UNDERSTANDING GENDER AS A MODERATOR OF THE RELATIONSHIP BETWEEN DIMENSIONS OF PSYCHOPATHY AND AFFECTIVE EMPATHY: THE ROLES OF ALEXITHYMIA AND AN INVALIDATING CHILDHOOD ENVIRONMENT

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ABSTRACT

UNDERSTANDING GENDER AS A MODERATOR OF THE RELATIONSHIP BETWEEN DIMENSIONS OF PSYCHOPATHY AND AFFECTIVE EMPATHY: THE ROLES OF ALEXITHYMIA AND AN INVALIDATING CHILDHOOD ENVIRONMENT

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A lack of empathy has historically been associated with the psychopathy construct, both in clinical descriptions, and theoretical conceptualizations. One factor to consider when attempting to understand the association between psychopathy and empathy is gender. Engel et al. (2023) examined gender as a moderator of the relationship between the dimensions of the triarchic model of psychopathy (i.e., boldness, meanness, and disinhibition; Patrick et al., 2010) and both cognitive and affective empathy. They found that gender moderated the relationship between meanness and empathetic concern, a facet of affective empathy, such that women high in meanness exhibited stronger deficits in affective empathy than men high in meanness. The current study utilized data from 282 college students to understand the results of Engel et al. (2023). A double moderated mediation model was tested to better understand why, and under what circumstances, gender moderated the relationship between certain dimensions of psychopathy (i.e., meanness, and possibly disinhibition) and affective empathy. Based on theory linking alexithymia to empathy deficits among those with various forms of psychopathology (Valdespino et al., 2017) and research demonstrating a positive relationship between

psychopathy and alexithymia (Lander et al., 2012; Ridings & Lutz-Zois, 2014) and a negative relationship between alexithymia and empathy (Jonason & Kruse, 2013), it was expected that alexithymia would mediate the relationship between both meanness and disinhibition and affective empathy. Further, it was expected that the path from meanness or disinhibition to alexithymia would be moderated by gender such that women show stronger positive relationships between both two dimensions of psychopathy and alexithymia. Lastly, based on the findings of Brown et al. (2018), this gender moderation effect was expected to be stronger for women who have experienced invalidating childhood environments. While the results of the present study did not support the main hypotheses, follow-up analyses revealed evidence for simple mediation such that alexithymia served as a mediator of the relationship between disinhibition and affective empathy. Such results align with previous research and theoretical predictions. Study limitations and possible directions for future research will be discussed.

Keywords: psychopathy, affective empathy, gender, boldness, meanness, disinhibition, alexithymia, invalidating childhood environment, moderation, mediation

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CHAPTER 1

INTRODUCTION

Psychopathy is a complex psychological idea with etiologies that have captivated the interest of scholars for decades. As suggested by Salekin (2000), most contemporary conceptualizations of psychopathy are linked, at least in part, to the work of Cleckley (1941); specifically, his book *The Mask of Sanity*. It can be argued that the modern clinical conception of psychopathy has been molded greatly by the work of Hervey Cleckley. Specifically, Cleckley (1941) expressed the idea that psychopathy can be characterized by an inability to feel human emotions such as empathy, anxiety, or guilt, and an inability to form relational attachments with others. Generally, classic work on psychopathy conveys the belief that there are two subtypes of psychopathy. Karpman (1941) is recognized as the first scholar to make the distinction that psychopathy is a multifaceted concept comprised of primary and secondary psychopathy. Primary psychopathy encompasses traits such as shallow affect, low empathy, and interpersonal coldness (Levenson et al., 1995; Skeem et al., 2003). Further, Jonason et al., (2013) noted that such individuals with profound levels of primary psychopathic traits are occasionally referred to as emotionally stable psychopaths. Furthermore, secondary psychopathy is composed of the socially manipulative and deviant facets of psychopathy and, across literature, has been noted as aggressive, impulsive, and neurotic psychopathy. The presence of anxiety and guilt coupled with the tendency for individuals to lead an irresponsible, antisocial lifestyle, denote the key characteristics of secondary psychopathy (Levenson et al., 1995; Skeem et al., 2003).

In contrast to a two-factor model, some researchers have formulated the triarchic model of psychopathy which serves as an organizational framework for psychopathy detailing three distinct, yet concurrent, dimensions of psychopathy; boldness, meanness, and disinhibition (Patrick & Drislane, 2015). As noted by Patrick et al. (2009) each of the three dimensions of psychopathy are embedded within either primary or secondary psychopathy. Primary psychopathy encapsulates both boldness and meanness, while secondary psychopathy encapsulates disinhibition. As described by Almeida et al. (2015) boldness captures dominance, fearlessness, and invulnerability to stress; meanness is defined as the callous self-interested pursuit of resources, without regard, or consideration of consequences, for others. Finally, just as with secondary psychopathy, disinhibition is characterized as the lack of behavioral restraint as well as impaired emotional regulation.

One psychological deficit that has been well established as a central feature of psychopathy is a lack of empathy, or the inability to experience and relate to others' emotions (Cleckley, 1941; Delk et al., 2017; Frick & Hare, 2002; Hare, 1991). Many researchers conceptualize empathy as a multifaceted construct consisting of cognitive empathy (i.e., the ability to detect and interpret the emotional cues of others), and affective empathy (i.e., the ability to feel what another person is feeling) (Armenti & Babcock, 2018; Batchelder et al., 2017; Duan & Hill, 1996). Few studies have examined the triarchic model of psychopathy as it pertains to deficits in empathy (Almedia et al., 2015), and only one study, to this author's knowledge, has examined gender as a moderator of the relationship between empathy and the dimensions of the triarchic model of psychopathy (Engel et al., 2023). The current study was built on the results of Engel et

al. (2023) by exploring factors that might account for their observed gender difference in the relationship between the three dimensions of psychopathy and both cognitive and affective empathy. In the remainder of the introduction, I will discuss in greater detail the relationship between psychopathy and empathy – focusing both on two-factor and three-factor models of psychopathy, gender differences in this relationship, and alexithymia and an invalidating childhood environment as factors that may help to elucidate these gender differences.

The Relationship between Psychopathy and Empathy

Some studies have found that psychopathy may be related to a reduction in affective, but not cognitive, empathy (Blair et al., 1996; Jonason & Krause, 2013). The relationship between psychopathy and empathy has been featured in both two, and three-factor, models of psychopathy. For instance, Mullins-Nelson et al. (2006) conducted a study examining the relationship between cognitive and affective empathy, and psychopathy using a two-factor model. The Psychopathic Personality Inventory-Short Form (PPI-SF; Lilienfeld, 1994) and the Interpersonal Reactivity Index (IRI; Davis, 1980) were used to examine the proposed relation. Two subscales of the PPI-SF were utilized to measure both primary (PPI-SF-I) and secondary (PP1-SF-II) psychopathy. Results indicated that primary psychopathy was not significantly associated with perspective-taking, a facet of cognitive empathy. Moreover, results indicated the presence of a negative correlation between primary psychopathy and affective empathy. Additionally, results revealed that secondary psychopathy was related to deficits in perspective-taking, empathetic concern, and guilt (Mullins-Nelson et al., 2006). The results of this study are consistent with the argument that those with psychopathic

attributes – particularly primary psychopathic attributes, are able to "talk the talk" of emotions, and yet simultaneously suffer from fundamental deficits in emotional responsiveness to others (especially with respect to fear, sadness, and happiness) (Blair, 2007; Seara-Cardoso et al., 2012). However, it is important to note that some studies have found negative associations between cognitive empathy and both primary and secondary psychopathy (e.g., Puthillam et al., 2019).

Using the Portuguese version of the Triarchic Psychopathy Measure, (TriPM; Patrick et al., 2010), Almeida and colleagues (2015) examined the associations between the triarchic model of psychopathy and both cognitive and affective empathy, which was also measured by the IRI (Davis, 1980). The IRI divides empathy into four sub-scales: two affective empathy facets referred to as empathetic concern and personal distress, and two cognitive empathy facets referred to as fantasy and perspective-taking. The results of the study by Almedia et al. (2015) revealed that meanness was negatively associated with empathetic concern, perspective-taking, and fantasy. These results support the notion that meanness reflects a general lack of concern for others. Boldness was negatively associated with empathic concern and personal distress but positively associated with perspective-taking. This is consistent with previous findings that suggest deficits in empathetic concern are limited to affective and interpersonal aspects of psychopathy (Seara-Cardoso et al., 2012). Finally, disinhibition showed an overall opposite pattern of relations, consistent with the view that disinhibition is related to etiological processes other than trait fearlessness. Importantly, disinhibited individuals reported more feelings of personal distress in response to the expressed distress of others (Almedia et al., 2015).

Gender, Empathy, and Psychopathy

One possible factor to consider when attempting to understand the association between psychopathy and empathy is gender, as research suggests that women tend to score higher than men on explicit measures of empathy (Eisenberg & Fabbes, 1990). Some studies have uncovered gender differences that exist in primary versus secondary psychopathy, with men scoring higher on measures of primary psychopathy, and no gender differences found on measures of secondary psychopathy (Blanchard & Lyons, 2016). However, the literature is scarce concerning how or if females high in psychopathy differ from their male counterparts regarding empathy dysfunction (Engel et al., 2023; Jonason et al., 2013; Verona et al., 2013). Furthermore, even as the three-factor model of psychopathy (Patrick et al., 2009) increases in popularity over the once-dominant two-factor model, little research has investigated the relationship between these three dimensions and empathy, and possible gender differences in these relationships.

One exception is a study conducted by Engel et al. (2023) in which the TriPM (Patrick et al., 2010) was utilized to examine gender as a moderator of the relationship between the dimensions of psychopathy (boldness, meanness, and disinhibition) and both cognitive and affective empathy. Statistical analyses were performed to examine if a) there were gender differences in boldness and meanness but not disinhibition, and b) gender moderated the relationship between both meanness and disinhibition and cognitive empathy. Results from the first set of statistical analyses revealed gender differences in meanness but not boldness or disinhibition. Specifically, results demonstrated that females scored significantly lower than males on meanness. Further statistical analysis was performed to examine gender as a moderator of the relationship between both meanness and disinhibition and cognitive empathy. Results indicated that

there was no interaction between gender and meanness and disinhibition in the prediction of perspective-taking. However, the analyses did reveal that gender moderated the relationship between meanness and empathetic concern, such that women high in meanness exhibited stronger deficits in affective empathy than men high in meanness. Additionally, there was a similar trend concerning empathetic concern in the same direction for disinhibition. Finally, there was also a trend for gender moderating the relationship between boldness and cognitive empathy; such that men high in boldness displayed a positive relationship with cognitive empathy whereas women high in boldness did not display a relationship between boldness and cognitive empathy (Engel et al., 2023).

Alexithymia, Empathy, Psychopathy, and a Childhood History of an Invalidating Environment

One thing that remains unclear from the study by Engel et al. (2023) is what may explain these differential relationships between the dimensions of psychopathy and cognitive and affective empathy as a function of gender. One possibility is that alexithymia, an emotional deficit related to empathy (Valdespino et al., 2017), may mediate the relationship between dimensions of psychopathy and empathy. Further, this indirect effect may be stronger for women who experienced an invalidating childhood environment. This section will focus on alexithymia as related to cognitive and affective empathy, primary and secondary psychopathy, and a childhood history of an environment.

Alexithymia and Empathy

Alexithymia can be defined as the inability to articulate and interpret one's internal feelings (Sifneos, 1973). Further, alexithymia can be distinguished by three subtypes: difficulty identifying feelings, difficulty describing feelings, and externally oriented thinking (Bagby et al., 1994). Across the literature, it is suggested that each of the three alexithymia subtypes fit within the parameters of either cognitive or affective empathy (Bagby et al., 1994; Decety, 2010; Jonason & Kruse, 2013; Valdespino et al., 2017). As detailed by Jonason and Kruse (2013), cognitive empathy deficits are denoted by both difficulties in identifying and describing feelings; and affective empathy deficits are denoted by externally oriented thinking. Nonetheless, it is important to note that while alexithymia relates to empathy; they differ in the sense that one is internal (i.e., alexithymia) and the other is external (i.e., empathy). Despite this difference, behavioral findings suggest that alexithymia and empathy correlate across both clinical and non-clinical populations (Valdespino et al., 2017).

Valdespino et al. (2017) conducted a literature review to examine the cognitive and neurobiological mechanisms that impact empathy, one being alexithymia. Utilizing a schematic, simplified version of Goldman's simulation of empathy theory, which suggests that humans use their own mental state(s) to simulate and understand others' mental state(s), Valdespino et al. (2017) theorized that alexithymia serves as a mediator a) across both clinical and non-clinical populations, and b) of the relationship between an individual's affective state, and their level of empathy. Specifically, alexithymia impairs the interpretation and representation of affective states, resulting in empathy deficits (Goldman, 1992); therefore, suggesting that if an individual is unable to correctly represent or interpret their own emotions, they will also struggle to understand the

emotions of others. In turn, the difficulty one has in both describing and interpreting, their own emotions, as well as the emotions of others, suggests that the presence of alexithymia may lead to deficits in empathy.

Alexithymia and Psychopathy

In a study conducted by Lander et al. (2012), the association between alexithymia and both primary and secondary psychopathy was tested. Specifically, their results supported the researchers' hypothesis, suggesting that there was a significant positive association between secondary psychopathy and alexithymia, but not between primary psychopathy and alexithymia. Examination of the specific dimensions of alexithymia revealed that primary psychopathy was significantly positively related to externally oriented thinking, but not to either difficulty describing feelings or difficulty identifying feelings. In a later study conducted by Ridings and Lutz-Zois (2014), findings from Lander et al., (2012) were replicated, indicating that alexithymia was significantly, positively related to secondary psychopathy but not primary psychopathy. Findings from Ridings and Lutz-Zois (2014) also indicated that borderline personality disorder and emotion dysregulation may mediate the relationship between alexithymia and secondary psychopathy. This finding suggests that it may be the shared variance between borderline personality disorder tendencies and secondary psychopathy that is linked to alexithymia. Thus, theoretical, and empirical correlates of borderline personality disorder tendencies (such as an invalidating childhood environment, which will be discussed in the next section) may further help to understand the observed relationship between secondary psychopathy and alexithymia. Moreover, the findings from Ridings and Lutz-Zois (2014) continue to supplement the growing body of literature, supporting the notion that

psychopathy is comprised of two distinct subtypes, primary and secondary psychopathy, both of which are uniquely associated with alexithymia.

Further, in a study conducted by Jonason and Kruse (2013), researchers sought to investigate the specific emotional deficits associated with the Dark Triad, specifically psychopathy. A bidimensional model of empathy, which focused on the distinction between the ability to understand one's internal feelings and the ability to feel what others feel was examined, as well as the relationship between the Dark Triad and different facets of alexithymia. Lastly, these relationships were examined overall, and across sexes, to determine if deficits in empathy mediate the sex differences in the Dark Triad traits (Jonason and Kruse, 2013). Upon conclusion of the study, findings suggest that gender moderated the relationship between psychopathy and alexithymia. Specifically, lower levels of empathy and increased externally oriented thinking (a facet of alexithymia) was associated with the Dark Triad in women compared to men. Further, results indicated that there was a particularly strong relationship between psychopathy and these emotional deficits and that high levels of psychopathy in women were predicted by elevated levels of emotional deficits (Jonason and Kruse, 2013).

Alexithymia and an Invalidating Childhood Environment

An invalidating childhood environment refers to an environment in which a child's primary caregiver(s) persistently disregards, ignores, and/or punishes the child for outwardly expressing his or her needs and emotions. There are many forms of invalidation including, physical, sexual, and emotional abuse and/or neglect, pervasive criticizing, belittling, and punishing of the individual, and routine pathologizing of the individual as possessing socially abnormal personality traits (Crowell et al., 2009; Keng

& Soh, 2018; Wagner et al., 1997). However, invalidation may also occur in more discreet ways such as an intolerance of the expression of a particular emotional experience or oversimplifying problem-solving (i.e., leading the individual to feel intellectually inferior by "dumbing down" the problem) when the individual is not capable of completing a particular task. Experiences of invalidation, specifically emotional abuse, or neglect, may result in individuals internalizing behaviors and emotions, thereby failing to learn adaptive ways of both regulating and understanding their own emotions, which is associated with alexithymia (Keng & Soh, 2018).

The associations between emotional abuse and neglect and alexithymia may be best explained by the stress vulnerability model (Zubin & Spring, 1977). Within this framework, emotional maltreatment may increase the risk for psychopathology, such that maltreatment might have a negative effect on a child's developing self-concept, resulting in affect regulation impairments (e.g., alexithymia; Hund & Espelage, 2006; Rorty et al., 1994). Empirical support for this theory is rooted in previous research, including a study by Aust et al. (2013), which concluded that emotional neglect was negatively associated with acceptance, awareness, and the ability to describe one's own emotions (e.g., alexithymia; Aust et al., 2013).

In a study conducted by Brown et al. (2018), the associations between emotional abuse and neglect (subcomponents of an invalidated childhood environment) and dimensions of alexithymia were examined. Further, the hypothesis that gender might moderate these associations differently for each of the three dimensions of alexithymia was examined. Results indicated that gender moderated the associations between both emotional abuse and neglect and difficulty identifying feelings. Emotional abuse was

positively associated with difficulty identifying feelings for females but was unrelated to difficulty identifying feelings among males. However, with respect to emotional neglect, results suggested that although the association between emotional neglect and difficulty identifying feelings was significant for males and females, though this association was stronger for females.

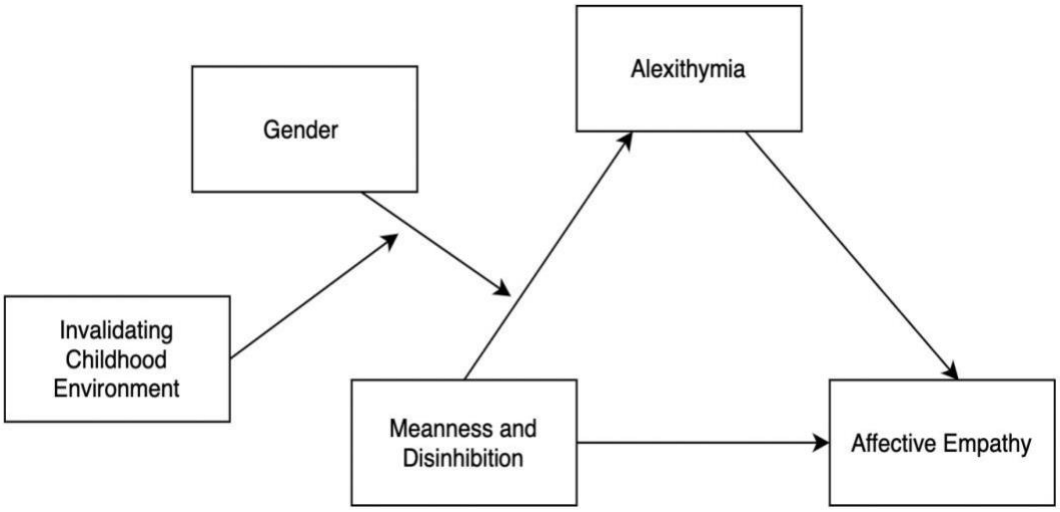
In part, the findings by Brown et al., (2018) may be explained by gender differences in stress-related coping strategies. Females who experience emotional maltreatment are more likely than males to use emotion-focused coping which is positively associated with alexithymia (Lawrence et al., 2006; Matud, 2004; Myers et al., 2013). It may be that in environments characterized by emotional maltreatment, females continue seeking social support from caregivers, despite being met with resistance or rejection, which might contribute to greater distress and poorer outcomes (e.g., difficulty identifying feelings; Brown et al., 2018). With respect to the current study, the results of Brown et al. (2018) indicate that gender moderated the relationship between emotional maltreatment and alexithymia may be useful in developing a model to better understand the findings of Engel et al. (2023).

The Current Study

The current study was designed to understand the results of Engel et al. (2023) that gender moderated the relationship between meanness and affective empathy (and that there was a trend in the same direction for the relationship between disinhibition and affective empathy). Specifically, the current study was designed to test a double moderated mediation model (see Figure 1 below) to better understand why, and under what circumstances, does gender moderate the relationship between certain dimensions

of psychopathy (i.e., meanness, and possibly disinhibition) and affective empathy. Based on research demonstrating a positive relationship between psychopathy and alexithymia (Lander et al., 2012; Ridings & Lutz-Zois, 2014) and a negative relationship between alexithymia and empathy (Jonason & Kruse, 2013; Valdespino et al., 2017), as well as Goldman's simulation of empathy theory (Goldman, 1992), it was expected that alexithymia would mediate the relationship between both meanness and disinhibition and affective empathy (Hypothesis 1). Drawing upon the results of Jonason and Kruse (2013), it was expected that the path from meanness or disinhibition to alexithymia would be moderated by gender such that women show stronger positive relationships between both two dimensions of psychopathy and alexithymia (Hypothesis 2). Lastly, in line with the findings of Brown et al. (2018), this gender moderation of effect was expected to be stronger for women who have experienced invalidating childhood environments (Hypothesis 3).

Figure 1: Conceptual Model of Study Hypotheses



CHAPTER 2

METHOD

Participants

Using a sample size based on a medium effect for the model being tested in this study, I recruited 446 undergraduate students from introductory psychology courses at a medium-sized, private university, to participate in the study. Of the 446 recruited participants, 80 participants were eliminated due to incomplete responses, 74 participants were eliminated due to insufficient time taken to complete the survey (10 minutes or less), and 10 participants were eliminated due to not specifying their gender identity (N = 3) or biological sex, or were inconsistent in their reporting between gender identity and biological sex (N = 7). A final sample size of 282 participants, 221 of whom reported their gender as female, and 61 of whom reported their gender as male, was used for the study[1]. Participant's ages ranged from 17 to 42 years old (M = 19.18, SD = 2.02), and the racial distribution of the sample was 80.5% White/Caucasian, 7.4% African American, 5.7% Hispanic, 2.5% Asian American, and 3.9% other racial or ethnic categories. The current academic year distribution of the sample was 44.3% Freshman, 36.5% Sophomore, 12.8% Junior, 5.3% Senior, and 1.1% fifth-year or greater.

[1] Main study analyses were conducted both with the full sample size, and the sample size which excluded participants who did not specify their gender identity, biological sex, or were inconsistent in their reporting between the two. Results of the analyses were the same as both yielded non-significant results.

Measures

Demographics. Demographic variables include gender, biological sex, age, race, and current academic year. were assessed using a questionnaire created by the researcher. Refer to Appendix B.

Alexithymia. The Toronto Alexithymia Scale (TAS-20) is a self-administered 20-item questionnaire that measures the dimensions of alexithymia. The TAS-20 has three subscales; Difficulty Identifying Feelings (e.g., "I have feelings that I can't quite identify"), Difficulty Describing Feelings (e.g., "I find it hard to describe how I feel about people"), and Externally Oriented Thinking (e.g., "I prefer to analyze problems rather than just describe them"). All items on the TAS-20 are scored on a 5-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The current study used total scores (ranging from 20 to 100) to assess for the presence of alexithymia.

The TAS-20 is both a reliable, and valid, measure of alexithymia. Most notably, literature by Bagby et al. (1994) suggests that the TAS-20 has good internal consistency ($\alpha = .81$) and good test-retest reliability ($r = .77$). Further, according to Bagby et al. (1994), the TAS-20 also demonstrates good construct validity as it was negatively associated to the openness subscale of the NEO-PI (-.49) and positively correlated with the anxiety (.25), depression (.36), and self-consciousness (.30) subscales of the NEO-PI, respectively. Additionally, it should be noted that the subscales in the TAS-20 are theoretically congruent with the concept of alexithymia. Refer to Appendix C.

Cognitive and Affective Empathy. The Interpersonal Reactivity Index (IRI) is a 28-item self-report questionnaire that measures dispositional empathy by utilizing four subscales (Davis, 1983): Perspective Taking (e.g., "I sometimes try to understand my friends better by imagining how things look from their perspective"), Fantasy (e.g., "I get involved with the feelings of the characters in a novel"), Personal Distress (e.g., "I sometimes feel helpless when I am in the middle of a very emotional situation") and Empathic Concern (e.g., "I am often quite touched by things that I see happen"). Each of the four subscales are comprised of seven items rated on a 5-point Likert scale, with answers ranging from A ("Does not describe me well") to E ("Describes me very well"). The current study assessed for affective empathy using the Empathic Concern subscale and cognitive empathy using the Perspective Taking subscale. Both subscales utilized in the current study have a total score ranging from 0 to 28.

Research on the IRI suggests that it is both reliable and valid. According to Davis (1980), the internal consistency coefficients range from .68 to .79 and test-retest reliability ranges from .61 to .81 over a 60-to-75-day interval (Baldner & McGinley, 2014). The IRI is suggested to have adequate convergent validity, as each subscale appears to be strongly correlated with pre-existing measures of empathy, such as the Brief Empathy Scale and the Questionnaire Measure of Emotional Empathy (Davis, 1983). Refer to Appendix D.

Invalidating Childhood Environment. The Invalidating Childhood Environment Scale (ICES) is an 18-item scale developed to assess for an invalidating childhood environment. The ICES is comprised of fourteen items focused on parental behaviors (e.g., "I was anxious, and my parents ignored it"), and four items describing one type of a

validating environment and the three types of invalidating environments. The three types of invalidating environments are "typical," controlling one's emotions and behaving as an adult, "perfect," concealing and overcoming emotions to please caregiver(s), and "chaotic," physically, or emotionally unavailable parents. Each item is scored on a 5-point Likert scale that ranges from 1 ("never" or "not like my family") to 5 ("all the time" or "like my family all of the time"). The current study utilized the total scores (ranging from 18 at the lowest, to 90 at the highest) to assess for an invalidating childhood environment.

Several studies have deemed the ICES as both reliable and valid. In a study conducted by Robertson et al. (2007), results indicated that the ICES had good internal consistency for both paternal invalidation ($\alpha = .88$), and maternal invalidation ($\alpha = .90$) Further, both Robertson et al. (2007), and Alpay et al. (2018), found that the ICES has acceptable convergent validity, as the scale was highly correlated with the My Memories of Upbringing scale for both mother and father forms, respectively. Refer to Appendix E.

Social Desirability. The Balanced Inventory of Desirable Responding (BIDR) is a self-report inventory containing two subscales, each comprised of 20 items. The subscales measure two components of socially desirable responding, self-deceptive enhancement (SDE) (e.g., "I am fully in control of my own fate"), and impression management (IM) (e.g., "I never take things that don't belong to me"). Self-deceptive enhancement (SDE) refers to nondeliberate socially desirable responding, and Impression Management (IM) refers to intentionally inaccurate socially desirable responding. Items are ranked on a 7-point Likert scale with options ranging from 1 ("not true") to 7 ("very true"). Further, the scoring of the BIDR differs as, responses of '6' or '7' are scored as

one point, while responses ‘1’, ‘2’, ‘3’, ‘4’ and ‘5’ are scored as zero points. Each subscale’s total scores range from 0 to 20, with higher scores indicating increased SDE or IM, respectively. In the current study, each subscale was used separately.

Across the literature, the BIDR has demonstrated adequate internal consistency. Paulhus (1991) reported ($\alpha = .83$) for the total measure. Further, Paulhus (1999) reported ($\alpha = .83$ to .86) for the SDE and ($\alpha = .75$ to .86) and IM subscales. Moreover, over a 5-week period, Paulhus (1991) reported suitable test-retest reliability values of .69 for SDE and .65 for IM. Over a 3-year period, Lonnqvist et al. (2007) reported similar test-retest reliability values of .71 for SDE and .68 for IM. Lastly, with respect to convergent validity, Paulhus (1999) reported a correlation of .73 between the BIDR total scores and the Marlowe-Crowne Social Desirability Scale and a correlation of .64 with the Edward’s Social Desirability Scale. Refer to Appendix F.

Psychopathy. The Triarchic Psychopathy Measure (TriPM) was developed to operationalize the three distinct constructs of the Triarchic model in terms of boldness, meanness, and disinhibition scales (Patrick et al., 2009). The TriPM is comprised of 19 items focused on boldness (“I never have to worry about making a fool of myself with others”), 20 items focused on meanness (“I don’t mind if someone I don’t like gets hurt”), and 19 items focused on disinhibition (“I have missed work without bothering to call in”). Each item is scored on a 4-point Likert scale with options ranging from 1 (“true”) to 4 (“false”). Scoring on the TriPM For items followed by [F] responses are scored as follows: true = 0; somewhat true = 1; somewhat false = 2; false = 3. All other items are scored as follows: true = 3; somewhat true = 2; somewhat false = 1; false = 0. Each of the three sub-scales (boldness, meanness, and disinhibition) are sub-scored

accordingly, with total psychopathy scores being the sum of the three sub-test scores combined. In the current study, each subscale was analyzed independently with total scores ranging from 0 to 57 for boldness, 0 to 60 for meanness, and 0 to 57 for disinhibition.

The TriPM has reported satisfactory internal consistency across all three domains ranging from αs = .77 to .90 (Stanley et al., 2013). The TriPM scales also demonstrate good construct validity as they are moderately correlated with overall PCL-R, PPI, LSRP, SRP-III, and YPI scores (Patrick, 2010; Stanley et al., 2013). Refer to Appendix G.

Procedure

Prior to data collection, this study was reviewed and approved by the appropriate institutional review board. After being recruited through an online participant pool for students enrolled in introductory psychology courses, participants accessed and completed the study online using a unique identification code assigned by the secure survey platform, Qualtrics. To protect participants' confidentiality, the link between the invitation codes and identifying information was destroyed after course credit was assigned. Each participant received 1 research credit for participating in the survey, and credit was assigned regardless of survey completion.

At the link to the Qualtrics survey, participants read and agreed to an informed consent (see Appendix A) by checking a box, rather than signing their names. Participants then proceeded to the rest of the study, which included measures of alexithymia, socially desirable responding, cognitive and affective empathy, invalidating childhood environments, and psychopathy. At the end of the survey, participants read and

indicated their receipt of a debriefing form containing a description of the study and available resources (Refer to Appendix H). Data from Qualtrics was downloaded and stored in an SPSS file on a password-protected computer accessible only by the study investigator.

CHAPTER 3

RESULTS

Preliminary Analyses

Descriptive statistics, skewness, kurtosis, and Cronbach's alpha for all study variables can be found in Table 1. Correlations between study variables were moderate, warranting the planned use of a moderated-mediation analysis (see Table 1). Prior to conducting the primary statistical analyses, all primary variables were assessed for normality. Only invalidating childhood environment exhibited a non-normal distribution, with a skewness of 1.31 (*SE* = .15) and kurtosis of 1.87 (*SE* = .29). Alpha levels were deemed adequate if they met the benchmark of .70 (Tavakol & Dennick, 2011). Using this benchmark, apart from affective empathy (α =.60) all primary variables demonstrated adequate alpha levels. To explore whether the study variables were differentially correlated with each other as a function of gender, zero-order correlations were conducted between all the primary study variables for each gender separately (see Table 2). Results indicated that invalidating childhood environment was not significantly correlated with either cognitive empathy (r = -.01, p > .05) or affective empathy for women (r =. -07, p > .05) but was positively correlated with cognitive empathy for men (r = .26, p < .05). Further, alexithymia and invalidating childhood environment were not significantly correlated for men (r = .11, p > .05), but were positively correlated for women (r = .17, p < .05). Moreover, alexithymia and cognitive empathy were not significantly correlated for men (r = -.12, p > .05), but were negatively correlated for women (r = -.16, p < .05). Lastly, disinhibition and cognitive empathy were negatively

correlated for women (r = -.23, p < .001) but were not significantly correlated for men (r = -.11, p > .05).

Preliminary analyses designed to identify possible demographic confounds showed that age was not significantly correlated with empathetic concern (r = .01 p > .05) or perspective taking (r = -.01, p > .05). A one-way ANOVA indicated that there were neither race nor ethnicity, differences in empathetic concern [$F(4, 275) = .75$, p > .05] or perspective taking [$F(4, 275) = .73$, p > .05]. Additionally, a one-way ANOVA indicated that there were not group differences in empathetic concern [$F(4, 275) = .54$, p > .05] or perspective taking [$F(4, 275) = .98$, p > .05] as a function of academic year. In addition to demographic confounds, possible confounds relating to social desirability were investigated. Self-deceptive enhancement was found to be significantly correlated with perspective taking (r = .19, p < .01) and empathetic concern (r = .13, p < .05). Finally, impression management was found to be significantly correlated with both empathetic concern (r = .31, p < .01), and perspective taking (r = .36, p < .01). Based on these results, self-deceptive enhancement and impression management were treated as covariates in the primary analyses.

Table 1 Zero-order correlations between study variables, descriptive statistics, skewness, kurtosis, and alpha values.

Variable	1	2	3	4	5	6	7
1.Alexithymia	--	-.15*	-.21**	.15*	.35**	.42**	.16**
2.Cognitive Empathy	--	--	.41**	.05	-.46**	-.21**	-.01
3.Affective Empathy	--	--	--	-.06	-.56**	-.23**	-.11
4. Invalidating Childhood Environment	--	--	--	--	.14*	.35**	.13*
5.Meanness	--	--	--	--	--	.59**	.26**
6.Disinhibition	--	--	--	--	--	--	-.00
7.Boldness	--	--	--	--	--	--	--
M	50.94	25.22	25.86	69.09	63.56	62.95	47.45
(SE)	*(.70)*	*(.27)*	*(.22)*	*(1.15)*	*(.51)*	*(.49)*	*(.47)*
SD	11.66	4.51	3.63	19.08	8.56	8.20	7.85
skewness	.02	-.18	-.37	1.31	-.88	-.56	-.10
kurtosis	-.79	.01	-.34	1.85	-.08	-.00	-.37
α	.84	.79	.60	.88	.88	.84	.79

Note:* $p < .05$; **$p < .01$

Table 2 Bivariate correlations split by gender.

Variable	1	2	3	4	5	6	7
1.Alexithymia	--	-.12	-.34**	.11	.33**	.37**	-.13
2.Cognitive Empathy	-.16*	--	.42**	.26*	-.36**	-.11	.21
3.Affective Empathy	-.19**	.41**	--	-.20	-.65**	-.26*	.04
4. Invalidating Childhood Environment	.17*	-.01	-.07	--	.13	.39**	.14
5.Meanness	.38**	-.48**	-.50**	.15*	--	.48**	.13
6.Disinhibition	.43**	.23**	-.23**	.34**	.64**	--	-.11
7.Boldness	-.17*	-.03	-.10	.13	.22**	.02	--

Note: *$p \leq .05$; **$p \leq .01$. Correlations on the top of the diagonal correspond to men, and correlations under the diagonal correspond to women.

Primary Analyses (Hypotheses 1 through 3)

It was expected that alexithymia will mediate the relationship between both meanness and disinhibition and affective empathy (Hypothesis 1). Further, it was expected that the path from meanness or disinhibition to alexithymia will be moderated by gender, such that women show stronger positive relationships between both two dimensions of psychopathy and alexithymia (Hypothesis 2). Lastly, it was anticipated that this gender moderation of effect is expected to be stronger for women who have experienced invalidating childhood environments (Hypothesis 3).

To test these hypotheses, a double moderated-mediation analysis was conducted using PROCESS Model 11 in SPSS. To evaluate significance, the index for the overall model of conditional mediation was used (Hayes, 2022). Two analyses were conducted, the first with meanness as the predictor variable and the second with disinhibition as the predictor variable. Affective empathy was used as the criterion variable in both analyses, with alexithymia as the mediator of the relationship between either meanness or disinhibition and affective empathy. Further, in both analyses, gender served as the moderator of the relationship between either meanness or disinhibition and alexithymia. Lastly, an invalidating childhood environment served as a moderator of the gender moderation effect in both analyses. To reduce the likelihood of problems with multicollinearity (Alin, 2010), meanness, disinhibition, and an invalidating childhood environment were all mean-centered. The double moderated-mediation analyses with meanness as the predictor variable was non-significant, as the bootstrap interval contained zero (b_{TRIM} = .00, *SE* = .0001, 95% CI: [-.0004, .0005]. Direct effects of meanness and alexithymia in the prediction of affective empathy can be found in below

(see Table 3). The three-way interaction of Meanness x Gender x Invalidating environment in the prediction of affective empathy was non-significant, $F(1, 262) = .01$, $p > .05$, $R^2 = .00$.

The double moderated-mediation analyses with disinhibition as the predictor variable was non-significant, as the bootstrap interval contained zero ($b_{TRID} = .00$, $SE = .0006$, 95% CI: [-.0003, .0019]. Direct effects of disinhibition and alexithymia in the prediction of affective empathy can be found in below (see Table 4). The three-way interaction of Disinhibition x Gender x Invalidating environment in the prediction of affective empathy was non-significant $F(1, 262) = .61$, $p > .05$, $R^2 = .00$.

Table 3

Direct Effects of Meanness and Alexithymia in the Prediction of Affective Empathy.

Variable	coeff	se	t	p	LLCI	ULCI
Intercept	25.58	1.11	23.15	.00	23.40	27.76
Meanness	.22	.02	8.74	.00	.17	.28
Alexithymia	.00	.02	.00	.99	-.04	.04
Self-Deceptive Enhancement	-.12	.08	-.17	.86	-.16	.14
Impression Management	.05	.07	.70	.48	-.09	.19

Note: $F(4, 267) = 29.94$, $p < .05$, $R^2 = .31$.

Table 4

Direct Effects of Disinhibition and Alexithymia in the Prediction of Affective Empathy.

Variable	coeff	se	t	p	LLCI	ULCI
Intercept	26.23	1.25	20.99	.00	23.77	28.69
Disinhibition	.03	.03	.83	.40	-.04	.90
Alexithymia	-.03	.02	-1.51	.13	-.07	.01
Self-Deceptive Enhancement	-.12	.08	-1.43	.15	-.29	.05
Impression Management	.31	.08	3.76	.00	.15	.47

Note: $F(4, 267) = 8.62$, $p < .05$, $R^2 = .11$.

Follow-Up Analyses

Follow-up analyses were conducted using PROCESS Model 4 in SPSS (Hayes, 2022) to determine if the simple indirect effects of the relationship between either meanness or disinhibition and affective empathy through alexithymia were significant. Two analyses were conducted, the first with meanness as the predictor variable and the second with disinhibition as the predictor variable. Affective empathy was treated as the criterion variable and alexithymia as the mediator in both analyses. The simple mediation model with meanness as the predictor variable was non-significant, as the bootstrap interval contained zero (b_{TRIM} = .00, *SE* = .0088, 95% CI: [-.0149, .0200]. Moreover, the simple mediation model with disinhibition as the predictor variable was significant, as the bootstrap interval did not contain zero (b_{TRID} = .02, *SE* = .0126, 95% CI: [.0002, .0507].

Further follow-up analyses were conducted using PROCESS Model 1 in SPSS (Hayes, 2022) in an attempt to replicate the results of Engel et al. (2023) with respect to gender as a moderator. Two analyses were conducted, the first with meanness as the

predictor variable and the second with disinhibition as the predictor variable. Affective empathy was treated as the criterion variable and gender identity was treated as the moderator in both analyses. The simple moderation model with meanness as the predictor variable was not significant (b = .09, SE = .05, p > .05). Moreover, the simple moderation model with disinhibition as the predictor variable was also not significant (b = .05, SE = .06, p > .05). These results were inconsistent with our expectation that this association may be stronger for women.

CHAPTER 4

DISCUSSION

Lack of empathy has historically been associated with the psychopathy construct, both in clinical descriptions (Cleckley, 1988) and in theoretical conceptualizations (Hare, 1991). The relationship between psychopathy and empathy has been featured in both two, and three-factor, models of psychopathy (Mullins-Nelson et al., 2006; Patrick et al., 2010). One possible factor to consider when attempting to understand the association between psychopathy and empathy is gender, as research suggests that women tend to score higher than men on explicit measures of empathy (Eisenberg & Fabbes, 1990). Engel et al. (2023) examined gender as a moderator of the relationship between the triarchic model of psychopathy (i.e., boldness, meanness, and disinhibition; Patrick et al., 2010) and both cognitive and affective empathy. The results indicated that gender moderated the relationship between meanness and empathetic concern, a facet of affective empathy, such that women high in meanness exhibited stronger deficits in affective empathy than men high in meanness. There was a trend in the same direction in the relationship between disinhibition and affective empathy.

The current study was designed to understand the results of Engel et al. (2023). Specifically, a double moderated mediation model was tested to better understand why, and under what circumstances, gender moderated the relationship between certain dimensions of psychopathy (i.e., meanness, and possibly disinhibition) and affective empathy. Based on theory linking alexithymia to empathy deficits among those with various forms of psychopathology (Valdespino et al., 2017) and research demonstrating a

positive relationship between psychopathy and alexithymia (Lander et al., 2012; Ridings & Lutz-Zois, 2014) and a negative relationship between alexithymia and empathy (Jonason & Kruse, 2013), it was expected that alexithymia would mediate the relationship between both meanness and disinhibition and affective empathy. Drawing upon the results of Jonason and Kruse (2013), it was expected that the path from meanness or disinhibition to alexithymia would be moderated by gender such that women would show stronger positive relationships between both two dimensions of psychopathy and alexithymia. Lastly, based on the findings of Brown et al. (2018), this gender moderation effect was expected to be stronger for women who have experienced invalidating childhood environments.

The results of the present study did not support the main hypotheses however, follow-up analyses revealed evidence for simple mediation whereby alexithymia served as a mediator of the relationship between disinhibition and affective empathy. There was no evidence to suggest that the path from meanness or disinhibition to alexithymia was moderated by gender or that such an effect was stronger for women who have experienced an invalidating childhood environment. In the remainder of the discussion, I will discuss in greater detail the results of the study as relevant to each hypothesis below, followed by the limitations of the present study, and suggestions for future research.

Hypothesis 1

In the current study, I hypothesized that alexithymia would mediate the relationship between both meanness and disinhibition and affective empathy. However, when examining the results of the model as a whole, no evidence was found for the hypothesized conditional mediation. In contrast, follow-up analyses examining simple

mediation yielded significant results when disinhibition was treated as the predictor variable. The results of the simple mediation align with what has been theoretically postulated in the literature in that it has been assumed that alexithymia acts as a mediator of the relationship between various forms of psychopathology and empathy deficits (Valdespino et al., 2017). The fact that mediation was found for disinhibition as a predictor variable, but not for meanness as a predictor variable is consistent with the conceptualizations of these two different aspects of psychopathy. Specifically, disinhibition is the dimension of psychopathy that is most conceptually linked to emotion dysregulation and, in turn, most similar to alexithymia. In contrast, meanness, which is akin to emotional callousness, is not as closely theoretically linked to alexithymia as is disinhibition (Almeida, 2015; Brown et al., 2018).

Hypothesis 2

The current study also hypothesized that the path from meanness or disinhibition to alexithymia would be moderated by gender, such that women would have stronger positive relationships between two dimensions of psychopathy (meanness and disinhibition). However, the results of the present study did not support this hypothesis, which was inconsistent with both our expectations and past research. In a study conducted by Jonason and Kruse (2013), results indicated that gender moderated the relationship between psychopathy and alexithymia. Specifically, their results indicated that lower levels of empathy and increased externally oriented thinking (a facet of alexithymia) facilitated the Dark Triad in women compared to men. Further, their results indicated that there was a particularly strong relationship between psychopathy and these

emotional deficits and that high levels of psychopathy in women were predicted by elevated levels of emotional deficits (Jonason and Kruse, 2013).

Hypothesis 3

Lastly, the present study hypothesized that the gender moderation effect, as detailed in hypothesis two, was expected to be stronger for women who have experienced invalidating childhood environments. However, as the results do not support a gender moderation effect in hypothesis two, there was no evidence to suggest that such moderation was stronger for women who have experienced invalidating childhood environments. This is incongruent with the findings of Brown et al. (2018), which indicated that gender moderated the relationship between emotional maltreatment and alexithymia such that the association between emotional neglect and difficulty identifying feelings was stronger for females than males. One possible explanation for the inconsistency between the results of the current study, and Brown et al. (2018) is the sample that was used. Brown et al., 2018 utilized a larger, more diverse population than the current study. Further, there were unequal numbers of women versus men in our sample, a limitation that will be covered in greater detail later in a following section.

Gender Moderating the Relationship of Psychopathy and Affective Empathy

The overarching purpose of this study was to attempt to better understand gender as a moderator of the relationship between certain dimensions of psychopathy (i.e., meanness, and disinhibition) and affective empathy. However, follow-up analyses failed to replicate this original effect found in Engel et al. (2023), thereby calling into question the utility of the model tested in the current study. Failure to replicate the moderation effect found in Engle et al. (2023) could be due to the differing methods of data

collection. Unlike the current study which collected data through Qualtrics, Engel et al. (2023) collected the majority of their data in person. As such, it is possible that the data collected by Engel et al. (2023) was more precise. However, the absence of a gender moderation effect is consistent with a recent meta-analysis by Campos et al. (2022). They examined gender as a moderator within the triarchic model (a three-factor model) and did not find a significant effect. Instead, Campos et al. (2022) found that gender served as a moderator variable within a two-factor model (i.e., primary vs. secondary psychopathy), such that there was a stronger relationship between Factor 1 (primary psychopathic traits) characteristics and cognitive empathy in samples where there were more females, rather than fewer females. Thus, in their meta-analytic study moderation was inferred through the observation that differences in results across individual studies were associated with the number of female participants in an individual study. Taken together, these findings suggest that the Factor 1/cognitive empathy relationship might be more pronounced in women, but that the relationship between meanness per se in isolation and empathy might not be.

Limitations and Directions for Future Research

Although this study did not provide an increased understanding of the results of Engel et al. (2023), it is important to consider the study limitations as they may provide directions for future research. Limitations of the study such as the demographic characteristics of the sample used and the way in which data was collected are factors that could have contributed to the study's non-significant results.

The sample used in this study was college students from a mid-sized, private, midwestern university. As one goal of this study was to examine gender differences with

respect to psychopathy and affective empathy, having a diverse, generalizable sample is key. Unfortunately, the demographic information utilized in this study, such as gender and race, posed limitations in their unique, respective, ways. First, it should be noted that 80.5% of study participants identified as white. With such a lack of diversity among participants, such results cannot be generalized to a larger, more diverse population. With respect to gender, 78.4% of participants identified as female, making the gender ratio highly imbalanced. An unequal sample size when testing a group difference can result in reduced statistical power and can affect the robustness of the equal variances assumption (Ramsey & Ramsey, 2010).

Another limitation of this study is the method by which data was collected. This study utilized an online data collection format, Qualtrics, where college students were offered course research credit in exchange for their completion of the study. As a result, random responding may be an issue. Attempting to correct for random responding, data from participants who completed the study in 10 minutes or less were removed from the main sample, though this may have not fully addressed the issue. A final limitation may be controlling for social desirability. The correlation between the social desirability measure and the indices of empathy are quite high, potentially indicating that there is conceptual overlap between the two constructs. As such, the decision to statistically control for social desirability in the main analyses may be problematic as an important piece of empathy may have been unintentionally parsed out from the analyses.

While the main study hypotheses were not supported, such results are aligned with recent findings which suggest that gender does not serve as a moderator of the relationship between a three-factor model of psychopathy and affective empathy

(Campos et al., 2022). Nonetheless, follow-up analyses using simple mediation were conducted and yielded significant results when disinhibition was the predictor variable. As theoretically established throughout the literature, such results suggest that alexithymia and empathy correlate across both clinical and non-clinical populations and thus theoretically assume that alexithymia acts as a mediator of the relationship between various forms of psychopathology and empathy deficits. However, follow-up research is needed to better understand these results and to examine in what conditions, if any, we see gender differences in empathy among individuals who possess psychopathic traits.

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APPENDIX A

Informed Consent to Participate In a Research Project

Project Title: Gender, Empathy, and Personality

Investigator(s): Caroline Born, Catherine Zois, Ph.D.

Description of the Study: This study is designed to better understand what personality traits may influence an individual's ability to understand, identify and describe emotions that either they or someone else is experiencing. Additionally, this study will examine circumstances under which gender may influence this relationship between personality traits and empathy. You will be asked to complete a series of six different questionnaires to the best of your ability. The questionnaire topics include demographic questions, your personality traits, perceived levels of empathy, and personal experiences as a child.

Adverse Effects and Risks: This study poses minimal risk to you. It is possible that you may feel uncomfortable answering questions related to your personality, past behaviors, and experiences as a child. If you feel upset or wish to stop this study for any reason, at any time, you may end the study at no penalty to you. You may also wish to contact the University of Dayton Counseling Center at (937) 229-3141 upon feeling an distress related to participation in the study. Please note, the Counseling Center is free for all University of Dayton undergraduates.

Anticipated Benefits: Your participation in this study will not directly benefit you but may benefit the field of psychology. By participating in this study, the information you provide may help in furthering knowledge about the relationship between gender, empathy, and personality.

Duration of Study: The study will take approximately 60 minutes to complete.

Confidentiality of Data: Your name will not be recorded on any study documents. Your responses will be kept completely confidential, and your responses will only be identified by a participant number in the data set with other participant numbers. Your responses will be kept in a locked filing cabinet and on secure computers. Only the designated researchers will have access to the data.

Contact Person: Participants may contact Dr. Catherine Zois by at czios1@udayton.edu or Caroline Born at bornc1@udayton.edu . If you have questions about your rights as a research participant you may also contact the chair of the Research Review and Ethics Committee at rrec@udayton.edu, or (937) 229-2713 or in SJ 329.

Consent to Participate: I have voluntarily decided to participate in this study. If I had questions about this study, I have contacted the investigator named above and he or she has adequately answered any *and all* questions I have about the study, the procedures involved, and my participation. I understand that I may voluntarily terminate my

participation in this study at any time and still receive full credit. In addition, I certify that I am 18 (eighteen) years of age or older. By checking the box below, I consent to participate in this study. If I do not want to participate, I can exit this webpage.

☐ I have read the informed consent and I consent to participate in this study.

The University of Dayton supports researchers' academic freedom to study topics of their choice. The topic and/or content of each study are those of the principal investigator(s) and do not necessarily represent the mission or positions of the University of Dayton

APPENDIX B

Demographic Information

Please select your biological sex *(i.e. the sex you were assigned at birth)*

_____Male

_____Female

_____Intersex

Please select your gender. *If "other," please enter your gender in the available text box.*

_____Man

_____Woman

_____Transgender female / trans woman

_____Transgender male / trans man

_____Non-binary, genderqueer, or genderfluid

_____My gender identity not listed here.

Please specify: _____

Please list your age:_____

Race/Ethnicity (select all that apply):

_____American Indian or Alaskan Native
_____Native Hawaiian or Other Pacific Islander
_____Asian
_____Black or African American
_____Hispanic or Latino
_____White
_____Other
If other, please list_____

Please select your current academic year: Freshman, sophomore, junior, senior, 5+ year

APPENDIX C

Toronto Alexithymia Scale (TAS-20)

Directions: Please indicate how much you agree or disagree with each of the following statements by circling a number from 1 to 5 provided each statement.

1. I am often confused about what emotion I am feeling. **F1**

Strongly disagree 1 2 3 4 5 Strongly agree

2. It is difficult for me to find the right words for my feelings. **F2**

Strongly disagree 1 2 3 4 5 Strongly agree

3. I have physical sensations that even doctors don't understand. **F1**

Strongly disagree 1 2 3 4 5 Strongly agree

4. I am able to describe my feelings easily. **RS** **F2**

Strongly disagree 1 2 3 4 5 Strongly agree

5. I prefer to analyze problems rather than just describe them. **RS** **F3**

Strongly disagree 1 2 3 4 5 Strongly agree

6. When I am upset, I don't know if I am sad, frightened, or angry. **F1**

Strongly disagree 1 2 3 4 5 Strongly agree

7. I am often puzzled by sensations in my body. **F1**

Strongly disagree 1 2 3 4 5 Strongly agree

8. I prefer to just let things happen rather than to understand why they turned out that way. **F3**

Strongly disagree 1 2 3 4 5 Strongly agree

9. I have feelings that I can't quite identify. **F1**

Strongly disagree 1 2 3 4 5 Strongly agree

10. Being in touch with emotions is essential. **RS** **F3**

Strongly disagree ***1*** ***2*** ***3*** ***4*** ***5*** ***Strongly agree***

11. I find it hard to describe how I feel about people. **F2**

Strongly disagree ***1*** ***2*** ***3*** ***4*** ***5*** ***Strongly agree***

12. People tell me to describe my feelings more. **F2**

Strongly disagree ***1*** ***2*** ***3*** ***4*** ***5*** ***Strongly agree***

13. I don't know what's going on inside me. **F1**

Strongly disagree ***1*** ***2*** ***3*** ***4*** ***5*** ***Strongly agree***

14. I often don't know why I am angry. **F1**

Strongly disagree ***1*** ***2*** ***3*** ***4*** ***5*** ***Strongly agree***

15. I prefer talking to people about their daily activities rather than their feelings. **F3**

Strongly disagree ***1*** ***2*** ***3*** ***4*** ***5*** ***Strongly agree***

16. I prefer to watch "light" entertainment shows rather than psychological dramas. **F3**

Strongly disagree ***1*** ***2*** ***3*** ***4*** ***5*** ***Strongly agree***

17. It is difficult for me to reveal my innermost feelings, even to close friends. **F2**

Strongly disagree ***1*** ***2*** ***3*** ***4*** ***5*** ***Strongly agree***

18. I can feel close to someone, even in moments of silence. **RS** **F3**

Strongly disagree ***1*** ***2*** ***3*** ***4*** ***5*** ***Strongly agree***

19. I find examination of my feelings useful in solving personal problems. **RS** **F3**

Strongly disagree ***1*** ***2*** ***3*** ***4*** ***5*** ***Strongly agree***

20. Looking for hidden meanings in movies or plays distracts from their enjoyment. **F3**

Strongly disagree ***1*** ***2*** ***3*** ***4*** ***5*** ***Strongly agree***

RS denotes reverse score items
F1 denotes factor 1 items
F2 denotes factor 2 items
F3 denotes factor 3 items

APPENDIX D

Interpersonal Reactivity Index (IRI)

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. When you have decided on your answer, fill in the letter next to the item number. READ EACH ITEM CAREFULLY BEFORE RESPONDING. Answer as honestly as you can. Thank you.

ANSWER SCALE:

A	B	C	D	E
DOES NOT DESCRIBE ME ME WELL				DESCRIBES VERY WELL

1. I daydream and fantasize, with some regularity, about things that might happen to me. (FS)

2. I often have tender, concerned feelings for people less fortunate than me. (EC)

3. I sometimes find it difficult to see things from the "other guy's" point of view. (PT) (-)

4. Sometimes I don't feel very sorry for other people when they are having problems. (EC) (-)

5. I really get involved with the feelings of the characters in a novel. (FS)

6. In emergency situations, I feel apprehensive and ill-at-ease. (PD)

7. I am usually objective when I watch a movie or play, and I don't often get completely caught up in it. (FS) (-)

8. I try to look at everybody's side of a disagreement before I make a decision. (PT)

9. When I see someone being taken advantage of, I feel kind of protective towards them. (EC)

10. I sometimes feel helpless when I am in the middle of a very emotional situation. (PD)

11. I sometimes try to understand my friends better by imagining how things look from their perspective. (PT)

12. Becoming extremely involved in a good book or movie is somewhat rare for me. (FS) (-)

13. When I see someone get hurt, I tend to remain calm. (PD) (-)

14. Other people's misfortunes do not usually disturb me a great deal. (EC) (-)

15. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (PT) (-)

16. After seeing a play or movie, I have felt as though I were one of the characters. (FS)

17. Being in a tense emotional situation scares me. (PD)

18. When I see someone being treated unfairly, I sometimes don't feel very much pity for them. (EC) (-)

19. I am usually pretty effective in dealing with emergencies. (PD) (-)

20. I am often quite touched by things that I see happen. (EC)

21. I believe that there are two sides to every question and try to look at them both. (PT)

22. I would describe myself as a pretty soft-hearted person. (EC)

23. When I watch a good movie, I can very easily put myself in the place of a leading character. (FS)

24. I tend to lose control during emergencies. (PD)

25. When I'm upset at someone, I usually try to "put myself in his shoes" for a while. (PT)

26. When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me. (FS)

27. When I see someone who badly needs help in an emergency, I go to pieces. (PD)

28. Before criticizing somebody, I try to imagine how I would feel if I were in their place. (PT)

NOTE:(-) denotes item to be scored in reverse fashion

PT = perspective-taking scale
FS = fantasy scale
EC = empathic concern scale
PD = personal distress scale

A = 0
B = 1
C = 2
D = 3
E = 4

Except for reversed-scored items, which are scored:

A = 4
B = 3
C = 2
D = 1
E = 0

APPENDIX E

Invalidating Childhood Environment Scale (ICES)

The following questions address your experiences of how your parents responded to your emotions when you were young. For each item, please choose the rating from 1 to 5 that most closely reflects your experience up to the age of 18 years.

1 – Never

2 – Rarely

3 – Some of the time

4 – Most of the time

5 – All of the time

Because your parents may have been very different, please rate them separately. The left hand column is to rate your mother, and the right hand column is to rate your father.

Mother	During my childhood …	Father
	My parents would become angry if I disagreed with them.	
	When I was anxious, my parents ignored this.	
	If I was happy, my parents would be sarcastic and say things like: "What are you smiling at?"	
	If I was upset, my parents said things like: "I'll give you something to really cry about!"	
	My parents made me feel OK if I told them I didn't understand something difficult the first time.	
	If I was pleased because I had done well at school, my parents would say things like: "Don't get too confident".	
	If I said I couldn't do something, my parents would say things like: "You're being difficult on purpose".	
	My parents would understand and help me if I couldn't do something straight away.	
	My parents used to say things like: "Talking about worries just makes them worse".	
	If I couldn't do something however hard I tried, my parents told me I was lazy.	
	My parents would explode with anger if I made decisions without asking them first.	
	When I was miserable, my parents asked me what was upsetting me, so that they could help me.	
	If I couldn't solve a problem, my parents would say things like: "Don't be so stupid — even an idiot could do that!"	
	When I talked about my plans for the future, my parents listened to me and encouraged me.	

Finally, we would like to know how you saw your whole family when you were younger. Please read the following descriptions and rate how closely each one matches your experience of growing up in your family (up to 18 years).

1

– not like my family

2

– a little bit like my family

3

– like my family some of the time

4

– like my family most of the time

5

– like my family all of the time

APPENDIX F

The Balanced Inventory of Desirable Responding (BIDR)

BIDR Version 6—Form 40

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

1 ——— 2 ——— 3 ——— 4 ——— 5 ——— 6 ——— 7

NOT TRUE — SOMEWHAT TRUE — VERY TRUE

____ 1. My first impressions of people usually turn out to be right.
____ *2. It would be hard for me to break any of my bad habits.
____ 3. I don't care to know what other people really think of me.
____ *4. I have not always been honest with myself.
____ 5. I always know why I like things.
____ *6. When my emotions are aroused, it biases my thinking.
____ 7. Once I've made up my mind, other people can seldom change my opinion.
____ *8. I am not a safe driver when I exceed the speed limit.
____ 9. I am fully in control of my own fate.
____ *10. It's hard for me to shut off a disturbing thought.
____ 11. I never regret my decisions.
____ *12. I sometimes lose out on things because I can't make up my mind soon enough.
____ 13. The reason I vote is because my vote can make a difference.
____ *14. My parents were not always fair when they punished me.
____ 15. I am a completely rational person.
____ *16. I rarely appreciate criticism.
____ 17. I am very confident of my judgments.
____ *18. I have sometimes doubted my ability as a lover.
____ 19. It's all right with me if some people happen to dislike me.
____ *20. I don't always know the reasons why I do the things I do.
____ *21. I sometimes tell lies if I have to.
____ 22. I never cover up my mistakes.
____ *23. There have been occasions when I have taken advantage of someone.
____ 24. I never swear.
____ *25. I sometimes try to get even rather than forgive and forget.
____ 26. I always obey laws, even if I'm unlikely to get caught.
____ *27. I have said something bad about a friend behind his or her back.
____ 28. When I hear people talking privately, I avoid listening.

____ *29. I have received too much change from a salesperson without telling him or her.

____ 30. I always declare everything at customs.

____ *31. When I was young I sometimes stole things.

____ 32. I have never dropped litter on the street.

____ *33. I sometimes drive faster than the speed limit.

____ 34. I never read sexy books or magazines.

____ *35. I have done things that I don't tell other people about.

____ 36. I never take things that don't belong to me.

____ *37. I have taken sick-leave from work or school even though I wasn't really sick.

____ 38. I have never damaged a library book or store merchandise without reporting it.

____ *39. I have some pretty awful habits.

____ 40. I don't gossip about other people's business.

Items 1–20 assess SDE; items 21–40 assess IM. Add one point for every "6" or "7" (minimum = 0; maximum = 20).

*, Items keyed in the "False" (negative) direction.

APPENDIX G

The Triarchic Psychopathy Measure (TriPM)

Instructions: This questionnaire contains statements that different people could use to describe themselves. Each statement is followed by four answer choices. For each statement, select the answer choice that best describes you. There are no right or wrong answers. Please respond quickly and do not take too much time on each item.

	True	**Somewhat true**	**Somewhat false**	**False**
1. I'm optimistic more often than not.	0	1	2	3
2. How other people feel is important to me. [F]	0	1	2	3
3. I often act on immediate needs.	0	1	2	3
4. I have no strong desire to parachute out of an airplane. [F]	0	1	2	3
5. I've often missed things I promised to attend.	0	1	2	3
6. I would enjoy being in a high-speed chase.	0	1	2	3
7. I am well-equipped to deal with stress.	0	1	2	3
8. I don't mind if someone I dislike gets hurt.	0	1	2	3
9. My impulsive decisions have caused problems with loved ones.	0	1	2	3
10. I get scared easily. [F]	0	1	2	3
11. I sympathize with others' problems. [F]	0	1	2	3
12. I have missed work without bothering to call in.	0	1	2	3
13. I'm a born leader.	0	1	2	3
14. I enjoy a good physical fight.	0	1	2	3
15. I jump into things without thinking.	0	1	2	3
16. I have a hard time making things turn out the way I want. [F]	0	1	2	3
17. I return insults.	0	1	2	3

	True	Somewhat true	Somewhat false	False
18. I've gotten in trouble because I missed too much school.	0	1	2	3
19. I have a knack for influencing people.	0	1	2	3
20. It doesn't bother me to see someone else in pain.	0	1	2	3
21. I have good control over myself. [F]	0	1	2	3
22. I function well in new situations, even when unprepared.	0	1	2	3
23. I enjoy pushing people around sometimes.	0	1	2	3
24. I have taken money from someone's purse or wallet without asking.	0	1	2	3
25. I don't think of myself as talented. [F]	0	1	2	3
26. I taunt people just to stir things up.	0	1	2	3
27. People often abuse my trust.	0	1	2	3
28. I'm afraid of far fewer things than most people.	0	1	2	3
29. I don't see any point in worrying if what I do hurts someone else.	0	1	2	3
30. I keep appointments I make. [F]	0	1	2	3
31. I often get bored quickly and lose interest.	0	1	2	3
32. I can get over things that would traumatize others.	0	1	2	3
33. I am sensitive to the feelings of others. [F]	0	1	2	3
34. I have conned people to get money from them.	0	1	2	3
35. It worries me to go into an unfamiliar situation without knowing all the details. [F]	0	1	2	3
36. I don't have much sympathy for people.	0	1	2	3

	True	Somewhat true	Somewhat false	False
37. I get in trouble for not considering the consequence of my actions.	0	1	2	3
38. I can convince people to do what I want.	0	1	2	3
39. For me, honesty really is the best policy. [F]	0	1	2	3
40. I've injured people to see them in pain.	0	1	2	3
41. I don't like to take the lead in groups. [F]	0	1	2	3
42. I sometimes insult people on purpose to get a reaction from them.	0	1	2	3
43. I have taken items from a store without paying for them.	0	1	2	3
44. It's easy to embarrass me. [F]	0	1	2	3
45. Things are more fun if a little danger is involved.	0	1	2	3
46. I have a hard time waiting patiently for things I want.	0	1	2	3
47. I stay away from physical danger as much as I can. [F]	0	1	2	3
48. I don't care much if what I do hurts others.	0	1	2	3
49. I have lost a friend because of irresponsible things I've done.	0	1	2	3
50. I don't stack up well against most others. [F]	0	1	2	3
51. Others have told me they are concerned about my lack of self-control.	0	1	2	3
52. It's easy for me to relate to other people's emotions. [F]	0	1	2	3
53. I have robbed someone.	0	1	2	3
54. I never worry about making a fool of myself with others.	0	1	2	3
55. It doesn't bother me when people around me are hurting.	0	1	2	3

	True	Somewhat true	Somewhat false	False
56. I have had problems at work because I was irresponsible.	0	1	2	3
57. I'm not very good at influencing people. [F]	0	1	2	3
58. I have stolen something out of a vehicle.	0	1	2	3

Scoring

Step 1: Coding Responses

For items followed by [F]-i.e., items 2, 4, 10, 11, 16, 21, 25, 30, 33, 35, 39, 41, 44, 47, 50, 52, 57-code responses as follows: True = 0; Somewhat true = 1; Somewhat false = 2; False = 3.

Code responses for all other items as follows: True = 3; Somewhat true = 2; Somewhat false = 1; False = 0.

Step 2: Computing Scale Scores and Total Scores

Boldness subscale (19 items)-Sum coded responses for the following items:

1, 4, 7, 10, 13, 16, 19, 22, 25, 28, 32, 35, 38, 41, 44, 47, 50, 54, 57

Meanness subscale (19 items)-Sum coded responses for the following items:

2, 6, 8, 11, 14, 17, 20, 23, 26, 29, 33, 36, 39, 40, 42, 45, 48, 52, 55

Disinhibition subscale (20 items)-Sum coded responses for the following items:

3, 5, 9, 12, 15, 18, 21, 24, 27, 30, 31, 34, 37, 43, 46, 49, 51, 53, 56, 58

Total Psychopathy score-Sum scores across the three subscales.

APPENDIX H

Debriefing Form

Information about the study, *Gender, Empathy, and Personality*

Objective:	This study is designed to better understand what personality traits may influence an individual's ability to understand, identify and describe emotions that either they or someone else is experiencing. Additionally, this study will examine circumstances under which gender may influence this relationship between personality traits and empathy. We expect to find that individuals with personality traits of lack of concern for the welfare of others and difficulty controlling impulses will show greater difficulty in understanding emotions when compared to individuals who don't have these personality traits. In turn, we expect that individuals who have difficulty understanding emotions will show less empathy toward other people than those who do have a greater ability to understand emotions.
Your Contribution:	Upon agreeing to partake in the study, your contributions of thoughtful, honest, answers are greatly appreciated. By providing the most truthful answers, researchers are able to better understand the relationship between personality traits and empathy; and possibly better understand circumstances under which gender may influence this relationship between personality traits and empathy. This information will potentially help counselors best treat individuals who do show problems with empathy, thereby enhancing the quality of the social relationships of these individuals.
Benefits to you:	Your participation in this study will not directly benefit you, but it may benefit the field of psychology. By participating in this study, the information you provide may assist in furthering knowledge surrounding the relationship between gender, empathy, and personality.
Assurance of privacy:	We are studying Gender, Empathy, and Personality and are not evaluating you personally in any way. Your responses will be kept completely confidential, and your responses will only be identified by a participant number in the data set with other participant numberss. Your name will not be revealed in any document resulting from this study. As your name is not associated with your responses, there is no way for the researchers to contact you if any of your responses on the questionnaires indicate any potential psychological problems for which you could benefit from counseling; however, the researchers highly encourage you to follow up with the Counseling Center upon feeling any distress associated with your participation in this study (see Counseling Center information below).

Please note:

- We ask you to kindly refrain from discussing this study with others in order to help us avoid biasing future participants.
- If you have any questions, please do not hesitate to contact any of the individuals listed below on this page.

Contact Information:

Students may contact Dr. Catherine Zois at czois1@udayton.edu or Caroline Born at bornc1@udayton.edu if you have questions or problems after participation in the study. If you have questions about your rights as a research participant you may also contact the chair of the Research Review and Ethics Committee at rrec@udayton.edu , or (937) 229-2713, or in SJ 329. Please note that if you should choose to contact Dr. Zois and/or the chair of the Research Review and Ethics Committee (RREC), as employees of the University of Dayton they are required to report any and all harassment and/or dating violence, etc. to the university's Title IX coordinator. We do not mention this fact to discourage you from contacting either of us, but simply to help you make an informed decision. Having said this, UD employees who work at the UD Counseling Center, as clergy, and/or as doctors in the UD Health Center are confidential resources and as such, are not required to report such information. You may also wish to contact the University of Dayton Counseling Center at (937) 229-3141. Please note, the Counseling Center is free for all University of Dayton undergraduates.

References:

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Disclaimer:

The University of Dayton supports researchers' academic freedom to study topics of their choice. The topic and/or content of each study are those of the principal investigator(s) and do not necessarily represent the mission or positions of the University of Dayton.

Thank you for your participation.