PSYCHOPATHY AND SUICIDE: THE MEDIATING EFFECTS OF EMOTIONAL AND BEHAVIORAL DYSREGULATION

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PSYCHOPATHY AND SUICIDE: THE MEDIATING EFFECTS OF EMOTIONAL AND BEHAVIORAL DYSREGULATION

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ABSTRACT

PSYCHOPATHY AND SUICIDE: THE MEDIATING EFFECTS OF EMOTIONAL AND BEHAVIORAL DYSREGULATION

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Psychopathy is recognized as a heterogeneous condition with empirical support behind the subtypes primary and secondary (Skeem, Poythress, Edens, Lilienfeld, & Cale, 2003). Research indicates differential patterns of associations between psychopathy subtypes and suicide whereby secondary psychopathy is positively related to suicidal ideations and attempts, and primary psychopathy is either negatively or unrelated to suicidal ideations and attempts (Verona, Hicks, & Patrick, 2005; Verona, Patrick, & Joiner, 2001). In seeking to explain the differential pattern of associations between psychopathy subtypes and suicide, the present study drew upon two modern frameworks for understanding self-injury: the emotional cascade model (Selby, Anestis, & Joiner, 2008) and interpersonal theory of suicide (IPTS; Joiner, 2005). The emotional cascade model attempts to understand how emotional and cognitive dysfunction combine to predict behavioral dysregulation such as non-suicidal self-injury (NSSI). The IPTS hypothesizes that an attempt at suicide requires the presence of both the desire for death and the capability to

act on said desire and that these processes operate independently of one another. A history of painful and provocative experiences, such as NSSI, is believed to incrementally contribute to an acquired capability for suicide, increasing a tolerance for pain and decreasing the fear of death. Likewise, research has found that a history of NSSI is elevated in individuals that act on their suicidal ideations versus those that do not (Klonsky, May, & Glenn, 2013). In the present study, specific cognitive, affective, and behavioral features integral to the emotional cascade model and IPTS, as well as present in secondary psychopathy, were hypothesized to contribute to a history of suicide attempts in a sample of 204 male and female offenders. A serial mediation analysis was conducted to test if the association between secondary psychopathy and suicide attempts was best explained through the indirect path of emotion dysregulation, rumination, suicidal ideation, and NSSI. The results supported this pattern of events, as the above variables sequentially mediated the relationship between secondary psychopathy and suicide attempts. Additional findings related to further differentiating psychopathy subtypes will be discussed, as will implications, limitations, and future directions.
Keywords: suicide, psychopathy, emotion dysregulation, non-suicidal self-injury, rumination, suicidal ideation, acquired capability, distress tolerance

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CHAPTER I

INTRODUCTION

In 2013, the Centers for Disease Control and Prevention (2015) reported that 41,149 Americans died by suicide. That is a completed suicide every 12.95 minutes. Despite our growing knowledge of the nature of suicide, and the proliferation of pharmacological treatments for psychiatric diseases, rates have been relatively stable over the past 30 years (Kessler, Berglund, Borges, Nock, & Wang, 2005).

Suicide and self-injurious behaviors are a complex, individual, and ever-evolving process. Autopsy studies and other forms of assessment have found mental illness to be the most significant risk factor for suicidal behavior (Bryan & Rudd, 2006; Cavanagh, Carson, Sharpe, & Lawrie, 2003). In fact, suicide rarely occurs in those that do not meet criteria for a psychiatric disorder (American Psychiatric Association, 2013). Researchers estimate that 80-90% of individuals who die by suicide suffered from a mental illness (Tanney, 2000). While suicidal behaviors can manifest in any mental disorder, they are most often associated with conditions of disordered mood (Rihmer, 2007), thought (Hor & Taylor, 2010), and personality (Soloff, Lynch, Kelly, Malone, & Mann, 2000).

Until recently, few studies examined the relationship between the personality construct of psychopathy and suicide. In fact, Hervey Cleckley, (1941/1988) who coined

the termed psychopathy, considered the condition a protective factor against suicide. Characterized by interpersonal and affective deficits, as well as antisocial and behavioral features (Cleckley, 1941/1988; Hare, 2003), psychopathic personality traits such as a lack of anxiety and remorse, callousness, and egocentricity led Cleckley to note “suicide rarely carried out” (p. 358) as part of the clinical profile. Moreover, Cleckley maintained that individuals with psychopathic characteristics present an overall impairment in how they respond to negative emotions. Based on his clinical case studies, Cleckley observed an absence of nervousness in response to both intense and everyday stressors, as well as an inability to feel guilt, remorse, or insecurities.

Although Cleckley treated it as a unitary construct, psychopathy is now understood as a multidimensional condition, with empirical support behind the two subtypes of primary and secondary psychopathy (Skeem, et al., 2003). Cleckley’s contemporary, Benjamin Karpman (1941), first distinguished the separate variants of psychopathy, suggesting subtypes existed that differed in root cause (primary as genetic and secondary as environmental) and proneness to negative emotions (primary as immune and secondary as vulnerable). Lykken (1995), as well as other researchers, have noted that Karpman’s description of primary psychopathy aligned well with Cleckley's prototype, describing a callous and egocentric individual incapable of experiencing empathy or anxiety. Secondary psychopathy referred to individuals whose antisocial tendencies manifested as impulsive and aggressive behaviors. Contrary to primary psychopathy then, an individual with secondary psychopathic traits was considered ‘neurotic;’ they could be highly emotional, and in response to their impulsive and

reactive behaviors, susceptible to feelings of guilt, depression, and anxiety. Subsequent research on male and female offenders have been consistent with Karpman's variants.

Beyond its historical conceptualization, more recent empirical efforts at defining the condition via emotional processing and self-control (Yildirim & Derksen, 2015) suggest that "suicide rarely carried out" might not hold true for individuals with secondary psychopathy. In one of the first studies to investigate the relationship between psychopathy subtypes and suicide, Verona et al. (2001) found that in male prison inmates, there was a significant, positive relationship between a history of suicide attempts and secondary psychopathy, but no relationship between suicide and primary psychopathy. They further found that the relationship was mediated by the personality traits of negative emotionality and impulsivity, indicating that dysregulated emotions and maladaptive behaviors might be an important mechanism in understanding the differential relationship between primary and secondary psychopathy and suicide attempts. Verona et al. (2005) further replicated these findings in female offenders. Additionally, consistent with Cleckley's (1941) notion that primary psychopathy protects against suicidality, they found a negative relationship between the affective and interpersonal features of primary psychopathy and suicide. Douglas, Herbozo, Poythress, Belfrage, and Edens (2006) furthered this work by showing that only the lifestyle aspects of secondary psychopathy (i.e., impulsivity, sensation seeking) and not the antisocial tendencies (i.e., poor behavioral controls, diverse criminal experiences; Hare, 2003) related to suicide. More recently, higher levels of secondary psychopathy predicted suicidal ideation in a community corrections sample (Gunter, Chibnall, Antoniak,

Philibert, & Hollenbeck, 2011) and a psychiatric setting (Swogger, Conner, Meldrum, & Caine, 2009). Furthermore, clinical factors associated with suicidal ideation such as depression and anxiety (Van Orden et al., 2010) have also been found to strengthen the relationship between secondary psychopathy and suicidal ideation (Pennington, Cramer, Miller, & Anastasi, 2015; Smith, Selwyn, Wolford-Clevenger, & Mandracchia, 2014).

In sum, these studies suggest that secondary psychopathy may be more predictive of suicide-related behaviors than primary psychopathy. What remains unclear is what exactly accounts for this differential pattern of associations. The purpose of the present study is to understand the differential relationships between primary versus secondary psychopathy and suicide among offenders of a local county jail. Within the literature, there is insufficient understanding of how the psychopathy subtypes, emotion dysregulation, and deliberate self-harm combine to predict suicide-related thoughts and behaviors. Existing research has explored primary versus secondary psychopathy, emotion dysregulation, and suicide, but not yet in a comprehensive manner, nor in a forensic sample. In the present study, I will employ two modern theories of self-harm to examine how emotion regulation difficulties, rumination, and non-suicidal self-injury operate together in explaining this differential pattern. In the remainder of the introduction, I will address the constructs of psychopathy and emotion dysregulation in more detail, explain risk factors for suicide-related behaviors, as well as explore the theory behind why emotionally dysregulated behaviors may serve as a mechanism for the relationship between secondary psychopathy and suicide attempts.

Psychopathy and Emotion Dysregulation

Despite their surface similarities (Karpman, 1941), differences exist between primary and secondary psychopathy in emotionality, behavioral control, and affective experience (Cleckley, 1941/1988; Fowles & Dindo, 2009; Karpman, 1941, 1948; Lykken, 1995). As defined by Gratz and Roemer (2004), emotion dysregulation involves deficits in the identification, comprehension, and acceptance of emotions, the ability to engage in goal-directed behavior and control one's impulses while upset, and the self-perception that one can effectively manage a range of emotions. This conceptualization emphasizes the importance of awareness and understanding of emotions, as well as the ability to behave in an appropriate manner in the presence of negative emotions (Gratz & Roemer, 2004). Secondary psychopathy's association with emotion dysregulation is often inferred indirectly based on positive correlations with constructs related to emotion dysregulation, like impulsivity (Poythress & Hall, 2011), negative emotionality (Hicks & Patrick, 2006), and externalizing disorders (Blonigen, Hicks, Krueger, Patrick, & Iacono, 2005). Furthermore, emotion dysregulation is also present in several psychiatric conditions closely associated with secondary psychopathy, such as borderline personality disorder (BPD; Skeem et al., 2003) and alexithymia (Lander, Lutz-Zois, Rye, & Goodnight, 2012). The emotional deficits related to the inability to process and understand self/other emotional states are equally indicative of BPD, alexithymia, and psychopathy (Jonason & Krause, 2013; Kroner & Forth, 1995). Features of BPD include affective instability, inappropriate anger, identity disturbance, unstable relationships, and impulsive, self-destructive behaviors (APA, 2013). The term *alexithymia*, from the Greek

lexis and thymos, translates as the “absence of words for emotions” (Sifneos, 1973). It is a personality trait marked by issues in emotion recognition and regulation such as differentiating one's emotions from its accompanying physiological arousal, difficulty describing emotions to others, and a concrete, factually oriented style of thinking (Taylor, 1994). Alexithymia is implicated in a variety of mental disorders (Leweke, Leichsenring, Kruse, & Hermes, 2012), and has been repeatedly linked to dysregulated behaviors like self-harm (Bailey & Henry, 2007; Borrill, Fox, Flynn, & Roger, 2009; Fink, Anestis, Selby, & Joiner, 2010).

In a study directly investigating the connection between psychopathy and alexithymia, Lander et al. (2012) found a positive relationship between secondary psychopathy and alexithymia, but not primary psychopathy. A follow-up study by Ridings and Lutz-Zois (2014) revealed that the core features of BPD, such as the inability to regulate intense emotions and behave in a desired manner, were able to account for secondary psychopathy’s connection to alexithymia. Individuals with BPD often engage in maladaptive behaviors as a way to regulate the intensity of their emotions (Linehan, 1993). Thus, high emotionality and an improper regulation of one’s emotional experience is not only a mechanism that can discriminate between psychopathy subtypes, connecting secondary psychopathy to BPD and alexithymia, but it might also account for secondary psychopathy’s unique relationship with suicide-related behaviors. In the next section, I will discuss the construct of emotion regulation more specifically, reviewing evidence that connects emotion dysregulation to maladaptive behaviors like non-suicidal self-injury and the cognitive process of rumination.

Emotion Dysregulation and Self-Harm.

As reviewed by Weiss, Sullivan, and Tull (2015), issues with emotion dysregulation manifest in many dysregulated behaviors, such as substance abuse, binge eating, risky sexual behaviors, as well as self-injurious behaviors including non-suicidal self-injury (NSSI; e.g., cutting on oneself without the intent to die) and suicide. Emotion dysregulation is a construct highly related to suicide (Rajappa, Gallagher, & Miranda, 2012). Baumeister (1990) proposed suicide was the product of an intense desire to escape inner psychological pain. First, an individual experiences an extremely negative discrepancy between expectations and actual events. A form of negative emotionality develops, and the individual becomes preoccupied and begins to ruminate on personal inadequacies. This ruminative process leads to increased feelings of distress, sadness, and worry. Suicidal ideations develop when the individual is completely overwhelmed and debilitated by their negative emotions. Baumeister's escape theory (1990) finally asserts that when the totality of a situation is perceived as insufferable, hopeless and uncontrollable, the act of suicide is seen as the only way out.

Linehan (1993) theorized a biological sensitivity to emotion, exposure to trauma, and the failure to acquire flexible ways of tolerating and handling negative emotions as contributors to suicidal behavior. Individuals involved in suicide-related behaviors have distinct problems with affect regulation and are more likely to turn to self-destructive methods to solve problems (Crowell, Beauchaine, & Linehan, 2009). In recent suicide of suicide attempters, lower expectations of an individual's problem-solving capacity were predictive of a repeat suicide attempt with-in an 18-month period (Dieserud, Røysamb,

Braverman, Dalgard, and Ekeberg, 2003). Linehan asserted that individuals with BPD often resort to maladaptive behaviors such as NSSI as a way to reduce intensely negative affect and arousal. For example, in a sample of inpatients diagnosed with BPD, the most common reasons for engaging in NSSI were reported as a method to distract from negative emotions, to generate feelings, and to punish themselves (Brown, Comtois, & Linehan, 2002). Individuals that engage in NSSI report greater emotion dysregulation compared to those that do not, claiming that NSSI helps to regulate negative emotions like anxiety, sadness, anger, and stress (Bresin, 2014; Selby et al., 2008).

Selby et al. (2008) developed the emotional cascade model to elucidate the connection between emotional and behavioral dysregulation, suggesting that individuals engage in NSSI to avoid extreme emotions (emotional cascades) provoked by a series of escalating ruminations. Nolen-Hoeksema (1991) defines rumination as a maladaptive emotion regulation strategy where an individual has repeated thoughts about the source, significance, and aftermath of an aversive experience. Rumination can successfully reduce negative affect in the short-term, but it has been shown to facilitate the frequency, severity, and accessibility of destructive emotions in the long term (Liverant, Kamholz, Sloan, & Brown, 2011). Rumination is itself related to NSSI (Armey & Crowther, 2008) as well as suicidal ideations and attempts (Rogers & Joiner, 2017). Furthermore, ruminative thoughts have been found to explain the connection between the limited strategies an individual uses to effectively regulate their emotions (Gratz & Roemer, 2004) and holding suicidal ideations (Miranda, Tsypes, Gallagher, & Rajappa, 2013). In an emotional cascade, rumination further intensifies and prolongs negative emotions

(Moberly & Watkins, 2008) and breaking the cycle of rumination through normal methods is often ineffective. The dysregulated behavior of NSSI is therefore utilized to interrupt this cognitive process; forcing the attention of an individual caught in a ruminative cycle to the physical sensation of pain (Selby & Joiner, 2009).

Klonsky et al. (2013) found that individuals utilizing NSSI as an emotion regulation strategy were more likely to have attempted suicide, demonstrating that NSSI does not deliver the intended result of escaping negative emotions Indeed, NSSI has been observed to explain why poor emotion regulation is related to a greater number of lifetime suicide attempts (Anestis, Pennings, Lavender, Tull, & Gratz, 2013). The interpersonal theory of suicide (IPTS; Joiner, 2005) offers a context for why this might be the case – why NSSI used to avoid negative emotions and thoughts of suicide tend to predict actual suicide attempts. In the following section I will further discuss the IPTS, which identifies painful maladaptive behaviors like NSSI as one driver of attempted suicides. I will then conclude by proposing a study whereby secondary psychopathy is related to suicide attempts through particular mechanisms postulated by the emotional cascade model and interpersonal theory of suicide.

Theories of Completed Suicide: From Ideations to Attempts

The IPTS proposes that suicide attempts require both a desire for death as well as the capability to follow through with said desire. The IPTS is an attempt to answer the question of why and how suicidal ideations become suicide attempts, as only a small fraction of people ever attempt suicide, while many more think about dying. The desire to die is theorized to emanate from feelings of alienation and the belief that one is a burden

to others. The capability to enact self-harm results from a tolerance for emotional and physical pain, which an individual acquires by experiencing painful and provocative events, and a fearlessness about death. As reviewed by Anestis, Soberay, Gutierrez, Hernadez, and Joiner (2014b), the direct relationship between suicide attempts and impulsivity is in reality quite small, suggesting that the ability to push past the innate terror and pain associated with suicide is an acquired process, not the result of one impulsive event (Joiner, 2005). Reoccurring forms of physical and emotional pain are hypothesized to habituate an individual to experiences associated with pain, injury, and the fear of death, which eventually reduces the apprehension to take one's life (Joiner, 2005).

Anestis, Kleinman, Lavender, Tull, and Gratz (2014a) note that the purported relationship between emotion dysregulation and the acquired capability for suicide can appear contradictory in that the ability to tolerate distress, a prerequisite for the acquired capability for a suicide attempt (i.e., physical and emotional pain tolerance), is antithetical to the construct of emotion dysregulation. Emotion dysregulation is the inability to tolerate distress and the need to escape negative affective states. It is strongly associated with suicidal ideations (Arria et al., 2009), but is a deterrent to suicidal behavior as formulated under the IPTS and the development of an acquired capability for suicide. Moreover, unlike Baumeister’s escape theory, the emotional cascade model asserts that dysregulated and painful behaviors, not suicide itself, proceed from the intense desire to escape a cycle of negative emotions. Such dysregulated behaviors interrupt the emotion dysregulation process by forcing the individual’s attention to the

physical sensation of pain (Selby et al., 2008). Therefore, emotionally dysregulated individuals like those with secondary psychopathy are more likely to seek relief via negative reinforcements such as dysregulated behaviors (i.e., NSSI; Anestis et al., 2014a), which suggests that the pursuit of physical pain at the expense of emotion pain functions as a behavioral amplifier through operant conditioning. By removing the unwanted, negative emotions through a change in attention (from the emotional to the physical), the behavior becomes rewarding and continues to occur. Joiner's IPTS nicely links Baumeister's escape theory (1990) with the emotional cascade model (Selby et al., 2008), creating a blueprint for understanding how emotion dysregulation and behavioral dysregulation relates to suicidality.

Ultimately, emotionally dysregulated individuals with secondary psychopathy may not be able to tolerate their distress, making it more likely that they would desire death as an escape from intense ruminations, but still less liable to act on their desire. However, a tendency to turn to painful behaviors as a distraction measure indirectly amplifies their pain tolerance and the acquired capability for suicide. Habituation to physical pain comes at the expense of avoiding emotional distress for individuals with secondary psychopathy. Therefore, emotion dysregulation can lead to non-lethal behaviors that are painful and provocative (through NSSI and risky behaviors), indirectly elevating the acquired capability and facilitating a potential leap from ideations to attempts (Anestis et al., 2012; Bender, Gordon, Bresin, & Joiner, 2011; Hamza, Stewart, & Willoughby, 2012).

The Current Study

As theorized by the IPTS, only the combination of emotional (desire for death) and behavioral (capability for action) dysregulation is hypothesized to predict suicide attempts. Research has found that a history of painful and provocative experiences, such as NSSI, is elevated in individuals that act on their suicidal ideations versus those who do not. This suggests that emotional and physical pain tolerances are aspects in acquiring a capability to commit suicide. The objectives of the proposed study are as follows:

Objective 1: Corroborate the differential suicide-related outcomes for primary and secondary psychopathy subtypes. It is hypothesized that secondary psychopathy will be related to suicidal ideations and attempts, whereas primary psychopathy will be negatively associated with suicidal ideations and attempts.

Objective 2: Utilize the emotional cascade model and the acquired capability aspect of the IPTS to examine a sequential pattern of relationships between psychopathy, emotion dysregulation, rumination, NSSI, and suicide (both attempts and ideations). Thus, as depicted by the conceptual model seen in Figure 1, it is hypothesized that secondary psychopathy would be related to suicide attempts through the indirect effects of emotion dysregulation, rumination, suicidal ideation, and NSSI (in that sequential order). With respect to the relationship between secondary psychopathy and suicidal ideations, as well as the reason NSSI follows suicidal ideations, the model serves to clarify the acquired capability's role in enacting suicide. Having the capability for suicide through habituating to both physical and emotional pain does not entail concurrent thoughts of lethal self-harm. A history of NSSI is thus not necessary for an emotionally

dysregulated individual to ponder suicide. Similarly, one can possess a desire to die without having the capability. It is the combination of emotional (desire) and behavioral (capability) dysregulation that is hypothesized to predict a history of suicide attempts.

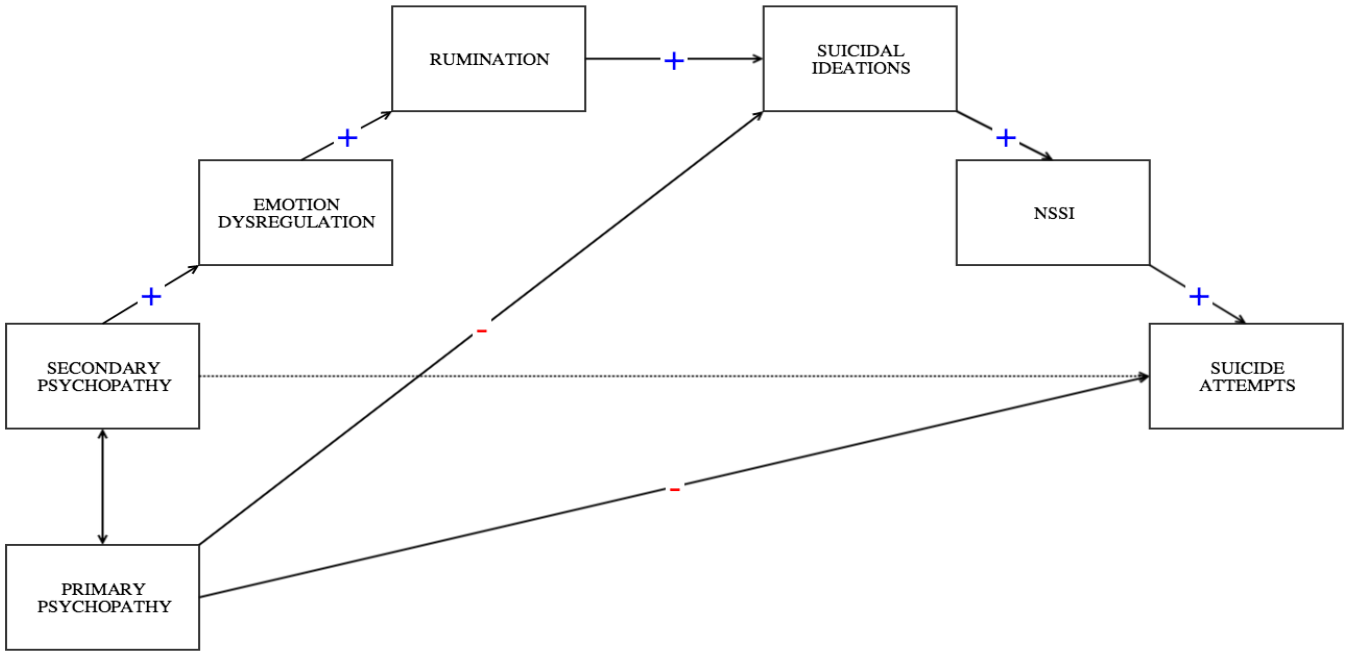


Figure 1

Conceptual Model of Study Hypotheses

CHAPTER II

METHOD

Participants

The current study consisted of 228 male (n = 112) and female (n = 115) offenders of a county jail in Dayton, Ohio. Eligibility criteria for participation required individuals to be over 18-years-old and possess at least a 6th grade reading level. Out of the original 228 individuals that participated, nineteen were excluded because their reading levels were classified as fifth grade or below. An additional two individuals were excluded due to substantial amounts of missing and/or biased data from participant non-response. Finally, three individuals were excluded because they were deemed outliers with regard to a particular study variable. Thus, the final sample consisted of 204 participants. Ages of the participants ranged from 18 to 69-years-old (M = 33.92 years, SD = 10.65) and participants identified as 63.7% Caucasian, 28.9% African-American, and 7.4% as other. Participant educational attainment were classified as 6.9% having a middle school education, 19.6% having attended high school without graduating, 34.3% reported graduating high school and/or receiving a GED, 7.8% reported having some vocational training, and 31.4% reported having some college education. Additional demographic information encapsulating offending behavior is provided in Table 1.

Table 1

Descriptive Statistics for Categorical Demographic Variables

Variables	Frequency	Percent
Times Booked Into Jail		
1	18	8.8
2	23	11.3
3	15	7.4
4	19	9.4
5	20	9.9
6	13	6.4
7	10	4.9
8	8	3.9
9	4	2.0
10+	73	36.0
Longest Prior Jail or Prison Sentence		
< 6 months	82	42.1
6 months – 12 months	50	25.6
13 months – 24 months	30	15.4
25 months to 48 months	21	10.8
49+ months	12	6.2
Current Charges		
Violent offense	52	25.5
Property offense	52	25.5
Drug offense	64	31.4
Public-order offense	25	12.3
Other	39	19.1
Choose not to respond	11	5.4
Past Charges		
Violent offense	55	27.0
Property offense	67	32.8
Drug offense	91	44.6
Public-order offense	48	23.5
Other	29	14.2
Choose not to respond	16	7.8

Note. (N = 204). Current and Past Charges sum to over 100% (i.e., > 206) because participants chose more than one response.

Measures

Self-Report Psychopathy Scale-fourth edition. (SRP-4). The SRP-4 (Paulhus, Neumann, & Hare, 2015) was used to measure psychopathic personality traits. The SRP-4 is a 64-item self-report measure corresponding to the four factors assessed by the Psychopathy Checklist-Revised (PCL-R; Hare, 2003), the most widely used interview-based assessment of psychopathy. The SRP-4's four non-overlapping subscales form the two factors of psychopathy: Interpersonal Manipulation and Callous Affect are combined to create factor 1 or primary psychopathy; Erratic Lifestyle and Criminal Tendencies are combined to create factor 2 or secondary psychopathy. Items are scored on a five-point Likert scale (1 = *disagree strongly* to 5 = *agree strongly*). An example item of primary psychopathy includes "A lot of people are 'suckers' and can easily be fooled." An example item of secondary psychopathy includes "I've often done something dangerous just for the thrill of it." The SRP-4 has a Flesh-Kincaid reading level of 4.9 and can be found in Appendix B.

In a sample of 274 male offenders, Hare (1985) found that the original SRP showed good reliability ($\alpha = .80$). The measure was further related to theoretically similar construct measures, correlating .38 with the PCL and .26 with the Minnesota Multiphasic Personality Inventory Psychopathic Deviate scale. Hare also found the SRP to negatively correlate -.53 with the California Psychological Inventory Socialization scale, a measure that has effectively differentiated criminals from non-criminals and which was conceptualized as the ability to take the role of another (Gough,1960). In a sample of undergraduates, Williams, Paulhus, and Hare (2007) found the SRP-II total score to have

a reliability of .88. Additionally, it was significantly related to the Levenson Self-Report Psychopathy Scale ($r = .53$, $p < .01$) and the Psychopathic Personality Inventory-Revised ($r = .60$, $p < .01$). For the current study, the Cronbach's alpha for the total score was .93, while the Cronbach's alphas for factor 1 and factor 2 were .90 and .87, respectively. Total scores can be used by the SRP-4 to distinguish those individuals possessing psychopathic personality traits. However, in the current study, the construct of psychopathy was split to assess for primary and secondary psychopathy subtypes.

Difficulties in Emotion Regulation Scale. (DERS). The DERS (Gratz & Roemer, 2004) integrates multiple theories of emotion regulation into a comprehensive 36-item self-report measure designed to assess clinical difficulties in emotion regulation. The DERS includes six subscales: Lack of Emotional Awareness (AWARENESS); Lack of Emotional Clarity (CLARITY); Difficulties Controlling Impulsive Behaviors When Distressed (IMPULSE); Difficulties Engaging in Goal-Directed Behavior When Distressed (GOALS); Nonacceptance of Negative Emotional Responses (NONACCEPTANCE); and Limited Access to Effective Emotion Regulation Strategies (STRATEGIES). The DERS is scored on a Likert scale ranging from 1 (*almost never*) to 5 (*almost always*). Many of the items begin with "When I'm upset," and test takers are asked to specify how often they feel what the item describes (e.g., "When I'm upset, I have difficulty concentrating"). Higher scores indicate greater difficulties with emotion regulation. The total score was utilized to test the primary model. The DERS has a Flesh-Kincaid reading level of 6.0 and can be found in Appendix C.

Gratz and Roemer (2004) found good reliability for the DERS total score (α = .93) and the subscales showed moderately high internal consistency (α > .80 for all six subscales). The measure has also demonstrated good internal consistency in samples that differed by age (Neumann, van Lier, Gratz, & Koot, 2009), psychological health (Fowler et al., 2014), race (Ritschel, Tone, Schoemann, & Lim, 2015), and ethnicity (Giromini, Velotti, de Campora, Bonalume, & Zavattini, 2012). In Gratz and Roemer's (2004) original validation study, the DERS was related to the Negative Mood Regulation Scale (r = -.69) as well as measures of experiential avoidance (r = .60, p < .01) and emotional expressivity (r = -.23, p < .01; Gratz & Roemer, 2004). In a sample of 870 adolescents, Neumann et al. (2009) found that the DERS demonstrated small, but statistically significant relationships with aggressive and delinquent behaviors, and large and statistically significant relationships with internalizing problems such as anxiety and depression. Finally, in a study of 218 adolescents with a serious mental illness, a cutoff score of 21.5 for the STRATEGIES factor was able to sufficiently differentiate individuals with a history of self-harm (Perez, Venta, Garnaat, & Sharp, 2012). Cronbach's alpha for the total score in the current study was .94, while the alphas for the six subscales listed above were .77 (AWARENESS), .80 (CLARITY), .88 (IMPULSE), .87 (GOALS), .86 (NONACCEPTANCE), and .88 (STRATEGIES), respectively.

Ruminative Responses Scale. (RRS). The RRS (Treynor, Gonzalez, & Nolen-Hoeksema, 2003) is a 22-item self-report measure of individual differences in the propensity to ruminate. Rumination is a maladaptive emotion regulation strategy where an individual's response to distress includes repetitively and passively focusing on

symptoms of distress and their possible meanings, causes, and consequences (Nolen-Hoeksema, 1991; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008). On a scale of 1 (*almost never*) to 4 (*almost always*), participants are asked to indicate the frequency they engage in rumination when they are depressed. The RRS also contains two subscales, brooding, (e.g., "I think 'why do I always react this way?'") and reflection (e.g., "Analyze recent events to try to determine why you are depressed"). Brooding is characterized by the intensive emphasis on the obstacles involved in overcoming problems and reflection is characterized by general self-reflective tendencies. Brooding was found to be related to depression in both the short term and long term, while reflection was only related to depression in the short term (Treynor et al., 2003). Previous research has both combined the brooding and reflection subscales as an overall measure of rumination, as well utilized the separate subscales in follow-up tests. In the current study, the composite score was used to assess ruminative thought processes. Total scores range from 22 to 88. Cronbach alphas for the total score in the current sample was .93. The RRS has a Flesh-Kincaid reading level of 4.4 and is located in Appendix D.

In a community sample of 1,328 randomly selected adults, Treynor et al. (2003) found excellent internal consistency ($\alpha = .88$) and a test-retest correlation of .67. In longitudinal studies, the RRS has been shown to predict increases in depression at 1 year (Nolen-Hoeksema, 2000), anxiety at 6-8 weeks (Calmes & Roberts, 2007), and increases in substance-abuse problems in women at 1 year (Nolen-Hoeksema & Harrell, 2002). Additionally, the interaction between rumination as measured by the RRS and the

experience of painful and provocative events has been able to predict the frequency of NSSI in a sample of undergraduates (Selby, Connell, & Joiner, 2010).

Self-Injurious Thoughts and Behaviors.

Suicidal Behaviors Questionnaire – Revised. (SBQ-R). The SBQ-R (Osman et al., 2001) is a brief 4-item self-report measure of suicidal behavior. The four questions access different features of suicidality. Items inquire into past ideations and attempts ("Item 1: Have you ever thought about or attempted to kill yourself"), frequency of ideations over the previous twelve months ("Item 2: How often have thought about killing yourself in the past year?"), threats of suicidal behavior ("Item 3: Have you ever told someone that you were going to commit suicide, or that you might do it?"), and self-reported likelihood of a future suicide ("Item 4: How likely is it that you will attempt suicide someday?"). Osman et al. (2001) found good internal consistency for the SBQ-R in a sample of adolescent psychiatric ($\alpha = .88$) and adult inpatients ($\alpha = .87$), as well as a sample of high school students ($\alpha = .87$). Acceptable reliability was found in a sample of college undergraduates ($\alpha = .76$). The total score is most often used as a comprehensive measure of suicidality, with higher scores signifying more engagement with suicide-related thoughts and behaviors. In the present study, item 1 of the SBQ-R, scored 0 thru 6 (*0 = neve*r, *5 = I have attempted to kill myself, and really hoped to die*) was used to create the continuous variable "Suicide Attempts." Item 2, scored 0 thru 4 (*0 = never, 4 = very often*) was utilized to create the continuous variable "Suicidal Ideations." The SBQ-R has a Flesh-Kincaid reading level of 6.1 and can be found in Appendix E.

Deliberate Self-Harm Inventory. (DSHI). The DSHI (Gratz, 2001) is a 17-item self-report measure assessing an individual's lifetime history of 16 different methods (and one "other" category) of NSSI. Deliberate self-harm as assessed by this measure is defined as "the deliberate, direct destruction or alteration of body tissue without conscious suicidal intent, but resulting in injury severe enough for tissue damage (e.g., scarring) to occur" (p. 255). Items begin with "Have you ever intentionally (i.e., on purpose)…" which is followed by some form of self-harm including cutting wrist, arms, or other area(s), burning with lighter or match, severe scratching, and sticking pins, needles, staples into skin ("without the intending to kill yourself?"). The last item is open-ended ("Done anything else to hurt yourself that was not asked about in this questionnaire? If yes, what did you do to hurt yourself?"). Responses of "Yes" for the first 16 items are scored a 1, all other responses (including if the open-ended question was endorsed but does not meet criteria for deliberate self-harm) is scored a 0. Follow-up questions specific to any endorsed method assesses for the age of onset, frequency, history, duration, and severity. The DSHI is a behavioral measure, and therefore, does not inquire into potential purposes of deliberate self-harm. Previous studies have created dichotomous and continuous variables from the inventory data (Gratz, 2001, 2006; Gratz & Roemer, 2008). A continuous variable measuring the frequency of NSSI was produced in the present study by totaling participant scores on the frequency follow-up question. Following the work of Whitlock, Exner-Cortens, and Purington (2014), lifetime frequency of NSSI was recoded as 0, 1 time, 2-5 times, 6-10 times, 11-20 times, 21-50 times, > 50 times. Cronbach's alphas for the scaled DSHI frequency item was .77 in the

present study. The Flesh-Kincaid reading level for the DSHI is 6.5 and the measure can be found in Appendix F.

Gratz (2001) found that in a sample of undergraduates, the DSHI demonstrated high internal consistency ($\alpha = .82$) and test-retest reliability over a range of 2 to 4 weeks ($\varphi = .68$, $p < .001$). The number of self-injurious behaviors was also highly correlated at the two timepoints ($r = .92$, $p < .001$). Gratz (2001) found that the dichotomous DSHI variable has been found to significantly correlate with other single-item questions of self-harm within the Suicide Behaviors Questionnaire ($r = .35$, $p < .001$) and the Diagnostic Interview of Borderlines, Revised ($r = .43$, $p < .001$). Gratz & Roemer (2008) demonstrated that the frequency of NSSI significantly correlated with the DERS total score at .26.

The Balanced Inventory of Desirable Responding. (BIDR). The BIDR (Paulhus, 1984). is a 40-item self-report measure of socially desirable response style that consists of two 20-item subscales: self-deceptive enhancement and impression management. Self-deceptive enhancement (SDE) is characterized by the unconscious tendency to provide positively biased responses. Impression management (IM) is the conscious and consistent misrepresentation to an audience with the intention of being perceived positively (Paulhus, 2002). Items are scored on a 7-point Likert scale and participants are asked to indicate the extent they agree or disagree with certain self-statements (1 = *Strongly Disagree*; 7 = *Strongly Agree*). Paulhus (1991) recommends that the BIDR be scored dichotomously whereby after reverse scoring negatively keyed items, one point is added for extreme scores (6 or 7) and zero for the rest. This method of scoring is to ensure that

only those offering inflated responses are receiving high scores. Subscale total scores range from 0 to 20 resulting in a BIDR full measure score 0 to 40. An example SDE item is “My first impressions always turn out to be right.” An example IM item includes “I have never dropped litter on the street.” The total score was utilized in determining socially desirable responding. The BIDR has a Flesh-Kincaid reading level of 3.6 and can be found in Appendix G.

The BIDR has demonstrated adequate internal consistency for the total 40-item measure (α = .83; Paulhus, 1991), the SDE (α = .83 to .86; Paulhus, 1999) and IM (α = .75 to .86; Paulhus, 1999) subscales. Over a 5 week period, Paulhus (1991) reported test-retest reliability correlations at .69 for SDE and .65 for IM. The sum of all 40 BIDR items demonstrated concurrent validity as a measure of socially desirable responding in correlating .71 with the Marlow-Crowne scale and .80 with Jacobson, Kellogg, Cauce, and Slavin’s (1977) Multidimensional Social Desirability Inventory (Paulhus, 1991). For the current study, Cronbach’s alphas for the SDE, IM, and total scale were .77, .81, and .86, respectively.

Literacy. To ensure that participants are able to sufficiently read the self-report questionnaires, a literacy measure will be included in the test battery.

San Diego Quick Assessment (SDQA). The SDQA (LaPray & Ross, 1969) is an individually administered sight-word reading assessment that classifies individuals based on reading-grade equivalents. The test consists of a series of 13 graded word lists arranged in order of difficulty beginning at the preprimer level up to the eleventh grade. There are 10 words within each list of similar difficulty. Participants are asked to read the

word lists aloud. Errors in reading are marked by the administrator on a separate record form. If after five seconds the participant does not read the next word on the list, they will be instructed to move on to the next word. Testing is discontinued if the participant is unable to read three out of the 10 words in a given list. The participant's reading level is the last grade-level word list in which they read eight or more words correctly. This measure can be found in Appendix H.

Fitzgerald (2001) found the SDQA to have excellent internal consistency (α = .97). Furthermore, in a sample of 283 students in grades 3 to 12, the SDQA demonstrated good concurrent validity with other reading tests such as the Wide Range Achievement Test- I and –II, and the Graded Word Reading Test with correlations of .86, .86, and .87, respectively (Smith & Harrison, 1983). While all tests were significantly correlated at the .01 level, Smith and Harrison (1983) felt the SDQA was a more conservative measure of reading ability as the mean score was about a year below the other three.

Procedure

Research data collection began after the University of Dayton's Institutional Review Board approval. A chaplain within a local county jail in Dayton, OH recruited male and female offenders for a study described as an investigation into personality, emotion, and self-harm. Individuals were selected based on interest and availability. In a private room, potential participants were informed that the present study concerned the relationship between personality, emotional control and suicide-related behaviors. Consent was verbal and not written, thereby offering the greatest assurance of confidentiality. Identification numbers were assigned to each participant and written on

the demographics form and no other identifying information was listed on research protocols.

Due to the content of the study, participants were informed that a mental health counselor was available, and participants were encouraged to end the study if they became overly distressed. Participants were also informed that they should contact the prison Chaplain in case they experienced any delayed adverse effects as a result of participation in the study. Contact information was listed on the debriefing form (located in Appendix J) in order to answer any follow-up questions or concerns. The debriefing form did not display direct contact information of the researchers. Instead, specific lines of communication were created via a Google Voice phone number that linked to a voicemail service where participants could call and leave messages related to their concerns. Additionally, a separate email address was setup specifically for study inquiries. Creating separate modes of contact allowed researchers to screen messages and identify participants who were truly in need of service and discard inappropriate or irrelevant messages.

After receiving verbal consent, participants were asked to complete a brief literacy measure to ensure appropriate reading levels for the self-report questionnaires. Participants read aloud lists of words that increased in difficulty. Regardless of performance, if the participant had consented to the study, they were allowed to go on and complete the self-report questionnaires. Participants were then led to an adjoining hallway where small groups of participants filled out the self-report questionnaires. Measures were administered by both undergraduate or graduate students. A researcher

went over instructions for each measure with the participants, and offered necessary help for a participant to complete the questionnaire packet. In addition to a demographics survey presented first, the packet consisted of the aforementioned questionnaires presented in counterbalanced order using a random starting order with rotation (e.g., DBCA, BCAD, CADB). These included the SRP-4, DERS, RRS, SBQ-R, DSHI, and BIDR. Following completion of the study, all participants were asked to read a debriefing form that explained the purpose of the study. A Prison Chaplain and prison guard were on hand for the entire process.

CHAPTER III

RESULTS

Preliminary Analyses

All descriptive statistics for continuous variables can be found in Table 2. Prior to conducting the primary statistical analyses, all primary study variables were assessed for missing values, outliers, and normality. After excluding nineteen participants due to eligibility criteria, and two additional participants because of substantial amounts of missing/biased data, the remaining 207 participants demonstrated minimal amounts of missing data. The proportion missing for a given item response ranged from 0.0% of the sample to as high as 2.2% of the sample. Following the recommendations of Parent (2013), available item analysis was used to address the minimal amounts of missing data in the primary analyses. Only the DERS exhibited a non-normal distribution, with significant positive skew (0.53, SE = 0.17, z = 3.11) and a significant Shapiro-Wilk test (S-W = .98, p = .002). However, after excluding two "probable outliers" (z-$score$ > 2.58) and one "extreme outlier" (z-$score$ > 3.29), the DERS demonstrated acceptable levels of skewness (.30, SE = .17) and kurtosis (-.42, SE = .34). Thus, the final sample consisted of 204 participants.

To identify potential confounds, preliminary analyses were performed investigating the relationship between demographic variables, social desirability, and the

Table 2

Descriptive Statistics for Continuous Study Variables

Variable	*M*	*SD*	Min-Max	α
SRP-4 Total	178.24	34.33	98 – 275	.93
Factor 1	83.53	18.14	46 – 134	.90
Factor 2	94.70	18.52	49 - 141	.87
DERS Total	86.93	22.99	44 – 147	.94
RRS Total	51.87	12.34	23 – 82	.92
SBQ Item 1: Suicide Attempts	1.61	1.88	0 – 5	
SBQ Item 2: Suicidal Ideations	1.03	1.33	0 – 4	
DSHI Frequency	3.60	6.87	0 – 35	

Note. (*N* = 204). SRP-4 = Self-Report Psychopathy Scale - fourth edition; DERS = Difficulties in Emotion Regulation Scale; RRS = Ruminative Response Scale; SBQ Item 1: Suicide Attempts = “Have you ever thought about or attempted to kill yourself”; SBQ Item 2: Suicidal Ideations = “How often have thought about killing yourself in the past year?”; DSHI Frequency = Deliberate Self-Harm Inventory sum frequency of self-injurious behaviors.

criterion variable of suicide attempts. Zero-order correlations revealed nonsignificant relationships between suicide attempts and age (r = -.07, p = .32), suicide attempts and the impression management subscale (r = -.04, p = .533), as well as attempts and the self-deceptive enhancement subscale (r = -.05, p = .457.) Therefore, age and social desirability were not controlled for in the primary analyses.

Next, two independent-samples t-tests were performed to assess for group differences, with gender and violent offense history as grouping variables and suicide attempts as the dependent variable. Results revealed significant group differences with regard to participant gender and suicide attempts, t(194.99) = -5.02, p < .001, d = -0.72, such that females (M = 2.20, SD = 2.00) were more likely to report a history of suicide attempts than males (M = 0.96, SD = 1.50). Levene's tests indicated unequal variances (F = 37.00, p < .001), so degrees of freedom were adjusted from 201 to 194.99. Additionally, group differences were marginally significant, t(189.12) = -1.94, p = .054, d = -0.28, such that participants with a non-violent offense history (e.g., property offense, drug offense, public-order offense, other offense, choose not to respond) were more likely to report a history of suicide attempts (M = 1.81, SD = 1.98) than individuals with a violent offense history (e.g., murder, manslaughter, non-negligent manslaughter, rape, other sexual assault, robbery, assault, other violent crimes; M = 1.31, SD = 1.69). Levene's test revealed heterogeneous variances (F = 8.67, p = .004), consequently, degrees of freedom were adjusted from 201 to 189.12. Thus, gender and a history of a violent offense charge were controlled for in the primary analyses.

A series of one-way ANOVAs were calculated to assess for group differences in

nominal demographic variables (e.g., race, education level) and suicide attempts. No significant group differences were observed regarding participant reading level, date of data collection, order of questionnaires, the number of times booked into jail, and the longest reported time in jail.

Looking at race and suicide attempts, *Levene's F* test indicated unequal variances $F(2, 200) = 15.61$, $p < .001$), therefore a *Welch's F* test was utilized to assess group differences. Analyses revealed that suicide attempts differed as a function of race, *Welch's* $F(2, 37.46) = 10.97$, $p < .001$, *est.* $\omega^2 = .09$. Since the assumption of homogenous variances was not met, Games-Howell post hoc comparisons were used to examine specific group differences. Analyses revealed that a history of suicide attempts was more often reported by Caucasian participants ($M = 1.88$, $SD = 1.96$) than African-Americans ($M = 0.81$, $SD = 1.38$), $t(154.22) = 4.26$, $p < .001$, $r = .32$. Additionally, Other participants (i.e., Hispanic and Asian) reported a greater history of suicide attempts ($M = 2.47$, $SD = 2.03$) than African-American participants ($M = 0.81$, $SD = 1.38$), $t(17.44) = 2.98$, $p = .021$, $r = .58$, There were no observed differences in suicide attempts between Caucasian and Other participants ($p = .544$). Consequently, race was controlled for in the primary analyses.

With regard to education level and suicide attempts, middle school and high school education were collapsed into one category to account for zero suicide attempts in the middle school education subsample. Since *Levene's F* test revealed unequal variances, $F(3, 199) = 4.32$, $p = .006$), a *Welch's F* test was used to asses group differences. Results revealed that suicide attempts significantly varied as a function of

education level, *Welch's F*(3, 60.94) = 3.50, p = .021, *est.* ω^2 = .04. Games-Howell post hoc tests were conducted to illuminate which education levels differed. Results demonstrated that college educated participants reported more suicide attempts (M = 2.16, SD = 2.02) than participants who graduated high school or attained a GED (M = 1.13, SD = 1.69), t(121.61) = -3.17 , p = .01, r = .28. There were no significant differences among the other education levels. Thus, education levels were controlled for the in the primary analyses.

Primary Analyses

The demographic variables of gender, violent offense history, race, and education level were statistically controlled for during primary analyses. Additionally, primary psychopathy was allowed to covary in the primary analyses. Paths were tested leading from primary psychopathy to the proposed mediators and outcome variable. This was done to control for the possible associations between primary psychopathy and the hypothesized mediators, thereby enabling a test of the unique contribution of secondary psychopathy in the prediction of suicide attempts.

Analyses were carried out using IBM SPSS statistics version 24 (2016), and version 2.16.3 of the SPSS-macro Process (Hayes, 2012) was utilized to test the main study hypotheses of multiple mediation. Zero-order correlations among primary study variables are presented in Table 3. A serial multiple mediation path model tested if secondary psychopathy was associated with suicide attempts through emotion dysregulation, rumination, suicidal ideations, and NSSI, controlling for gender, history of

Table 3

Zero-Order Correlations for Primary Study Variables

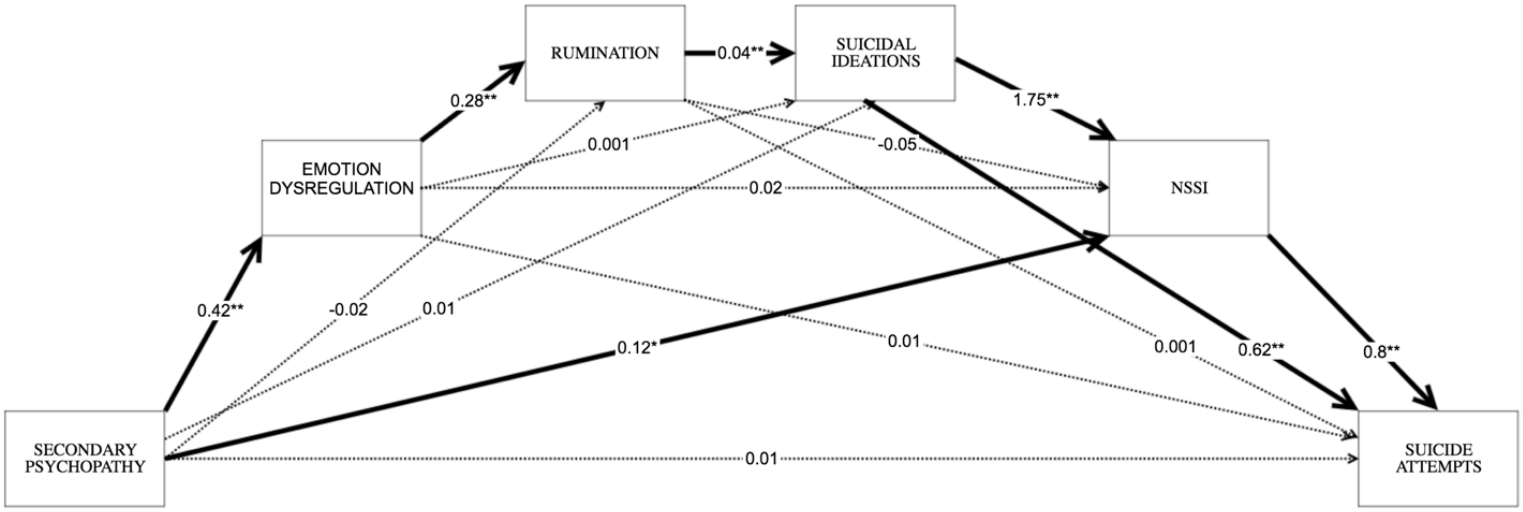
Variables	1	2	3	4	5	6	7
SRP-4 Factor 1	–						
SRP-4 Factor 2	.75***	–					
DERS	.34***	.41***	–				
RRS	.12	.21**	.56***	–			
Suicide Attempts	.13	.30***	.34***	.37***	–		
Suicidal Ideations	.11	.19**	.29***	.45***	.63***	–	
NSSI Frequency	.25***	.37***	.31***	.23**	.53***	.41***	–

Note. (*N* = 203). Suicidal Ideations = SBQ Item 2; Suicide Attempts = SBQ Item 1; SRP-4 = Self-Report Psychopathy Scale - fourth edition; DERS = Difficulties in Emotion Regulation Scale; RRS = Ruminative Response Scale; DSHI Frequency = frequency of NSSI.
*$p < .05$. **$p < .01$. ***$p < .001$.

a violent offense, race, and education level. Figure 1 presents the conceptual multiple mediation model. Although not visible in the Figure, primary psychopathy was allowed to covary. Bias corrected bootstrapped confidence intervals (95% BCa CI) were produced to assess direct and indirect effects of simple and multiple mediation models. Figure 2 presents the basic mediation model, along with unstandardized path coefficients and full model summary statistics.

As seen in Figure 2, the paths leading from secondary psychopathy to emotion dysregulation, emotion dysregulation to rumination, rumination to suicidal ideations, and NSSI to suicide attempts were all significant at the level of $p < .001$. The total effect of secondary psychopathy on suicide attempts was significant, $b = 0.04$, $p < .001$. The specific indirect effect of the entire 4-variable serial mediation was statistically significant, $b = .0006$, 95% BCa CI [0.0002, 0.0017]. According to Preacher and Hayes (2008), mediation is demonstrated when the confidence interval for the indirect effect does not contain zero. Additionally, secondary psychopathy was not related to suicide attempts independently of the 4-mediator model, $b = 0.01$, $p = .097$. The total indirect effect (i.e., the sum of all specific indirect effects) of secondary psychopathy on suicide was significant, $b = 0.02$, 95% BCa CI [0.0076, 0.0390]. Finally, the ratio of the effect of the serial mediation to the total effect indicated that 2% of the association between secondary psychopathy and suicide attempts was mediated by emotion dysregulation, rumination, SI, and NSSI.

Next, it was hypothesized that emotion dysregulation would explain the differential relationships between psychopathy subtypes and suicide attempts. Zero-order



Note. $R^2 = .55$, $F(10, 193) = 23.29$, $p < .001$; *$p < .01$; **$p < .001$.
Bolded lines = significant coefficients at unstandardized $p < .01$. NSSI = non-suicidal self-injury; Model controls for gender, history of a violent offense, race, and education level.

Figure 2

Unstandardized Regression Coefficients for Multiple Mediation Model

correlations found that both primary and secondary psychopathy were significantly correlated with emotion dysregulation. However, only secondary psychopathy was significantly related to suicide attempts. As can been viewed in the bottom half of Table 4, two simple-mediations with both primary and secondary psychopathy predicting suicide attempts through emotion dysregulation were performed. Each psychopathy subtype acted as a covariate while the other was the independent variable. When secondary psychopathy was the predictor variable, there was a significant indirect effect on suicide attempts through emotion dysregulation, $b = 0.01$, 95% BCa CI [0.0027, 0.0179]. When primary psychopathy was the predictor variable, there was a non-significant indirect effect on suicide attempts through emotion dysregulation, $b = 0.002$, 95% BCa CI [-0.0022, 0.0091].

Table 4

Effects of Mediation Pathways

Mediation Model	B	LLCI	ULCI
2^{ndary}→ED→RRS→SI→ NSSI→SA	.001	0.0002	0.0018
Alternative Mediations			
2^{ndary}→ED→SA	.01	0.0027	0.0179
Primary→ED→SA	.002	-0.0022	0.0091

Note. (*N* = 204). 2^{ndary} = secondary psychopathy; ED = emotion dysregulation; RRS = rumination; SI = suicidal ideations; NSSI = non-suicidal self-injury; SA = suicide attempts; LLCI = lower limit bootstrapped confidence interval; ULCI = upper limit bootstrapped confidence interval.

CHAPTER IV

DISCUSSION

The objective of this project was to extend previous research revealing differential relationships among psychopathy subtypes and suicide within the framework of two current theories of self-injury, the emotional cascade model (Selby et al., 2008) and the interpersonal theory of suicide (Joiner, 2005). The emotional cascade model attempts to understand how cognitive and emotion dysregulation combine to predict dysregulated behaviors like NSSI. The interpersonal theory interprets an attempt at suicide as a two-pronged process of desire and acquired capability. In as much as secondary psychopathy is considered a condition of dysregulated/heightened emotion processing and impaired self-control (Yildirim & Derksen, 2015), the constructs of emotion dysregulation and rumination were hypothesized to act as explanatory mechanisms leading an individual with secondary psychopathic personality traits to desire suicide and engage in NSSI. In turn, engaging in NSSI was expected to account for the capability to transition from ideations to attempts. Using a sample of male and female offenders, a serial mediation path model was tested whereby secondary psychopathy's relationship to suicide attempts was explained by the sequential paths of emotion dysregulation, rumination, SI, and NSSI. Mediation analyses did provide support for this hypothesis. In the following

sections I will discuss the theoretical and practical implications of these results.

Psychopathy Subtypes: Emotion Dysregulation, NSSI, and the Acquired Capability for Suicide

The results of the current study offer further support for the differential relationship between psychopathy subtypes and suicide. It was hypothesized that primary psychopathy would be negatively related to suicidality and that emotion dysregulation would explain the differential relationship between psychopathy subtypes and suicide attempts. Zero-order correlations revealed that primary psychopathy was unrelated to rumination, suicidal ideations, and suicide attempts, but significantly correlated with emotion dysregulation and NSSI, while secondary psychopathy was related to each of the aforementioned variables. As expected, emotion dysregulation mediated the relationship between secondary psychopathy and suicide, but not primary psychopathy and suicide.

The fact that primary psychopathy was unrelated to suicidal ideations and attempts in the present study, but correlated with NSSI, lends credence to the interpersonal theory's conception of suicide as two-part process of desire and capability. Aspects of desiring death under the interpersonal theory – feeling alienated from and burdensome to others – are antithetical to the interpersonal-affective deficits that define primary psychopathy. Likewise, primary psychopathic personality traits such as fearless dominance have been negatively associated with internalizing symptoms in male offenders (Benning, Patrick, Blonigen, Hicks, & Iacono, 2005) and have even acted as a protective factor against developing symptoms of post-traumatic stress disorder in national guard combat veterans (J. Anestis, Harrop, Green, & Anestis, 2017). However,

primary psychopathy's connection to NSSI is in line with previous research showing the subtype was related to a proxy measure of the acquired capability for suicide (i.e., a history of painful and provocative experiences; Anestis et al., 2016). In a current review of the literature on suicide capability, May and Victor (2017) cataloged different empirically supported acquired contributors to suicide that fall into two general categories: direct exposure to traumatic or life-threatening events and painful self-injurious behaviors. Such self-injurious behaviors may be direct, like NSSI, or indirect, like an eating disorder or substance abuse. Therefore, even though primary psychopathic personality traits might inoculate an individual to ever desire suicide, the boldness and disinhibition key to the condition could still lead to acquiring the capability for suicide. Irrespective of the condition's damaging effects, it is possible that primary psychopathic personality traits may also make populations vulnerable to painful and provocative experiences (i.e., military, police, firefighters, surgeons) increasingly resilient to suicide. While both psychopathy subtypes are emotionally and behaviorally dysregulated, the findings indicate bifurcated downstream effects of dysregulated emotional states on specific cognitive (i.e., rumination) and behavioral (i.e., NSSI) regulatory strategies that help to predict suicide in only the secondary psychopathy subtype. The next section explores these downstream effects in secondary psychopathy and discusses how rumination bridges the gap between the emotional cascade model and the interpersonal theory of suicide.

Emotional Cascades Within the Interpersonal Theory: The Importance of Rumination

Aldao and Tull (2015) suggest that emotion regulation abilities and emotion regulation strategies are distinct but interconnected processes. One's emotion regulation ability determines the emotion regulation strategy chosen in a given situation – hence, poor emotion regulation abilities can lead to a pattern of ruminative thinking. Consequently, rumination appears to play a special role in aggravating the already dysregulated emotional state of individuals with secondary psychopathy, prolonging the experience of negative emotions like anger, aggression (Sukhodolsky, Golub, & Cromwell, 2001) and self-hatred (Giammarco & Vernon, 2015). Recently, Guerra and White (2017) found that ruminating on angry moods or recalling angry experiences strengthened the relationship between secondary psychopathy and reactive aggression – a volatile, defensive reaction to a perceived threat (Dodge & Cole, 1987). The authors hypothesized that "anger rumination amplifies the influence of secondary psychopathy on reactive aggression…by exacerbating emotion dysregulation and negative affect" (Guerra & White, 2017, p. 43). Rumination also inhibits problem solving (Ward, Lyubomirsky, Sousa, & Nolen-Hoeksema, 2003) and is considered a transdiagnostic risk factor in both internalizing and externalizing disorders (Aldao, Nolen-Hoeksema, & Schweizer, 2010). In the current study, rumination was only related to the secondary psychopathy subtype, as opposed to the significant correlations between both psychopathy subtypes and emotion dysregulation and NSSI. Thus, for individuals with secondary psychopathy, maladaptive cognitive-emotion regulation like rumination may act as bridge to both

NSSI, as in the emotional cascade model, and suicidal desire, as in the interpersonal theory of suicide. Both affective and cognitive-emotional dysregulation possess a compounding effect in predicting dysregulated behaviors (Selby, Kranzler, Panza, & Fehling, 2016). Combined, affective, cognitive, and behavioral dysregulation make up a lethal completed picture of the interpersonal theory of suicide: desire and capability. Thus, the emotional cascade model appears to work in concert with the interpersonal theory of suicide for individuals with secondary psychopathy. In the following section, brief suggestions are provided to help combat dysregulation in individuals with secondary psychopathy.

Clinical Implications

While it is a mistake to generalize the findings of one study with a unique sample of individuals to the population at large, it is still useful to contemplate the potential clinical significance of such results, especially for clinicians who work in corrections settings. There may be multiple takeaways from the present study's results, but here are merely three clinical implications: (a) psychopathic personality traits do not preclude offender engagement in self-injurious behaviors, (b) both emotional lability and ruminative thought processes may play a pernicious role in leading individuals to desire suicide and engage in NSSI, and (c) a history of painful and provocative events (especially NSSI) should be a recurrent assessment concern as it can facilitate a full-blown suicide attempt in vulnerable individuals. In light of limited treatment resources and potential intractability of the psychopathy condition (Polaschek, 2014; Salekin, 2002), clinicians in correctional settings ought to arrange treatment goals in terms of

lethality and feasibility of therapeutic success. Any suicide-related behaviors must be taken care of immediately, as they interfere with productive therapy. Behavior therapies that immediately target NSSI and suicidal behavior assist individuals to cope with acute distress with the goal of staying alive and uninjured (Stanley, Brodsky, Nelson, & Dulit, 2007). Another way to combat self-injury is to challenge ruminative thought patterns, their form, function, and outcome, while tapping into the unique reasons individuals give for their self-harming behaviors. Finally, treating the underlying affective dysregulation is a difficult and time-intensive way to assist offenders with secondary psychopathy. However, it is the treatment target offering the highest dividends because of its downstream effects on other maladaptive regulation strategies like rumination, self-injury, drug use, and recidivism. Mindfulness and acceptance-based therapies such as Dialectical Behavior Therapy (Linehan, 1993) and Acceptance and Commitment Therapy (Hayes, Strosahl, & Wilson, 2003) may offer an effective treatment approach to both emotion regulation difficulties and ruminative thought processes. The focus of cognitive/behavioral change in mindfulness and acceptance-based therapies is less on content and more on context; changing the way an individual relates to a thought or emotion without changing the psychological event itself. Acceptance-based therapies can therefore work in a paradoxical manner for individuals with very little distress tolerance. By embracing the nonjudgmental experience of negative thoughts and emotions, by giving in to the distress, so to speak, one gains a detached distance from it, reducing the need to escape through any number of dysregulated behaviors.

Limitations and Future Directions

The primary limitation of the present study was its cross-sectional design. Mediation models with cross-sectional data are often recommended against (Maxwell & Cole, 2007; Maxwell, Cole, & Mitchell, 2011) because they inherently imply temporal causation. The current study was neither experimental nor longitudinal and therefore, strong casual conclusions cannot be drawn. However, prevailing trait theories in personality psychology assume, and a large amount of empirical evidence agrees (McCrae & Costa, 1999), that underlying dispositions *cause* measurable variations in behavioral outcomes. There is no evidence to presume that NSSI, for example, causes psychopathic personality traits. Additionally, outside of a clinical therapeutic trial, it is implausible and ethically suspect to meaningfully manipulate *trait*-levels of variables like psychopathy, emotion dysregulation and rumination. However, experimental methods are available to induce changes in *state*-levels of dysregulated emotions (Gratz, Rosenthal, Tull, Lejuez, & Gunderson, 2006) and rumination (for a review, see Watkins, 2008). Additionally, researchers have been able to manipulate proxy measures of NSSI and the acquired capability for suicide such as psychophysical measures of pain tolerance (Franklin et al., 2011; Franklin, Hessel, & Prinstein, 2011), and a behavioral task that assesses the ability to persist through emotional distress (Anestis & Capron, 2016). Future research should utilize longitudinal data and experimental manipulation to demonstrate that causal mechanisms can be shown temporally, and not just statistically (Winer et al., 2016).

The exclusive reliance on self-report data was also a drawback. Lilienfeld & Fowler (2006) report that self-reported measurements of psychopathy are widely seen as controversial due to response distortions such as overreporting or underreporting socially desirable/undesirable personality traits and related behaviors. Since psychopathy's lack of emotional awareness and insight was believed to be essential to the present study's model, self-report may have been particularly problematic since many of the constructs assessed required introspection. Nevertheless, using moderation and suppression analyses, a recent study by Watts et al. (2016) found that the validity of self-reported measures of psychopathy were not reduced by response distortion. Even though interviews are deemed the gold-standard in suicide assessment, the use of self-report measures were warranted given their utility and the increased potential that an interview creates for underreporting on stigma-laden constructs like suicide (Kaplan et al., 1994). Additionally, given the historical difficulties of defining the construct of emotion regulation (Cole, Martin, & Dennis, 2004), as well as the potential confounding effects of variable overlap, the current study would have benefitted from multiple indicators of psychopathy, emotion dysregulation, and rumination.

Finally, there were relevant problems with how the suicidal ideations and suicide attempts variables were operationalized from single items of the SBQ-R. Firstly, the items deal with a history of suicide over different time scales. The item assessing suicidal ideations refers to a personal history within the past year, while the item assessing suicide attempts refers to a personal history within one's life. Secondly, even though ideations are inferred from an attempt, the "Suicide Attempt" variable simultaneously queries for

suicidal thoughts in addition to attempts. Thus, differentiation of the two variables was confounded by the compromised face validity of the suicide attempts variable as well as item overlap. Research investigating the process of suicide must ensure to distinguish suicidal ideations from suicide attempts, thus allowing for a genuine test of how ideation becomes action (Klonsky & May, 2014).

Conclusion

Despite these limitations, the present study contained considerable strengths. To my knowledge, this study was one of the first to explicitly combine two popular theories of self-harm, the emotional cascade model (Selby et al., 2008) and the interpersonal theory of suicide (Joiner, 2005) in assessing the relationship between psychopathy and suicide. Due to its multidimensionality, bifurcated relationship to suicidal ideations and attempts, but shared association with emotion dysregulation, a history of painful and provocative events, and the acquired capability for suicide, the psychopathy construct offers a unique set of traits in which to test the emotional cascade model and interpersonal theory of suicide. Additionally, compared to a convenience sample, the base rate of psychopathy in a jail allowed for a more valid assessment of the condition. Kiehl and Hoffman (2011) estimate that 93% of adult male psychopaths in the United States are in prison, or on parole or probation.

In conclusion, the findings were supportive of the hypothesis that secondary psychopathy was related to suicide attempts through the indirect effects of emotion dysregulation, rumination, suicidal ideations, and NSSI. The fact that evidence for these mechanisms was found solely in the secondary psychopathy subtype, despite primary

psychopathy's relation to emotion dysregulation and NSSI, is noteworthy. The findings suggest that rumination plays a unique role in connecting emotional cascades to an acquired capability for a suicide attempt in individuals with secondary psychopathic personality traits. Tackling affect dysregulation therapeutically may consequently have downstream effects on the potentially lethal compounding effects of cognitive (i.e., rumination) and behavioral (i.e., NSSI) dysregulation. Therefore, in addition to extending research on the relationship between psychopathy and suicide, the results of the present study have vital implications for clinicians working in correctional settings.

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APPENDIX A

INVITATION TO PARTICIPATE IN RESEARCH

Research Project Title: Personality, Emotional Control and Self-Harm

You have been asked to participate in a research project conducted by Nicholas Fadoir and Dr. Catherine Zois from the University of Dayton, in the Department of Psychology.

The purpose of the project is to study the relationship between an individual's personality traits, how they control their emotions, and any history of or future potential for suicide-related behaviors.

You should read the information below, and ask questions about anything you do not understand, before deciding whether or not to participate.

- You will fill out surveys asking about your thoughts, feelings and behaviors, including how you manage your emotions, and risk for suicide. This will take about 45 minutes.

- Your participation in this research is completely voluntary. There are no consequences if you choose not to participate. You have the right not to answer any question and to stop participating at any time for any reason. If you feel upset at any point during or after the study, Chaplain Templeton and other mental health counselors are available to speak with you.

- This study poses minimal risk to you. It is possible that you may feel uncomfortable answering questions related to your personality, past behaviors, and emotional control. The questionnaires pertaining to self-harming behaviors may be particularly stressful. If you feel upset or wish to stop this study for any reason, at any time, please do not hesitate to notify one of the research assistants.

- This study will not directly benefit you, but it may benefit the field of psychology. It may additionally help prevent future suicides in offender populations.

- Your decision to participate or decline will not affect your case or criminal charges in any way. You will not be paid for your participation.

- All of the information you tell us will be confidential. No one will know that you have participated in this project, except for individuals at the jail who see you directly interact with us.

- You understand that you are ONLY eligible to participate if you are over the age of 18.

Please contact your chaplain with any questions or concerns regarding this study or your rights as a participant.

APPENDIX B

SAN DIEGO QUICK READING ASSESSMENT (SDQR)

There are ten words on each of the following pages. I would like you to try to read every word aloud. If you do not know how to pronounce a word, just try your best. If you think aloud, I can tell which parts of the word you already know. When you are finished, I will help you with any words you would like help understanding.

Preprimer	**Primer**	**Grade 1**
See	You	Road
Play	Come	Live
Me	Not	Thank
At	With	When
Run	Jump	Bigger
Go	Help	How
And	Is	Always
Look	Work	Night
Can	Are	Spring
Here	This	Today

Grade 2	**Grade 3**	**Grade 4**
Our	City	Decided
Please	Middle	Served
Myself	Moment	Amazed
Town	Frightened	Silent
Early	Exclaimed	Wrecked
Send	Several	Improved
Wide	Lonely	Certainly
Believe	Drew	Entered
Quietly	Since	Realized
Carefully	Straight	Interrupted

Grade 5	Grade 6	Grade 7
Scanty	Bridge	Amber
Business	Commercial	Dominion
Develop	Abolish	Sundry
Considered	Trucker	Capillary
Discussed	Apparatus	Impetuous
Behaved	Elementary	Blight
Splendid	Comment	Enumerate
Acquainted	Necessity	Daunted
Escaped	Gallery	Condescend
Grim	Relativity	Wrest

Grade 8	Grade 9	Grade 10
Capacious	Conscientious	Zany
Limitation	Isolation	Jerkin
Pretext	Molecule	Nausea
Intrigue	Ritual	Gratuitous
Delusion	Momentous	Linear
Immaculate	Vulnerable	Inept
Ascent	Kinship	Legality
Acrid	Conservatism	Aspen
Binocular	Jaunty	Amnesty
Embankment	Inventive	Barometer

Grade 11
Galore
Rotunda
Capitalism
Prevaricate
Risible
Exonerate
Superannuate
Luxuriate
Piebald

APPENDIX C

DEMOGRAPHICS FORM

Please take a few moments to complete the demographic information on this page and then proceed in completing the remainder of the packet in the order they are presented.

ID # _____

What is your age? _____

What is your gender?

Male Female

What is your race or ethnic group?

1. Caucasian/White
2. Hispanic
3. African-American/Black
4. Asian-American
5. Other

_____

How many years of school did you attend? (Circle highest level completed)

Middle School			High School					Vocational School		
6	7	8	9	10	11	12	GED	1	2	3

College					Postgraduate Years			
1	2	3	4	5	1	2	3	4

What is the date of your most recent arrest?

*MM/DD/YYYY*_____

What is (are) your current charge(s)?

1. Violent offense (i.e., murder, manslaughter, non-negligent manslaughter, rape,

other sexual assault, robbery, assault, other violent crimes) Property offense (i.e., burglary, larceny, motor vehicle theft, fraud, other property crimes)

2. Drug offense
3. Public-order (i.e., weapons, drunk driving, court offenses, prostitution, morals and decency offenses, liquor law violations, other public-order crime)
4. Other_____

_____

5. Choose not to respond

How many total times have you been booked into jail?

1 2 3 4 5 6 7 8 9 10+

What was (were) your previous offense(s)? Circle all that apply.

1. Violent offense (i.e., murder, manslaughter, non-negligent manslaughter, rape, other sexual assault, robbery, assault, other violent crimes)
2. Property offense (i.e., burglary, larceny, motor vehicle theft, fraud, other property crimes)
3. Drug offense
4. Public-order (i.e., weapons, drunk driving, court offenses, prostitution, morals and decency offenses, liquor law violations, other public-order crime)
5. Other_____
6. Choose not to respond

What is the longest jail or prison sentenced received? (*IN MONTHS***)**

_____

APPENDIX D

SELF-REPORT PSYCHOPATHY SCALE-FOURTH EDITION (SRP-4)

Please rate the degree to which you agree with the following statements about you. You can be honest because your name will be detached from the answers as soon as they are submitted.

1	2	3	4	5
Disagree Strongly	Disagree	Neutral	Agree	Agree Strongly

_____1. I'm a rebellious person. (ELS)
_____2. I'm more tough-minded than other people. (CA)
_____3. I think I could "beat" a lie detector. (IPM)
_____4. I have taken illegal drugs (e.g., marijuana, ecstasy). (ELS)
_____5. I have never been involved in delinquent gang activity. **RS** (CT)
_____6. I have never stolen a truck, car or motorcycle. **RS** (CT)
_____7. Most people are wimps. (CA)
_____8. I purposely flatter people to get them on my side. (IPM)
_____9. I've often done something dangerous just for the thrill of it. (ELS)
_____10. I have tricked someone into giving me money. (CT)
_____11. It tortures me to see an injured animal. **RS** (CA)
_____12. I have assaulted a law enforcement official or social worker. (CT)
_____13. I have pretended to be someone else in order to get something. (IPM)
_____14. I always plan out my weekly activities. **RS** (ELS)
_____15. I like to see fist-fights. (CA)
_____16. I'm not tricky or sly. **RS** (IPM)
_____17. I'd be good at a dangerous job because I make fast decisions. (ELS)
_____18. I have never tried to force someone to have sex. **RS** (CT)
_____19. My friends would say that I am a warm person. **RS** (CA)
_____20. I would get a kick out of 'scamming' someone. (IPM)
_____21. I have never attacked someone with the idea of injuring them. **RS** (CT)
_____22. I never miss appointments. **RS** (ELS)
_____23. I avoid horror movies. **RS** (CA)
_____24. I trust other people to be honest. **RS** (IPM)

_____25. I hate high speed driving. (ELS)
_____26. I feel so sorry when I see a homeless person. **RS** (CA)
_____27. It's fun to see how far you can push people before they get upset. (IPM)
_____28. I enjoy doing wild things. (ELS)
_____29. I have broken into a building or vehicle in order to steal something or vandalize. (CT)
_____30. I don't bother to keep in touch with my family any more. (CA)
_____31. I find it difficult to manipulate people. **RS** (IPM)
_____32. I rarely follow the rules. (ELS)
_____33. I never cry at movies. (CA)
_____34. I have never been arrested. **RS** (CT)
_____35. You should take advantage of other people before they do it to you. (IPM)
_____36. I don't enjoy gambling for real money. **RS** (ELS)
_____37. People sometimes say that I'm cold-hearted. (CA)
_____38. People can usually tell if I am lying. **RS** (IPM)
_____39. I like to have sex with people I barely know. (ELS)
_____40. I love violent sports and movies. (CA)
_____41. Sometimes you have to pretend you like people to get something out of them. (IPM)
_____42. I am an impulsive person. (ELS)
_____43. I have taken hard drugs (e.g., heroin, cocaine). (CT)
_____44. I'm a soft-hearted person. **RS** (CA)
_____45. I can talk people into anything. (IPM)
_____46. I never shoplifted from a store. **RS** (CT)
_____47. I don't enjoy taking risks. **RS** (ELS)
_____48. People are too sensitive when I tell them the truth about themselves. (CA)
_____49. I was convicted of a serious crime. (CT)
_____50. Most people tell lies everyday. (IPM)
_____51. I keep getting in trouble for the same things over and over. (ELS)
_____52. Every now and then I carry a weapon (knife or gun) for protection. (CT)
_____53. People cry way too much at funerals. (CA)
_____54. You can get what you want by telling people what they want to hear. (IPM)
_____55. I easily get bored. (ELS)
_____56. I never feel guilty over hurting others. (CA)
_____57. I have threatened people into giving me money, clothes, or makeup. (CT)
_____58. A lot of people are "suckers" and can easily be fooled. (IPM)
_____59. I admit that I often "mouth off" without thinking. (ELS)
_____60. I sometimes dump friends that I don't need any more. (CA)
_____61. I would never step on others to get what I want. **RS** (IPM)
_____62. I have close friends who served time in prison. (CT)
_____63. I purposely tried to hit someone with the vehicle I was driving. (CT)
_____64. I have violated my probation from prison. (CT)

RS denotes reverse score items.

Subscales: IPM = Interpersonal Manipulation; CA = Callous Affect; ELS = Erratic Life Style; CT = Criminal Tendencies.

Sum the 16 items in each subscale to get the four scores.
Primary Psychopathy = sum of IPM and CA subscales.
Secondary Psychopathy = sum of ELS and CT subscales

The total SRP-4 score is the sum of the four subscales.

APPENDIX E

DIFFICULTIES IN EMOTION REGULATION SCALE (DERS)

Please indicate how often the following statements apply to you by writing the appropriate number from the scale below on the line beside each item:

1	2	3	4	5
almost never	sometimes	about half the time	most of the time	almost always

---

_____ 1) I am clear about my feelings. **RS** (CLARITY)
_____ 2) I pay attention to how I feel. **RS** (AWARENESS)
_____ 3) I experience my emotions as overwhelming and out of control. (IMPULSE)
_____ 4) I have no idea how I am feeling. (CLARITY)
_____ 5) I have difficulty making sense out of my feelings. (CLARITY)
_____ 6) I am attentive to my feelings. **RS** (AWARENESS)
_____ 7) I know exactly how I am feeling. **RS** (CLARITY)
_____ 8) I care about what I am feeling. **RS** (AWARENESS)
_____ 9) I am confused about how I feel. (CLARITY)
_____ 10) When I'm upset, I acknowledge my emotions. **RS** (AWARENESS)
_____ 11) When I'm upset, I become angry with myself for feeling that way. (NONACCEPTANCE)
_____ 12) When I'm upset, I become embarrassed for feeling that way. (NONACCEPTANCE)
_____ 13) When I'm upset, I have difficulty getting work done. (GOALS)
_____ 14) When I'm upset, I become out of control. (IMPULSE)
_____ 15) When I'm upset, I believe that I will remain that way for a long time. (STRATEGIES)
_____ 16) When I'm upset, I believe that I'll end up feeling very depressed. (STRATEGIES)
_____ 17) When I'm upset, I believe that my feelings are valid and important. **RS** (AWARENESS)
_____ 18) When I'm upset, I have difficulty focusing on other things. (GOALS)

_____ 19) When I'm upset, I feel out of control. (IMPULSE)
_____ 20) When I'm upset, I can still get things done. **RS** (GOALS)
_____ 21) When I'm upset, I feel ashamed with myself for feeling that way. (NONACCEPTANCE)
_____ 22) When I'm upset, I know that I can find a way to eventually feel better. **RS** (STRATEGIES)
_____ 23) When I'm upset, I feel like I am weak. (NONACCEPTANCE)
_____ 24) When I'm upset, I feel like I can remain in control of my behaviors. **RS** (IMPULSE)
_____ 25) When I'm upset, I feel guilty for feeling that way. (NONACCEPTANCE)
_____ 26) When I'm upset, I have difficulty concentrating. (GOALS)
_____ 27) When I'm upset, I have difficulty controlling my behaviors. (IMPULSE)
_____ 28) When I'm upset, I believe that there is nothing I can do to make myself feel better. (STRATEGIES)
_____ 29) When I'm upset, I become irritated with myself for feeling that way. (NONACCEPTANCE)
_____ 30) When I'm upset, I start to feel very bad about myself. (STRATEGIES)
_____ 31) When I'm upset, I believe that wallowing in it is all I can do. (STRATEGIES)
_____ 32) When I'm upset, I lose control over my behaviors. (IMPULSE)
_____ 33) When I'm upset, I have difficulty thinking about anything else. (GOALS)
_____ 34) When I'm upset, I take time to figure out what I'm really feeling. **RS** (AWARENESS)
_____ 35) When I'm upset, it takes me a long time to feel better. (STRATEGIES)
_____ 36) When I'm upset, my emotions feel overwhelming. (STRATEGIES)

RS denotes reverse score items.

SCORING: The measure yields a total score as well as scores on six subscales. Total score is calculated by summing the items. Higher scores suggest greater problems with emotion dysregulation.

DERS Factors: NONACCEPTANCE = Nonacceptance of Emotional Responses; GOALS = Difficulties Engaging in Goal-Directed Behavior; IMPULSE = Impulse Control Difficulties; AWARENESS = Lack of Emotional Awareness; STRATEGIES = Limited Access to Emotion Regulation Strategies; CLARITY = Lack of Emotional Clarity

APPENDIX F

RUMINATIVE RESPONSES SCALE (RRS)

People think and do many different things when they feel depressed. Please read each of the items below and indicate whether you almost never, sometimes, often, or almost always think or do each one when you feel down, sad, or depressed. Please indicate what you generally do, not what you think you should do.

1 = almost never
2 = sometimes
3 = often
4 = almost always

_____1. think about how alone you feel
_____2. think "I won't be able to do my job if I don't snap out of this"
_____3. think about your feelings of fatigue and achiness
_____4. think about how hard it is to concentrate
_____5. think "What am I doing to deserve this?"
_____6. think about how passive and unmotivated you feel.
_____7. analyze recent events to try to understand why you are depressed
_____8. think about how you don't seem to feel anything anymore
_____9. think "Why can't I get going?"
_____10. think "Why do I always react this way?"
_____11. go away by yourself and think about why you feel this way
_____12. write down what you are thinking about and analyze it
_____13. think about a recent situation, wishing it had gone better
_____14. think "I won't be able to concentrate if I keep feeling this way."
_____15. think "Why do I have problems other people don't have?"
_____16. think "Why can't I handle things better?"
_____17. think about how sad you feel.
_____18. think about all your shortcomings, failings, faults, mistakes
_____19. think about how you don't feel up to doing anything
_____20. analyze your personality to try to understand why you are depressed
_____21.go someplace alone to think about your feelings
_____22. think about how angry you are with yourself

SCORING: To obtain total scores on this scale, sum the scores of the 22 items.

APPENDIX G

SUICIDAL BEHAVIORS QUESTIONNAIRE-REVISED (SBQ-R)

Instructions: Please circle the number beside the statement or phrase that best applies to you.

1. Have you ever thought about or attempted to kill yourself? (Circle only one):

1 = Never
2 = It was just a **brief** passing thought
3a = I have **had a plan** at least once to kill myself but **did not** try to do it
3b = I have **had a plan** at least once to kill myself and really wanted to die
4a = I have **attempted** to kill myself, but **did not** want to die
4b = I have **attempted** to kill myself, and really hoped to die

2. How often have you thought about killing yourself in the past year? (Circle only one):

1 = Never
2 = Rarely (1 time)
3 = Sometimes (2 times)
4 = Often (3-4 times)
5 = Very often (5+ times)

3. Have you ever told someone that you were going to commit suicide, or that you might do it? (Circle only one):

1 = No
2a = Yes, at one time, but **did not** really want to die
2b = Yes, at one time, and really wanted to do it
3a = Yes, more than once, but **did not** want to do it
3b = Yes, more than once, and really wanted to do it

4. How likely is it that you will attempt suicide someday? (Circle only one):

0 = Never
1 = No chance at all
2 = Rather Unlikely
3 = Unlikely
4 = Likely
5 = Rather Likely
6 = Very Likely

SBQ-R Scoring: sum all of the scores circled by the respondents. The total score will range from 3 to 18.

APPENDIX H

DELIBERATE SELF-HARM INVENTORY (DSHI)

This questionnaire asks about a number of different things that people sometimes do to hurt themselves. Please be sure to read each question carefully and respond honestly. Often, people who do these kinds of things to themselves keep it a secret, for a variety of reasons. However, honest responses to these questions will provide us with greater understanding and knowledge about these behaviors and the best way to help people.

Please answer yes to a question only if you did the behavior intentionally, or on purpose, to hurt yourself. Do not respond yes if you did something accidentally (e.g. you tripped and banged your head by accident). Also, please be assured that your responses are completely confidential.

1. Have you ever intentionally (i.e., on purpose) cut your wrist, arms, or other area(s) of your body (without intending to kill yourself)? (circle one):

1. Yes 2. No

If yes,

How old were you when you first did this?_____
How many times have you done this? _____
When was the last time you did this? _____
How many years have you been doing this? (If you are no longer doing this, how many years did you do this before you stopped?) _____
Has this behavior ever resulted in hospitalization or injury severe enough to require medical treatment? _____

In the questionnaire given to participants, the above format is used for each of the following items, with each index question followed by the follow-up question. Like Item 1, each of the following items begins with the phrase: Have you ever intentionally (i.e., on purpose)

2. Burned yourself with a cigarette,
3. Burned yourself with lighter or a match?
4. Carved marks into your skin?

5. Carved pictures, designs, or other marks into your skin?
6. Severely scratched yourself, to the extent that scarring or bleeding occurred?
7. Bit yourself, to the extent that you broke the skin?
8. Rubbed sandpaper on your body? Dripped acid onto your skin?
9. Used bleach, comet, or oven cleaner to scrub your skin?
10. Stuck sharp objects such as needles, pins, staples, etc. into your skin, not including tattoos, ear piercing, needles used for drug use, or body piercing?
11. Rubbed glass into your skin?
12. Broken your own bones?
13. Banged your head against something, to the extent that you caused a bruise to appear?
14. Punched yourself, to the extent that you caused a bruise to appear?
15. Prevented wounds from healing?
16. Done anything else to hurt yourself that was not asked about in this questionnaire? If yes, what did you do to hurt yourself?

_____

APPENDIX I

BALANCED INVENTORY OF DESIRABLE RESPONDING (BIDR)

Using the scale of 1 to 7 below, write a number beside each statement to indicate how much you agree with it.

Strongly Disagree						Strongly Agree
1	2	3	4	5	6	7

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

_____ 24. I never swear.
_____ 25. I sometimes try to get even rather than forgive and forget. **RS**
_____ 26. I always obey laws, even if I'm unlikely to get caught.
_____ 27. I have said something bad about a friend behind his or her back. **RS**_____
28. When I hear people talking privately, I avoid listening.
_____ 29. I have received too much change from a salesperson without telling him or her. **RS**
_____ 30. I always declare everything at customs.
_____ 31. When I was young I sometimes stole things. **RS**
_____ 32. I have never dropped litter on the street.
_____ 33. I sometimes drive faster than the speed limit. **RS**
_____ 34. I never read sexy books or magazines.
_____ 35. I have done things that I don't tell other people about. **RS**
_____ 36. I never take things that don't belong to me.
_____ 37. I have taken sick-leave from work or school even though I wasn't really sick. **RS**
_____ 38. I have never damaged a library book or stole merchandise without reporting it.
_____ 39. I have some pretty awful habits. **RS**
_____ 40. I don't gossip about other people's business.

RS denotes reverse score items (Award 1 point for each "6" or "7" responses and 0 points for any other response)

Items 1-20 of this measure are part of the Self-Deception Enhancement subscale; items 21-40 are part of the Impression Management subscale.

APPENDIX J

DEBRIEFING FORM

This study was designed to see how personality, emotional control, and non-suicidal self-injury lead to suicidal ideations and suicide attempts. We want to answer this question because it has been found that hurting oneself without the intent to die actually increases the risk for an outright suicide attempt. We wanted to see if a tendency to injure oneself without the desire to die helps explain why certain personality traits are often seen in individuals that attempt suicide.

If you have any questions or concerns regarding this study or your rights as a participant, please contact the jail Chaplain, Mr. William Templeton. If you are currently feeling distressed due to the nature of the study, or become distressed at a later time, please contact Chaplain Templeton or one of the available mental health counselors.

Additionally, if you have further questions of the researchers, please call and leave a message at (XXX) XXX-XXXX, or email XXXXXXX@XXXXXX.com