avoidant attachment in adulthood (i.e., attachments to all domains) would predict meanness, the primary factor of psychopathy; secondly, we hypothesized that anxious and avoidant attachment would also predict impulsivity. We used multiple regressions to test all four hypotheses. Our hypotheses were partially supported. Anxious attachment served as a better predictor for both dimensions of psychopathy. Limitations and implications are discussed.

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Bowlby (1969) claimed the absence or disrupted form of care in an individual's childhood could result in the inability to establish attachments, bonds, and empathy toward other people (Arrigo & Griffin, 2004). Bonding-related issues and callousness (e.g., lack of empathy and guilt) have been identified as characteristics of the construct of psychopathy (Christian et al., 2018; Levenson et al., 1995; van der Zouwen et al., 2018). Individuals with high psychopathic traits report having fewer emotional relationships, including peer-relationships such as romantic relationships and friendships (Christian et al., 2018), as well as partaking in antisocial behaviors and having more conflict in their peer relationships (Muñoz et al., 2008).

The risk for the development of psychopathic traits (e.g. callousness and antisocial traits) has been linked to childhood maltreatment (Carlson et al., 2015; Ometto et al., 2016; Shi et al., 2012), maternal withdrawal (Bisby et al., 2017; Shi et al., 2012), neglect (Ometto et al., 2016; Thibodeau et al., 2017), and insecure attachment (Christian et al., 2018; Grady et al., 2019; Hansen et al., 2011; Kochanska et al., 2009; Schimmenti et al., 2014; Stover et al., 2018).

Psychopathy

Psychopathy is marked by a lack of empathy, poor control over behavior, and deficient emotional responses (Anderson & Kiehl, 2014). The construct of psychopathy is not acknowledged as an independent disorder in the DSM-5 but rather used as one of the criteria for the clinical diagnosis of antisocial personality disorder (ASPD) (American Psychiatric Association, 2013). While ASPD and psychopathy are closely related and often mistaken for one another, psychopathy is better described as a related syndrome of ASPD (Patrick, 2007). Psychopathy has been associated with general criminal and violent behavior, and recidivism (Edens et al., 2007; Vitacco et al., 2014), as well as risky, unrestrictive, and deviant sexual behaviors (Bommel et al., 2018; Kastner & Sellbom, 2012; Visser et al., 2014), and fewer emotional relationships (Christian et al., 2019).

Psychopathy has been characterized as consisting of two main components. Levenson's (Levenson et al., 1995) two-factor model, the Levenson Self-Report Psychopathy Scale (LSRP), assessed psychopathy as such: the primary factor (meanness) describes individuals as "selfish, uncaring, and taking a manipulative posture towards others," (Levenson et al., 1995); also described as the interpersonal, affective, and callous factor (Miller et al., 2007; Sellbom & Drislane, 2021). The second factor (impulsivity and bad temper) describes individuals who exhibit "impulsivity and a self-defeating lifestyle" (Levenson et al., 1995), as well as the poorly behaved and socially deviant (Miller et al., 2007; Nummenmaa et al., 2021). Throughout our literature we will refer to the primary factor as *meanness* and the secondary factor as *impulsivity*.

Attachment theory

Bowlby (1969) conceptualized attachment as a biological system in which the infant possesses the innate predisposition (i.e., a need) to maintain proximity to their caregiver (usually a maternal figure) for the benefits of physical and psychological protection. As the offspring progresses developmentally, their need for proximity becomes dependent on environment exploration and socialization; thus, their attachment extends to other figures that fulfill those needs. Bowlby (1969) described attachment behavior as a biological/adaptive behavior that is as instinctive as mating and parenting behaviors.

Based upon Bowlby's work, Ainsworth differentiated between secure and insecure attachment. Anxious attachment (also known as resistant) and avoidant attachment are characterized as insecure attachment styles and occur when an infant's needs are met inconsistently or not at all (Ainsworth et al., 1978). Secure attachment is established when an infant's needs are met (i.e., attachment figure is available, responsive, and helpful) by their caregiver (Bowlby, 1980; Ainsworth et al., 1978).

Attachment does not only refer to the infant-parent bond; it can occur in all relationships throughout the lifespan. Anxious and avoidant attachment are also traditionally used to describe adult insecure attachment (Fraley et al., 2011; Shaver & Mikulincer, 2002). Adult dimensions of resistant attachment, labeled anxious-ambivalent by Hazan and Shaver (1987) and as preoccupied by Main et al. (1985), describe individuals who have high anxiety and low avoidance (Hazan & Shaver, 1987; Shaver, & Mikulincer, 2002). Adults who score high in the anxious dimension are often preoccupied with their current or former relationship experiences. Their love experiences are consuming; they possess an extreme need to maintain proximity, acceptance, support, and reassurance from their attachment figure (e.g., romantic partner) (George et al., 1985; Hazan & Shaver, 1987).

Avoidant/dismissing attachment describes individuals who have high avoidance and low anxiety. Adults who score high in avoidant dimensions feel extreme discomfort maintaining proximity, engaging in self-disclosure, or experiencing vulnerability and

dependence on their attachment figure (George et al., 1985; Hazan & Shaver, 1987). Bartholomew and Horowitz (1991) also differentiate between dismissing and fearful avoidant attachment. Fearfully avoidant attachment describes individuals who have high avoidance and high anxiety (Bartholomew & Horowitz, 1991). The fearfully attached experience feelings of unworthiness and are conflicted between their need for proximity and their fear of rejection.

Maltreatment and Attachment

Maltreatment is often defined as physical abuse, emotional abuse, neglect, indifferent parenting, low maternal warmth, and sexual abuse (Bailey & Shelton, 2014; Bisby et al., 2017; Labadie et al., 2018; Ometto et al., 2016). Early experiences of maltreatment from attachment figures have been associated with variations of insecure attachment (Brown et al., 2018; Gander et al., 2018; Labadie et al., 2018; Liu et al., 2018; Martin et al., 2017). The effects of maltreatment on attachment style are established in childhood (Stonarch et al., 2011) and expected to remain stable throughout the lifespan; although it may worsen due to incidences of adverse life experiences (Fearon & Roisman, 2017; Weinfeld et al., 2000).

Childhood exposure to neglect and physical abuse has been associated with anxious attachment in adulthood (Widom et al., 2018); whereas emotional and sexual, but not verbal, abuse have been linked to both anxious and avoidant attachment (Oshri et al., 2015). Labadie et al. (2018) found two different attachment-related profiles in a sample of 324 childhood sexual abuse survivors (CSA), where two-thirds were anxiously and preoccupied attached, while the remaining one-third were fearfully attached, characterized as having increased attachment anxiety and avoidance (Labadie et al., 2018). These findings further reinforce the relationship between attachment insecurity and childhood experiences of abuse.

Maltreatment and Psychopathy

A history of childhood maltreatment has been associated with future psychopathy (Benes, 1994; Blair, 2004; Daversa, 2010; Ometto et al., 2016; Shi et al., 2012). Experiences of maltreatment in the early years of development can alter brain structures associated with one's stress response that may contribute to future psychopathy (Blair, 2004; Benes, 1994; Daversa, 2010).

Primary Factor of Meanness

According to Shi et al. (2012), the quality of care that an infant receives from birth until 18 months of age is a good predictor of a future antisocial personality disorder (ASPD) diagnosis in adulthood. Inconsistent parental care (e.g., maternal withdrawal and exposure to maltreatment) within the first year of an infant's life has been associated with patterns of disregard for societal norms which are consistent with ASPD traits in early adulthood (Shi et al., 2012).

Ometto et al. (2016) study of Brazilian adolescents found experiences of childhood maltreatment to be correlated with an elevation in psychotic traits across all domains measured (i.e., interpersonal, affective lifestyle, and antisocial). Emotional neglect stood out as the form of maltreatment to cause the most damage to social behavior; it was most correlated to deficits in social skills (i.e., empathy, self-control, and social confidence) which are consistent with psychopathic domains used in the study (Ometto et al., 2016). Neglect's role with social skills is consistent with empirical research that links neglect to discomfort with proximity and intimacy in future relationships (Thibodeau et al., 2017).

Low maternal warmth (i.e., low affection and responsiveness) was significantly related to callous traits in a sample of 227 adolescent male offenders (Bisby et al., 2017). Low maternal warmth had a stronger relationship to "callousness and uncaring dimensions" than emotional and physical neglect (Bisby et al., 2017). Emotional neglect was associated with callous traits when the emotional neglect contained low-maternal traits (Bisby et al., 2017). It appears children mirror in adulthood what they experience in childhood; if a child receives little warmth and caring, they tend to demonstrate callousness and uncaring.

Grady et al. (2019) studied 109 men with a history of sexual offense from a regional sexual offender treatment program center. Researchers learned that 75% of their sample reported experiences of physical and sexual abuse, whereas most of their sample reported a history of emotional, physical, or sexual abuse experiences. While this study suggests sexual abuse may play a role in the development of future psychopathic behavior, Howell et al. (2017) found contrasting results in their sample of Swedish adults. Their research found criminality to be related to "childhood experiences of physical violence, witnessed violence and neglect, but not with being the victim of property crimes, verbal abuse or sexual abuse" (Howell et al., 2017, p. 349). Nonetheless, both studies found an association between psychopathic behavior and emotional and physical violence. This speaks to the meanness dimension

of psychopathy (primary factor).

Secondary Factor of Impulsivity

Childhood maltreatment has also been linked to impulsivity (Liu, 2019). In a sample that included healthy women, women with borderline personality disorder (BPD), attention deficit hyperactivity disorder and substance use disorder, without BPD, childhood maltreatment was related to both impulsivity and difficulties with emotional regulation across all groups (Krause-Utz et al., 2019). High levels of adverse childhood experiences (ACEs), which frequently include experiences of childhood maltreatment, have also been associated with “impulsive self-control in the context of intense negative emotionality” (Shin, McDonald, & Conley, 2018). Similarly, Oshri et al. (2015) found, out of all the emotional regulation dimensions assessed, impulsivity had the strongest indirect effect on risk behaviors in those who experienced child maltreatment. This may help explain the link between maltreatment and the impulsive facet of psychopathy.

Psychopathy and Attachment

As formerly stated, childhood experiences of maltreatment are linked to both the manifestation of insecure attachment styles and to greater incidences of psychopathy. Comparably, an association has been observed between psychopathy and attachment style (Christian et al., 2018; Grady et al., 2019; Hansen et al., 2011; Kochanska et al., 2009; Schimmenti et al., 2014; Stover et al., 2018). Grady et al. (2019) noted, securely attached individuals partake in fewer antisocial behaviors compared to those who are insecurely attached. Hansen et al. (2011) found an association between the personality trait “neuroticism” and criminal behavior, and that adult attachment styles were a factor in aggression in intimate relationships. In fact, attachment style was a better predictor of criminal behavior than neuroticism (Hansen et al., 2011).

The relationship between attachment and psychopathy is also evident when examining nonincarcerated populations. Christian et al. (2019) studied Australian university students and found those who scored high on an antisocial scale had fewer close relationships with their peers; further, they struggled with obtaining, maintaining, and continuing to be part of emotional relationships. Those who scored higher on psychopathy usually experienced more adverse childhood experiences and were consistently less dependent on their family for attachment needs (Christian et al., 2018).

Present study

Previous research suggests there is a relationship between individuals’ insecure attachment and psychopathy. While evidence suggests insecure attachment is due to maltreatment, little is known about whether an anxious or avoidant attachment type is more predictive of psychopathy. Similarly, prior literature on attachment and psychopathy has not distinguished between the two factors of psychopathy and the two types of insecure attachment. Thus, in the present study we aim to highlight these distinctions by testing two hypotheses. We first hypothesized that anxious and avoidant attachment in adulthood will predict meanness, the primary factor of psychopathy; secondly, we hypothesized anxious and avoidant attachment would also predict impulsivity, the secondary factor of psychopathy.

Methods

Participants

Our sample was a convenience sample that consisted of 137 participants, 70 females, 64 males, 1 other, and 2 unidentified. Their ages ranged from 19 through 80 years of age with a ($M = 29.26$, $SD = 10.40$). We had a global sample: United States of America (45%), United Kingdom (21%), Europe (20%), Asia (8%), Canada (3%), Cuba (2%), and Australia (2%).

After securing IRB approval, we solicited participants to fill out an online survey via social media, i.e., Facebook and Instagram, in multiple groups designed for thesis, dissertation, and research survey exchange (e.g., *Research Participation - Dissertation, Thesis, PhD, Survey Sharing*). The recruitment statement and a link to the online survey was posted on the media websites. Upon completion of the online survey, participants were asked to share the link to further solicit participants, thus employing a snowball data collection technique.

Materials

The survey was created using Google forms and took approximately 15 minutes to complete. Upon entering the survey, participants first completed an informed consent, then the attachment and psychopathy instruments.

Attachment Measure

To assess attachment, we used the Experiences in Close Relationships-Relationship Structures Questionnaire (ECR-RS) (Fraley et al., 2011). The ECR-RS, also referred to as the Relationships Structure questionnaire, is a modified version of the Experiences in Close Relationships-Revised (ECR-R) assessment (Fraley, Waller, & Brennan, 2000; Fraley et al., 2011). The ECR-RS measures attachment-related avoidance and attachment-related anxiety. The ECR-RS has exhibited satisfactory convergent and discriminant validity (Fraley et al., 2011).

To assess participants' attachment-related avoidance and attachment-related anxiety, they were asked to indicate the extent to which they agreed or disagreed with 36 statements using a seven-point Likert-type scale. They were given statements such as, "it helps to turn to this person in times of need" and "I talk things over with this person," in regard to a mother-like figure, father-like figure, someone they are/were dating or marital partner, and a best-friend.

Psychopathy Measure

To measure the construct of psychopathy, we used the Levenson Self Report Psychopathy scale (Levenson et al., 1995). Adequate reliability and validity have been established for this measure (Lynam, 1999; Sellbom, 2011). The LSRP has exhibited satisfactory internal validity, as well as adequate convergent reliability when compared to other psychopathy measures and high cross-cultural convergent and discriminative validity (Sellbom, 2011).

To assess participants' psychopathy score, they were asked to agree or disagree with 26 statements using a four-point Likert-type scale using statements such as, "success is based on survival of the fittest; I am not concerned about the losers." The LSRP measures psychopathy using a two-factor scale. The primary factor assesses the degree of "meanness in psychopaths," while the second measures the "impulsivity and bad temper" (Levenson et al., 1995). Meanness in psychopaths (primary factor) describes individuals who are "selfish, uncaring, manipulative posture towards others" and impulsivity and bad temper (secondary factor) describes individuals who exhibit "impulsivity and a self-defeating lifestyle" (Levenson et al., 1995).

Results

Responses were averaged to create scores for meanness ($M = 1.83$, $SD = .46$) and impulsivity ($M = 2.06$, $SD = .51$). Overall attachment scores for anxious and avoidant attachments were calculated by finding the average of the four separate attachment scores. Some participants were missing data for a relationship. This missing data was ignored when computing the averages, leading to 7 missing scores in the overall avoidant attachment scores, and 5 missing scores for the overall anxious attachment scores. Overall anxious attachment ($M = 2.41$, $SD = 1.21$) and overall avoidant attachment ($M = 2.96$, $SD = .95$) had a strong correlation, $r(125) = .52$, $p < .001$, $R^2 = .27$. Descriptive statistics can be seen in Table 1.

Table 1: Descriptive statistics and Pearson correlations

	Mean (SD)	Overall anxious attachment	Meanness	Impulsivity
Overall avoidant attachment	2.96 (.95)	.52***	.16	0.17
Overall anxious attachment	2.41 (1.21)		.33***	.41***
Meanness	1.83 (.46)			.50***
Impulsivity	2.06 (.51)			

* $p < .05$, ** $p < .01$, *** $p < .001$

A multiple regression was used to see if meanness could be predicted using the overall anxious and avoidant attachment scores. The overall model was significant, $F(2, 124) = 6.61$, $p = .002$, adjusted $R^2 = .08$. Individually, anxious attachment was a significant predictor ($B = .12$, $p = .002$), but avoidant attachment was not ($B = .001$, $p = .98$). The y-intercept was 1.54, and the standard error was .45.

Another multiple regression was used to see if impulsivity could be predicted using the overall anxious and avoidant attachment scores. The overall model was significant, $F(2, 124) = 11.69, p < .001$, adjusted $R^2 = .15$. Individually, anxious attachment was a significant predictor ($B = .18, p < .001$), but avoidant attachment was not ($B = -.03, p = .63$). The y-intercept was 1.70, and the standard error was .47.

Discussion

The primary goal of this study was to examine the ability of insecure attachment (avoidant and anxious) to predict both traits of psychopathy: “meanness” and “impulsivity and bad temper”. Both of our hypotheses were partially supported. Anxious attachment in adulthood was an excellent predictor of both factors of psychopathy meanness (primary factor) and impulsivity (secondary), whereas avoidant attachment was not predictive of either factor of psychopathy. This is contrary to previous research supporting the association between avoidant attachment and the primary factor of psychopathy (Blanchard & Lyons, 2016; Conradi et al., 2016; Walsh et al., 2019), although it must be noted that sometimes this association has been explained with little variance (Christian et al., 2018; Christian et al., 2019). Comparably, previous literature supports the association between avoidant attachment and impulsivity (Brewer et al., 2018; Christian et al., 2017; Conradi et al., 2016; Mack et al., 2011), although, anxious attachment has been found to be more strongly associated with impulsivity (Blanchard & Lyons, 2016; Christian et al., 2017; Conradi et al., 2016). This was reinforced by our findings. In our research, we speculate that the lack of support we found in anxious attachment could be a product of the strong correlation between anxious and avoidant attachment, see Table 1.

The primary factor is considered a fundamental component of psychopathic personality, with special regard to affective dysfunction (Blackburn, 1998). Viding and McCrory (2018) suggest that protective environmental factors could help explain the antisocial component of the primary factor, in the absence of callous-unemotional traits (meanness). This is parallel to changes in peer delinquency leading to changes in psychopathic traits in individuals (Backman, 2018). Considering the nature of our data collection (electronically via social media), which included recruitment in survey/dissertation exchange-participation groups, other aspects of the sample (e.g., emotional intelligence, level of education) could have served as environmental protective factors contributing to the absence of significance between meanness and those with avoidant attachment. Further examination is necessary to validate this idea.

As previously mentioned, emotional neglect has been shown to be the form of maltreatment that is most damaging to social behavior and most correlated to deficits in social skills (Ometto et al., 2016). Similarly, empirical research links neglect to discomfort with proximity and intimacy in future relationships (Thibodeau et al., 2017); these are traits that describe individuals with an avoidant attachment style (George et al., 1985; Hazan & Shaver, 1987). Hence, individuals with an avoidant type of attachment feel the need to protect themselves from dependence in their relationships (Constant et al., 2018).

Research suggests that individuals with an avoidant attachment show decreased levels of intrapersonal and interpersonal emotional competencies (Constant et al., 2018). Additionally, impulsivity has been associated with an increase in the number of negative relationships (Mooney et al., 2019). Thus, in addition to other variables (e.g., protective environmental factors) that could have contributed to the weak association between avoidant attachment and the secondary factor, the combination of high psychopathy and a high avoidant attachment style may have exacerbated the challenges of self-reporting assessments. Their limited competency in assessing their own and others’ emotions, their fear of dependency, and their impediment of sustaining good quality relationships could impair their perception of their relationships and therefore call into question the validity of their judgement.

Anxious attachment, on the other hand, served as a better predictor for both dimensions of psychopathy, with the greatest amount of variance explaining impulsivity. Consistent with our hypotheses, previous research supports anxious attachment’s prediction of meanness (Blanchard & Lyons, 2016; Schimmenti et al., 2014) and impulsivity (Blanchard & Lyons, 2016; Christian et al., 2017; Conradi et al., 2016; Walsh et al., 2019).

Research by Mikulincer and Shaver (2012) suggest that individuals who score high in the anxious attachment dimension depend on hyperactivating strategies (i.e., extensive efforts to meet their attachment-related needs), with little trust that their needs will be met. Then, when their attempts are unsuccessful, they experience anger and resentment. Individuals who score high in the secondary factor have also been shown to use hyperactivating strategies (Christian et al., 2017), further supporting our findings. Similarly, this strategy is associated with traits of the primary factor of psychopathy, such as interpersonal manipulation (e.g., instrumental aggression) and egoism (Christian et al., 2017; Hare, 2003).

The primary factor of psychopathy is understood to be fundamental to psychopathic personality characteristics (Harpur et al., 1989), while the secondary factor is more closely related to criminal behavior (Kennealy et al., 2010). It is also important to note that psychopathic individuals constitute less than 1% of the general population (Coid et al., 2009; Neumann & Hare, 2008). Perhaps the limited support for the primary factor in the current study can be explained by poor representation of psychopathy in our sample.

Conclusion

Limitations of this study included the self-report nature of the survey. This can lead to response bias in both attachment and psychopathy measures. A more clinical approach to psychopathy might provide more accurate information. Other limitations include the fact that not all participants completed all parts of the survey. For instance, some did not fill in any information about a father figure. All items were measured using a Likert-type scale, which could be argued by some that it is not a true interval variable and therefore not appropriate for a regression analysis. Also, having the scores only range from 1 to 4 or 1 to 7 could have limited the variance of all the variables.

Future research might explore how anxious attachment interacts with emotional regulation and impulsivity, serving possibly to negatively impact relationships. Additionally, researchers should replicate this research with a larger and more diverse sample (i.e., aim to vary levels of education) to learn if there is a difference in the results of avoidant attachment.

The risk behaviors associated with impulse control may play a role in premature commitment to or termination of relationships. If we can shine a light on the development of psychopathy, we can work to prevent its prevalence. A basic need of children is warmth from their primary caregivers; without it, people seem susceptible to emotional callousness and impulsivity.

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