Psychopathy and emotion regulation: The mediating role of motives and goals

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Psychopathy and Emotion Regulation: The Mediating Role of Motives and Goals

A Thesis Submitted in Partial Fulfillment
of the Requirements for the Degree of Master of Arts

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Abstract

The purpose of this study was to examine the relation between psychopathy and emotion regulation as serially mediated by emotional motives and goals in an all-male sample. Six serial mediation models were proposed, three for each motive-type (i.e., hedonistic, instrumental), and two for each emotion (i.e., anger, fear, joy). Eight-hundred and seventy-eight participants were recruited via Amazon’s Mechanical Turk (MTurk). Results indicate that male MTurk workers with greater levels of psychopathy have poorer emotion regulation, emotion goals for experiencing anger and fear, hedonistic and instrumental motives for experiencing anger and fear, emotion goals for not experiencing joy, and hedonistic and instrumental motives for not experiencing joy. Four of the six serial mediation models were significant. Specifically, the relation between psychopathy and emotion regulation was serially mediated by hedonistic motives for experiencing anger and fear and emotion goals for experiencing anger and fear, as well as instrumental motives for experiencing anger and fear and emotion goals for experiencing anger and fear. However, the relation between psychopathy and emotion regulation was not serially mediated by either hedonistic or instrumental motives for experiencing joy and emotion goals for experiencing joy. These findings support the Fear-Enjoyment Hypothesis, which suggests that people with psychopathic traits are more likely to interpret fear as enjoyable and thus seek out fear-eliciting stimulation.

Keywords: psychopathy, emotion regulation, emotion goals, hedonistic motives, instrumental motives
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Dedication

I would like to dedicate this achievement to my mother (Marcia Baker) and father (Harvey Baker), whose contributions cannot be fully articulated. Thank you, Mom and Dad, for your unwavering love and support, without which I may never have pursued Psychology, and thus never would have completed this project. Thank you, Mom and Dad, for also raising me with guidance in virtue, without which I would not have had the discipline to successfully complete this project.

I would also like to dedicate this thesis to my grandparents, Mawmaw (Beverly Gail Ellis), Pawpaw (Thomas Ellis), and Pawpaw Willard (Willard Patterson). Although love and support was all you could give, you did so overwhelmingly, and for that, I thank you both. To Mawmaw and to Pawpaw Willard, rest in peace.
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Chapter 1: Introduction

Prologue

Psychopathy represents a constellation of extreme personality variants in interpersonal, affective, and behavioral domains, that often manifest as antisocial behavior (Spantidaki Kyriazi et al., 2021). Specific traits in psychopathy include egocentricity, manipulativeness, deceitfulness, and superficial charm in the interpersonal domain; callousness, superficial emotions, and a lack of empathy and remorse in the affective domain; and impulsivity, irresponsibility, a lack of long-term goals, and a proclivity for rule-violating behavior in the behavioral domain (Mededovic et al., 2017; Miller et al., 2013). The behavioral domain may also be understood as two separate dimensions, with one dimension focusing on general lifestyle characteristics (e.g., irresponsibility), and the other focusing on antisocial behavior (i.e., behavior that deviates sharply from social norms, including social/moral transgressions and severe expressions of aggressive behavior; American Psychological Association, n.d.; Neumann et al., 2015). When combined, these traits result in harmful patterns of thinking and behaving which inherently violate society’s expectations, norms, and values (Cleckley, 1955/2015; Miller et al., 2001; Widiger & Lynam, 1998).

Criminality is a subset of antisociality, in that all criminal behavior is antisocial, but not all antisocial behavior is criminal. More specifically, antisocial behavior requires the general breaking of social rules and norms, which includes violations of the law, whereas criminal behavior requires only the breaking of laws. Unlike criminality, antisociality is an irremovable aspect of psychopathy that permeates into the other characteristics that comprise the construct, such as interpersonal style, affective reactions,
and general approach to life (Neumann et al., 2015). Given research demonstrating that people with psychopathic personality traits have the capacity to experience emotions, poor emotion regulation strategies and abilities, and maladaptive emotional motives and goals, this study sought to investigate the process by which these maladaptive motives and goals contribute to the observed dysfunction in emotional regulation.

Literature Review

Psychopathy: A Brief Overview

Despite having no stand-alone diagnosis in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association [APA], 2013) or the International Statistical Classification of Disease and Related Health Problems (ICD-11; World Health Organization, 2019), psychopathy is often described as a personality pathology or disorder due to its long-standing influence on the conceptualization of disordered personalities for the first DSM (APA, 1952) and its subsequent revisions (Crego & Widiger, 2014). Due to difficulties assessing for the cognitive and attitudinal aspects of psychopathy, DSM-III developers created the diagnosis of Antisocial Personality Disorder (ASPD) with the intention of capturing the construct of psychopathy (Crego & Widiger, 2014). Specifically, ASPD is characterized as a pervasive pattern of disregard for and violation of the rights of others that manifests as social irresponsibility with exploitive, delinquent, and criminal behavior (APA, 2013). ASPD is distinguished from psychopathy in that it focuses primarily on the presence of behavioral manifestations, such as aggression, impulsivity, and violating others’ rights, which are used to infer personality characteristics such as callousness, superficial charm, deceitfulness, and arrogance (Crego & Widiger, 2014). Because people with these
particular traits can be manipulative and have grandiose perceptions of themselves, assessing the presence of these traits may be difficult without information from other sources, which is why the presence of these traits must be inferred from behavior. Additionally, because diagnostic criteria for ASPD do not require the presence of these traits, ASPD can be considered distinct from psychopathy in that psychopathy requires the presence of both the traits and behaviors. Furthermore, whereas nearly all people categorized as psychopaths meet criteria for ASPD, only a small percentage of people diagnosed with ASPD can be categorized as psychopaths (Hare, 1996).

One complication with interpreting the psychopathy literature is measurement of the construct. Prior to 1990, most research on psychopathy measured the construct using clinical checklists describing traits and behaviors associated with psychopathy, such as those traits and behaviors described by clinician Cleckley (1955/2015) in his published clinical observations of institutionalized psychopaths. However, this changed in 1990, when Hare et al. published the Hare Psychopathy Checklist - Revised (PCL-R). The PCL-R is a measure of psychopathy in criminal populations that is rated based on a person’s lifetime functioning as evident in the assessment of a clinical interview and institutional file information (Hare, 1996). The PCL-R measures psychopathy categorically, as people with scores above 30 are considered to be psychopaths, whereas those with scores 30 or below are considered not to be psychopaths. To this date, the PCL-R has been revised once, is regarded as the most prominent and well-validated measure of the psychopathy construct (Vien & Beech, 2006), and its revised version has been used to develop and validate more recent measures of psychopathy. Another complication with interpreting the psychopathy literature that stems from measurement of
the construct is that some researchers have analyzed psychopathy as a categorical variable, whereas others have analyzed psychopathy as a continuous variable. Earlier research into psychopathy addressed the construct as categorical and investigated the differences between psychopaths and non-psychopaths in offender samples, which is evident in studies using the PCL-R. However, in the past two decades, researchers have shifted their analytic strategy from categorical to continuous. This is due not only to the development of research questions regarding psychopathy in the general population, but also to the integration of trait dimensional models of personality pathology (Trull & Durrett, 2005). Therefore, I differentiate the categorical from continuous analysis of psychopathy by addressing sampled participants as being either “with psychopathic personalities/categorized as psychopaths” (categorical analysis), or “with elevated levels of psychopathic traits” (continuous analysis).

The most blatant and extreme behavioral manifestations of psychopathic traits (and antisociality) involve criminal activity, especially violent crime (Hare & McPherson, 1984; Reidy et al., 2015). Approximately 15-25% of adult males within the criminal justice system meet criteria for psychopathy, with criminal “psychopaths” being five times more likely to commit and recidivate violent crimes compared to their non-psychopathic counterparts (Kiehl & Hoffman, 2011; Reidy et al., 2015). Indeed, psychopathy is the best predictor of violent crime and recidivism in the United States, associated with a high risk of premature death, and often accompanied by a fast life history strategy, which is characterized as a “relatively short-term focus and present-oriented attitude of taking risks or being aggressive in order to maximize immediate
rewards… and little investment in social relationships or offspring” (Csatho & Birkas, 2018; Jonason et al., 2010; Maibom, 2008).

Because the most striking manifestation of psychopathic traits and antisociality is criminal behavior, researchers have historically oversampled from offender populations, which seems to disregard the people with psychopathic propensities who are not involved in criminal activity, or not detected by the criminal justice system. Given the DSM-5’s general classification of mental illness as being specified by levels of mild, moderate, and severe impairment, it is reasonable to conceive that there are differential levels of severity for psychopathy across modes (i.e., thoughts, attitudes, behaviors) and domains (i.e., familial, legal, occupational, social, and sexual), which may be persistent or intermittent across time. Thus, it is more than likely that there are people with psychopathic personalities within the general population at any given time who are either entirely uninvolved, minimally involved, or highly and undetectably involved in criminal activity. In fact, 54.5% and 59% of violent crimes went unsolved and unreported in 2019 (Federal Bureau of Investigation, Uniform Crime Report, 2019; Morgan & Truman, 2020) respectively, which demonstrates the potential for undetected individuals with psychopathic personalities to not only have committed a portion of these crimes, but also to continue committing these types of crime. Furthermore, Kiehl and Hoffman (2011) estimate that 1% of adult males in the general U.S. population in 2011 (approximately 1.15 million males) would meet criteria for psychopathy.

Nevertheless, more moderate behavioral manifestations of psychopathy may also present concerns within interpersonal, relational, and occupational domains, as well as within the realm of public health and safety. Some of these moderate manifestations
include aggression, coercion, deviant workplace behavior, hypersexuality and risky sex, infidelity, and substance abuse in both males and females (Book et al., 2019; Brewer et al., 2015; Carre et al., 2018; Hoffman & Verona, 2019; Jones & Weiser, 2014; Kastner & Sellbom, 2012; Seibert et al., 2011). Like criminal activity, these behaviors result in destructive outcomes for all parties involved. For example, the repeated infidelity, use of manipulation, and lesser desire for and experience of intimacy with romantic partners observed in males and females with psychopathic traits may lead to reduced satisfaction, quality, and commitment in their romantic relationships, and even dissolution and divorce (Ali & Chamorro-Premuzic, 2010; Jonason et al., 2013; Jones & Weiser, 2014; Smith et al., 2014; Weiss et al., 2018). In addition, consistently deviant workplace behavior, such as bullying and counterproductivity, leads to career difficulties for males and females with elevated levels of psychopathic traits (Paleczek et al., 2018), as well as a reduction of workplace morale, employee well-being, productivity, and profitability for their coworkers and employers (Boddy, 2014). As for general health and public safety, psychopathy’s association with hypersexuality and risky sex places people with heightened levels of psychopathic traits at acute risk for contracting and disseminating human immunodeficiency virus (HIV) and other sexually transmitted diseases, as risky sex is one of the strongest predictors of contracting HIV (Hoyle et al., 2000). Thus, psychopathy presents a variety of potential risks not limited to crime.

**Sex Differences in Psychopathy.** Because the most obvious behavioral manifestation of psychopathy is criminal behavior, researchers have historically neglected investigating psychopathy within non-offending populations, and within populations for which criminal behavior is less likely. One such group being cisgender...
females, who commit crimes at a much lower rate than cisgender males (Steffensmeier & Allan, 1996). However, as described in detail above, people categorized as psychopaths and those with elevated levels of psychopathic traits do not always engage in criminal behavior, and even when they do, they are not always detected by the criminal justice system. Thus, in the past three decades, researchers have begun investigating psychopathy not only within female offender samples, but also within general population samples.

Another problem regarding research on sex and gender differences in psychopathy is that researchers in the broader psychological community have done a poor job at distinguishing between biological sex assigned at birth and gender identity. Often, researchers have used and continue to use the terms “sex” and “gender” interchangeably, which makes it difficult to interpret results in a meaningful way (Hartung & Lefler, 2019). This also makes it difficult to build a theoretical framework for why certain behaviors may be indicative of psychopathology in some groups, but not others. Given the major problem of not distinguishing sex and gender in research, Hartung and Lefler (2019) recommend that researchers exercise clarity and consistency when distinguishing between the two. Therefore, I will be using the terms “male” and “female” throughout this paper to describe biological sex assigned at birth, and will refrain from discussing gender identity, as most research on psychopathy has not addressed its potential influence.

Research in the field of psychopathy indicates that both males and females are capable of exhibiting psychopathic traits, that there are similarities in the expression of psychopathic traits, and that there also are significant differences in the expression of
psychopathic traits. For example, both males and females with elevated levels of psychopathic traits demonstrate more aggression than those with lower levels of psychopathic traits. Specifically, both males and females with psychopathic personalities engage in various forms of aggression, with females demonstrating more relational aggression than males, and males demonstrating more physical aggression than females (Colins et al., 2017). In addition, females with elevated levels of psychopathy are more likely to engage in indirect aggression than their male counterparts, which may be due to the greater risk of harm for females engaging in aggressive behavior (Thomson et al., 2019). Males and females with elevated levels of psychopathy also display similarities and differences in the types of crime for which they commit, and the age at which they were first convicted. For instance, both males and females with elevated levels of psychopathy commit crimes such as vandalism, assault (threatening violence), selling drugs, and intimate partner violence (Declerq et al., 2015; de Vogel & Lancel, 2016). Despite these similarities, males with elevated psychopathic traits have more incidents of physical, verbal, and sexual violence, whereas females have more incidents of property crimes such as theft and fraud, as well as prostitution (de Vogel & Lancel, 2016). Furthermore, compared to females with elevated levels of psychopathic traits, males with elevated levels of psychopathic traits score higher on juvenile delinquency and are older in age at their first conviction, but have less instances of running away (Rogstad & Rogers, 2008).

The research indicates that there are also similarities and differences in other psychiatric symptoms and presentations of psychopathy between the sexes. Females categorized as psychopaths are more likely to engage in self-destructive and self-harming
behaviors, such as attempting suicide, compared to their male counterparts (de Vogel & Lancel, 2016). In addition, both males and females categorized as psychopaths are more likely to have internalizing problems than non-psychopathic males and females; however, females with psychopathic personalities demonstrate higher rates of Post-Traumatic Stress Disorder (PTSD) and anxiety disorders than their male counterparts. Females with psychopathic personalities are also more likely to present as emotionally labile, angry, and hostile than males with psychopathic personalities (Colins et al., 2017). Furthermore, when a sample of clinical psychologists were asked to describe prototypical presentations of psychopathy in males and females, the most common symptoms associated with males were self-aggrandizing, sense of invulnerability, self-centered, domineering, reckless, disruptive, aggressive, lacks anxiety, and is unempathetic, whereas the most common symptoms associated with females were manipulative, lacks emotional stability, and unstable self-concept (Kreis & Cooke, 2011). Although the symptoms “sense of invulnerability” for males and “unstable self-concept” for females are markedly different, they may share the same core, meaning that both males and females with psychopathic personalities may have a fragile self-concept which manifests in males as an inflated sense of invulnerability, and in females as a labile sense of self (Kreis & Cooke, 2011). Another important finding from the study by Kreis and Cooke (2011) is that clinical psychologists also described females with prototypical presentations of psychopathy as being more dependent (i.e., needy, helpless, vulnerable) than their male counterparts, which the authors suggest may be due to females employing female stereotypes to exploit others. Walsh et al. (2019) found that both males and females with psychopathic personalities demonstrated attachment insecurity and dependence on others. However,
males with psychopathic personalities were found to be more anxiously attached than their non-psychopathic male counterparts, whereas females with psychopathic personalities were found to be equally as anxiously attached as their non-psychopathic female counterparts, which may be due to the social taboo of dependence in men, and the social acceptability of dependence in females (Walsh et al., 2019).

Males and females with psychopathic traits also exhibit similarities and differences in addiction, occupational problems, and cognition. Regarding addiction, males and females with elevated levels of psychopathy engage in more alcohol and drug abuse than those with lower levels of psychopathy, but unlike females, males also display more problems with gambling (Miller et al., 2011; Sellbom et al., 2016). As for occupational troubles, males and females categorized as psychopaths experience employment problems, such as unemployment, at similar rates (de Vogel & Lancel, 2016). Lastly, males and females with elevated levels of psychopathy may have significant differences in cognition, such as attention, recognition, processing, and memory. For example, females with elevated levels of psychopathic traits were found to be better than their male counterparts at attending to goal-relevant information, ignoring peripheral threat information, recognizing emotional information, and remembering emotional information, although they still displayed deficits compared to females with lower levels of psychopathic traits (Efferson & Glenn, 2018). Efferson and Glenn (2018) also found that females with elevated levels of psychopathy also demonstrated no deficits in response perseveration, or the ability to inhibit a response to an aversive stimulus that was previously rewarded, for which males with elevated levels of psychopathy continuously demonstrate. The authors suggest that the differences in cognition,
especially those pertaining to recognizing and remembering emotional information, may be due to socialization practices and gender roles for females compared to males, in that females are raised to be more attentive to emotional information than males.

The above findings highlight some of the significant similarities and differences among males and females with elevated levels of psychopathy, and the potential explanations for them, although this review is not exhaustive. An important takeaway from these findings is that psychopathy exists in both males and females, and manifests very similarly in some ways, and very differently in other ways. However, because research on psychopathy in females is more scarce than that in males, and reviews on sex differences in psychopathy is even more scarce still, more research is needed for a better understanding of the clinical picture of psychopathy in both sexes. Given the need for research differentiating the manifestation of psychopathic traits in males and females, this project will build on the greater accumulation of research with an all-male sample, which will provide the opportunity for future replication studies with an all-female sample.

Relevant Problems Within the Psychopathy Literature. Despite decades of research, we still do not understand psychopathy well-enough for a stand-alone diagnosis in the DSM-5, nor a single treatment plan with positive outcomes (Vien & Beech, 2006). These large gaps in the research are the result of at least two factors. First, people with psychopathic personalities are considered to be narcissistic with carefree attitudes about their own lives and the lives of others, they fail to take responsibility for their actions, and they externalize the blame for their actions (Hare & Neumann, 2008). As such, it is logical to assert that people with psychopathic personalities fail to perceive any problems in their lives as consequences of their behavior worth significant concern. Subsequently,
it stands to reason that they do not seek out therapy or behavioral modification, and instead are mandated to treatment by the court or placed in intervention programs at correctional facilities. Additionally, even when people with psychopathic personalities are enrolled in treatment interventions, they demonstrate less clinical improvement, lower levels of motivation, and higher rates of attrition than people without psychopathic personalities (Ogloff et al., 1990).

Second, the psychopathy literature has demonstrated a major problem within the field: misinterpretation of seminal clinical observations. Conceptualizations emphasizing an inability of experiencing emotions as a central component of psychopathy have misinterpreted the criterion “general poverty in major affective regions” coined by clinician Cleckley in writings on his clinical observations of categorized psychopaths within in-patient treatment facilities (Cleckley, 1955/2015). More specifically, the meaning of the word “poverty” has been understood as synonymous with words such as inability and incapacity, rather than insufficiency. In fact, Cleckley was concerned with the quality of their emotional experiences, as in “how long-lasting these states are, how consistent, and how ‘mature’ their expression” (Marsh, 2013, p. 4). These misinterpretations naturally led to the development of research projects aimed at measuring emotional responding in people with psychopathic personalities, which initially garnered support for theories of emotional incapacity and subsequently became a popular concept in mass media. Despite the initial support, recent meta-analyses and literature reviews revealed this predominant conceptualization to be at odds with the amalgamation of empirical research. Affectively, cognitively, and physiologically, males and females with psychopathic personalities experience a range of emotions, including
anger, fear, and excitement (Kosson et al., 2016; Marsh, 2013; see below for further discussion). These findings suggest that existing theories related to psychopathy and antisocial behavior must be reconsidered and updated to include the potential influence of constructs previously considered irrelevant.

**Emotion Regulation, Response Modulation & Psychopathy**

One construct previously considered irrelevant to psychopathy, but which now offers a potential explanation, is emotion regulation, which refers to the appropriate/adaptive monitoring, evaluating, and automatic or controlled manipulation of the presence and/or intensity of the components of an emotional response (e.g., subjective experience, physiological activity, or behavior; Gross & Thompson, 2007; Thompson, 1994). On the other hand, maladaptive emotion regulation (i.e., emotion dysregulation) refers to unsuccessful attempts at changing an emotional response in the desired way, applying strategies for regulation in a rigid manner inconsistent with long-term goals, long-term costs of an emotional response outweighing the short-term influences on emotion, or attempts to suppress or resist emotional experiences which result in maladaptive secondary emotional responses (Werner & Gross, 2010). Emotion dysregulation in males and females has been linked to forms of externalizing behaviors also associated with psychopathy, such as aggression and impulsivity (Garofalo & Neumann, 2018), intimate partner violence (Gratz & Roemer, 2003), and substance abuse (Bjureberg et al., 2016; Cooper et al., 1995; Gratz & Roemer, 2003; Hayes et al., 1996; Tull et al., 2015). In males, emotion dysregulation is also associated with risky sex (Tull et al., 2012), and in females, emotion dysregulation is also associated with non-suicidal self-injury/deliberate self-harm (Gratz & Roemer, 2008), behaviors which are also
associated with psychopathic traits. In addition, emotion dysregulation has been identified as a transdiagnostic indicator of mental illness (Kring & Sloan, 2009), and is associated with eating disorders (Lavender et al., 2014; Segal & Golan, 2016; Whiteside et al., 2007), posttraumatic stress disorder (PTSD; Cloitre, 1998; Tull et al., 2007), borderline personality disorder (BPD; Gratz et al., 2006), generalized anxiety disorder (GAD; Mennin et al., 2002; Salters-Pedneault et al., 2006), major depression (Ehring et al., 2010), and bipolar disorder (Bjureberg et al., 2016; Gratz & Roemer, 2003; Tamir & Millgram, 2017). Thus, these findings point to the importance of emotion dysregulation as a hallmark feature for a variety of diagnoses, which, given its characterization as a personality pathology, could extend to psychopathy.

The potential relevance of emotion dysregulation to psychopathy has only gained empirical and theoretical traction in the past decade, primarily due to the discounting of popular conceptualizations that emphasize an inability to experience emotions as a core feature of psychopathy. Recent evidence, literature reviews, and meta-analyses indicate that males and females with elevated levels of psychopathic traits subjectively and physiologically experience anger at a rate similar to or greater than controls (Blackburn & Lee-Evans, 1985; Dawel et al., 2012; Hicks & Patrick, 2006; Kosson et al., 2016; Marsh, 2013; Marsh & Blair, 2008; Marsh et al., 2011), and appropriate anxiety and fear responses when attending to relevant stimuli (Derefinko, 2014; Hare & Neumann, 2008; Kosson et al., 2016; Marsh, 2013). However, they also demonstrate reduced anxiety and fear responses, but only when not attending to relevant stimuli (Hoppenbrouwers et al., 2016). Taken together, these findings suggest that people with psychopathic personalities are not impaired in their ability to experience emotions, but rather that they have a
deficiency in the process of attending to those emotions, which in turn influences the process involved in the regulating of emotions.

The response modulation (RM) hypothesis (Newman & Lorenz, 2003) suggests that people with psychopathic personalities may experience deficiencies in modulating behavioral and emotional responses due to a difficulty in switching attention between two stimuli. Therefore, when engaged in goal-pursuit, people with psychopathic personalities do not recognize or respond to contextual cues or emotionally-laden stimuli that are peripheral to the task at hand. For example, Lykken (1957) found that males with psychopathic personalities demonstrate little to no learning of passive avoidance contingencies (i.e., electric shocks for inhibiting errored responses) when the instructed task was to learn a sequence of responses for moving through a maze. Extending these findings, Newman and Kosson (1986) observed that males with psychopathic personalities were as good as controls in an avoid-punishment condition, but significantly worse than controls in switching attention in a reward-and-punishment condition. In addition, males with psychopathic personalities responded much faster than participants without psychopathic personalities in tasks requiring the ignoring of peripheral stimuli (e.g., Stroop paradigm; Newman et al., 1997; Schmitt, 2000).

Because males with psychopathic traits experience deficiencies in switching attention from a primary task or stimulus to a peripheral one, they are also less likely to experience or express emotions to emotionally-salient but peripheral stimuli. For instance, although most people are generally quicker at identifying both emotionally-laden (vs. affectively-neutral; Dewhurst & Parry, 2000) and high-frequency (vs. low-frequency; Rajaram & Neely, 1992) words, males with psychopathic personalities did not
experience this advantage, as they were significantly slower than controls at identifying these word-types (Lorenz & Newman, 2001; Williamson et al., 1991). Additionally, males with psychopathic personalities exhibit lower levels of startle response to noise probes when viewing unpleasant slides and greater levels of startle response to noise probes when viewing neutral slides, whereas the opposite is true for most people, generally speaking (Patrick et al., 1993). Males with psychopathic personalities also exhibit lower startle responses than controls while viewing slides depicting mutilation, assault, threat, and thrill (Levenston et al., 2000). These findings for males, combined with evidence demonstrating an inverse relation between startle potentiation and the degree of attention afforded to a slide for males and females (i.e., greater startle related to lower attention; Bradley et al., 1993), suggest that the reduced startle response observed in males with psychopathic personalities is the result of their investing substantial attention into viewing the content of a slide, rather than the result of an inability to experience fear.

The concept of switching attention within the psychopathy literature is similar to that of set shifting within the Attention-Deficit/Hyperactivity Disorder (ADHD) literature. ADHD is classified in *DSM-5* as a neurodevelopmental disorder characterized by developmentally extreme and pervasive manifestations of inattention and/or hyperactivity/impulsivity (APA, 2013; Hinshaw et al., 2021). In the context of ADHD, set shifting is defined as the ability to quickly and efficiently switch back and forth between mental sets or multiple tasks (Monsell, 1996 as cited in Rohlf et al., 2011). Set shifting is conceptualized as a component of executive functioning (EF), which is an umbrella term that refers to cognitive abilities involved in self-regulation and goal-
directed persistence, and is linked to activation in the prefrontal cortex (Barkley, 1997; Moriguchi & Hiraki, 2013). According to Barkley (1997), EF may manifest as publicly observable or instead as highly internalized in the form of self-directed actions, the organization of behavioral contingencies across time, the use of self-directed speech, rules, or plans, deferred gratification, and goal-directed, future-oriented, purposive, or intentional actions. People with ADHD often experience deficits in EF and have reduced activation in their prefrontal cortex (Moriguchi & Hiraki, 2013).

Interestingly, the prefrontal cortex is also associated with psychopathic traits. In a systematic review of research examining the neural correlates of psychopathy, Johanson et al. (2020) found that psychopathy (examined categorically and continuously) was associated with reduced activity, grey matter volume, and functional connectivity in the prefrontal cortex. Additionally, both males and females categorized as psychopaths report more ADHD symptoms than males and females categorized as non-psychopaths, and adolescents and adults with a diagnosis of ADHD report more psychopathic traits than adolescents and adults without a diagnosis of ADHD (Colins et al., 2017; Eisenbarth et al., 2008; Fowler et al., 2009). According to Pauli et al. (2019), the link between ADHD and psychopathy may be understood as a developmental pathway, whereby a diagnosis of ADHD, coupled with pervasive conduct problems, places a child at increased risk of developing psychopathy in adulthood. More research is needed to address this developmental pathway and overlap between ADHD and psychopathic traits.

The deficiencies in switching attention observed in people with psychopathic personalities may operate in the opposite direction of that previously discussed, with these individuals exhibiting difficulties shifting attention away from primary,
emotionally-salient stimuli and toward peripheral tasks. Having difficulty in regulating one’s emotions in order to engage in peripheral goal-related tasks, lacking strategies and believing nothing can be done to regulate one’s emotions when upset, and having difficulty controlling one’s behavior when upset are three of six theorized dimensions of emotion dysregulation (Gratz & Roemer, 2003). In accordance with the RM hypothesis, these dimensions of emotion dysregulation could be associated with psychopathy. Indeed, both males and females with elevated levels of psychopathic traits demonstrate difficulty with regulating emotions along these three dimensions (Garofalo et al., 2018, 2020).

Regardless of whether emotion dysregulation is analyzed as a multidimensional or unidimensional construct, psychopathy total scores for both males and females (as conceptualized by the PCL-R) continue to demonstrate positive associations with emotion dysregulation (Garofalo et al., 2018, 2019, 2020), with Factor 2 traits demonstrating poorer emotion regulation (and emotional intelligence) than Factor 1 traits in some studies with mixed-gender samples (Ali et al., 2009; Grieve & Mahar, 2010; Maxwell et al., 2017; Miller et al., 2010; Vidal et al., 2010), and the four facets demonstrating relatively similar levels of emotion dysregulation in others (Garofalo et al., 2018, 2019, 2020). Hence, it appears that emotion dysregulation is an important consideration with regard to the psychopathic personality.

**A Motivational Framework for Emotion Regulation in Psychopathy**

With mounting evidence demonstrating that attention is an important factor for understanding the emotional responses and regulation of people with psychopathic personalities, a logical next step would be to address factors that affect attention, such as motivation. Previous research has demonstrated the influence of motivation on attention...
in the general population (Calcott & Berkman, 2014; Di Nocera et al., 2014; Norman & Shallice, 1986; Posner et al., 1980), in addition to the results discussed above. Although people with psychopathic personalities are characterized as being poor at setting and adhering to long-term goals (Cleckley, 1955/2015), this does not necessarily mean that they are not goal-oriented in the short-term. The above findings (e.g., Schmitt, 2000), which demonstrate that males with psychopathic personalities have difficulty switching attention while engaged in a particular task, are also evidence suggesting that these individuals are more situationally goal-oriented than the average person. Therefore, it may be the lack of motivation for processing, rather than the processing itself, which is deficient in their difficulty modulating behavior and managing emotional responses. It is possible that males with psychopathic traits experience anger to a greater or similar extent compared to controls because they are motivated to attend to feelings of anger and anger-inducing stimuli.

Because the purpose of the emotion regulation process is to attain a goal, and therefore emotion regulation is always motivated (Tamir & Millgram, 2017), people with psychopathic personalities could want to experience anger because they think it will help them achieve something (Tamir, 2009), or it could be that they want to feel a certain way, affectively (i.e., emotion goal, desired affective state; Tamir & Gutentag, 2017; Tamir, 2016). In both cases, an emotional state can influence whether the goal is obtained or not. For instance, a person who is sad may have difficulty expressing enthusiasm (i.e., emotion goal) upon meeting new people, which could reduce their likelihood of making friends (i.e., achievement goal). The importance of motivation to the emotion regulation process is evidenced by findings showing that people will choose to intentionally express
or not express an emotion if they believe it will result in some desired or undesired outcome (Cameron & Payne, 2011; Forgas, 2013). Thus, it appears motivation may be as important as attention for emotion regulation in people with elevated levels of psychopathic traits.

**Emotion Goals for Emotion Regulation**

Given the assertion that emotion regulation is a process motivated by achievement goals and desired emotional states (i.e., emotion goals), one can infer that emotion dysregulation, generally speaking, is similarly motivated, but by maladaptive desires. A hedonistic approach to emotion regulation suggests that people want to maximize pleasure and minimize pain. Being that psychopathology and psychopathy alike are associated with emotion dysregulation, evidence supporting the presence of maladaptive emotion goals in psychopathology suggests a logical potential for the presence of maladaptive emotion goals in psychopathy as well.

That is, one would expect participants with mood disorders to demonstrate different preferences for experiencing emotions compared to controls. In support of this claim, participants with clinical depression reported a significantly greater preference for sadness, reported a significantly lower preference for happiness, and chose to view significantly more sadness-inducing images compared to non-depressed participants, regardless of their current emotional state (Millgram et al., 2015). Additionally, depressed participants chose sad music significantly more than non-depressed participants and significantly more than happy music; they also chose to increase their emotional reactivity to sad images significantly more than non-depressed participants, and subsequently experienced more intense sadness. These results suggest not only that
people with clinical depression are more motivated to experience sadness, but also that this motivation contributes to their emotion regulatory process and likely results in the maintenance of their depressive state.

The suggestion that depression is partly maintained by a desire for experiencing sadness is congruent with the Behavioral Concordance Model (Cote & Moskowitz, 1998), which suggests that people prefer consistent, rather than inconsistent, experiences. This trait-consistent approach is congruent with evidence demonstrating that extraverts, who reportedly experience greater levels of pleasant emotions compared to introverts (Larsen & Augustine, 2008), have a much stronger desire for pleasant emotions and a greater dislike for unpleasant emotions compared to introverts (Rusting & Larsen, 1995). Such consistency preferences may be held due to habit or the comfort of familiarity; or, these preferences may be held in order to elicit desired outcomes (i.e., instrumental motives).

Generally speaking, people have a strong preference for pleasant affective states and a strong dislike for unpleasant affective states (Kampfe & Mitte, 2009), a notion which supports a hedonistic approach to emotion regulation. However, in situations in which a goal is being pursued, an instrumental approach may be more appropriate. That is, desired affective states are influenced by the type of goal being pursued, and the utility for which an affective state is believed to aid in successful goal attainment. For instance, participants who expected to play an approach-oriented computer game reported a greater preference for excitement-inducing activities, whereas participants who expected to play an avoidance-oriented game reported a greater preference for fear-inducing activities (Tamir & Ford, 2009). In addition, expecting to play an approach-oriented game was
associated with a greater perceived utility of excitement, expecting to play an avoidance-oriented game was associated with a greater perceived utility of fear, and expecting to play a confrontation-oriented game was associated with a greater perceived utility of anger (Tamir & Ford, 2009). These results support the notion that situational demands and instrumental considerations influence preferences for affective states, but they do not address the interaction with personality traits.

As previously discussed, desired affective states are influenced by situational goal pursuit and personality. However, there is also an interaction between the type of goal being pursued and trait personality, which together influence preferences for desired affective states. In support of this claim, extraverts demonstrate stronger preferences for happiness and happiness-activities compared to introverts, but only in the context of effortful situations (Tamir, 2009). When considered through the lens of a trait-consistent approach, this finding suggests that when engaged in an effortful task, people prefer levels of happiness for which they are more accustomed to experiencing.

Because psychopathy is a personality pathology linked with emotion dysregulation, it is reasonable to infer that individuals with elevated psychopathic traits have maladaptive emotion goals consistent with their personality and similar to those observed in those with clinical depression. From a trait-consistent perspective, it is possible that the poor emotion regulation associated with psychopathy is a function of the interaction between their maladaptive emotion goals and habitual experiences. For instance, it has been suggested that the affective facet, which is characterized by a lack of concern for others, a lack of remorse or guilt, a failure to take responsibility for one’s actions, and shallow affect, is associated with emotional suppression (Casey et al., 2013;
Nentjes et al., 2016). Thus, one would expect psychopathy (and the affective traits more specifically) to be generally associated with minimal-to-no desire for pleasant emotions such as happiness, empathy, and love. Additionally, psychopathy is associated with pathological lying and manipulation, general risk-taking behavior, aggression, and impulsivity, all of which typically elicit feelings of fear. Given evidence demonstrating that people with psychopathic personalities experience fear affectively, cognitively, and physiologically, albeit to a lesser extent than the general population (Kosson et al., 2016), a reasonable explanation for the risk-taking behaviors associated with psychopathy exists in the Fear-Enjoyment Hypothesis (Hosker-Field et al., 2016), which states that people with psychopathic traits interpret fear as enjoyable, and thus have a desire to experience fear. Desiring the experience of fear because it is perceived as pleasant is consistent with a hedonistic motivation for regulating emotions.

This perspective is consistent with the circumplex model of affect (Russell, 1980), which asserts that emotions are conceptualized along two interacting, bipolar dimensions. The first dimension is valence, which represents the degree to which an emotion is perceived as pleasurable or displeasurable, and the second dimension is arousal, which represents the degree to which an emotion activates or deactivates the autonomic nervous system (Posner et al., 2008). According to this model, each emotion is conceptualized with varying degrees of both valence and arousal. For example, an emotion such as joy is typically perceived as pleasant and is physiologically activating, whereas an emotion such as sadness is typically perceived as unpleasant and is physiologically deactivating. If people with elevated levels of psychopathic traits generally interpret fear as enjoyable, then they could also interpret fear (or other negative emotions, such as anger) as useful in
contexts in which most people would interpret fear as a hindrance or as less useful than other, positive emotions. Recent evidence demonstrates that males and females with elevated levels of psychopathic traits indeed hold maladaptive emotion goals and motives, such as having general preferences for anger and fear, along with a perceived pleasantness (i.e., enjoyment) and perceived utility for anger and fear (Spantidaki Kyriazi et al., 2021). Not only that, but Spantidaki Kyriazi et al. (2021) found that hedonistic and instrumental motives mediated the relation between psychopathic traits and emotion goals for anger, fear, and joy. However, emotion goals and motives have yet to be investigated alongside emotion regulation as a serial mediation, and therefore, by combining the Fear-Enjoyment Hypothesis with motivational and trait-consistent approaches to emotion regulation, this study seeks to address this gap in the literature.
Chapter 2: Method

The Current Study

Using a motivational framework for emotion regulation in conjunction with the Fear-Enjoyment Hypothesis of psychopathy, which states that people with psychopathic personalities interpret fear as pleasurable rather than aversive, the current study aimed to investigate the instrumental and hedonistic motivations for setting emotion goals in males with elevated levels of psychopathic traits, as well as the interaction effects of these motives and goals on emotion regulation. Specifically, I examined emotion goals as a mediator between psychopathic traits and emotion regulation. In line with previous research demonstrating that psychopathic traits are related to poor emotion regulation and maladaptive emotion goals (i.e., desire for experiencing anger and fear with no desire for experiencing joy), I hypothesized that total psychopathy scores would be positively related to emotion dysregulation, and that this relation would be explained by the maladaptive emotion goals set for both positive and negative emotions. I expected to find that total psychopathy scores would be positively correlated with emotion goals for anger and fear, and negatively correlated with emotion goals for joy.

In addition, I examined the perceived utility (i.e., instrumental motive) and perceived pleasantness (i.e., hedonistic motive) of emotions as two variables that mediate the relation between psychopathic traits and emotion goals, with greater perceived utility and perceived pleasantness of negative emotions being associated with more maladaptive emotion goals for males with greater levels of psychopathic traits. In accordance with previous findings, I expected to find that the perceived utility and perceived pleasantness of anger, fear, and joy would mediate the relation between psychopathic traits and
emotion goals for anger, fear, and joy. Based on empirical findings, I expected to find that total psychopathy scores would be positively correlated with the perceived utility of anger and fear, negatively correlated with the perceived utility of joy, positively correlated with the perceived pleasantness of anger and fear, and negatively correlated with the perceived pleasantness of joy.

Lastly, I investigated the relation between psychopathic traits and emotion regulation as a serial mediation, with instrumental and hedonistic motives mediating the relation between psychopathic traits and emotion goals, and emotion goals mediating the relation between psychopathic traits and emotion regulation.

**Participants**

Seven-hundred and seventy-five males participated in the study, which was approved by the University of Northern Iowa’s Institutional Review Board (IRB). Participants were recruited via Amazon’s Mechanical Turk (MTurk), and compensated $1.00. Of the 775 participants that reported their assigned sex at birth as male, seven reported their gender identity as non-binary, and one reported their gender identity as woman. These participants were retained in analyses as gender identity is considered distinct from assigned sex at birth. The majority of participants identified their race as White or European American (72.8%), followed by Black or African American (9.2%), Asian or Asian American (7.6%), Hispanic/Latinx (4.6%), and American Indian or Alaska Native (.4%). Participants’ average age was 41.4 years old. Most participants reported their highest level of education received as Bachelor’s degree (40.4%), followed by a Graduate degree (14.6%), some education after high school but no (15.9%), an Associate’s degree (11.8%), a high school degree or GED (8.6%), Vocational training
(3.1%), Trade certification (2.6%), and no high school degree (.1%). Twenty-one percent of participants reported their annual household income before taxes as $100,000 or more, followed by $30,000 – less than $50,000 (20%), $50,000 – less than $70,000 (19.8%), $70,000 – less than $100,000 (18.4%), $10,000 – less than $30,000 (14.7%), and less than $10,000 (5.6%). Demographic characteristics of study participants is reported in Table 1.

**Recruitment**

Because the base rate of psychopathic traits in the general population is extremely low, achieving an MTurk sample with elevated levels of psychopathy was a concern. To address this concern, I used a recruitment strategy developed by Widom (1977), which has shown repeated success in sampling people with elevated levels of psychopathic traits (as cited in Mullins-Sweatt et al., 2010). The recruitment script was modified for online use and is shown below.

“Wanted: charming, aggressive, carefree people who are impulsively irresponsible but are good at handling people and at looking after number one. If these traits don’t apply to you, worry not! You may still participate. We are conducting an online survey about personality and emotions which will take approximately 20 minutes to complete. Respondents will receive $1.00 for participation. If interested, please click the link below.”
Table 1

Demographic Characteristics of Study Participants

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<th>Characteristic</th>
<th>M</th>
<th>SD</th>
<th>%</th>
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<td>Grade 12 or GED</td>
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<td>8.6</td>
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<td>Some edu after high school, no degree/award</td>
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<td>15.9</td>
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<td>21</td>
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Note: M = Mean, SD = Standard Deviation, % = Percent of sample.
Procedure

Participants were recruited online via Amazon’s Mechanical Turk (MTurk) to participate in a survey via Qualtrics (https://www.qualtrics.com). Once participants clicked the provided study link and were redirected to Qualtrics, they were presented with an informed consent (see Appendix B). Following informed consent, they completed each of the measures, which were counterbalanced and randomized in order to control for potential presentation-order effects. Next, participants were presented with questions regarding their demographic information, followed by an open-ended item which offers the opportunity to leave comments for the researcher. Lastly, participants were presented with a debriefing (see Appendix C) which thanked them for their participation and provided contact information for the researchers and IRB Administrators.

Measures

*Self-Report Psychopathy Scale—Short Form*

The Self-Report Psychopathy Scale-SF (SRP-SF; Paulhus et al., 2016) is a multifaceted self-report scale used to measure psychopathic traits. This measure contains 29 items (e.g., “It’s fun to see how far you can push people before they get upset”) presented on a 5-point Likert-type scale (1 = Disagree strongly, 5 = Agree strongly). The SRP-SF was modeled after the PCL-R, and produces scores for each of the four facets (i.e., interpersonal, affective, lifestyle, and antisocial), as well as a total score. The interpersonal facet measures superficial charm, grandiose sense of self-worth, pathological lying, and manipulative tendencies. The affective facet measures lack of remorse or guilt, shallow affect, callousness/lack of empathy, and failure to accept responsibility for one’s actions. The lifestyle facet measures need for stimulation,
parasitic lifestyle, impulsivity, and irresponsibility. The antisocial facet measures poor behavioral controls, early behavioral problems, juvenile delinquency, and general law-breaking behavior. The SRP-SF has previously demonstrated good validity across populations (Seara-Cardoso et al., 2020). The SRP-SF demonstrated excellent internal reliability in this sample ($\alpha = .92$). See Appendix A for the full measure.

**Difficulties in Emotion Regulation Scale – 16**

The Difficulties in Emotion Regulation Scale – 16 (DERS-16; Bjureberg et al., 2016) is a self-report measure of difficulties with regulating emotions. This measure contains 16 items (e.g., “When I am upset, I become out of control”) presented on a 5-point Likert-type scale ($1 = \text{Almost never}, 5 = \text{Almost always}$). The DERS-16 has demonstrated good construct validity (Bjureberg et al., 2016; Garofalo et al., 2019). In this sample, the DERS-16 demonstrated excellent internal reliability ($\alpha = .95$). See Appendix B for the full measure.

**Affect Valuation Index**

To measure emotion goals, I used a modified version of the Affect Valuation Index (AVI; Tsai et al., 2006), which is a self-report measure of ideal affect (affective states that people value or ideally want to feel), and actual affect (affective states that people actually feel). Because the aim of this project was to investigate emotion goals, only the item pertaining to ideal affect was used. Participants were presented with a list of 12 words that describe feelings (e.g., delighted, hostile, joyful, scared), and rated how often they would ideally like to have those feelings over the course of a typical week on a 5-point Likert-type scale ($1 = \text{Never}, 5 = \text{All the time}$). The AVI has been analyzed previously for emotional valence, resulting in a positive emotions score and negative
emotions score; however, Tsai et al. (2006) assert that this measure can also be analyzed in a variety of ways, such as analyzing for specific emotions. Thus, four of the 12 descriptor words were averaged to measure emotion goals for anger (i.e., hostile, angry, irritated, mad), four were averaged to measure emotion goals for fear (i.e., scared, fearful, afraid, nervous), and four were averaged to measure emotion goals for joy (i.e., delighted, joyful, happy, cheerful). The AVI has demonstrated good construct and discriminant validity (Tsai et al., 2006). The AVI subscales for anger (α = .88) and fear (α = .89) demonstrated good internal reliability in this sample, whereas the subscale for joy (α = .91) demonstrated excellent internal reliability in this sample. See Appendix C for the full measure.

**Perceived Affect Utility Scale–Revised**

To measure instrumental motives, I used a modified version of the Perceived Affect Utility Scale-Revised (PAUse-r; Chow et al., 2017), which is a self-report measure of how useful an emotion is for goal attainment. I reduced the PAUse-r instructions in order to keep the survey duration to less than 15 minutes. Like with the AVI, participants were presented with a list of 12 words that describe feelings (e.g., delighted, hostile, joyful, scared), and rated how much the different emotions motivate them to achieve their goals, and how much the different emotions make it easier for them to do things to achieve their goals on a 5-point Likert-type scale (1 = Strongly disagree, 5 = Strongly agree). The analytic strategy for the PAUse-r is similar to that for the AVI; however, because there are two items on the PAUse-r, eight descriptor words were averaged to measure instrumental motives for each emotion instead of four descriptor words. Across both items, eight of the 24 descriptor words were averaged to measure instrumental
motives for anger (i.e., hostile, angry, irritated, mad), eight were averaged to measure instrumental motives for fear (i.e., scared, fearful, afraid, nervous), and eight were averaged to measure instrumental motives for joy (i.e., delighted, joyful, happy, cheerful). The PAUse-r has demonstrated good construct and discriminant validity (Chow et al., 2017). In this sample, the PAUse-r demonstrated excellent internal reliability for the anger ($\alpha = .92$), fear ($\alpha = .93$), and joy ($\alpha = .94$) subscales. See Appendix D for the full measure.

**Attitudes Toward Emotions Questionnaire**

To measure hedonistic motives, I used the Attitudes Toward Emotions Questionnaire (ATE; Harmon-Jones et al., 2011), which is a self-report measure of an emotion’s subjective feel on a 5-point Likert-type scale ($1 = \text{Rarely/never}, 5 = \text{Almost always/always}$). The ATE contains 28 items (e.g., “I like the feeling of power I get from expressing my anger”) that produce five subscale scores for five discrete emotions (i.e., anger, joy, sadness, disgust, fear); however, due to the specific aims of this study, only the three relevant subscales (i.e., Attitudes Toward Anger, Attitudes Toward Joy, Attitudes Toward Fear) were given. The ATE has repeatedly demonstrated good predictive validity (Harmon-Jones et al., 2011). In this sample, none of the ATE subscales demonstrated acceptable reliability; however, the ATE-Anger ($\alpha = .67$) and ATE-Fear ($\alpha = .69$) subscales approached acceptable internal reliability, whereas the ATE-Joy ($\alpha = .54$) subscale demonstrated poor internal reliability. Reliability analyses indicated that removing a single item from each of the ATE subscales improved internal reliability for each subscale. Removing the item “I dislike how it feels when I’m angry” from the ATE-Anger subscale resulted in acceptable internal reliability ($\alpha = .73$).
Removing the item “I do things just because they scare me” from the ATE-Fear subscale resulted in acceptable internal reliability ($\alpha = .79$). Removing the item “I like experiencing joy” resulted in acceptable internal reliability ($\alpha = .77$). Thus, the reduced versions of each subscale were used in analyses. See Appendix D for the full measure.

**Demographics**

For demographics, I measured biological sex, gender identity, race/ethnicity, age, highest level of education, annual household income, and perceived social status. To measure perceived social status, I used the MacArthur Scale of Subjective Social Status (MacArthur SSS Scale; Adler et al., 2000), which is a single-item measure that presents participants with a drawing of a ladder that represents where people stand in society (i.e., people on the top rung are better off, people on the bottom rung are worse off), and asks participants to indicate on which rung they stand, and thus where they believe they stand in society. I chose to measure perceived social status in addition to highest level of education and annual household income in order to exploratorily address differences in objective and subjective socioeconomic status, given that people with elevated levels of psychopathy tend to hold grandiose perceptions of themselves. See Appendix E for the full measure.

**Design**

This study employed a correlational design to explore mediational mechanisms that possibly explain associations between psychopathic traits and emotion dysregulation. I conducted mediation analyses to analyze the indirect effects of hedonistic motives, instrumental motives, and emotion goals on the relation between psychopathic traits and emotion dysregulation.
Hypotheses

**Hypothesis 1: Zero-Order Correlations.** Psychopathy total scores and emotion dysregulation will be positively associated. Psychopathy will also be positively associated with the perceived pleasantness of anger and fear, the perceived utility of anger and fear, and general emotion goals for anger and fear. In addition, psychopathy will be negatively associated with the perceived pleasantness of joy, the perceived utility of joy, and general emotion goals for joy.

**Hypothesis 2: Serial Mediation Models – Hedonistic Motives.** The relation between psychopathy and emotion goals for anger, fear, and joy will be mediated by the perceived pleasantness of anger, fear, and joy. In addition, the relation between psychopathy and emotion dysregulation will be serially mediated by the perceived pleasantness of anger, fear, and joy, as well as general emotion goals for anger, fear, and joy.

**Hypothesis 3: Serial Mediation Models – Instrumental Motives.** The relation between psychopathy and emotion goals for anger, fear, and joy will be mediated by the perceived utility of anger, fear, and joy. Further, the relation between psychopathy and emotion dysregulation will be serially mediated by the perceived utility of anger, fear, and joy, as well as general emotion goals for anger, fear, and joy.

Data Handling

**A Priori Power Analysis & Data Output Issues**

Because G*Power (Faul et al., 2009), a program widely used in psychological research to conduct power analyses, is not capable of calculating sample size for mediational analyses, I used an alternative method of determining sample size posited by
Fritz and MacKinnon (2007). Fritz and MacKinnon (2007) created a table for determining sample size based on three criteria: 1) the estimated effect size for the $a$ path; 2) the estimated effect size for the $b$ path; and 3) the type of mediational test used. According to Fritz and MacKinnon’s (2007) power table for meditational analyses, when using percentile bootstrapping, the sample size needed to detect a small effect for the $a$ path and a small effect for the $b$ path is 558. These effect sizes were estimated using results reported by Spantidaki Kyriazi et al. (2021). Thus, ideally, I would have recruited 600 participants from Amazon’s Mechanical Turk (MTurk), and offer $1.00 as compensation.

Because the funding offered by the University of Northern Iowa’s Intercollegiate Academics Fund (IAF) was not enough to cover recruiting 600 participants, I used CloudResearch’s MTurk Toolkit to specify the recruitment of 562 male participants. The CloudResearch MTurk Toolkit offers researchers the opportunity to recruit participants from MTurk and specify pre-exclusionary criteria, including those that may improve data quality over using MTurk alone. Despite specifying the recruitment of 562 male participants in CloudResearch, there were 878 observations in the Qualtrics output file. These additional observations were the result of participants taking the survey through MTurk, but not submitting a completion code when prompted, and thus these observations were categorized as “not submitted” by MTurk and CloudResearch, and these participants were not initially compensated for their participation. Although their data was not identifiable in the Qualtrics output, I was able to identify the MTurk worker ID associated with most of these participants through collaboration with CloudResearch. Furthermore, the participants that were matched to MTurk worker IDs were compensated
through MTurk with research funds held by the chair of this project, Dr. Nicholas Schwab.

**Data Cleaning Protocol**

Pre-exclusionary criteria entered into the CloudResearch MTurk Toolkit included excluding participants assigned female sex at birth, participants not residing in the U.S., participants younger than 18 years of age, and participants with duplicate or suspicious geocodes. Of the 878 participants that completed the Qualtrics survey, 17 reported their sex assigned at birth as female, and one did not identify a sex assigned at birth. Thus, these 18 cases were excluded from all further analyses. In addition, there were no participants that did not reside in the U.S., no participants that were younger than 18 years of age, and no participants that expressed duplicate or suspicious geocodes.

Post-exclusionary criteria applied included having duplicate or suspicious IP addresses, having careless data, having dishonest data, or having missing values. Fifty-two cases were excluded for demonstrating duplicate IP addresses. Additionally, I deemed participants’ data as careless if they missed all three of the attention checks (see Appendix H), which were presented at different points throughout the survey in Likert-type format; or, if the duration of their survey was two standard deviations below the mean of sample participants’ total survey duration. Twenty-four participants were excluded for missing all three attention checks, and no participants were excluded for having a survey duration of less than the sample’s mean survey duration. I also deemed participants’ data as careless if they missed two of the three attention checks in conjunction with a survey duration two standard deviations below the mean. There were no participants whose survey duration was two standard deviations below the mean.
duration, and therefore no participants were excluded based on this criterion. Further, I deemed participants’ data as dishonest if they indicated a lack of honesty in responding. There were no participants who indicated that they were dishonest in their responding, and therefore no participants were excluded based on this criterion. Lastly, two exclusion criteria were applied in regard to missing values. First, if a participant completed less than 50% of an instrument that has good reliability ($\alpha = .80$) or less than 100% of an instrument with poor reliability ($\alpha < .80$), I excluded their data from analyses for that instrument. Based on these criteria, no participants were excluded from analyses with the SRP-SF, DERS-16, AVI subscales, or PAUse-r subscales. However, for the ATE subscales, seven participants were excluded from analyses with the Anger subscale, eight were excluded from analyses with the Joy subscale, and 10 were excluded from analyses with the Fear subscale. Lastly, if a participant completed less than 50% of the entire survey, I excluded their data entirely from analysis. No participants were excluded from analyses based on this criterion.

Because I used PROCESS (Hayes, 2012) for the mediation analyses, the influence of outliers was not a concern. PROCESS is a robust test of mediational relations that does not assume normality of data nor linearity of the model, and achieves this by generating a sample distribution using a bootstrapping procedure. Therefore, extreme responses and skewed distributions would not influence the analyses and was not a concern.

Data Analytic Protocol

First, I calculated descriptive statistics and zero-order, bootstrapped correlations for all study variables (i.e., psychopathy total scores, psychopathy facet scores, hedonistic motives, instrumental motives, emotion goals, emotion dysregulation). Next, I conducted
mediation analyses for the serial mediation models proposed. Specifically, I treated the psychopathy total score as the predictor variable and emotion dysregulation as the outcome variable, with hedonistic motives, instrumental motives, and emotion goals as mediators (see Figure 1). In total, there were six separate mediation models (see Figures 2 through 7, which depict each hypothesized model); the first three models examined hedonistic motives and corresponding emotion goals as mediators, whereas the second three models examined instrumental motives and corresponding emotion goals as mediators. The reason for having three models for each motive-type is due to the three different emotions being examined (i.e., anger, fear, joy). For instance, hedonistic motives for anger and emotion goals for anger would serially mediate the relationship between psychopathy and emotion dysregulation. Next, I examined the indirect effects of psychopathic traits on emotion dysregulation via hedonistic motives, instrumental motives, and emotion goals for anger, fear, and joy. All analyses were initially conducted using the full ATE subscales, and then repeated using the reduced version each subscale.
Figure 1

*Hypothesized Mediation Model with Motives and Emotion Goals as Mediators*

Note. Model of the relationship between psychopathy and emotion regulation, as mediated by motives and emotion goals. Motives = hedonistic motives for anger, fear, or joy; instrumental motives for anger, fear, or joy. Emotion Goals = general desire for experiencing anger, fear, or joy.
Figure 2

_Hedonistic Motives and Emotion Goals for Anger as Mediators_

![Diagram of the relationship between psychopathy and emotion regulation, as mediated by hedonistic motives and emotion goals for experiencing anger.]

*Italicized variables (e.g., $\alpha_1$) indicate each pathway calculated in mediation analyses.*
Figure 3

*Instrumental Motives and Emotion Goals for Anger as Mediators*

![Diagram](image)

*Note.* Model of the relationship between psychopathy and emotion regulation, as mediated by instrumental motives and emotion goals for experiencing anger. SRP-SF = Self-Report Psychopathy Scale-Short Form; DERS-16 = Difficulties in Emotion Regulation Scale-16; PAUse-r for Anger = Perceived Affect Utility Scale-Revised (instrumental motives) for anger; AVI for Anger = Affect Valuation Index for anger.

*Italicized variables (e.g., α₁) indicate each pathway calculated in mediation analyses.*
Figure 4

_Hedonistic Motives and Emotion Goals for Fear as Mediators_

![](image)

_Note_. Model of the relationship between psychopathy and emotion regulation, as mediated by hedonistic motives and emotion goals for experiencing fear.

*Italicized variables (e.g., $\alpha_i$) indicate each pathway calculated in mediation analyses.

Figure 5

_Instrumental Motives and Emotion Goals for Fear as Mediators_

![](image)

_Note_. Model of the relationship between psychopathy and emotion regulation, as mediated by instrumental motives and emotion goals for experiencing fear.

*Italicized variables (e.g., $\alpha_i$) indicate each pathway calculated in mediation analyses.
**Figure 6**

*Hedonistic Motives and Emotion Goals for Joy as Mediators*

![Diagram](image)

*Note.* Model of the relationship between psychopathy and emotion regulation, as mediated by hedonistic motives and emotion goals for experiencing joy.

*Italicized variables (e.g., $\alpha_1$) indicate each pathway calculated in mediation analyses.

**Figure 7**

*Instrumental Motives and Emotion Goals for Joy as Mediators*

![Diagram](image)

*Note.* Model of the relationship between psychopathy and emotion regulation, as mediated by instrumental motives and emotion goals for experiencing joy.

*Italicized variables (e.g., $\alpha_1$) indicate each pathway calculated in mediation analyses.
Chapter 3: Results

Descriptive and Inferential Statistics

Descriptive statistics for all study variables are included in Table 2, and descriptive statistics for all study variables using the full ATE subscales are reported in Table 3. The mean of SRP-SF total scores in this sample indicate that most participants scored on the lower end of the psychopathy continuum \( (M = 54.21, SD = 18.61) \), as the maximum score achievable is 135. This is not surprising, given that an overwhelming majority of people in the general population do not present with high levels of psychopathic traits (Neumann et al., 2015). The mean of DERS-16 scores indicate that most participants in this sample scored on the lower end of the emotion dysregulation spectrum \( (M = 31.56, SD = 13.12) \), as the maximum score achievable is 80. The mean AVI-Anger score in this sample indicates that most participants scored on the lower end of the spectrum for having emotion goals for experiencing anger \( (M = 1.34, SD = .57) \), as the maximum score achievable is 10. The mean of AVI-Fear scores in this sample indicates that most participants scored on the lower end of the spectrum for having emotion goals for experiencing fear \( (M = 1.37, SD = .59) \), as the maximum score achievable is 10. The mean of AVI-Joy scores in this sample indicates that most participants scored in the low to middle range of the spectrum for having emotion goals for experiencing joy, \( (M = 4.08, SD = .86) \), as the maximum score achievable is 10. The mean of ATE-Anger scores in this sample indicates that most participants scored on the lower end of the spectrum for enjoying experiences for anger \( (M = 5.62, SD = 2.33) \), as the maximum score achievable is 25.
Table 2

Descriptive Statistics for All Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>Range*</th>
</tr>
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<td>14-145</td>
</tr>
<tr>
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<td>13.12</td>
<td>8-80</td>
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<td>AVI</td>
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<td>Fear</td>
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<td>.59</td>
<td>0.5-5</td>
</tr>
<tr>
<td>Joy</td>
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<td>4.08</td>
<td>.86</td>
<td>0.5-5</td>
</tr>
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<td>ATE</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Anger</td>
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<td>Fear</td>
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</tr>
<tr>
<td>Joy</td>
<td>686</td>
<td>4.09</td>
<td>.80</td>
<td>0.5-5</td>
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</tbody>
</table>

*Note.* SRP-SF = Self-Report Psychopathy Scale-Short Form; DERS-16 = Difficulties in Emotion Regulation Scale-16; AVI = Affect Valuation Index; ATE = Attitudes Toward Emotions; PAUse-r = Perceived Affect Utility Scale-Revised; n = number of observations included in correlation analyses; \( M \) = Mean; \( SD \) = Standard Deviation; \( Range^* \) = Range of Possible Scores.

Hypothesis 1: Bootstrapped Zero-Order Correlations

Psychopathy

In support of my hypothesis, scores on the SRP-SF were positively and moderately correlated with DERS-16 scores, \( r = .42, p < .01, 95\% \text{ CI } [.35, .48] \), AVI-Anger scores, \( r = .37, p < .01, 95\% \text{ CI } [.31, .44] \), AVI-Fear scores, \( r = .32, p < .01, 95\% \text{ CI } [.25, .39] \), PAUse-r Anger scores, \( r = .43, p < .01, 95\% \text{ CI } [.36, .48] \), and PAUse-r...
Fear scores, \( r = .30, p < .01, 95\% \text{ CI } [.23, .36] \). Also in support of my hypothesis, SRP-SF scores were positively and strongly correlated with ATE-Anger scores, \( r = .60, p < .01, 95\% \text{ CI } [.55, .65] \), and ATE-Fear scores, \( r = .49, p < .01, 95\% \text{ CI } [.43, .55] \).

**Table 3**

*Descriptive Statistics for All Study Variables Using Full ATE Subscales.*

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>Range*</th>
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</thead>
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<tr>
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<td>13.14</td>
<td>8-80</td>
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<td>AVI</td>
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<td>Fear</td>
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<td>Joy</td>
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<td>.86</td>
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<td>ATE</td>
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<td>Joy</td>
<td>778</td>
<td>19.26</td>
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<td>PAUse-r</td>
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<tr>
<td>Anger</td>
<td>773</td>
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<td>Fear</td>
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<td>Joy</td>
<td>767</td>
<td>4.09</td>
<td>.80</td>
<td>0.5-5</td>
</tr>
</tbody>
</table>

*Note.* SRP-SF = Self-Report Psychopathy Scale-Short Form; DERS-16 = Difficulties in Emotion Regulation Scale-16; AVI = Affect Valuation Index; ATE = Attitudes Toward Emotions; PAUse-r = Perceived Affect Utility Scale-Revised; n = number of observations included in correlation analyses; \( M = \) Mean; \( SD = \) Standard Deviation; \( Range^* = \) Range of Possible Scores.

In addition, SRP-SF scores were negatively correlated with ATE-Joy scores, \( r = -.15, p < .01, 95\% \text{ CI } [-.22, -.07] \), and PAUse-r Joy scores, \( r = -.17, p < .01, 95\% \text{ CI } [-.24, -.09] \), as expected. Although the correlation between SRP-SF and AVI-Joy scores was
nonsignificant, $r = -0.07, p = 0.058, 95\% \text{ CI } [-0.15, 0.00]$, the relation was trending in the hypothesized direction. Thus, greater levels of psychopathic traits were associated not only with greater levels of emotion dysregulation, having more emotion goals for anger and fear, having a greater perceived utility of anger and fear, and having a greater perceived pleasantness of anger and fear, but also having a lower perceived pleasantness of joy and a lower perceived utility of joy. Correlation coefficients for all study variables are included in Table 4, and correlation coefficients for all study variables using the full ATE subscales are reported in Table 5.

**Emotion Dysregulation**

Scores on the DERS-16 were positively correlated with SRP-SF scores, $r = 0.42, p < 0.01, 95\% \text{ CI } [0.35, 0.48]$, AVI-Anger scores, $r = 0.32, p < 0.01, 95\% \text{ CI } [0.25, 0.38]$, AVI-Fear scores, $r = 0.33, p < 0.01, 95\% \text{ CI } [0.26, 0.40]$, ATE-Anger scores, $r = 0.32, p < 0.01, 95\% \text{ CI } [0.25, 0.38]$, ATE-Fear scores, $r = 0.17, p < 0.01, 95\% \text{ CI } [0.10, 0.25]$, PAUse-r Anger scores, $r = 0.21, p < 0.01, 95\% \text{ CI } [0.14, 0.28]$, and PAUse-r Fear scores, $r = 0.22, p < 0.01, 95\% \text{ CI } [0.15, 0.29]$. In addition, DERS-16 scores were negatively correlated with ATE-Joy scores, $r = -0.10, p < 0.01, 95\% \text{ CI } [-0.18, -0.03]$. The relations between DERS-16 scores and AVI-Joy scores, $r = -0.06, p = 0.153$, 95\% CI [-0.13, 0.02], and DERS-16 scores and PAUse-r Joy scores, $r = -0.08, p < 0.05$, 95\% CI [-0.14, 0.01], were nonsignificant, although they were trending in the hypothesized direction. These results indicate that greater levels of emotion dysregulation were associated not only with greater levels of psychopathy, having more emotion goals for anger and fear, having a greater perceived pleasantness and perceived utility of anger and fear, but also having a lower perceived pleasantness of joy.
Table 4

Correlations for All Study Variables

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<td>-</td>
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<td>-</td>
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<td>-.02</td>
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*Note. SRP-SF = Self-Report Psychopathy Scale-Short Form; DERS-16 = Difficulties in Emotion Regulation Scale-16; AVI = Affect Valuation Index; ATE = Attitudes Toward Emotions; PAUse-r = Perceived Affect Utility Scale-Revised*
Table 5

*Bootstrapped Correlations for All Study Variables Using Full ATE Subscales*

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<th>7</th>
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<tbody>
<tr>
<td>1. SRP-SF</td>
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<td>-</td>
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<td>-</td>
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<tr>
<td>2. DERS-16</td>
<td>.42**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>3. AVI-Anger</td>
<td>.37**</td>
<td>.32**</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>4. AVI-Fear</td>
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<td>.33**</td>
<td>.75**</td>
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<td>-</td>
<td>-</td>
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<td>5. AVI-Joy</td>
<td>-.07</td>
<td>-.06</td>
<td>-.46**</td>
<td>-.40**</td>
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<td>-</td>
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<td>6. ATE-Anger</td>
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<td>.41**</td>
<td>.46**</td>
<td>.39**</td>
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<td>7. ATE-Fear</td>
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<td>.17**</td>
<td>.29**</td>
<td>.28**</td>
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<td>.58**</td>
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<td>-</td>
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<td>8. ATE-Joy</td>
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<td>-.11**</td>
<td>-.39**</td>
<td>-.32**</td>
<td>.41**</td>
<td>-.38**</td>
<td>-.27**</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>9. PAUse-r Anger</td>
<td>.42**</td>
<td>.21**</td>
<td>.34**</td>
<td>.26**</td>
<td>-.12*</td>
<td>.42**</td>
<td>.30**</td>
<td>-.22**</td>
<td>-</td>
<td>-</td>
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<tr>
<td>10. PAUse-r Fear</td>
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<td>.22**</td>
<td>.24**</td>
<td>.33**</td>
<td>-.06</td>
<td>.24**</td>
<td>.19**</td>
<td>-.11*</td>
<td>.57**</td>
<td>-</td>
</tr>
<tr>
<td>11. PAUse-r Joy</td>
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<td>-.07</td>
<td>-.17**</td>
<td>-.17**</td>
<td>.37**</td>
<td>-.18**</td>
<td>-.09*</td>
<td>.38**</td>
<td>-.33**</td>
<td>-.33**</td>
</tr>
</tbody>
</table>

*Note.* SRP-SF = Self-Report Psychopathy Scale-Short Form; DERS-16 = Difficulties in Emotion Regulation Scale-16; AVI = Affect Valuation Index; ATE = Attitudes Toward Emotions; PAUse-r = Perceived Affect Utility Scale-Revised; **p < .001, *p < .05.
Emotion Goals

Anger. Scores on the AVI-Anger subscale were positively correlated with SRP-SF scores, \( r = .37, p < .01, 95\% \text{ CI [.31, .44]}, \) DERS-16 scores, \( r = .32, p < .01, 95\% \text{ CI [.25, .38]}, \) AVI-Fear scores, \( r = .75, p < .01, 95\% \text{ CI [.71, .78]}, \) ATE-Anger scores, \( r = .44, p < .01, 95\% \text{ CI [.38, .50]}, \) ATE-Fear scores, \( r = .25, p < .01, 95\% \text{ CI [.18, .32]}, \) PAUse-r Anger scores, \( r = .34, p < .01, 95\% \text{ CI [.27, .41]}, \) and PAUse-r Fear scores, \( r = .24, p < .01, 95\% \text{ CI [.17, .31]} \). In addition, AVI-Anger scores were negatively correlated with AVI-Joy scores, \( r = -.46, p < .01, 95\% \text{ CI [-.51, -.39]}, \) ATE-Joy scores, \( r = -.29, p < .01, 95\% \text{ CI [-.36, -.22]}, \) and PAUse-r Joy scores, \( r = -.17, p < .01, 95\% \text{ CI [-.24, -.10]} \). These results indicate that having more emotion goals for anger was associated not only with having greater levels of psychopathy, having greater levels of emotion dysregulation, having more emotion goals for fear, and having a greater perceived pleasantness and perceived utility of anger and fear, but also having less emotion goals for joy and a lower perceived pleasantness and perceived utility of joy.

Fear. AVI-Fear subscale scores were positively correlated with SRP-SF scores, \( r = .32, p < .01, 95\% \text{ CI [.25, .39]}, \) DERS-16 scores, \( r = .33, p < .01, 95\% \text{ CI [.26, .40]}, \) AVI-Anger scores, \( r = .75, p < .01, 95\% \text{ CI [.71, .78]}, \) ATE-Anger scores, \( r = .36, p < .01, 95\% \text{ CI [.29, .42]}, \) ATE-Fear scores, \( r = .25, p < .01, 95\% \text{ CI [.18, .32]}, \) PAUse-r Anger scores, \( r = .26, p < .01, 95\% \text{ CI [.19, .33]}, \) and PAUse-r Fear scores, \( r = .34, p < .01, 95\% \text{ CI [.27, .40]} \). Additionally, AVI-Fear scores were negatively correlated with AVI-Joy scores, \( r = -.40, p < .01, 95\% \text{ CI [-.46, -.34]}, \) ATE-Joy scores, \( r = -.25, p < .01, 95\% \text{ CI [-.31, -.17]}, \) and PAUse-r Joy scores, \( r = -.17, p < .01, 95\% \text{ CI [-.24, -.10]} \). These results indicate that having more emotion goals for fear was associated not only with
having greater levels of psychopathy, greater levels of emotion dysregulation, more emotion goals for anger, and a greater perceived pleasantness and perceived utility of anger and fear, but also having less emotion goals for joy and a lower perceived pleasantness and perceived utility of joy.

**Joy.** AVI-Joy subscale scores were negatively correlated with AVI-Anger scores, \( r = -.46, p < .01, 95\% \text{ CI } [-.51, -.39] \), AVI-Fear scores, \( r = -.40, p < .01, 95\% \text{ CI } [-.46, -.34] \), ATE-Anger scores, \( r = -.19, p < .01, 95\% \text{ CI } [-.26, -.12] \), and PAUse-r Anger scores, \( r = -.13, p < .01, 95\% \text{ CI } [-.20, -.05] \). In addition, AVI-Joy subscale scores were positively correlated with ATE-Joy scores, \( r = .41, p < .01, 95\% \text{ CI } [.34, .47] \), and PAUse-r Joy scores, \( r = .37, p < .01, 95\% \text{ CI } [.30, .43] \). The relations between AVI-Joy scores and SRP-SF scores, \( r = -.07, p = .058, 95\% \text{ CI } [-.15, .00] \), AVI-Joy scores and DERS-16 scores, \( r = -.06, p = .153, 95\% \text{ CI } [-.13, .02] \), AVI-Joy scores and ATE-Fear scores, \( r = -.01, p = .709, 95\% \text{ CI } [-.06, .09] \), and AVI-Joy scores and PAUse-r Fear scores, \( r = -.07, p = .084, 95\% \text{ CI } [-.14, .01] \), were nonsignificant, although these correlations were trending in the anticipated direction. These results suggest that having more emotion goals for joy was associated not only with less emotion goals for anger and fear and a lower perceived pleasantness and perceived utility of anger, but also greater perceived pleasantness and perceived utility of joy.

**Hedonistic Motives**

**Anger.** Scores on the ATE-Anger subscale were positively correlated with SRP-SF scores, \( r = .60, p < .01, 95\% \text{ CI } [.55, .65] \), DERS-16 scores, \( r = .32, p < .01, 95\% \text{ CI } [.25, .38] \), AVI-Anger scores, \( r = .44, p < .01, 95\% \text{ CI } [.38, .50] \), AVI-Fear scores, \( r = .36, p < .01, 95\% \text{ CI } [.29, .42] \), ATE-Fear scores, \( r = .57, p < .01, 95\% \text{ CI } [.52, .62] \),
PAUse-r Anger scores, \( r = .41, p < .01, 95\% \text{ CI } [.34, .47] \), and PAUse-r Fear scores, \( r = .19, p < .01, 95\% \text{ CI } [.12, .27] \). In addition, ATE-Anger subscale scores were negatively correlated with AVI-Joy scores, \( r = -.19, p < .01, 95\% \text{ CI } [-.26, -.12] \), ATE-Joy scores, \( r = -.28, p < .01, 95\% \text{ CI } [.34, .21] \), and PAUse-r Joy scores, \( r = -.21, p < .01, 95\% \text{ CI } [-.28, -.14] \). These results suggest that perceiving anger as a more pleasant emotion was associated not only with having greater levels of psychopathy, greater levels of emotion dysregulation, more emotion goals for anger and fear, perceiving fear as a pleasant and useful emotion, and perceiving anger as a useful emotion, but also having less emotion goals for joy, and perceiving joy as an unpleasant and less useful emotion.

**Fear.** ATE-Fear subscale scores were positively correlated with SRP-SF scores, \( r = .49, p < .01, 95\% \text{ CI } [.43, .55] \), DERS-16 scores, \( r = .17, p < .01, 95\% \text{ CI } [.10, .25] \), AVI-Anger scores, \( r = .27, p < .01 \), AVI-Fear scores, \( r = .25, p < .01, 95\% \text{ CI } [.18, .32] \), ATE-Anger scores, \( r = .57, p < .01, 95\% \text{ CI } [.52, .62] \), PAUse-r Anger scores, \( r = .29, p < .01, 95\% \text{ CI } [.22, .36] \), and PAUse-r Fear scores, \( r = .19, p < .01, 95\% \text{ CI } [.11, .26] \). The correlations between ATE-Fear scores and AVI-Joy scores, \( r = -.01, p = .709, 95\% \text{ CI } [-.06, .09] \), ATE-Fear scores and ATE-Joy scores, \( r = -.02, p = .669, 95\% \text{ CI } [-.09, .06] \), as well as ATE-Fear scores and PAUse-r Joy scores, \( r = -.03, p = .426, 95\% \text{ CI } [-.11, .05] \), were nonsignificant, although they were trending in the anticipated direction. These results suggest that perceiving fear as a pleasant emotion is associated with greater levels of psychopathy, greater levels of emotion dysregulation, having more emotion goals for anger and fear, perceiving anger as a pleasant and useful emotion, and perceiving fear as a useful emotion.
**Joy.** ATE-Joy subscale scores were negatively correlated with SRP-SF scores, $r = -.15, p < .01, 95\% \text{ CI} [-.22, -.07]$, DERS-16 scores, $r = -.10, p < .01, 95\% \text{ CI} [-.18, -.03]$, AVI-Anger scores, $r = -.29, p < .01, 95\% \text{ CI} [-.36, -.22]$, AVI-Fear scores, $r = -.25, p < .01, 95\% \text{ CI} [-.31, -.17]$, ATE-Anger scores, $r = -.28, p < .01, 95\% \text{ CI} [.34, .21]$, and PAUSE-r Anger scores, $r = -.11, p < .01, 95\% \text{ CI} [-.19, -.04]$. Additionally, ATE-Joy scores were positively correlated with PAUSE-r Joy scores, $r = .36, p < .01, 95\% \text{ CI} [.29, .42]$. The correlations between ATE-Joy scores and ATE-Fear scores, $r = -.02, p = .669, 95\% \text{ CI} [-.09, .06]$, and ATE-Joy scores and PAUSE-r Fear scores, $r = -.05, p = .182, 95\% \text{ CI} [-.13, .02]$, were nonsignificant, although the correlation was trending in the expected direction. These results indicate that perceiving joy as a pleasant emotion was associated not only with lower levels of psychopathy, lower levels of emotion dysregulation, having less emotion goals for anger and fear, and perceiving anger as a pleasant and useful emotion, but also perceiving joy as a useful emotion.

**Instrumental Motives**

**Anger.** Scores on the PAUSE-r Anger subscale were positively correlated with SRP-SF scores, $r = .43, p < .01, 95\% \text{ CI} [.36, .48]$, DERS-16 scores, $r = .21, p < .01, 95\% \text{ CI} [.14, .28]$, AVI-Anger scores, $r = .34, p < .01, 95\% \text{ CI} [.27, .41]$, AVI-Fear scores, $r = .26, p < .01, 95\% \text{ CI} [.19, .33]$, ATE-Anger scores, $r = .41, p < .01, 95\% \text{ CI} [.34, .47]$, ATE-Fear scores, $r = .29, p < .01, 95\% \text{ CI} [.22, .36]$, and PAUSE-r Fear scores, $r = .57, p < .01, 95\% \text{ CI} [.51, .61]$. In addition, PAUSE-r Anger scores were negatively correlated with AVI-Joy scores, $r = -.13, p < .01, 95\% \text{ CI} [-.20, -.05]$, ATE-Joy scores, $r = -.11, p < .01, 95\% \text{ CI} [-.19, -.04]$, and PAUSE-r Joy scores, $r = -.33, p < .01, 95\% \text{ CI} [-.40, -.26]$. These results indicate that perceiving anger as a useful emotion is associated not only
with greater levels of psychopathy, greater levels of emotion dysregulation, having emotion goals for anger and fear, perceiving anger as a pleasant emotion, and perceiving fear as a pleasant and useful emotion, but also having less emotion goals for joy and perceiving joy as an unpleasant and less useful emotion.

**Fear.** PAUse-r Fear scores were positively correlated with SRP-SF scores, $r = .30, p < .01, 95\% \text{ CI } [.23, .36]$, DERS-16 scores, $r = .22, p < .01, 95\% \text{ CI } [.15, .29]$, AVI-Anger scores, $r = .24, p < .01, 95\% \text{ CI } [.17, .31]$, AVI-Fear scores, $r = .34, p < .01, 95\% \text{ CI } [.27, .40]$, ATE-Anger scores, $r = .19, p < .01, 95\% \text{ CI } [.12, .27]$, ATE-Fear scores, $r = .19, p < .01, 95\% \text{ CI } [.11, .26]$, and PAUse-r Anger scores, $r = .57, p < .01, 95\% \text{ CI } [.51, .61]$. In addition, PAUse-r Fear scores were negatively correlated with AVI-Joy scores, $r = -.07, p < .01, 95\% \text{ CI } [-.14, .01]$, and PAUse-r Joy scores, $r = -.33, p < .01, 95\% \text{ CI } [-.39, -.26]$. The relation between PAUse-r Fear scores and ATE-Joy scores, $r = -.05, p = .182, 95\% \text{ CI } [.13, .02]$, was nonsignificant but trending in the anticipated direction. These results suggest that perceiving fear as a useful emotion is associated not only with greater levels of psychopathy, greater emotion dysregulation, having emotion goals for anger and fear, perceiving anger as a pleasant and useful emotion, and perceiving fear as a pleasant emotion, but also with having less emotion goals for joy, and perceiving joy as a less useful emotion.

**Joy.** PAUse-r Joy scores were negatively correlated with SRP-SF scores, $r = -.17, p < .01, 95\% \text{ CI } [-.24, -.09]$, DERS-16 scores, $r = -.08, p < .05, 95\% \text{ CI } [-.14, .01]$, AVI-Anger scores, $r = -.17, p < .01, 95\% \text{ CI } [-.24, -.10]$, AVI-Fear scores, $r = -.17, p < .01, 95\% \text{ CI } [-.24, -.10]$, ATE-Anger scores, $r = -.21, p < .01, 95\% \text{ CI } [-.28, -.14]$, PAUse-r Anger scores, $r = -.33, p < .01, 95\% \text{ CI } [-.40, -.26]$, and PAUse-r Fear scores, $r = -.33, p
Additionally, PAUse-r Joy scores were positively correlated with AVI-Joy scores, $r = .37, p < .01, 95\% \text{ CI } [.30, .43]$, and ATE-Joy scores, $r = .36, p < .01, 95\% \text{ CI } [.29, .42]$. The correlation between PAUse-r Joy scores and ATE-Fear scores, $r = -.03, p = .426, 95\% \text{ CI } [-.11, .05]$, was nonsignificant but trending in the anticipated direction. These results suggest that perceiving joy as a useful emotion is associated not only with lower levels of psychopathy, lower levels of emotion dysregulation, having no emotion goals for anger and fear, perceiving anger as a less pleasant and less useful emotion, and perceiving fear as a less useful emotion.

**Hypothesis 2: Serial Mediation Models – Hedonistic Motives**

**Serial Mediation Model 1: Anger**

All serial mediation analyses were conducted using PROCESS version 4.0 for SPSS with 5,000 bootstrapped samples. Because each of the hypothesized serial mediation models involve two mediators in a specified path, the Model 6 template was chosen. In this hypothesized model, psychopathy (as measured by the SRP-SF) is the predictor variable, emotion dysregulation (as measured by the DERS-16) is the outcome variable, hedonistic motives for anger (as measured by ATE-Anger) is the first mediator, and emotion goals for anger (as measured by AVI-Anger) is the second mediator.

Results from serial mediation analyses indicate that the overall model (from SRP-SF to ATE-Anger to AVI-Anger to DERS-16) is significant, $F(3, 727) = 69.71, p < .001$. Specifically, ATE-Anger and AVI-Anger serially mediate the relation between SRP-SF and DERS-16, and together account for 22% of the variance in DERS-16 scores. In addition, the direct effect of SRP-SF on DERS-16, through ATE-Anger and AVI-Anger, was significant, $b = .26, t(727) = 7.8, p < .001$. Regarding direct path analyses, SRP-SF
significantly predicted ATE-Anger (path $a_1$), $b = .64$, $t(729) = 22.5$, $p < .001$, AVI-Anger (path $a_2$), $b = .13$, $t(728) = 3.12$, $p < .001$, and DERS-16 (path $c$), $b = .42$, $t(729) = 12.5$, $p < .001$. ATE-Anger significantly predicted AVI-Anger (path $d_1$), $b = .37$, $t(728) = 8.7$, $p < .001$, and both ATE-Anger, (path $b_1$), $b = .18$, $t(727) = 4.0$, $p < .001$, and AVI-Anger (path $b_2$), $b = .14$, $t(727) = 3.7$, $p < .001$, significantly predicted DERS-16. Results from direct path analyses are modeled in Figure 8, and results from direct path analyses using the full ATE subscale are modeled in Figure 9.

**Figure 8**

*Standardized Regression Coefficients for Model 1*

![Diagram](image)

***$p < .001$.***
Results from analyses of indirect effects (IE) for all six models are located in Table 6, and results from analyses of IEs for all six models using the full ATE subscales are located in Table 7. These results indicate that the path from SRP-SF to ATE-Anger to DERS-16 was significant, IE = .11, SE = .04, p < .001, 95% CI [.04, .19], which means that the perceived pleasantness of anger independently mediated the relation between psychopathy and emotion dysregulation. In addition, the path from SRP-SF to AVI-Anger to DERS-16 was significant, IE = .02, SE = .009, p < .001, 95% CI [.004, .04], which means that emotion goals for anger also independently mediated the relation between psychopathy and emotion dysregulation. Lastly, the path from SRP-SF to ATE-Anger to AVI-Anger to DERS-16 was also significant, IE = .03, SE = .01, p < .001, 95% CI [.01, .06], which means that the perceived pleasantness of anger mediated the relation between psychopathy and emotion goals for anger, and emotion goals for anger mediated
the relation between perceived pleasantness of anger and emotion dysregulation. Table 6 includes standardized indirect effects for all six models, and Table 7 includes standardized indirect effects for all six models using the full ATE subscales.

**Serial Mediation Model 2: Fear**

In this hypothesized model, psychopathy (as measured by the SRP-SF) is the predictor variable, emotion dysregulation (as measured by the DERS-16) is the outcome variable, hedonistic motives for fear (as measured by ATE-Fear) is the first mediator, and emotion goals for fear (as measured by AVI-Fear) is the second mediator. Results from serial mediation analyses with 5,000 bootstrapped samples indicate that the overall model (from SRP-SF to ATE-Fear to AVI-Fear to DERS-16) is significant, $F(3, 727) = 71.12, p < .001$. Specifically, ATE-Fear and AVI-Fear serially mediate the relation between SRP-SF and DERS-16, and together account for 23% of the variance in DERS-16 scores.
Table 6

*Standardized Indirect Effects for All Mediation Models*

<table>
<thead>
<tr>
<th>Indirect Effects</th>
<th>Estimate</th>
<th>SE</th>
<th>95% CI [LL, UL]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model 1: HM – Anger</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>SRP-SF → ATE-Anger → DERS-16</td>
<td>.11***</td>
<td>.04</td>
<td>[.04, .19]</td>
</tr>
<tr>
<td>SRP-SF → AVI-Anger → DERS-16</td>
<td>.02***</td>
<td>.009</td>
<td>[.004, .04]</td>
</tr>
<tr>
<td>SRP-SF → ATE-Anger → AVI-Anger → DERS-16</td>
<td>.03***</td>
<td>.01</td>
<td>[.01, .06]</td>
</tr>
<tr>
<td><strong>Model 2: HM – Fear</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRP-SF → ATE-Fear → DERS-16</td>
<td>-.04***</td>
<td>.02</td>
<td>[-.08, .002]</td>
</tr>
<tr>
<td>SRP-SF → AVI-Fear → DERS-16</td>
<td>.06***</td>
<td>.02</td>
<td>[.03, .09]</td>
</tr>
<tr>
<td>SRP-SF → ATE-Fear → AVI-Fear → DERS-16</td>
<td>.02***</td>
<td>.006</td>
<td>[.008, .03]</td>
</tr>
<tr>
<td><strong>Model 3: HM – Joy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRP-SF → ATE-Joy → DERS-16</td>
<td>.03***</td>
<td>.01</td>
<td>[.009, .06]</td>
</tr>
<tr>
<td>SRP-SF → AVI-Joy → DERS-16</td>
<td>.001***</td>
<td>.003</td>
<td>[-.004, .008]</td>
</tr>
<tr>
<td>SRP-SF → ATE-Joy → AVI-Joy → DERS-16</td>
<td>-.007***</td>
<td>.006</td>
<td>[-.014, .008]</td>
</tr>
<tr>
<td><strong>Model 4: IM – Anger</strong></td>
<td></td>
<td></td>
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<tr>
<td>SRP-SF → PAUse-r Anger → DERS-16</td>
<td>-.002***</td>
<td>.02</td>
<td>[-.04, .03]</td>
</tr>
<tr>
<td>SRP-SF → AVI-Anger → DERS-16</td>
<td>.05***</td>
<td>.010</td>
<td>[.02, .08]</td>
</tr>
<tr>
<td>SRP-SF → PAUse-r Anger → AVI-Anger → DERS-16</td>
<td>.02***</td>
<td>.010</td>
<td>[.01, .03]</td>
</tr>
<tr>
<td><strong>Model 5: IM – Fear</strong></td>
<td></td>
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</tr>
<tr>
<td>SRP-SF → PAUse-r Fear → DERS-16</td>
<td>.01***</td>
<td>.010</td>
<td>[.007, .04]</td>
</tr>
<tr>
<td>SRP-SF → AVI-Fear → DERS-16</td>
<td>.05***</td>
<td>.010</td>
<td>[.03, .08]</td>
</tr>
<tr>
<td>SRP-SF → PAUse-r Fear → AVI-Fear → DERS-16</td>
<td>.02***</td>
<td>.005</td>
<td>[.009, .03]</td>
</tr>
<tr>
<td><strong>Model 6: IM – Joy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRP-SF → PAUse-r Joy → DERS-16</td>
<td>-.002***</td>
<td>.007</td>
<td>[-.015, .012]</td>
</tr>
<tr>
<td>SRP-SF → AVI-Joy → DERS-16</td>
<td>.0003***</td>
<td>.002</td>
<td>[-.003, .003]</td>
</tr>
<tr>
<td>SRP-SF → PAUse-r Joy → AVI-Fear → DERS-16</td>
<td>.003***</td>
<td>.002</td>
<td>[-.002, .007]</td>
</tr>
</tbody>
</table>

*Note. SE = Standard Error; 95% CI [LL, UL] = 95% Confidence Interval [Lower Level, Upper Level]; HM = Hedonistic Motives; IM = Instrumental Motives; SRP-SF = Self-Report Psychopathy Scale-Short Form; ATE = Attitudes Toward Emotions Questionnaire; DERS-16 = Difficulties in Emotion Regulation Scale-16; AVI = Affect Valuation Index; PAUse-r = Perceived Affect Utility Scale-Revised; ***p < .001; bolded values indicate CIs not including 0.*
Table 7

Standardized Indirect Effects for All Medication Models Using Full ATE Subscales

<table>
<thead>
<tr>
<th>Indirect Effects</th>
<th>Estimate</th>
<th>SE</th>
<th>95% CI [LL, UL]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model 1: HM - Anger</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRP-SF → ATE-Anger → DERS-16</td>
<td>.008</td>
<td>.03</td>
<td>[-.06, .07]</td>
</tr>
<tr>
<td>SRP-SF → AVI-Anger → DERS-16</td>
<td>.03***</td>
<td>.01</td>
<td>[.01, .06]</td>
</tr>
<tr>
<td>SRP-SF → ATE-Anger → AVI-Anger → DERS-16</td>
<td>.04***</td>
<td>.01</td>
<td>[.02, .06]</td>
</tr>
<tr>
<td><strong>Model 2: HM - Fear</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRP-SF → ATE-Fear → DERS-16</td>
<td>-.30***</td>
<td>.02</td>
<td>[-.07, .01]</td>
</tr>
<tr>
<td>SRP-SF → AVI-Fear → DERS-16</td>
<td>.06***</td>
<td>.02</td>
<td>[.03, .10]</td>
</tr>
<tr>
<td>SRP-SF → ATE-Fear → AVI-Fear → DERS-16</td>
<td>.01***</td>
<td>.01</td>
<td>[.005, .02]</td>
</tr>
<tr>
<td><strong>Model 3: HM - Joy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRP-SF → ATE-Joy → DERS-16</td>
<td>.005***</td>
<td>.006</td>
<td>[-.007, .02]</td>
</tr>
<tr>
<td>SRP-SF → AVI-Joy → DERS-16</td>
<td>.0002***</td>
<td>.002</td>
<td>[.003, .004]</td>
</tr>
<tr>
<td>SRP-SF → ATE-Joy → AVI-Joy → DERS-16</td>
<td>.0007***</td>
<td>.002</td>
<td>[.004, .006]</td>
</tr>
<tr>
<td><strong>Model 4: IM - Anger</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRP-SF → PAUe-r Anger → DERS-16</td>
<td>-.002***</td>
<td>.02</td>
<td>[-.04, .03]</td>
</tr>
<tr>
<td>SRP-SF → AVI-Anger → DERS-16</td>
<td>.05***</td>
<td>.010</td>
<td>[.02, .08]</td>
</tr>
<tr>
<td>SRP-SF → PAUe-r Anger → AVI-Anger → DERS-16</td>
<td>.02***</td>
<td>.010</td>
<td>[.01, .03]</td>
</tr>
<tr>
<td><strong>Model 5: IM - Fear</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRP-SF → PAUe-r Fear → DERS-16</td>
<td>.01***</td>
<td>.010</td>
<td>[-.007, .04]</td>
</tr>
<tr>
<td>SRP-SF → AVI-Fear → DERS-16</td>
<td>.05***</td>
<td>.010</td>
<td>[.03, .08]</td>
</tr>
<tr>
<td>SRP-SF → PAUe-r Fear → AVI-Fear → DERS-16</td>
<td>.02***</td>
<td>.005</td>
<td>[.009, .03]</td>
</tr>
<tr>
<td><strong>Model 6: IM - Joy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SRP-SF → PAUe-r Joy → DERS-16</td>
<td>-.002***</td>
<td>.007</td>
<td>[-.015, .012]</td>
</tr>
<tr>
<td>SRP-SF → AVI-Joy → DERS-16</td>
<td>.0003***</td>
<td>.002</td>
<td>[.003, .005]</td>
</tr>
<tr>
<td>SRP-SF → PAUe-r Joy → AVI-Fear → DERS-16</td>
<td>.002***</td>
<td>.002</td>
<td>[.002, .007]</td>
</tr>
</tbody>
</table>

*Note.* All reported values are standardized coefficients from 5,000 bootstrapped samples. SE = Standard Error; 95% CI [LL, UL] = 95% Confidence Interval [Lower Level, Upper Level]; HM = Hedonistic Motives; IM = Instrumental Motives; SRP-SF = Self-Report Psychopathy Scale-Short Form; ATE = Attitudes Toward Emotions Questionnaire; DERS-16 = Difficulties in Emotion Regulation Scale-16; AVI = Affect Valuation Index; PAUe-r = Perceived Affect Utility Scale-Revised. ***p < .001; bolded values indicate CIs not including 0.

In addition, the direct effect of SRP-SF on DERS-16, through ATE-Fear and AVI-Fear, was significant, $b = .38$, $t(3, 727) = 9.8, p < .001$. Regarding direct path analyses, SRP-SF
significantly predicted ATE-Fear (path $\alpha_1$), $b = .53$, $t(729) = 16.7$, $p < .001$, AVI-Fear (path $\alpha_2$), $b = .24$, $t(728) = 5.82$, $p < .001$, and DERS-16 (path $c$), $b = .42$, $t(1, 729) = 12.5$, $p < .001$. ATE-Fear significantly predicted AVI-Fear (path $d_{21}$), $b = .14$, $t(728) = 3.5$, $p < .001$, but not DERS-16 (path $\beta_1$), $b = -.07$, $t(3, 727) = -1.91$, $p = .057$, whereas AVI-Fear did significantly predict DERS-16 (path $\beta_2$), $b = .24$, $t(3, 727) = 6.84$, $p < .001$. Results from direct path analyses are modeled in Figure 10, and results from direct path analyses using the full ATE subscale are modeled in Figure 11.

**Figure 10**

*Standardized Regression Coefficients for Model 2*

```plaintext

<table>
<thead>
<tr>
<th></th>
<th>Hedonistic Motives for Fear</th>
<th>Emotion Goals for Fear</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.14***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.53***</td>
<td>.24***</td>
</tr>
<tr>
<td>Psychopathy</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.24***</td>
<td>-.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.24***</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>.38***</td>
</tr>
</tbody>
</table>

Emotion Dysregulation

***$p < .001$.**
Analyses of indirect effects (IE) indicate that the path from SRP-SF to ATE-Fear to DERS-16 was not significant, IE = -0.04, SE = 0.02, p < 0.001, 95% CI [-0.08, 0.02], which means that the perceived pleasantness of fear did not independently mediate the relation between psychopathy and emotion dysregulation. However, the path from SRP-SF to AVI-Fear to DERS-16 was significant, IE = 0.06, SE = 0.02, p < 0.001, 95% CI [0.03, 0.09], which means that emotion goals for fear do independently mediate the relation between psychopathy and emotion dysregulation. In addition, the path from SRP-SF to ATE-Fear to AVI-Fear to DERS-16 was significant, IE = 0.02, SE = 0.006, p < 0.001, 95% CI [0.008, 0.03], which means that the perceived pleasantness of fear mediated the relation between psychopathy and emotion goals for fear, and emotion goals for fear mediated the relation between perceived pleasantness of fear and emotion dysregulation.
**Serial Mediation Model 3: Joy**

In this hypothesized model, psychopathy (as measured by the SRP-SF) is the predictor variable, emotion dysregulation (as measured by the DERS-16) is the outcome variable, hedonistic motives for joy (as measured by ATE-Joy) is the first mediator, and emotion goals for joy (as measured by AVI-Joy) is the second mediator.

Results from serial mediation analyses with 5,000 bootstrapped samples indicate that the overall model (from SRP-SF to ATE-Joy to AVI-Joy to DERS-16) is significant, $F(1,719) = 55.96, p < .001$. Specifically, ATE-Joy and AVI-Joy mediate the relation between SRP-SF and DERS-16, and together account for 19% of the variance in DERS-16 scores. In addition, the direct effect of SRP-SF on DERS-16, through ATE-Joy and AVI-Joy, was significant, $b = .39, t(3,719) = 11.04, p < .001$. Regarding direct path analyses, SRP-SF negatively predicted ATE-Joy (path $a_1$), $b = -.30, t(721) = -8.5, p < .001$, and positively predicted DERS-16 (path $c$), $b = .42, t(1,721) = 12.53, p < .001$, but did not predict AVI-Joy (path $a_2$) $b = .06, t(720) = 1.67, p = .094$. However, ATE-Joy significantly predicted AVI-Joy (path $d_{21}$), $b = .44, t(720) = 12.6, p < .001$, and negatively predicted DERS-16 (path $\beta_1$), $b = -.12, t(3,719) = -2.96, p < .005$, whereas AVI-Joy did not significantly predict DERS-16 (path $\beta_2$), $b = -.02, t(3,719) = .54, p = .587$. Results from direct path analyses are depicted in Figure 12, and results from direct path analyses using the full ATE subscale is depicted in Figure 13.
Figure 12

*Standardized Regression Coefficients for Model 3*

- **Hedonistic Motives for Joy** → **Emotion Goals for Joy**: .44***
- **Psychopathy** → **Emotion Dysregulation**: .39***
- **Psychopathy** → **Emotion Goals for Joy**: -.12**
- **Emotion Goals for Joy** → **Emotion Dysregulation**: .02
- **Hedonistic Motives for Joy** → **Psychopathy**: -.30***
- **Psychopathy** → **Emotion Dysregulation**: .06

***p < .001, **p < .005.

Figure 13

*Standardized Regression Coefficients for Model 3 Using Full ATE-Joy Scale*

- **Hedonistic Motives for Joy** → **Emotion Goals for Joy**: .41***
- **Psychopathy** → **Emotion Dysregulation**: .42***
- **Psychopathy** → **Hedonistic Motives for Joy**: -.13***
- **Psychopathy** → **Emotion Goals for Joy**: -.02
- **Emotion Goals for Joy** → **Emotion Dysregulation**: -.01
- **Emotion Goals for Joy** → **Hedonistic Motives for Joy**: -.04

*Note. ATE-Joy = Attitudes Toward Emotions Questionnaire – Joy Subscale.*

***p < .001, **p < .005.
Analyses of indirect effects (IE) indicate that the path from SRP-SF to ATE-Joy to DERS-16 was significant, IE = .03, SE = .01, p < .001, 95% CI [.009, .06], which means that the perceived pleasantness of joy independently mediated the relation between psychopathy and emotion dysregulation. However, the path from SRP-SF to AVI-Joy to DERS-16 was not significant, IE = .001, SE = .003, p < .001, 95% CI [-.004, .008], which means that emotion goals for joy did not independently mediate the relation between psychopathy and emotion dysregulation. In addition, the path from SRP-SF to ATE-Joy to AVI-Joy to DERS-16 was also not significant, IE = -.003, SE = .006 p < .001, 95% CI [-.014, .008], which means that the perceived pleasantness of joy did not mediate the relation between psychopathy and emotion goals for joy, and emotion goals for joy did not mediate the relation between perceived pleasantness of joy and emotion dysregulation.

**Hypothesis 3: Serial Mediation Models – Instrumental Motives**

**Serial Mediation Model 4: Anger**

In this hypothesized model, psychopathy (as measured by the SRP-SF) is the predictor variable, emotion dysregulation (as measured by the DERS-16) is the outcome variable, instrumental motives for anger (as measured by PAUse-r Anger) is the first mediator, and emotion goals for anger (as measured by AVI-Anger) is the second mediator.

Results from serial mediation analyses with 5,000 bootstrapped samples indicate that the overall model (from SRP-SF to PAUse-r Anger to AVI-Anger to DERS-16) is significant, \(F(3, 736) = 61.71, p < .001\). Specifically, PAUse-r Anger and AVI-Anger serially mediate the relation between SRP-SF and DERS-16, and together account for
20% of the variance in DERS-16 scores. In addition, the direct effect of SRP-SF on DERS-16, through PAUse-r Anger and AVI-Anger, was significant, $b = .35$, $t(736) = 9.22$, $p < .001$. Regarding direct path analyses, SRP-SF significantly predicted PAUse-r Anger (path $a_1$), $b = .43$, $t(738) = 12.9$, $p < .001$, AVI-Anger (path $a_2$), $b = .27$, $t(737) = 7.29$, $p < .001$, and DERS-16 (path $c$), $b = .41$, $t(738) = 12.38$, $p < .001$. PAUse-r Anger significantly predicted AVI-Anger (path $d_{2i}$), $b = .24$, $t(737) = 6.37$, $p < .001$, but not DERS-16 (path $\beta_1$), $b = -.00$, $t(736) = -.10$, $p = .917$, whereas AVI-Anger did significantly predict DERS-16 (path $\beta_2$), $b = .18$, $t(736) = 5.06$, $p < .001$. Results from direct path analyses are depicted in Figure 14.

**Figure 14**

*Standardized Regression Coefficients for Model 4*

![Diagram of the model](image)

***$p < .001$.***

Analyses of indirect effects (IE) indicate that the path from SRP-SF to PAUse-r Anger to DERS-16 was not significant, $IE = -.002$, $SE = .02$, $p < .001$, 95% CI [-.04, .03], which means that the perceived utility of anger did not independently mediate the relation
between psychopathy and emotion dysregulation. However, the path from SRP-SF to AVI-Anger to DERS-16 was significant, IE = .05, SE = .01, \( p < .001 \), 95% CI [.02, .08], which means that emotion goals for anger do independently mediate the relation between psychopathy and emotion dysregulation. In addition, the path from SRP-SF to PAUse-r Anger to AVI-Anger to DERS-16 was significant, IE = .02, SE = .01, \( p < .001 \), 95% CI [.01, .03], which means that the perceived utility of anger mediated the relation between psychopathy and emotion goals for anger, and emotion goals for anger mediated the relation between perceived utility of anger and emotion dysregulation.

**Serial Mediation Model 5: Fear**

In this hypothesized model, psychopathy (as measured by the SRP-SF) is the predictor variable, emotion dysregulation (as measured by the DERS-16) is the outcome variable, instrumental motives for fear (as measured by PAUse-r Fear) is the first mediator, and emotion goals for fear (as measured by AVI-Fear) is the second mediator. Results from serial mediation analyses with 5,000 bootstrapped samples indicate that the overall model (from SRP-SF to PAUse-r Fear to AVI-Fear to DERS-16) is significant, \( F(3, 726) = 70.63, p < .001 \). Specifically, PAUse-r Fear and AVI-Fear serially mediate the relation between SRP-SF and DERS-16, and together account for 22% of the variance in DERS-16 scores. In addition, the direct effect of SRP-SF on DERS-16, through PAUse-r Fear and AVI-Fear, was significant, \( b = .34, t(3, 725) = 9.6, p < .001 \).

Regarding direct path analyses, SRP-SF significantly predicted PAUse-r Fear (path \( \alpha_1 \)), \( b = .30, t(727) = 8.4, p < .001 \), AVI-Fear (path \( \alpha_2 \)), \( b = .24, t(726) = 6.7, p < .001 \), and DERS-16 (path \( c \)), \( b = .42, t(1, 727) = 12.5, p < .001 \). PAUse-r Fear significantly predicted AVI-Fear (path \( d_{21} \)), \( b = .16, t(726) = 7.54, p < .001 \), but not
DERS-16 (path $\beta_1$), $b = .05$, $t(3, 725) = 1.33$, $p = .182$, whereas AVI-Fear did significantly predict DERS-16 (path $\beta_2$), $b = .21$, $t(3, 725) = 5.95$, $p < .001$. Results from direct path analyses are depicted in Figure 15.

**Figure 15**

*Standardized Regression Coefficients for Model 5*

![Diagram](diagram)

**Analyses of indirect effects (IE) indicate that the path from SRP-SF to PAUse-r Fear to DERS-16 was not significant, IE = .01, SE = .01, $p < .001$, 95% CI [-.007, .04], which means that the perceived utility of fear did not independently mediate the relation between psychopathy and emotion dysregulation. However, the path from SRP-SF to AVI-Fear to DERS-16 was significant, IE = .05, SE = .01, $p < .001$, 95% CI [.03, .08], which means that emotion goals for fear do independently mediate the relation between psychopathy and emotion dysregulation. In addition, the path from SRP-SF to PAUse-r Fear to AVI-Fear to DERS-16 was significant, IE = .02, SE = .005, $p < .001$, 95% CI \[.01, .03\].**

***$p < .001$.***
[.009, .03], which means that the perceived utility of fear mediated the relation between psychopathy and emotion goals for fear, and emotion goals for fear mediated the relation between perceived utility of fear and emotion dysregulation.

**Serial Mediation Model 6: Joy**

In this hypothesized model, psychopathy (as measured by the SRP-SF) is the predictor variable, emotion dysregulation (as measured by DERS-16) is the outcome variable, instrumental motives for joy (as measured by PAUse-r Joy) is the first mediator, and emotion goals for joy (as measured by AVI-Joy) is the second mediator.

Results from serial mediation analyses with 5,000 bootstrapped samples indicate that the overall model (from SRP-SF to PAUse-r Joy to AVI-Joy to DERS-16) is significant, $F(3, 709) = 50.80, p < .001$. Specifically, PAUse-r Joy and AVI-Joy mediate the relation between SRP-SF and DERS-16, and together account for 18% of the variance in DERS-16 scores. In addition, the direct effect of SRP-SF on DERS-16, through PAUse-r Joy and AVI-Joy, was significant, $b = .42, t(3, 709) = 12.14, p < .001$.

Regarding direct path analyses, SRP-SF negatively predicted PAUse-r Joy (path $a_1$), $b = -.16, t(711) = -4.3, p < .001$, and positively predicted DERS-16 (path $c$), $b = .42, t(1, 711) = 12.32, p < .001$, but did not significantly predict AVI-Joy (path $a_2$), $b = -.009, t(711) = -.26, p = .792$. PAUse-r Joy significantly predicted AVI-Joy (path $d_{21}$), $b = .36, t(711) = 10.16, p < .001$, but neither PAUse-r Joy (path $b_1$) $b = .01, t(3, 709) = .30, p = .765$, nor AVI-Joy (path $b_2$), $b = -.03, t(3, 709) = -.94, p = .346$, significantly predicted DERS-16. Results from direct path analyses are depicted in Figure 16.
Analyses of indirect effects (IE) indicate that the path from SRP-SF to PAUse-r Joy to DERS-16 was not significant, IE = -.002, SE = .007, p < .001, 95% CI [-.015, .012], which means that the perceived utility of joy did not independently mediate the relation between psychopathy and emotion dysregulation. In addition, the path from SRP-SF to AVI-Joy to DERS-16 was also not significant, IE = .0003, SE = .002, p < .001, 95% CI [-.003, .005], which means that emotion goals for joy do not independently mediate the relation between psychopathy and emotion dysregulation. Furthermore, the path from SRP-SF to PAUse-r Joy to AVI-Joy to DERS-16 was also not significant, IE = .002, SE = .002, p < .001, 95% CI [-.002, .007], which means that the perceived utility of joy did not mediate the relation between psychopathy and emotion goals for joy, and emotion goals for joy did not mediate the relation between perceived utility of joy and emotion dysregulation.
Chapter 4: Discussion

The purpose of the current study was to examine the process by which males with psychopathic traits experience emotion dysregulation. I found that people with greater levels of psychopathic traits experience greater levels of emotion dysregulation, which is consistent with both Hypothesis 1 and previous research by Garofalo et al. (2018, 2019, 2020). I also found that people with greater levels of psychopathic traits have more hedonistic and instrumental motives for experiencing anger and fear, less hedonistic and instrumental motives for experiencing joy, more general emotion goals for experiencing anger and fear, and less general emotion goals for experiencing joy, which supports Hypothesis 1. These results are consistent with those of Spantidaki Kyriazi et al. (2021), which found that people with greater levels of psychopathic traits hold maladaptive emotion goals, such as a greater desire for experiencing anger and fear in their daily lives. Despite claims that people with psychopathic traits do not experience emotions, recent research indicates that when people with psychopathic traits are attending to relevant stimuli, they experience anger and anxiety or fear at rates similar to or greater than that of control participants (Blackburn & Lee-Evans, 1985; Dawel et al., 2012; Derefinko, 2014; Hare & Neumann, 2008; Hicks & Patrick, 2006; Kosson et al., 2016; Marsh, 2013; Marsh & Blair, 2008; Marsh et al., 2011). From a motivational perspective, people with greater levels of psychopathic traits may experience greater levels of anger and fear compared to controls because they have a desire to experience greater levels of anger and fear. Not only that, but having a general desire to experience anger and fear may motivate one to regulate their experiences of anger and fear, such that when they experience these emotions, they fixate on them and have no desire to redirect their attention elsewhere.
In order to replicate and extend on previous findings and examine emotion dysregulation as the outcome of this process, as suggested by Spantidaki Kyriazi et al. (2021), I conducted serial mediation analyses with psychopathic traits as the predictor variable, hedonistic or instrumental motives were the first mediator variable and emotion goals as the second mediator variable. My findings indicate that hedonistic and instrumental motives for anger and fear, along with emotion goals for anger and fear, together mediated the relation between psychopathy and emotion dysregulation, which provides support for Hypothesis 2 and 3. Consistent with findings from Spantidaki Kyriazi et al. (2021), I found that people with psychopathic traits have general emotion goals for experiencing anger due to their perceiving anger as a pleasant and useful emotion. I also found that people with psychopathic traits have general emotion goals for experiencing fear due to their perceiving fear as a useful emotion. Contradicting the findings of Spantidaki Kyriazi et al. (2021), I found that people with psychopathic traits also have general emotion goals for experiencing fear due to their perceiving fear as a pleasant emotion. My findings suggest that the process by which people with psychopathic traits experience emotion dysregulation is motivated by their perceptions of pleasantness and utility of anger and fear, which in turn motivates their general desire for experiencing anger and fear. These findings are consistent with the Fear-Enjoyment Hypothesis (Hosker-Field et al., 2016), which suggests that people with psychopathic traits are motivated to experience fear because they perceive the experience of fear as enjoyable.

Regarding the emotion of joy, the current study found consistent and contradictory results of those reported by Spantidaki Kyriazi et al. (2021). Specifically, I
found that the relation between psychopathy and emotion goals for joy was mediated by both hedonistic and instrumental motives for joy, whereas Spantidaki Kyriazi et al. (2021) found that the relation between psychopathy and emotion goals for joy was solely mediated by hedonistic motives for joy. My findings suggest that people with psychopathic traits are less likely to have general emotion goals for experiencing joy due to their perceiving joy as a less pleasant and less useful emotion. As with the emotions of anger and fear, I extended the mediational models involving joy to include the outcome variable of emotion dysregulation, with psychopathic traits being the predictor variable, hedonistic or instrumental motives being the first mediator variable, and emotion goals for joy being the second mediator variable. Results from the serial mediation analyses indicate that together, the hedonistic motives and general emotion goals for joy mediated the relation between psychopathy and emotion dysregulation, but not in the order hypothesized. In this model, hedonistic motives for joy predicted emotion dysregulation and emotion goals for joy, but emotion goals for joy did not predict emotion dysregulation. In the second mediation model for the emotion joy, instrumental motives for joy predicted emotion goals for joy, but neither instrumental motives nor emotion goals for joy predicted emotion dysregulation. One possible explanation for these results is due to the measurement of emotion dysregulation, which is discussed at length in the limitations section. The key takeaway of these findings is that hedonistic and instrumental motives for experiencing joy mediate the relation between psychopathy and emotion goals for joy, which means that people with psychopathic traits are less likely to hold emotion goals for joy due to their perception of joy as a less pleasant and less useful emotion.
Implications

The findings of the current study carries implications for mending at least three problems within the general psychopathy literature, as well as for public health and clinical contexts. The first issue is that researchers have historically misinterpreted people with psychopathic traits as being incapable of feeling emotions; however, recent studies have found that people with psychopathic traits do in fact experience emotions, physically and subjectively (Blackburn & Lee-Evans, 1985; Dawel et al., 2012; Dereffinko, 2014; Hare & Neumann, 2008; Hicks & Patrick, 2006; Kosson et al., 2016; Marsh, 2013; Marsh & Blair, 2008; Marsh et al., 2011). Although the levels of psychopathy in this particular sample were on the lower end of the spectrum, I found support for the notion that people with psychopathic traits do experience emotions. Thus, the results of this study, while not reversing the decades long setback of treating people with psychopathic traits as having an inability to experience emotions, does provide support to the growing body of literature which suggests that people high on psychopathy do have emotions.

Another issue within the psychopathy research field is that people with psychopathic traits do not seek out treatment, and if they are in treatment, it is likely court-mandated or within correctional facilities while they are incarcerated (Vien & Beech, 2006). People with psychopathic traits in the general population are narcissistic and externalize blame for their actions onto others, and therefore they do not see anything wrong with themselves or their behavior that would lead them to seek treatment (Hare & Neumann, 2008). Although the results of my study do not directly impact whether people with psychopathic traits seek treatment, there are implications for public health
awareness. Bringing awareness to the nature of psychopathic traits and their impacts may be helpful in getting more people to seek treatment. Campaigns should prioritize the publicizing of personality traits associated with psychopathy, as well as the secondary problems associated with it in order to bring awareness to the fact that these traits and secondary problems may be a sign of psychological issues warranting treatment. Some secondary problems associated with psychopathy that may be publicized in an awareness campaign include frequent work termination (e.g., joblessness, unemployment), an inability to refrain from infidelity, and recurrent pregnancy or sexually transmitted infection (STI) scares due hypersexuality and impulsivity, among others. In addition, even if these campaigns do not directly result in people with psychopathic traits recognizing the signs in themselves and seeking treatment on their own, bringing awareness to the public may result in recommendations from the people around them to seek out the information and inquire about treatment.

A third general problem within the psychopathy literature centers around the supposed “untreatability” of psychopathy (Da Silva et al., 2021; Felthous, 2016; Hughes et al., 2016; Kemp & Baskin-Sommers, 2019; Skeem et al., 2002; Vien & Beech, 2006). For decades, researchers and clinicians alike have concluded that psychopathy is untreatable, therefore leaving treatment providers with little hope that any sort of improvement is possible for those with psychopathic traits (Blackburn, 1993, 2000; Dolan & Coid, 1993; Losel, 1995; Salekin, 2002). One reason for which people with psychopathic traits are considered untreatable by researchers is due to findings showing that people with psychopathic traits demonstrate less clinical improvement with treatment, lower levels of motivation in treatment, and higher rates of attrition to
treatment than people without psychopathic traits (Ogloff et al., 1990). In addition, many methodologically flawed studies examining various forms of treatment with psychopathic offenders have concluded that psychopathic traits either worsened or remained the same over the course of treatment, whereas secondary problems associated with psychopathy, such as risk for violence and/or recidivism, also either increased over the course of treatment or remained the same over the course of treatment (Da Silva et al., 2021; DeSorcy et al., 2020; Felthous, 2016; Kemp & Baskin-Sommers, 2019; Salekin, 2002; Vien & Beech, 2006). One example study conducted by Harris et al. (1991) concluded that psychopathy may worsen with treatment. However, the treatment program utilized in this study included “radical components” such as coercive tactics limiting patients’ ability to opt out or drop out, was primarily peer-operated with little input or supervision from professional staff, and involved extreme “defense altering techniques” (Skeem et al., 2002, p. 579). More specifically, patients were required to reside for up to two weeks in “nude encounter groups in a total encounter capsule” where they were “fed through tubes in the walls, in order to achieve true communication and discover their essential nature” (Skeem et al., 2002, p. 579). Not only that, but they were also administered LSD, alcohol, and other substances “in order to disrupt their glibness, aloofness, and hostility, increase their anxiety, and make them chemically cooled out and dependent,” and thus more accessible to peers and treatment (Skeem et al., 2002, p. 579). At the time of writing in 2002, Skeem et al. noted that of the several studies addressing treatment effectiveness in psychopathic offenders, there were only two nonrandomized control trials investigating whether psychopathy moderates the effect of treatment on recidivism, and thus there is “insufficient evidence to support the view that ‘nothing works’” (Losel,
Thus, it appears that the field of psychopathy research is in need of high-quality, evidence-based, theory-driven research, especially when investigating the effectiveness of treatment.

Despite conclusions such as that by Losel (1995), the prevailing notion within the niche of treatment providers remains that psychopathy cannot be treated. Some primary issues for treating psychopathy are people not seeking out treatment, having less clinical improvement, having lower levels of motivation, and having higher rates of attrition than people without psychopathic traits. In addition to these issues, another problem facing treating clinicians is that high-risk offenders (especially those with psychopathic traits) often display characteristics that are not conducive to the establishment of a strong therapeutic alliance, which is believed to be of critical importance and highly predictive of therapeutic success, regardless of therapeutic modality or client characteristics (Castonguay et al., 2006; Horvath et al., 1993). Because people with psychopathic traits are often manipulative, deceptive, and non-responsive in treatment settings, clinicians often perceive them as difficult or resistant clients, which leads clinicians to become frustrated and hopeless as to the client’s treatability (Skeem et al., 2002). Although it may be difficult to enact, one suggestion for these clinicians is to continuously address the resistance, non-responsiveness, manipulativeness, and deceitfulness directly with the client, with the hope that continued discussion of these actions will eventually lead to their reduction in the client. Despite the therapeutic alliance being considered a very important factor for the effectiveness of any psychological treatment, including that for people with psychopathic traits, it may not be as important for those incarcerated with psychopathic traits. For example, in a study addressing associations between working
alliance to sex offender treatment completion and recidivism as a function of psychopathy, DeSorcy et al. (2020) found that 85% of men scoring 25 or higher on the PCL-R successfully completed the treatment program, and psychopathy did not significantly predict treatment attrition. They also found that a strong working alliance did not necessarily mean making positive treatment gains in the form of risk reduction; in fact, they found that working alliance did not significantly predict any recidivism outcomes whatsoever (DeSorcy et al., 2020). Given these results, the impact of therapeutic alliance on treatment outcomes for those with psychopathic traits warrants further investigation.

Another suggestion for treating those with psychopathic traits is to discuss the importance of returning to treatment sessions, even if they do not feel it is necessary or do not think there is/will be any improvement. This suggestion is based on results of a study addressing the effectiveness of standard outpatient mental health services with civil psychiatric patients both high and low in psychopathy. In this study, Skeem et al. (2002) found that those high in psychopathy became generally less violent after receiving “adequate doses” of treatment. More specifically, those patients’ high in psychopathy who received seven or more treatment sessions during a 10-week period were three times less likely to be violent during a subsequent 10-week period, compared to those with high psychopathy scores who received six or fewer treatment sessions (Skeem et al., 2002). These results were consistent even after controlling for factors that could have influenced patients’ attendance, such as substance abuse, race, and employment status. Skeem et al. (2002) also found that patients with high psychopathy scores receiving seven or more sessions in a 10-week period were just as likely to improve as those with low
psychopathy scores, whereas patients’ with high psychopathy scores receiving six or fewer sessions in a 10-week period were equally as unlikely to improve as those with high psychopathy scores receiving no treatment. Therefore, Skeem et al. (2002) conclude that an important factor to consider when treating people with psychopathic traits is treatment dose, especially in settings for which resources are scarce and individually tailored treatment is not possible.

Although the results of my study did not investigate the treatment of psychopathic traits, nor populations incarcerated or detained, there are implications for the general treatment of psychopathy that can be gleamed from this study’s results. Before addressing these treatment implications, it is important to discuss the current treatment protocol for those with psychopathic traits. According to Kemp and Baskin-Sommers (2019), the most common treatment in prisons revolve around some form of Cognitive-Behavioral Therapy (CBT), which is aimed at identifying and challenging maladaptive thoughts and behaviors in order to make them more adaptive and less disruptive. In prisons, CBT techniques are typically implemented within group settings, but are sometimes also implemented within individual settings. According to Kemp and Baskin-Sommers (2019), studies addressing the effectiveness of CBT techniques in group and individualized settings conclude that CBT in both settings is relatively ineffective for treating and improving psychopathy. As such, Baskin-Sommers et al. (2015) designed a cognitive intervention that targets the attention to context deficit associated with psychopathy, and examined its’ efficacy in a sample of incarcerated, adult male offenders. This cognitive intervention is based on cognitive remediation, which is an intervention intended to improve neuropsychological functioning such as attention or
memory, and may be used to “address the tendency of psychopathic individuals to
neglect important contextual information” (Dargis et al., 2017, p. 217). Kemp and
Baskin-Sommers (2019) found that after six weeks of computerized training which taught
participants to practice attention to peripheral or nonsalient cues and notice changes in
contextual information, participants showed significant improvement on the pre- and
postmeasures of affective cognitive control deficits present in individuals with
externalizing traits (Kemp & Baskin-Sommers, 2019). The results of the current study
demonstrate that people with higher levels of psychopathy are motivated to experience
anger and fear due to their perceived pleasantness and utility of anger and fear.
Considering the attentional deficits associated with psychopathy, it stands to reason that
being more motivated to experience anger and fear will result in ignoring other emotional
cues. Ignoring other emotional cues to retain the experience of anger or fear may have
negative consequences, especially when it is an inappropriate time or place to act on
feelings of anger or fear. Thus, it is possible that a treatment combining aspects of
cognitive-remediation and CBT might be beneficial for improving the cognitive
deficiencies contributing to emotional dysregulation in psychopathy. Although this form
of treating psychopathy must be replicated in a non-laboratory setting to establish support
for its implementation, and since this form of treatment only addresses the attentional
deficits associated with the syndrome, it does provide a hopeful avenue for identifying
and targeting the cognitive-affective deficiencies associated with psychopathy, not only
with computerized tasks but also potentially generalizing to other situations in which
cognitive-affective deficiencies arise. Although they did not address cognitive
remediation as a treatment for improving psychopathic traits directly, Dargis et al. (2017)
investigated whether priming participants with relevant words would improve their ability to recognize peripheral information. Although the results of their study must be replicated, they found that people in the general population with psychopathic traits showed faster reaction time and greater accuracy on a lexical decision task after being primed with words relevant to the task, compared to those who were primed with words unrelated to the task. These findings by Dargis et al. (2017) and Kemp and Baskin-Sommers (2019) provide a hopeful avenue for improving the attentional deficits associated with psychopathy. Therefore, clinical researchers should consider further developing treatment protocols based in cognitive remediation for improving attentional skills in those with psychopathic traits.

The results of the current study help us understand the emotional experiences and preferences of males with psychopathic personality traits, and offer a possible explanation for why males with these traits regulate their emotions in a manner that results in harmful, externalizing behavior. Having a better understanding of this process may help focus prevention and rehabilitation efforts in clinical contexts. In clinical practice with a male that has elevated levels of psychopathy and poor emotion regulation, the clinician could examine his perceptions of pleasantness and usefulness of both anger and fear to determine whether they are maladaptive and contribute to his emotion dysregulation. The clinician could then help the client to develop strategies for identifying and regulating these emotions in a more adaptive way. For instance, the clinician could instruct the client to track their emotions subjectively and physiologically, including how they regulated their emotions, and help them distinguish between adaptive and maladaptive regulation strategies. In a situation wherein the client enjoys the
experience of both anger and fear (which are physiologically arousing emotional responses), and is describing their anger towards another person (which could result in the client committing harm on the other person), the clinician could help the client to redirect their anger toward appropriate activities that are physiologically arousing and fear-inducing, such rock climbing or high diving. By showing an understanding of the client’s emotional perceptions and preferences, these strategies may benefit the therapeutic relationship, help build rapport, and improve motivation for change, which are known challenges for working with clients with psychopathic traits (Ackerman & Hilsenroth, 2001; Ogloff et al., 1990).

One program that provides a promising avenue for the treatment of psychopathic traits in male detained youth that provides support for the suggestions made in the paragraph above is the PSYCHOPATHY.COMP program developed by Da Silva et al. (2021). PSYCHOPATHY.COMP is an individual intervention based on Compassion Focused Therapy (CFT), which was “specifically designed to reduce psychopathic traits by promoting a compassionate motivation in these youth” (Da Silva et al., 2021, p. 500). According to CFT, all humans have an innate set of basic motivations to “survive, thrive and form affiliative/attachment bonds”, and these motivations are regulated by biological systems termed the threat system, drive system, and soothing system (Da Silva et al., 2021, p. 500). From this perspective, an imbalance of basic motives and emotion regulation systems leads to mental health problems, such as internalizing and externalizing psychopathological symptoms and disorders. This perspective is consistent with the findings of the current study, such that being highly motivated to experience anger and fear leads to difficulties regulating one’s emotions as well as one’s behavior.
CFT considers antisocial behavioral patterns and psychopathic traits as evolutionarily rooted strategies for coping with harsh rearing scenarios, as in these poor rearing environments, children struggle to develop adequate coping strategies and learn that the world is a threatening place wherein no one is trustworthy and everyone else is either the predator or the prey (Da Silva et al., 2021). As such, detained youth frequently present with an overdeveloped and oversensitive threat system, a drive system that is self-focused on short-term goals and wants, an underdeveloped soothing system, and central emotional dysfunctions (Da Silva et al., 2021). Within CFT there are four sequential modules: the first focuses on the basics of our mind, the second focuses on our mind according to CFT, the third focuses on Compassionate Mind Training (CMT), and the fourth focuses on recovery, relapse prevention, and finalization. When testing the effectiveness of the PSYCHOPATHY.COMP program in a controlled trial, Da Silva et al. (2021) found that psychopathic traits decreased over time in the treatment group, but not the control group. The control group received Treatment As Usual (TAU), which is a standard intensive treatment program for male detained youth using Cognitive Behavioral Therapy (CBT) techniques. Not only did Da Silva et al. (2021) find that psychopathic traits decreased over time in the treatment group, they also found that psychopathic traits increased over time in the control group, meaning that TAU may actually contribute to the maintenance of psychopathic traits. These findings suggest that without an individually tailored program targeting psychopathic traits, psychopathic traits may worsen and the presence of disruptive and antisocial behavior may increase after release from incarceration. In addition, taking the results of the current study as well as the Da Silva et al. (2021) study into consideration, it appears that working to understand and
adapt the motivations that detained youth with psychopathic traits have for experiencing anger and fear may help to improve their ability to regulate emotions and reduce other problematic behavior.

Limitations and Future Directions

There are specific limitations to the present study that could be remedied in future research studies, and some that could not. One limitation of the present study is the correlational design. The present study sought to provide a preliminary examination of the theorized process by which people with psychopathic traits experience emotion dysregulation. Given the support for the theorized processes, future research should seek to extend these findings by using methodological designs that can establish causal relations between hedonistic and instrumental motives for experiencing anger, fear, and joy, emotion goals for anger, fear, and joy, and emotion dysregulation. Researchers can accomplish this using a longitudinal design, wherein participants’ psychopathic traits, motives for experiencing emotions, emotion goals, and emotion dysregulation can be tracked over time.

Another limitation to this study is generalizability. Because I recruited an all-male sample, the results of this study should not be generalized to female populations. Future research should first attempt to replicate these findings in an all-female sample. In addition, despite the MTurk sample being more representative of the U.S. population than a college sample would have been, the MTurk sample was not precisely representative of the U.S. population, as White/European Americans were undersampled (72.8% compared to 76.3% of the general population), Blacks/African Americans were undersampled (9.2% compared to 13.4% of the general population), Hispanic/Latinx participants were
undersampled (4.6% compared to 18.5% of the general population), American Indian/Alaska Natives were undersampled (0.4% compared to 1.3% of the general population), and Native Hawaiian/Other Pacific Islanders were undersampled (0% compared to 0.2% of the general population), whereas Asian Americans were oversampled (7.6% compared to 5.9% of the general population; United States Census Bureau, 2019). Therefore, future research should examine the relations between these variables in a sample more representative of the U.S. population. Future researchers should also examine these variables in incarcerated populations, as understanding the process by which these variables contribute to emotion dysregulation is vital for understanding whether and how emotion dysregulation contributes to criminal activity, and where to focus prevention and rehabilitation efforts for reducing crime.

Lastly, there are measurement limitations to this study. Specifically, the measure of emotion dysregulation used in this study may not capture dysregulation in the context of experiencing joy. In fact, 14 of the 16 items on the Difficulties in Emotion Regulation Scale-16 (DERS-16) start with the phrase “When I’m upset.” Therefore, the items themselves are priming participants to think about the times when they are experiencing negatively valenced emotions, rather than priming participants to think about the times when they are experiencing both negatively valenced and positively valenced emotions. Thus, findings from this study indicating that hedonistic and instrumental motives for experiencing joy and emotion goals for joy do not serially mediate the relation between psychopathy and emotion dysregulation may be explained by the measurement of emotion dysregulation in the sole context of negatively valenced emotions. In order to address this limitation, future researchers should develop measures
of emotion dysregulation that incorporate the context of positively valenced emotions, such as joy. Such a measure would be relevant not only in the context of psychopathy, but also in the context of other mental illnesses, such as Bipolar Disorder, for which manic episodes are dysregulated experiences of positively valenced emotions often characterized as “unlimited and haphazard enthusiasm” (APA, 2013, pp. 127). Despite these limitations, this study has helped our understanding of the motivational process by which males with psychopathic traits experience emotion dysregulation. I hope that this study will encourage others to continue investigating the emotional disturbances associated with psychopathic traits.
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Appendix A: Self-Report Psychopathy Scale – Short Form

Instructions: Please rate the degree to which you agree with the following statements using numbers from the scale below. Your name will be detached from your answers so you cannot be identified.

5-point Likert-type scale (1 = Strongly disagree, 2 = Disagree, 3 = Moderately disagree, 4 = Agree, 5 = Strongly Agree)

1. I’m a rebellious person.
2. I have never been involved in delinquent gang activity.
3. Most people are wimps.
4. I’ve done something dangerous just for the thrill of it.
5. I have tricked someone into giving me money.
6. I have assaulted a law enforcement official or social worker.
7. I have pretended to be someone else in order to get something.
8. I like to see fist-fights.
9. I would get a kick out of ‘scamming’ someone.
10. It’s fun to see how far you can push people before they get upset.
11. I enjoy doing wild things.
12. I have broken into a building or vehicle in order to steal something or vandalize.
13. I don’t bother to keep in touch with my family any more.
15. You should take advantage of other people before they do it to you.
16. People sometimes say that I’m cold-hearted.
17. I like to have sex with people I barely know.
18. I love violent sports and movies.
19. Sometimes you have to pretend you like people to get something out of them.
20. I was convicted of a serious crime.
21. I keep getting in trouble for the same things over and over.
22. Every now and then I carry a weapon (knife or gun) for protection.
23. You can get what you want by telling people what they want to hear.
24. I never feel guilty over hurting others.
25. I have threatened people into giving me money, clothes, or makeup.
26. A lot of people are “suckers” and can easily be fooled.
27. I admit that I often “mouth off” without thinking.
28. I sometimes dump friends that I don’t need any more.
29. I purposely tried to hit someone with the vehicle I was driving.
Appendix B: Difficulties in Emotion Regulation Scale – 16

Instructions: Please indicate how often the following statements apply to you by choosing the appropriate number from the scale below (1–5).

5-point Likert-type scale (1 = Almost never [0-10%], 2 = Sometimes [11-35%], 3 = About half the time [36-65%], 4 = Most of the time [66-90%], 5 = Almost always [91-100%])

1. I have difficulty making sense out of my feelings.
2. I am confused about how I feel.
3. When I am upset, I have difficulty getting work done.
4. When I am upset, I become out of control.
5. When I am upset, I believe that I will remain that way for a long time.
6. When I am upset, I believe that I’ll end up feeling very depressed.
7. When I am upset, I have difficulty focusing on other things.
8. When I am upset, I feel out of control.
9. When I am upset, I feel ashamed with myself for feeling that way.
10. When I am upset, I feel like I am weak.
11. When I am upset, I have difficulty controlling my behaviors.
12. When I am upset, I believe that there is nothing I can do to make myself feel better.
13. When I am upset, I become irritated with myself for feeling that way.
14. When I am upset, I start to feel very bad about myself.
15. When I am upset, I have difficulty thinking about anything else.
16. When I am upset, my emotions feel overwhelming.
Appendix C: Affect Valuation Index

Instructions: Listed below are a number of words that describe feelings. Some of the feelings are very similar to each other, whereas others are very different from each other. Read each word and then rate how often YOU WOULD IDEALLY LIKE TO HAVE that feeling over the course of a typical week, using the following scale:

1. Over the course of a typical week, I would IDEALLY like to feel…

   ____ delighted  ____ fearful  ____ irritated
   ____ hostile    ____ happy   ____ nervous
   ____ joyful    ____ angry   ____ cheerful
   ____ scared    ____ afraid  ____ mad
Appendix D: Perceived Affect Utility Scale - Revised

Instructions: You will be asked how much different emotions: (a) motivate you to achieve your goals; and (b) make it easier for you to do things to achieve your goals. By “goals” we mean the things that you generally seek to accomplish in everyday life, or the things you typically try to do. Some examples of goals are “getting along with others,” “trying to be the center of attention,” “trying to help others,” and “trying to do what is best for myself.” Please pay close attention to subtle differences between emotion words and answer each item to the best of your ability. Use the following scale to record your answers.

1. Feeling ____ motivates me to achieve my goals.
   _____ delighted   _____ fearful   _____ irritated
   _____ hostile    _____ happy     _____ nervous
   _____ joyful     _____ angry     _____ cheerful
   _____ scared    _____ afraid     _____ mad

2. Feeling ____ makes it easier for me to do things that will help me to achieve my goals.
| Delighted | Fearful | Irritated |
| Hostile   | Happy   | Nervous   |
| Joyful    | Angry   | Cheerful  |
| Scared    | Afraid  | Mad       |
Appendix D: Attitudes Toward Emotions Questionnaire

Instructions: There are no right or wrong answers for the following questions. Please answer honestly based on how you feel. Thank you for your participation. Please answer each question using the scale provided below.”

<table>
<thead>
<tr>
<th>Rarely/never</th>
<th>Occasionally</th>
<th>Sometimes</th>
<th>Often</th>
<th>Almost always/always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Attitudes Toward Anger**

- I like the feeling of increased energy I get from expressing my anger
- I like the feeling of power I get from expressing my anger
- I like it when I feel like yelling at someone
- I dislike how it feels when I am angry
- I like how it feels when I am furious

**Attitudes Toward Fear**

- I like to do things that scare me
- I do things just because they scare me
- I like being scared
- I seek out things that scare me
- I dislike being scared
- I dislike doing things that scare me
**Attitudes Toward Joy**

I do not really enjoy the moments in my life when I am happy
I like experiencing joy
I prefer to hang around with people who make me happy
I really like feeling happy
I like conversations that make me feel happy
Appendix E: Demographics

Instructions: Please indicate which of the following you most closely identify with. This information will be kept confidential and will not be used to identify you.

1. What was your sex assigned at birth:
   a. Male
   b. Female
   c. Intersex

2. What is your gender identity?
   a. Woman
   b. Man
   c. Non-Binary
   d. Self-identify: ________________________________

3. What is your race/ethnicity? Choose all that apply.
   a. American Indian or Alaska Native
   b. Black or African American
   c. Asian or Asian American
   d. Native Hawaiian or other Pacific Islander
   e. White or European American
   f. Hispanic/Latinx
   g. Self-identify: ________________________________

4. What is your age?
   a. ____ (drop down)

5. What is the highest level of education you have completed?
   a. No high school degree
   b. Grade 12 or GED
   c. Some education after high school, no degree/award
   d. Trade certification
   e. Vocational training
   f. Associate’s degree
   g. Bachelor’s degree (four-year degree)
   h. Graduate degree (M.A., M.D., Ph.D, etc.)

6. What is your annual household income, before taxes?
   a. Less than $10,000
   b. $10,000 - less than $30,000
   c. $30,000 - less than $50,000
   d. $50,000 - less than $70,000
   e. $70,000 - less than $100,000
   f. $100,000 or more

7. MacArthur Scale of Subjective Social Status:
Instructions: Think of this ladder as representing where people stand in the United States. At the top of the ladder are the people who are the best off – those who have the most money, the most education, and the most respected jobs. At the bottom are the people who are the worst off – those who have the least money, least education, the least respected jobs, or no job. The higher up you are on this ladder, the closer you are to the people at the very top; the lower you are, the closer you are to the people at the very bottom.

Where would you place yourself on this ladder?

At this time in your life, where do you think you stand on this ladder relative to other people in the United States? Please click on the step that indicates where you think you stand on this ladder at this time in your life compared to other people in the United States.
Appendix F: Informed Consent

Project Title: “Personality and Emotions”

Name of Investigator(s): Morning S. Baker, Nicholas Schwab, PhD

You are invited to participate in a research study conducted by students from the University of Northern Iowa. The University requires that you give your agreement in order to participate in this study. The following information is provided to help you make an informed decision about whether or not to participate.

Purpose of this Study: The study will examine personality characteristics, perceptions about emotions, and emotional experiences.

Explanation of Procedures: You will be presented with questions regarding your personality characteristics, perception of emotions, and emotional experiences, and be asked to rate how well the statements describe you. The study will take approximately 15 minutes to complete.

Discomfort and Risks: Risks are minimal.

Compensation and Benefits: Each participant will be compensated with $1.00 USD immediately after completion of the study. This study could benefit society by contributing to scientific research on the relationship between personality characteristics, perceptions of emotions, and emotional experiences. There is no direct benefit for your participation in this study besides the financial compensation offered.

Confidentiality: Your confidentiality will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception of data transmitted electronically. Survey data will not be retained on the Amazon servers, but will be retained on the Qualtrics servers indefinitely. Data transferred from the survey site will be saved in password protected files indefinitely. Any reports and presentations about the findings from this study will not include your name or any other information that could identify you. We may share the data we collect in this study with other researchers doing future studies. Your IP address will be verified by CloudResearch to ensure that your address is in the United States and that multiple surveys are not being completed from the same address. This information will be deleted immediately after it is verified.

Right to Refuse or Withdraw: Your participation is completely voluntary. You are free to withdraw from participation at any time or choose not to participate at all. The researcher may also withdraw your participation at any time.

Who do I contact for questions about the Study? For more information about the study or study procedures, contact either of the following: Morning Baker bakermat@uni.edu, or Nicholas Schwab Department of Psychology, University of Northern Iowa at
Agreement: I am fully aware of the nature and extent of my participation in this study as stated above and the possible risks arising from it. I have been able to ask questions and express my concerns about this study. I acknowledge that I have received a copy of this consent statement. I am 18 years or older. I hereby agree to participate in this study.

Click I agree to continue your participation.
Appendix G: Debriefing

Thank you for participating! Today you answered questions regarding your personality characteristics, perceptions about emotions, emotional experiences, and demographics.

The primary purpose of this research is to investigate how participants’ personality characteristics and perceptions about emotions influence their emotional experiences.

The results of this study may be used to develop treatment interventions designed for specific personality types.

If you have any questions about the study, please contact the following: Morning Baker at bakermat@uni.edu, or Nicholas Schwab Department of Psychology, University of Northern Iowa at nicholas.schwab@uni.edu. For questions about your rights as research participants, please contact the UNI IRB Administrator Rebecca Rinehart at rebecca.rinehart@uni.edu.
Appendix H: Attention Check Items

1. I have never used a computer. (Huang et al., 2015)

2. I can run 2 miles in 2 minutes. (Huang et al., 2015)

3. I work fourteen months in a year. (Huang et al., 2015)