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Understanding how different personality models can predict non-suicidal self-injurious behaviors

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**UNDERSTANDING HOW DIFFERENT PERSONALITY MODELS CAN PREDICT
NON-SUICIDAL SELF-INJURIOUS TENDENCIES**

By

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B.S., Drake University, 2019

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

Department of Psychology

Clinical Psychology Program
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ABSTRACT

The current study seeks to examine the role of maladaptive personality traits and personality functioning's relationship with non-suicidal self-injury (NSSI) engagement and suicidal behavior. Specifically, this study examined the validity of the Alternative Model of Personality Disorders (AMPD) in predicting historical and prospective self-harm behavior in comparison to the Five Factor Model. This study recruited 400 female participants, ages 18-24, who completed a battery of measures about personality functioning, traits, self-harm, and suicidal history. Two weeks after the initial assessment, participants completed a follow-up survey to assess their NSSI behavior over the past two weeks. Through point-biserial correlations, this study found that Criterion A and B of the AMPD were related to self-harm. Through a series of logistic regression analysis, Criterion A and B, together, did not increment the prediction of self-harm or suicide. In respect to this study, AMPD was the best fitting model compared to the FFM in predicting historical NSSI and suicide. In addition, we found that adding Criterion A of the AMPD combined with the FFM traits led to an increase in explained variance of NSSI; yet the AMPD was the best fit model for lifetime prevalence of suicidal behavior. Overall, through the examination of the relation between the AMPD from the FFM in predicting self-harm behavior, this study allows for a more comprehensive understanding of how Personality Functioning and personality traits are related to self-harm behavior.

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Introduction

Nonsuicidal self-injury (NSSI), or the deliberate, express damage to one's own body tissue without the intent to commit suicide, is extremely common amongst young adults (NSSI; Nock, 2009; Voss et al., 2020). NSSI behaviors are also referred to as self-mutilation, self-wounding, and parasuicide (Nock, 2010). NSSI has been a topic of concern since the late 1930's when self-injury, disconnected from suicide, first appeared in a clinical description (Menninger, 1985). Since then, the awareness and prevalence of NSSI has grown. Yet, despite the increase in research over the years on NSSI, there is still a lack of understanding of what leads someone to engage in these behaviors.

NSSI occurs among 4-6% of adults and 15-21% of adolescents and young adults (Swannell et al., 2014). The onset of NSSI behaviors are typically between the ages of 14-24 (Klonsky, 2007). Although these behaviors may develop earlier in adolescence, the prevalence rate of self-harming behaviors in college students is one of the highest, with 14-38% of students having engaged in NSSI at least once (Brickman et al., 2014; Gratz, 2001; Wester, et al., 2017; Whitlock et al., 2011; Whitlock et al., 2006) and roughly 7-14% report having engaged in NSSI behaviors within the last 12 months (Taliaferro & Muehlenkamp, 2015). Furthermore, adolescents and young adults with a history of NSSI think about engaging in self-injurious behaviors more frequently than they engage in such behaviors. Specifically, findings indicate individuals with a history of NSSI had about five different thoughts about engaging in self-injurious behaviors each week and act on those thoughts about one to two times per week (Nock et al., 2009). In addition, research suggests there is only a small-time frame needed to lead up to engagement in NSSI behaviors (Armey et al., 2011). This indicates that young adults are more

vulnerable to engaging in NSSI than other populations and, once they engage in NSSI, they are more likely to think about and have additional episodes of NSSI.

NSSI is also associated with maladaptive physical and mental health outcomes. NSSI behaviors including self-cutting, carving, picking, or scratching of the skin, burning oneself, or swallowing harsh substances often results in lasting physical consequences (Nock, 2010; Swannel et al., 2014). For example, permanent scarring and infections can occur and serve as a reminder to the individual engaging in NSSI (Gong, 2019; Wilkinson & Goodyer, 2011). However, NSSI is also associated with significant emotional and behavioral health concerns. Engaging in self-injury is associated with an increase in psychological distress in the individual including self-loathing and feelings of hopelessness (Gong, 2019), as well as distress to those who are close with the individual (Klonsky, 2007). Further, individuals who engage in self-harming behaviors are more likely to engage in suicidal attempts and to commit suicide than those without a history of NSSI (Bostwick et al., 2016; Nock & Prinstein, 2004). Likewise, engaging in NSSI behaviors is associated with increased pain tolerance and decreased fear of future harm (Bunderla & Kumperščak, 2015). Therefore, NSSI can lead to an increase in an individual's appeal for, and capacity of, engaging in suicidal attempts. As a result, engaging in NSSI behaviors can lead to many functional difficulties and negative mental health outcomes.

NSSI is also associated with a number of mental health disorders. Individuals that engage in NSSI commonly have comorbid psychopathology including mood disorders (Wilkinson et al., 2011), anxiety disorders (Victor et al., 2017), eating disorders (Cucchi et al., 2016), and Cluster B personality disorders, as well as a general impairment with regulating emotion (i.e., feelings of intense anxiety and negative mood states; Selby et al., 2012). Consequently, an overwhelming majority of those with Borderline Personality Disorder (BPD), 65-80%, engage in NSSI

(Zetterqvist et al., 2013). This suggests that personality functioning is integrally tied with NSSI engagement.

Furthermore, NSSI behaviors are strongly associated with a range of personality disorder (PD) diagnoses. For example, BPD, Narcissistic Personality Disorder, and Dependent Personality Disorder have a strong relationship with NSSI behaviors (Chioqueta et al., 2004; Dawood et al., 2017; Krysinska et al., 2006; Selby et al., 2012). This association may be due to overlapping characteristics between personality disorders. Specifically, personality disorders are generally characterized by difficulties regulating emotions, problems establishing and maintaining mutual relationships with others, and disruptions in the sense of self. These maladaptive patterns of behaviors and thoughts in individuals with PDs are also common in individuals who engage in NSSI (Andrews et al., 2017; Benzi et al., 2018; Brickman et al., 2014; Itzhaky et al., 2019). In addition, personality disorders tend to have similar symptomology that is found in NSSI like repetitive negative thinking, impulsive behavior, and greater sensitivity and emotional reactivity in social situations (Bowen et al., 2019; Klonsky et al., 2003; Selby et al., 2012). As a result, certain enduring personality characteristics evident in various types of PDs have been identified as risk factors for NSSI. Therefore, it is important to address how these personality factors relate to NSSI in order to fully understand why one might engage in this maladaptive behavior and, therefore, develop more meaningful interventions.

Recent advances in the classification of personality pathology have conceptualized personality pathology as maladaptive variants of normative personality traits. Specifically, the Alternative Model of Personality Disorders (AMPD) outlined in Section III of the DSM-5 (APA, 2013) defines personality pathology as both an impairment in personality functioning and as the presences of pathological personality traits (Hopwood et al., 2019). The Five Factor Model

(FFM) specially looks at normative personality traits and its relation to personality pathology and related behaviors. In fact, many studies have looked at how personality traits are related to NSSI (Claes et al., 2010; Lynam et al., 2011; Mullins-Sweatt et al., 2013; Nock & Prinstein, 2004). However, the FFM provides ample information at the adaptive, lower end of the trait spectrum, leaving a lack of understanding at the extreme ends (Suzuki et al., 2015). Thus, the AMPD's maladaptive personality traits and personality functioning severity indicator may lead to a more comprehensive investigation of how personality and NSSI are related. However, to date there are no studies that use the AMPD to assess the relationship between NSSI and personality.

Thus, the current project will examine how the AMPD components relate to prior and future NSSI behaviors. Furthermore, given the established relationships between normative personality traits and NSSI, the current study will also examine whether the AMPD demonstrates incremental validity over an existing trait model of personality, specifically the Five Factor Model. Given that many individuals who engage in NSSI do not meet diagnostic criteria for personality pathology or any mental health condition (Kiekens et al., 2018), focusing just on NSSI's relation to pathological manifestations of traits could limit the understanding of this phenomena. Therefore, exploring both maladaptive and normative traits may disentangle the overlap and distinct aspects of these approaches. Overall, using personality trait models to investigate the relationship between personality and NSSI is important due to the many similarities between PDs and NSSI behaviors and could lead to better understanding of what individual factors contribute to the motivation behind self-injury.

Literature Review

NSSI Functions and Relation to Suicide

Engaging in behaviors that directly harms oneself forgoes individual's innate desire for self-preservation; yet, NSSI is also an adaptive function that individuals use to better their inter- and intrapersonal experience with others. Specifically, there are both interpersonal functions, such as being influenced by or bonding with others, as well as intrapersonal functions such as emotional regulation or self-punishment, that drive individuals to engage in NSSI (Edmondson et al., 2016; Hilt et al., 2008; Mukhlenkam et al., 2013; Nock & Prinstein, 2004; Schoenleber & Berenbaum, 2012). These different functions lead to reinforced behavior, generating an increased likelihood of engaging in self-harm in the future. Thus, understanding the factors that contribute to and maintain NSSI behaviors may help identify characteristics of those who are most at risk and develop interventions to prevent and treat individuals at risk for self-harm.

NSSI behaviors can be utilized by individuals to influence their social environment through help-seeking behaviors and escape from undesired social interactions. Individuals who engage in NSSI can elicit support from others by gaining attention from family members, friends or even therapists (Nock & Prinstein, 2004). By gaining support from interpersonal relationships, individuals are positively reinforced in this maladaptive behavior. Similarly, a study conducted by Hasking et al (2013) found that individuals are more likely to engage in NSSI if they are exposed to this behavior by peers. Mukhlenkam et al (2013) suggests that one reason for this, is that individuals want to fit in with those around them, highlighting the underlying social motives that can incite NSSI engagement. Therefore, NSSI can provoke a sense of support as well as a feeling of belonging from others when they gain attention, as a result of their self-harming behavior. Further, there are negative reinforcers centered around interpersonal relationships as

well. Nock (2010) suggests that NSSI engagement can potentially lead to a decrease in criticism from those who are close to the individual as well as lessen arguing and fighting around the individual who is self-injuring. This leads to a decrease in unwanted social interactions, reinforcing the self-harming behavior. NSSI behaviors, therefore, can serve to regulate individuals' social interactions and environment.

The most common functions for NSSI center around regulating one's inner thoughts and feelings, in particular emotional regulation. Emotion regulation is an individual's ability to manage their emotional experience, both within themselves and when communicating with others. Research has indicated a range of emotions such as shame, guilt, anxiety, anger, alienation, self-hatred and/or depression are commonly experienced before one engages in NSSI. (Breen et al., 2013; Chapman & Dixon-Gordon, 2007; Edmondson et al., 2016; Klonsky, 2007). Therefore, individuals often experience intense negative emotions before engaging in self-harm. Following NSSI, individuals generally experience a significant decrease in these negative emotions, feeling a sense of relief from, and control over, their emotional experience (Schoenleber & Berenbaum, 2012). As a result, engaging in NSSI can serve as a distraction from negative emotional states and operate as a means of managing one's affect.

Further intrapersonal functions of NSSI can be seen through individuals engaging in self-harm to gain a feeling of control over their own lives or to even create a sense of security for themselves. Many individuals who self-injure perceive NSSI as a coping strategy, a way to distract themselves from dealing with stress and other unwanted emotions (Hilt et al., 2008). Similarly, NSSI can be used by individuals as a way cope with their emotional experience through dissociation, a way for individuals to disrupt their current thoughts and emotions. Specifically, self-injury is a form of escape, a behavior that allows one to depart from their

emotional state (Brown et al., 2002). Further, self-report measures have indicated that engaging in NSSI behaviors can serve as a function of self-punishment, to establish boundaries with others, increase the feeling of having control over the self, as well as provide a mode of emotional relief (Ferrara et al., 2012; Gratz, 2006). In a study conducted by Fox and colleagues (2017), it was found that individuals who have low self-esteem and are self-critical turn to NSSI as a form of punishment and a way to decrease their negative thoughts. As a result, NSSI provides a method for individuals to gain a sense of control over their emotional experience and is reinforced by the feelings of relief from the aversive internal experience.

NSSI can also serve as a function in decreasing one's feelings of pain and fear of hurting oneself—which is often seen when inter- and intrapersonal functions are no longer effective (Bunderla & Kumperšćak, 2015). By engaging in NSSI behaviors, individuals strengthen their ability to harm themselves, decreasing their innate fear of pain and injury. This is a result of NSSI assisting in desensitization of self-inflicted harm and feelings of physical pain (Klonsky et al., 2013). This is particularly important as NSSI behaviors typically develop before suicidal behaviors. Several theories have posited potential mechanisms by which NSSI leads to the capacity for suicidal behaviors. For example, Joiner's (2005) Interpersonal-Psychology theory posits that suicidal behavior is more likely when an individual has the capabilities to commit suicide. Two risk factors for suicide, hopelessness and NSSI, have also been determined to be essential risk factors in distinguish individuals who might attempt suicide from those who only think about suicide (Taliaferro & Muehlenkamp, 2014). Further, when NSSI behaviors are no longer successful in serving its function, suicide ideation typically develops (Stewart et al., 2017). Likewise, NSSI is a predictor of suicidal attempts and suicide death with more than 66% of those who have attempted suicide also have a shared history of NSSI (Benjet et al., 2017).

Therefore, a better understanding of NSSI behaviors is essential as NSSI can lead to more fatal behaviors later. Furthermore, NSSI can be a precursor to developing suicidal ideation and engaging in suicidal attempts, indicating that NSSI tends to co-occur with severe, even lethal, pathology.

Overall, NSSI is used by individuals to improve upon their inter- and intrapersonal experiences. Specifically, NSSI is method for individuals to seek out social support or suppress undesired social interactions, to control their thoughts and feelings, and to provide a sense of control over their environment. Understanding the underlying functions of NSSI can, ultimately, help identify those that are at risk for engaging in self-harming behaviors by recognizing individuals who are highly distressed, who are having trouble attaining desired attention from others, or who feel like they have little control over their circumstances. Moreover, these same risk-factors are also seen within individuals who have varying levels of personality pathology. Individuals with PD's tend to have trouble with their inter- and intrapersonal relationships and, as a result, personality pathology is also seen as a maintaining factor that needs to be considered, alongside NSSI functions, as influences over engaging in self-harm.

Personality and NSSI

NSSI is related to various forms of psychopathology, specifically personality disorders (PDs). In fact, it is estimated that about 10% of people within the general public meet diagnostic criteria for a PD; yet 45% of those seeking treatment for NSSI have a comorbid personality disorder (Haw et al., 2001; Sansone & Sansone, 2011). In addition, those who have a personality disorder are at a much higher risk for engaging in NSSI than those without a personality disorder, as more than 67% of those with a PD engage in some form of NSSI (Ayodeji et al.,

2015; Klonsky et al., 2003). Together these findings suggest that personality pathology and NSSI may share similar etiologies or personality factors may contribute to engagement in NSSI.

Borderline Personality Disorder and NSSI co-occur at alarming rates, nearly 65-80% of individuals with BPD also engage in NSSI (Brickman et al., 2014). In addition to NSSI being a distinct maladaptive phenomenon within psychopathology, NSSI is also one of the criteria that individuals could have in order to be diagnosed with BPD. Another key feature of BPD is emotion dysregulation which is highly associated with NSSI and a contributing factor to continued engagement in this maladaptive behavior (Brickman et al., 2014; Colle et al., 2020; Glenn & Klonsky, 2009). Gratz et al. (2010) found that NSSI was specifically tied to one's ability to express their emotions and in individual's acceptance of their emotional experiences, indicating that emotion regulation is an important factor for engaging in NSSI. One explanation for why NSSI and BPD are so integrally tied together is the emotional cascade model which theorizes that NSSI is a negative reinforcer for individuals with BPD (Shelby et al., 2009). This is because NSSI momentarily stops one's rumination, which often intensifies negative emotions, therefore giving the individual a sense of relief and a way to regulate their affect. BPD is also characterized by deficits in impulse control, which is also implicated in NSSI behaviors. BPD is highly associated with behavioral disinhibition. Hamza and colleagues (2015) suggest that individuals who are experiencing negative emotions and are impulsive are inclined to act recklessly and prone to seek out ways to experience immediate, short-term relief to emotional distress—specifically NSSI. As a result, some of the important, defining features of BPD can lead to both the initiation and the maintenance of NSSI, highlighting the significant comorbidity between BPD and self-harm.

Moreover, NSSI is present amongst a range of other PDs as well. Cluster A Personality Disorders, the odd or eccentric cluster of PDs, and both narcissistic presentations of grandiosity and vulnerability have been connected to high occurrences of repetitive and impulsive instances of NSSI (Dawood et al., 2017; Selby et al., 2012). Further, Cluster C Personality Disorders, the fearful or anxious cluster, in particular dependent personality disorder, have also been associated with an elevated rate of self-harming behavior (Chioqueta et al., 2004; Krysinska et al., 2006). Overall, PDs share many common characteristics that have individually been implicated in NSSI behaviors and functioning.

For example, emotion regulation skills are typically impaired within individuals with personality pathology in general. PD clusters A, B and C have each been associated with deficits in emotional regulation skills and NSSI behavior (Borges & Naugle, 2017). Specifically, Dependent, Avoidant, and Paranoid PD, in addition to all of cluster B's PDs, the emotional and/or erratic cluster, have an association with emotion dysregulation (Garofalo et al., 2018; Loas et al., 2011; Nicolo et al., 2011; Salvatore et al., 2012). Further, a study conducted by van Zutphen et al (2018) found that individuals with BPD and Cluster-C PD's shows elevated responses in their brain regions that are related to emotion regulation when compared to those without a PD. This suggests that having difficulties with one's emotion regulation skills is found across personality disorder presentations.

Impulsivity is also a common characteristic in a range of personality disorder diagnoses. Individuals who are diagnosed with BPD, NPD and Antisocial Personality Disorder often have high rates of impulsivity, have deficits in their ability to reflect on one's behaviors, are quick to action, and are generally considered to be careless (Chapman et al., 2008; Dawood et al., 2017). In a study conducted by Hamza and colleagues (2015), it was found that Negative Urgency, an

impulsive trait closely associated with neuroticism, has shown to have higher rates within individuals who engage in NSSI. Similar results have also been found in which higher levels of negative urgency and lack of premeditation were related to NSSI engagement (Glenn & Klonsky, 2010; Lynam et al., 2011). Together, this suggests that there is significant overlap within specific facets of impulsivity that are commonly found within individuals with PDs. This is important as NSSI occurs more frequently and with greater intensity (i.e., more harmful methods) when individuals are more impulsive (Whipple & Fowler, 2011). In particular, individuals with BPD have shown to have high levels of novelty seeking and harm avoidance, which leads to impulsive and sensation seeking behavior, as well as more negative experienced emotions (e.g., anxious and frightened) which is highly related to NSSI behaviors (Tschan et al., 2017). This relationship between impulsivity and NSSI is likely due to individuals being more motivated to act in a rash, quick manner to lessen their negative emotions in order to receive immediate results.

Difficulties with interpersonal relationships or intrapersonal sense of self are central features of PD's and may regulate the use of NSSI. These unstable interpersonal and intrapersonal concepts are highly linked with NSSI and, consequently, we see NSSI and PDs highly correlated (Andrews et al., 2017; Brickman et al., 2014; Itzhaky et al., 2019). Studies have shown that interpersonal problems are significantly associated with NSSI (Muehlenkamp et al., 2011). In a study conducted by Whipple and Fowler (2011), it was found that those who have BPD and engage in NSSI have increased deficits in distinguishing between the self and others' experiences, are more likely to interpret social interactions as hostile, and more sensitive to rejection from others than individuals with BPD without a history of NSSI. This suggests that BPD itself does not predict NSSI, but intrapersonal and interpersonal deficits. In addition, when an individual with BPD is having a hard time with their own identity, feeling shame or self-

consciousness, they are more likely to self-harm (Crowe, 2004; Gratz et al., 2010). When looking at NPD, Dawood and colleagues (2017) found that as the PD pathology becomes more severe, the greater the expectations that the individual has for themselves and for others and the more vulnerable that individual is in engaging in NSSI behaviors. Further, individuals who engage in NSSI and have personality pathology found in Schizotypal, Avoidant, and Dependent Personality Disorder were found to have more intense emotional reactions and sensitivity of rejection by others (Klonsky et al., 2003). As a result, disruptions amongst the perceptions of the self and others are present across a range of PD's and are associated with NSSI engagement.

Together these findings suggest certain personality traits and characteristics that are shared across personality disorder diagnoses may better account for the relationship between PD's and NSSI behaviors. Further, there is accumulating research that suggests that the current categorical system does not take into consideration all the different personality-related problems individuals have (Trull & Durrett, 2005; Widiger & Mullins-Sweatt, 2009). As a result, relying on the categorical system and PD diagnoses may obscure the important relationships needed to be identified in order to accurately predict NSSI behavior. Therefore, recent conceptualizations of PD's that have moved away from the categorical approach and begun to conceptualize PD's as extreme variants of personality traits, should be used to assess the relationship between NSSI and personality.

The Five Factor Model (FFM) is a dimensional framework that can be used to understand normative personality and is able to accommodate for unique personality profiles. This model includes five broad domains, Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. These factors have been examined and defined through both the lexical approach and factor analysis and is the most widely accepted trait

conceptualization of personality (Widiger, 2017). In general, Neuroticism is a trait encompasses the degree to which an individual is prone to anxiety, frustration, anger, or even feelings of sadness (Widiger & Oltmanns, 2017); Extraversion identifies how likely an individual is to experience positive mood states and play a more active, central role in different social situations (Widiger, 2017); Openness to Experience relates to one's tendencies to be more curious, intellectual/thoughtful, as well as creative (Caspi et al., 2005); Agreeableness is a trait that works with an individual's tendency to be considerate, cooperative, and generally engaged in prosocial behaviors (Widiger, 2017); Conscientiousness is conceptually defined as having self-control, being orderly and hardworking (Roberts et al., 2014). Numerous studies have shown the FFM traits are associated with PD diagnoses, (Rottman et al., 2009; Trull, 1992; Widiger & Mullins-Sweatt, 2009; Widiger & Trull, 2007) and clinically relevant behaviors, including NSSI.

As a result, the FFM can be used to help better understand personality pathology and its related behaviors like NSSI. Neuroticism, the dimension of emotional instability, looks at one's prospect to experience anxiety, frustration, anger, and sadness has demonstrated the most robust relationships with NSSI behaviors (Mullins-Sweatt et al., 2013; Claes et al., 2010). Several studies have shown that high levels of neuroticism is associated with high levels of NSSI (Claes et al., 2010; Hasking et al., 2010; Mullins-Sweatt et al., 2013). In a study investigating the relationship between personality traits and its relation to NSSI in individuals with and without BPD, it was concluded that Neuroticism is an important risk factor in past and future NSSI behavior above and beyond BPD (Lynam et al., 2011). Further, this association has been documented cross-culturally, indicating that the correlation between neuroticism and NSSI is not just relevant to the United States population (Geusen & Beullens, 2018; Liang et al., 2014). Neuroticism is made up of different facets like anxiety, anger hostility, depression, self-

consciousness, vulnerability, and impulsiveness. Nock and Prinstein (2004) showed that emotion dysregulation is a key factor of neuroticism, has been reliably associated with NSSI. Overall, there is a strong relationship between emotional stability and self-harm which is measured through the trait neuroticism.

The FFM traits of agreeableness, conscientiousness, extraversion, and openness to experience are also associated with NSSI behaviors. Specifically, agreeableness, conscientiousness and extraversion are negatively related with engagement in NSSI behaviors (Claes et al., 2010; You et al., 2016). Hasking and colleagues (2010) assert that conscientiousness can even function as a protective factor against engaging in self-harming behaviors. Likewise, the FFM traits agreeableness, conscientiousness, and extraversion have been linked to low frequency of NSSI behaviors, while neuroticism was correlated to an increase in NSSI frequency (Brown, 2009). Openness to experience, like neuroticism, is positively associated with NSSI behaviors (MacLaren & Best, 2010). Further, the number of different methods used by an individual engaging in NSSI is associated with openness to experience and negatively associated with conscientiousness (Robertson et al., 2013). As a result, personality traits help specify what individual aspects of a person's personality leaves them vulnerable—or resistant—to engaging in self-harming behaviors.

Although the FFM traits demonstrate clear relationships with NSSI behaviors, the FFM was developed to assess normative personality characteristics and was created with non-clinical samples in forming the traits within the model (Widiger & Mullins-Sweatt, 2010). As a result, the FFM provides more information at the lower, adaptive end of the trait spectrum which leaves a lack of understanding at the maladaptive ends of each personality traits (Suzuki et al., 2015). When thinking about NSSI behaviors, we are primarily looking at populations who have extreme

variants of personality traits. As a result, it would be necessary and more appropriate to use personality models that incorporate personality pathology and are intended to be used with populations who have maladaptive variants of personality traits. Along those same lines, traits alone do not fully encompass one's personality; therefore, incorporating other aspects of one's personality like intrapersonal and interpersonal functioning would allow for a more inclusive, accurate prediction of who might engage in NSSI.

The Alternative Model of Personality Disorders (AMPD) has been proposed as an alternative method that overcomes the limitations evidenced in prior classification systems and the FFM. Specifically, PDs are defined as both an impairment in personality functioning along with the presence of pathological personality traits (Hopwood et al., 2019). Criterion A, personality functioning, is based on the attachment, object relations, and social cognitive personality theories about PDs (Bender et al., 2011). Criterion B, pathological personality traits, is based on similar lexical approaches of the FFM as well as PD research (Markon et al., 2005). As a result, the AMPD is a flexible, multi-method personality assessment that can be used in both research and clinical settings.

Specifically looking at the traits, the AMPD identifies individual differences in personality traits that appear within personality disorders (Hopwood et al, 2019; Krueger et al., 2012). Widiger & Simonsen (2005) showed evidence of important deficits in variations of maladaptive personality traits which became the basis for the AMPD constructs: Negative Affect, Antagonism, Disinhibition, Detachment, and Psychoticism. Specifically, Negative Affect is defined by emotional lability, anxiousness, and separation insecurity; Detachment is one's tendency to withdraw from others, experience anhedonia, and have avoid intimacy; Antagonism is characterized by manipulateness, deceitfulness, and grandiosity; Disinhibition is defined by

irresponsibility, impulsivity, and distractibility; Psychoticism is characterized by unusual beliefs and experiences, eccentricity, and perceptual dysregulation (Krueger et al., 2002). The traits measured by the AMPD have high correlations with the traits on the FFM and have shown to be maladaptive variants of Neuroticism, Agreeableness, Conscientiousness, Extroversion, and Openness to Experience (Thomas et al., 2013). Table 1 shows the relationship between the AMPD and FFM. In a study conducted by Suzuki and colleagues (2015), the AMPD traits provided similar, overlapping information along the trait dimensions as the FFM. Yet, the AMPD offered more precise information at the maladaptive levels of the trait while the FFM presented more information at the adaptive levels. As a result, the AMPD is valid in assessing general personality and yields additional information in the extreme ends of a traits dimension.

To date, there are limited studies that have investigated the relationship between NSSI using the AMPD traits. However, NSSI is linked to different personality domains like Negative Affect, Disinhibition, Antagonism, and Detachment as defined by the traits in the AMPD (Turner et al, 2018). As a result, recent studies have investigated and found that Negative Affect is a pertinent risk factor for those who engage in NSSI. In a study conducted by Hasking and colleagues (2019), it was found that higher rates of negative affect related to higher lifetime prevalence of NSSI. Impulsiveness and aggression are also traits that have been identified as markers within individuals that can leave them vulnerable to suicidal behaviors and are embodied within the AMPD traits Disinhibition and Antagonism, respectively (Jimenez-Treviño et al., 2011). Looking at impulsivity more closely, Negative Urgency and Lack of Premeditation, which is expressed in Disinhibition, are strongly related to NSSI (Lynam et al., 2011). Though studies specifically looking at how Disinhibition and NSSI are related is absent, the elements of this trait have been identified to be related to self-harm. Moreover, Turner and colleagues (2018)

concluded that individuals are at a high risk for self-harm when they are more socially detached from others—which is accounted within the trait of Detachment. All in all, research on specific AMPD traits relation to NSSI is severely lacking; yet particular features of AMPD traits have been connected to self-harming behaviors.

Personality traits have elements of influence over an individual's characteristic behaviors and thoughts. However, traits are characterized as consistent and stable attributes of one's personality and do not relate information about individuals' perceptions of themselves or others which account for the fluctuating quality of personality. Therefore, traits might not provide enough information to understand the connection between personality and self-harming behaviors. In addition, most of the functions and predictors of NSSI are related to individuals interpersonal and intrapersonal experiences which align with the personality functioning criterion (Criterion A) of the AMPD.

The AMPD supplements the information on personality pathology that is provided by personality traits by incorporating personality functioning, intrapersonal and interpersonal functioning, in relation to PD's. The AMPD Criterion A indicates that how one thinks and feels about themselves, as well as how they think and feel about others, is a critical feature in one's personality functioning (Hopwood et al., 2019). What is significant about Criterion A is that it is measuring one's concept of self and interpersonal relation which are concepts that fluctuate through one's experiences and, most importantly, are seen at the core of personality dysfunction. Due to individual differences in how readily one's concept of self and others can change, the AMPD Criterion A might be able to account for the dynamic aspect of NSSI that cannot be attributed to specific personality traits. Recent studies have even suggested that there is a strong correlation between the self and interpersonal functioning relating to NSSI. Fliege and

colleagues (2009) conducted a study that concluded poor familial support and self-esteem to be highly linked to an increase in NSSI behaviors. Self-criticism and self-identity are also elements that are strongly associated with NSSI (Glassman et al., 2007; Goldberg & Israelshvili, 2017; Luyckx et al., 2015b). As a result, Criterion A of the AMPD may relate to engagement in NSSI behaviors as it is better capturing pathology among individuals.

The intrapersonal functioning component of the AMPD includes the concepts of identity and self-direction. Specifically, those who have difficulty with their self-functioning tend to have trouble staying true to their identity across different social situations and have difficulty in pursuing goals (Morey et al., 2020). Though there has been very limited research using the Criterion A of the AMPD, some general concepts can be seen in studies looking at how one views the self in relation to NSSI. In a meta-analysis conducted by Cha and colleagues (2018), it was found that low self-esteem and estranged peer relations are risk factors for suicidal behavior. Self-criticism and self-identity are also elements that have been proven to be highly correlated with these behaviors (Glassman et al., 2007; Goldberg & Israelshvili, 2017). Self-criticism has been determined as a motivating factor for engaging in NSSI behaviors, specifically as a way to engage in self-punishment. Studies have also shown that there is a positive association between identity confusion and NSSI behaviors, explaining additional variance of NSSI beyond age, gender, psychological disorders, and personality traits (Claes et al., 2014; Gandhi et al., 2017; Luyckx et al., 2015a). This shows that when individuals do not have a clear sense of self and/or thinking negatively about themselves, they are more at risk for engaging in NSSI behaviors to punish themselves. Further, an individual's identity is formed in relation to others around them, suggest that one's intrapersonal perspective are highly intertwined with interpersonal relationships and these relationships might also influence NSSI behaviors.

The interpersonal functioning component of the AMPD includes the concepts of intimacy and empathy. Those who have difficulty with interpersonal functioning tend to have problems with creating and maintaining close, mutual relationships as well as have trouble seeing and understanding different situations from other perspectives (Morey et al., 2020). Again, there has been very limited research using the Criterion A of the AMPD; yet some of the same common notions have been studied and looked at how NSSI and how one is able to relate to others could be correlated. In fact, a study conducted by Turner and colleagues (2016) found that there was a significant correlation between young adults experiencing interpersonal conflict as well as NSSI urges or acts within the same day. Further, individuals who are more detached from others and have less social support are at higher risk for NSSI (Turner et al., 2016). Experiencing a negative interpersonal event is believed to lead to engaging in NSSI behavior (Prinstein et al., 2009), as many individuals who have engaged in NSSI have also reported stressors like having conflict with others or feeling rejected before they engaged in self-harm (Shaw Welch & Linehan, 2002). These findings suggest that disruptions in interpersonal relationships may be an important risk factor for NSSI. Thus, Criterion A of the AMPD may increment the information that is gathered by personality traits and provide a more comprehensive explanation as to what factors encourage individuals to engage in NSSI.

Overall, the AMPD provides a comprehensive outlook at assessing an individual's personality, both by providing information about personality traits and personality functioning. The AMPD offers a method of assessing general personality while also contributing additional information about the extreme variants of traits dimensions—information that could lead to better understanding of the relationship between personality and NSSI. Further, NSSI has been linked to interpersonal and intrapersonal functions and has proven to be tied to individual's

perception of self and others. Through criterion A of the AMPD, how one thinks and feels about themselves, as well as how they think and feel about others, is taken into consideration as influencing one's overall personality. As a result, the AMPD is a model of personality that may offer a more holistic view of personality's relationship to self-harming behavior. However, to date, there are no studies that look at the relationship between personality functioning and maladaptive personality traits in relationship to NSSI.

Current Study

This study examined the role of maladaptive personality traits and personality functioning's relationship with NSSI engagement. Specifically, this study examined the unique associations of the AMPD Criterion A (personality functioning) and Criterion B (maladaptive traits) with historical and prospective NSSI engagement. Although these components may demonstrate unique relationships with NSSI engagement, the AMPD articulates that personality disorders are characterized by impairments in both personality functioning (Criterion A) and pathological personality traits (Criterion B). However, extant research findings are mixed with some studies suggesting both components provide unique information (Morey, 2019; Hopwood et al., 2011) and other suggesting only one component is necessary (Sleep et al., 2019). Therefore, the current study examined whether these components provide incremental evidence for the prediction of self-harm.

Finally, the study also examined which model of personality, the FFM or the AMPD, was better able to explain the relationship between personality and NSSI engagement. A significant body of research suggests FFM's normative personality traits are relevant in predicting NSSI (Claes et al., 2010; Lynam et al., 2011; Mullins-Sweatt et al., 2013); however, it is unclear to what extent maladaptive personality traits or personality functioning predict NSSI behaviors.

Assessing maladaptive traits and personality functioning is important as it will provide a better understanding of how personality pathology plays a role in NSSI and better inform identifying risks and interventions for self-harm. Ultimately, this study aims to better understand what individual factors contribute to the motivation behind self-injury by clarifying which model provides the most information between who is at risk for engaging in NSSI. Thus, the following aims and hypotheses were examined:

Specifically, this study assessed the following aims:

Aim 1: To determine if the AMPD components predicts NSSI and suicidal behavior.

- Hypothesis 1: Higher levels of the PID-5 traits Negative Affect, Disinhibition, Detachment, and Antagonism will be associated with a greater likelihood of historical and prospective NSSI and suicidal behavior.
- Hypothesis 2: Greater impairments in Personality Functioning will be associated with a greater likelihood of historical and prospective NSSI and suicidal behavior.
- Hypothesis 3: Personality functioning will increment the prediction of NSSI and suicidal behavior beyond the maladaptive personality traits.

Aim 2: To compare the FFM and AMPD in predicting NSSI and suicidal behavior.

- Hypothesis 4: The AMPD will explain greater variance in NSSI and suicidal behavior than the FFM.

Exploratory Aim 3: To assess whether Personality Functioning will increment the relationship between FFM traits and NSSI and suicidal behaviors more so than the relationship between the PID-5 traits and NSSI and suicide.

- Hypothesis 5: Higher levels of the FFM traits Neuroticism and lower levels of Extraversion and Conscientiousness will be associated with a greater likelihood of historical and prospective NSSI and suicidal behavior.
- Hypothesis 6: The AMPD Criterion A combined with the FFM traits will provide incremental utility in predicting NSSI and suicidal behavior compared to the AMPD.

Methods

Participants

Participants included 475 female undergraduate students from a mid-sized Midwestern university in the United States and female workers from Amazon Mechanical Turk (MTurk), an online crowdsourcing platform. Participants were limited within the age range of 18-24, as this is the average age for college students and an age range in which engaging in NSSI behaviors are more common (Nock et al., 2009). Participants also had to identify as biologically female as there are differences in the functions, methods, and frequency of NSSI between males and females (Geusens & Beullens, 2018; Victor et al., 2018; Whitlock et al., 2011). Further, to be eligible for the current study, participants had to pass validity checks that assessed for attention. Undergraduate participants had to pass at least two of three validity checks while the MTurk participants had to pass three out of five validity checks. The undergraduate sample consisted of 134 female undergraduates who were recruited from the SONA research pool and the MTurk sample consisted of 341 adult English-speaking workers. Seven participants from the undergraduate sample were removed while 56 participants from the MTurk sample were omitted due to not meeting at least two of the inclusion criteria. The final sample for analysis, therefore, consisted of 412 participants (N=127 undergraduate students and N=285 MTurk participants).

The demographic information for the undergraduate and MTurk sample are located in Table 2. The undergraduate sample ($M= 19.52$ $SD= 1.28$) was significantly younger ($t(398)= 17.470, p< .001$) compared to the MTurk sample ($M= 22.73, SD= 1.91$). The samples did not differ with respect to gender identity ($X^2= (3, N= 400) = 2.988, p= .393$) or race/ethnicity ($X^2= (1, N= 400) = 1.231, p= .267$). However, education level ($X^2= (7, N= 400) = 230.900, p< .001$) was not distributed equally across groups. It is important to note that due to a small portion of individuals identifying as belonging to various racial and ethnic minorities, participants who identified as white were compared to the participants who identified as any other race/ethnicity. In addition, 56% of the undergraduate sample had a history of NSSI engagement and 53.6% had a history of suicidal thoughts and behaviors. Within the MTurk sample, 80.0% had a history of NSSI engagement while 54.9% had a history of suicidal thoughts and behaviors. As participants from both samples were restricted to the age range of 18-24 and biological females, the undergraduate and MTurk sample were combined for analysis. A description of the demographic characteristics for the full sample is also located in Table 2.

Measures

Personality Functioning

Overall personality functioning was measured by the *Level of Personality Functioning Scale-SR* (LPFS-SR; Morey, 2017; Appendix A). The LPFS-SR is an 80 item self-report measure of self and interpersonal functioning as described in Criterion A of the DSM-5 alternative model of personality disorder. Item responses are rated on a 4-point Likert scale (1 = Totally False to 4 = Very True). The LPFS measures four interrelated domains of self (Identity and Self-Direction) and interpersonal (Empathy and Intimacy) functioning. There are 16 to 23 items for each component. Each item is weighed as a result of its assumed severity in accordance

with the LPFS. The Personality Functioning score is calculated by multiplying each item's raw by its weighting and then summed to attain the level of Personality Functioning severity. Higher scores equate to greater impairment. Overall, the LPFS-SR has been shown to have high retest reliability and construct validity (Hopwood et al., 2018) in community samples. In the current study, Cronbach's α for the total score was 0.96.

Personality Traits

Normative personality traits were measured using the Big Five Inventory-2 (BFI-2; Soto & John; 2016; Appendix B) and pathological personality traits were assessed using the Personality Inventory for the DSM-5—Short Form (PID-5-SF; Maples et al., 2015; Appendix C). The BFI-2 is a 60-item self-report inventory that assess the personality domains of the FFM: Conscientiousness, Extraversion, Neuroticism, Agreeableness, and Openness to Experience. Each item is rated on a 5-point Likert scale ranging from “*disagree strongly*” to “*agree strongly*.” High scores on a given domain indicate greater levels of the measured trait. Cronbach's α and McDonald's σ within this study for each domain were: 0.80 and 0.77 (Neuroticism), 0.69 and 0.63 (Extraversion) 0.76 and 0.75 (Agreeableness), 0.79 and 0.780 (Conscientiousness), and 0.732 and 0.702 (Openness to Experience).

The PID-5-SF (Maples et al., 2015) is a 100-item self-report measure that assesses the pathological personality trait domains of the AMPD including: Disinhibition, Detachment, Negative Affectivity, Antagonism, and Psychoticism. Each item is answered on a 4-point Likert scale ranging from 0 (*very false or often false*) to 3 (*very true or often true*). Personality domain scores are obtained calculating the mean of each respective domain. Higher scores on a domain indicate greater level of the measured trait. Cronbach's α and McDonald's σ for this study for each domain were 0.87 and 0.87 (Negative Affect), 0.88 and 0.88 (Disinhibition), 0.88 and 0.87

(Detachment), 0.92 and 0.92 (Antagonism) and 0.92 and 0.92 (Psychoticism), indicated good internal consistency for each trait composite.

NSSI Behaviors

Engagement in self-injury was measured by the *Inventory of Statements about Self-Injury* (ISAS; Klonsky, 2007; Appendix D). The ISAS consists of two parts. The first part of the ISAS consists of 7-items assessing the frequency of different NSSI behaviors (e.g., cutting, biting, burning), when one last engaged in NSSI, the pain felt, as well as the time it takes to act on the urge of the behavior. The total NSSI frequency scores for participants are gathered by summing the frequency of each method of NSSI. For the purposes of this current study, NSSI engagement was converted to a binary variable to indicate whether someone had engaged in NSSI or not. The second part of the measure was not used for this study. The first part of the ISAS, the behavioral assessment, has shown to have high test-retest reliability (Glenn & Klonsky, 2011; Klonsky & Olino, 2008).

Suicide Ideation and Attempts

Suicidal ideation and past attempts were assessed using the *Suicidal Behaviors Questionnaire-Revised* (SBQ-R; Osman et al., 2001; Appendix E), a 4-item self-report questionnaire. This inventory measures a broad range of information related to suicide ideation and attempts, the frequency of suicidal ideation, as well as the likelihood of suicidal behavior in the future. Each item has its own response scale (e.g., item 1 is on a 1-4 item scale while item 4 is on a 0-6 item scale). The total score of the inventory ranges from 3-18 points. High total scores on the inventory indicate greater risk for suicidality. For the purposes of this study, item one was used to assess suicidality as it pertains to an individual's lifetime suicidal ideation and/or

attempts and it was converted to a binary variable. Cronbach's α and McDonald's σ for this study were 0.71 and 0.76, respectively.

Procedure

Human subjects' approval was obtained from the University of South Dakota Institutional Review Board prior to data collection. Participants were recruited through the USD SONA system and MTurk to complete an initial and follow-up survey two-weeks later. Once participants signed up for the study, they were provided a link to Qualtrics to complete the initial survey consisting of the following measures: Demographics, BFI-2, PID-5-SR, ISAS, LPFS, and SBQ-R. Once the measures were completed, each participant was informed that in two weeks they will be eligible to complete a survey that should take about 10 minutes. Participants who completed the initial survey were contacted 2 weeks later with a link to complete the follow-up survey in Qualtrics. The follow-up survey consisted of the ISAS, modified to ask about NSSI behaviors within the past 2-weeks. Participants who did not complete the follow-up survey within 24 hours after receiving the first follow-up survey email received up to two reminder emails, 24 hours (approximately 15 days after the initial survey) and 72 hours (final email sent 18 days after the initial survey). In total, 71.2% of the undergraduate participants completed the follow-up survey while 59.3% of the MTurk participants completed the follow-up survey. As a result, 252 participants completed the follow-up survey.

Undergraduate student participants received research credit in exchange for their participation (5 points after the first survey and 3 points for the follow-up survey). MTurk workers were compensated \$2.00 for completing the initial survey and \$1.00 for the follow-up survey.

Results

Data Preparation

The descriptive statistics and assumptions for statistical tests were conducted using SPSS version 28.0 and R (IBM Corp., 2021; R Core Team, 2020). The descriptive statistics for the study variables are presented in Table 3 and the bivariate correlations between each variable are presented in Table 4. Multivariate normality was examined for this initial survey on historical self-harm behavior using Mahalanobis distance. A total of 12 participants obtained Mahalanobis distance values that were significantly distant from the centroid—and therefore not likely to occur by chance. As a result, these 12 participants were removed from the analysis. This resulted in a total sample of 400 participants who were included in the analysis assessing previous NSSI and suicidal behavior. Of those who completed the initial survey related to historical self-harm, 252 participants chose to complete the follow-up survey. Those who completed the follow-up survey differed significantly from those who only participated in the initial survey. Results of the chi-square and t-tests performed between the two samples are in Table 5 and 6. Overall, those who completed the second survey were younger, had less impairments in personality functioning, were less likely to have engaged in NSSI in the past, and had less extreme scores on measures of normative and pathological personality traits than those who chose to not complete the follow-up survey. Of those who completed the second part of the study, 14.2% of the sample engaged in NSSI within the two weeks since the initial part of the study. Multivariate normality was also examined for the prospective NSSI analysis. One participant obtained Mahalanobis distance values that was significantly different and was removed from the analysis resulting in a total of 251 participants within the prospective analysis.

Once the data had been cleaned, it was examined and the outcome variable of NSSI engagement, historically and prospectively, and history of suicidal thoughts and behaviors were converted to a binary variable (min = 0 and max = 1).

Aim 1

Maladaptive Traits Relationship to Self-Harm

To test the first hypothesis, that higher levels of the PID-5 traits Negative Affect, Disinhibition, Detachment, and Antagonism would be associated with a greater likelihood of historical and prospective NSSI and suicidal behavior, point-biserial correlations were conducted. The resulting correlations are located in Table 7. All five maladaptive personality traits are positively associated with historical NSSI engagement (*p values* < .001). Regarding prospective NSSI engagement, Psychoticism was the only maladaptive trait that demonstrated a significant association. Specifically, Psychoticism was positively associated with engaging in NSSI within two weeks after the initial survey ($r = 0.141$, $p = .025$). Further, Negative Affect ($p < .001$), Detachment ($p < .001$), Antagonism ($p = .037$), Disinhibition ($p = .002$), and Psychoticism ($p = .008$) all had a significant positive relationship with a lifetime history of suicidal thoughts and behaviors.

Personality Functioning's Relationship to Self-Harm

To test the second hypothesis, greater impairments in Personality Functioning will be associated with a greater likelihood of historical and prospective NSSI and suicidal behavior, point-biserial correlations were conducted. The results of the correlations can be found in Table 7. Criterion A's Personality Functioning showed to have a significant positive relationship with historical NSSI ($p < .001$), prospective NSSI ($p = .044$), as well as a history of suicidality ($p = .007$).

Historical NSSI: AMPD

To assess the third hypothesis, Personality Functioning will increment the prediction of NSSI and suicidal behavior beyond the variance predicted by the maladaptive personality traits, binary logistic regressions were used. Specifically, the change in variance in NSSI engagement between the first step and the second step, depending on whether maladaptive traits were either placed in the model first or second, was analyzed. The overall model was significant ($X^2(6)=44.853, p<.001$, Nagelkerke $R^2=15.5\%$, Hosmer and Lemeshow $X^2(8)=9.223, p=.324$). When the maladaptive traits were placed in the model first, as shown in Table 8, the variance of historical NSSI engagement explained was significant at 15.5% ($X^2(5)=44.716, p<.001$). However, adding Personality Functioning to the model did not increment the variance explained by the maladaptive traits ($X^2(1)=0.136, p=.711$). In addition, when Personality Functioning was placed first in the model, as shown in Table 9, 11.1% of the variance was explained in historical NSSI engagement ($X^2(1)=31.442, p<.001$). The maladaptive personality traits did significantly increment the variance explained, accounting for 15.5% of the variance as to whether someone had a history of NSSI engagement ($X^2(5)=13.412, p=.020$). Within the logistic regression, higher levels of Negative Affect significantly increased the odds of lifetime NSSI engagement ($OR=1.841, p=.033$). Personality Functioning was no longer significant.

Prospective NSSI: AMPD

To assess whether Personality Functioning increments the prediction of prospective NSSI engagement, the variance explained between adding Personality Functioning and maladaptive traits into the model were analyzed. The overall model was not significant for prospective NSSI ($X^2(6)=6.600, p=.359$; Nagelkerke $R^2=4.0\%$, Hosmer and Lemeshow $X^2(8)=4.923, p=.775$). When the maladaptive traits were placed in the model first, as shown in Table 10, the variance

explained, 3.7%, was not significant ($X^2(5)= 6.032, p= .303$). Personality Functioning was then added to the model and did not significantly add to the variance explained at 4.0% ($X^2(1)= 0.569, p= .451$). In addition, when Personality Functioning was placed first in the model, as shown in Table 11, the variance explained in prospective NSSI was significant at 2.5% ($X^2(1)= 4.133, p= .043$). However, when the maladaptive personality traits were added to the model, the variance explained increased to 4.0% which was not significant ($X^2(5)= 2.488, p= .778$).

Lifetime Prevalence of Suicidal Behavior: AMPD

The incremental utility of maladaptive traits and personality functioning in predicting suicidal thoughts and behaviors were also analyzed. The overall model, both maladaptive traits and Personality Functioning, was significant ($X^2(6)= 57.791, p< .001$; Nagelkerke $R^2 = 18.3\%$, Hosmer and Lemeshow $X^2(8)= 9.314, p = .317$). When the maladaptive traits were placed in the model first, as shown in Table 12, 17.2% of the variance of historical suicidal thoughts and behaviors were explained ($X^2(5)= 54.225, p< .001$). Personality Functioning was then added to the model and did not significantly increment the variance explained ($X^2(1)= 3.567, p= .059$). In addition, when Personality Functioning was placed in step one of the model, as shown in Table 13, a significant amount of variance was explained at 2.5% ($X^2(1)= 7.3573 p= .006$). The maladaptive personality traits were then added, and significantly increment the variance explained as to whether someone had a history of suicidal tendencies to 18.2% ($X^2(5)= 50.218, p< .001$). Overall, within the logistic regression higher levels of Negative Affect (OR= 5.899, $p< .001$) and Detachment (OR= 2.202, $p= .014$) increased the likelihood of lifetime suicidal thoughts and behaviors.

Aim 2: Comparing the AMPD and FFM

Historical NSSI

To evaluate whether the AMPD explains greater variance in historical self-harm than the FFM, binary logistic regressions were conducted, and model fit statistics were compared. Specifically, the Akaike's Information Criteria (AIC) which indicates relative model fit, the Bayesian Information Criterion (BIC) which indicates relative model fit while also taking into consideration the number of parameters within the model, and the Area Under the Curve (AUC) which measures the accuracy of the model were reported. Lower values of AIC and BIC indicate better model fit whereas higher AUC values indicate better classification. The results of the binary logistic regressions are reported in Table 14. Both models significantly and adequately classified individuals who had engaged in NSSI at least once within their lifetime (AMPD: $X^2(6)= 44.853, p < .001$, Hosmer and Lemeshow $X^2(8)= 9.223, p = .324$, Nagelkerke $R^2 = 15.5\%$; FFM: $X^2(5)= 41.355, p < .001$, Hosmer and Lemeshow $X^2(8)= 13.506, p = .086$, Nagelkerke $R^2 = 14.2\%$). When comparing the AIC, BIC, and AUC between the AMPD (AIC= 433.88, BIC= 461.713, and AUC= .700) and FFM (AIC= 440.57, BIC= 464.500, and AUC= .697) regression models predicting historical NSSI, the AMPD model had the lowest AIC and BIC scores and the higher discrimination score with AUC; indicating that in respect to the current studies data, the AMPD is the best-fit model for historical NSSI engagement.

Prospective NSSI Engagement

To evaluate whether the AMPD explains greater variance in prospective self-harm than the FFM, binary logistic regressions were conducted, and model fit statistics were compared. The results of the binary logistic regressions are reported in Table 15. Neither model significantly classified individuals who had engaged in NSSI at least once within the two weeks following the

initial part of the study (AMPD: $X^2(6)= 6.600, p= .359$, Hosmer and Lemeshow $X^2 (8)= 4.923, p= .766$, Nagelkerke $R^2 = 4.0\%$; FFM: $X^2(5)= 1687, p= .889$, Hosmer and Lemeshow $X^2 (8)= 17.402, p= .026$), Nagelkerke $R^2 = 1.0\%$). The AIC, BIC, and AUC for the AMPD regression model predicting prospective NSSI engagement were: AIC= 269.86, BIC= 294.449 and AUC= .619. The AIC, BIC, and AUC for the FFM regression model predicting prospective NSSI engagement were: AIC= 276.73, BIC= 297.880, and AUC= .579.

Lifetime Prevalence of Suicidal Behavior

To evaluate whether the AMPD explains greater variance in lifetime history of suicidal thoughts and behavior than the FFM, binary logistic regressions were conducted, and model fit statistics were compared. The results of the binary logistic regressions are reported in Table 16. Both models significantly and adequately classified individuals who had a lifetime history of suicidal thoughts or behaviors (AMPD: $X^2(6)= 57.791, p < .001$, Hosmer and Lemeshow $X^2 (8)= 9.314, p= .317$, Nagelkerke $R^2 = 18.2\%$; FFM: $X^2(5)= 19.060, p= .002$, Hosmer and Lemeshow $X^2 (8)= 6.926, p= .545$, Nagelkerke $R^2 = 6.2\%$). When comparing the AIC, BIC, and AUC between the AMPD (AIC= 499.47, BIC= 527.306, and AUC= .713) and FFM (AIC= 542.92, BIC= 566.849, and AUC= .637) regression models in predicting historical suicidal thoughts and behaviors, the AMPD had the lowest AIC and BIC scores and the higher discrimination score with AUC. Therefore, the best-fit model in respect to the current study for previous suicidal thoughts and behaviors was the AMPD.

Aim 3: FFM and Personality Functioning

Historical NSSI Engagement

For the final, exploratory aim, we examined whether the FFM model combined with Criterion A (Personality Functioning) would explain greater variance in historical self-harm than

the AMPD as assessed in Aim 2. Binary logistic regressions were conducted, and model fit statistics were compared. First, the incremental utility of Personality Functioning and FFM traits depending on whether Personality Functioning were either placed in the model first or second, were analyzed. Then the model fit statistics were compared. The overall model in which the FFM traits were combined with Personality Functioning to predict historical NSSI engagement was significant ($X^2(6)= 44.853, p < .001$, Hosmer and Lemeshow $X^2(8)= 9.223, p = .324$, Nagelkerke $R^2= 15.5\%$).

When the normative (FFM) traits were placed in the model first, as shown in Table 17, the variance explained was 14.6% which was significant ($X^2(5)= 42.299, p < .001$). Adding Personality Functioning in the second step significantly incremented the variance explained by the normative traits to 18.1% ($X^2(1)= 10.797, p = .001$). In addition, when Personality Functioning was placed first in the model, as shown in Table 18, the variance explained was significant ($X^2(1)= 32.341, p < .001$) as it explained 11.3% of the variance. When the normative personality traits were added to the model, they incremented the variance explained on whether someone had a history of NSSI engagement to 18.1% ($X^2(5)= 20.755, p < .001$). Within the logistic regression, Agreeableness ($OR= 2.942, p = .009$) and Personality Functioning ($OR= 1.006, p = .001$) demonstrated to increase the likelihood of whether someone had engaged in NSSI within their lifetime.

Further, the AIC, BIC, and AUC for the FFM and Personality Functioning combined regression model predicting historical NSSI engagement were calculated: $AIC= 427.11$, $BIC= 454.982$, and $AUC= .730$. When comparing the AIC, BIC, and AUC between the FFM and Personality Functioning to the AMPD ($AIC= 433.88$, $BIC= 461.713$, and $AUC= .700$) regression model, the FFM combined with Criterion A showed to have the lowest AIC and BIC scores and

the higher discrimination score with AUC. Therefore, the best-fit model for previous NSSI engagement was the combined FFM and personality functioning model.

Prospective NSSI Engagement

Binary logistic regressions were conducted, and model fit statistics were compared. First, the incremental utility of Personality Functioning and FFM traits depending on whether Personality Functioning were either placed in the model first or second, were analyzed. Then the model fit statistics were compared. The overall model in which the FFM traits were combined with Personality Functioning to predict prospective NSSI engagement was not significant ($X^2(5) = 6.522, p = .239$, Hosmer and Lemeshow $X^2(8) = 1.245, p = .996, p = .996$, Nagelkerke $R^2 = 6.4\%$). When the normative (FFM) traits were placed in the model first, as shown in Table 19, only 1.0% of the variance in who would engage in NSSI within the two weeks following the initial survey was explained ($X^2(5) = 1.634, p = .897$). Personality Functioning was then added to the model and significantly incremented the variance explained by the maladaptive traits to 6.4% ($X^2(1) = 9.023, p = .003$). In addition, when Personality Functioning was placed first in the model, as shown in Table 20, the variance explained in prospective NSSI was significant at 2.5% ($X^2(1) = 4.135, p = .042$). The normative personality traits did not significantly increment the variance explained as to whether someone would have engaged in NSSI within the two weeks, only increasing the variance explained to 6.4% ($X^2(5) = 6.522, p = .259$).

Further, the AIC, BIC, and AUC for the FFM and Personality Functioning combined regression model predicting prospective NSSI engagement were calculated: AIC = 266.67, BIC = 291.294, and AUC = .552. Overall, neither the FFM and Personality Functioning model nor the AMPD fit the data.

Lifetime Prevalence of Suicidal Behavior

To assess whether the FFM model combined with Criterion A (Personality Functioning) would explain greater variance in lifetime prevalence of suicidal thoughts and behaviors than the AMPD, binary logistic regressions were conducted, and model fit statistics were compared. The incremental utility of Personality Functioning and FFM traits depending on whether Personality Functioning were either placed in the model first or second, were analyzed. Then the model fit statistics were compared. The overall model in which the FFM traits were combined with Personality Functioning to predict historical suicidal thoughts and behaviors was significant ($X^2(6) = 25.766, p < .001$, Hosmer and Lemeshow $X^2(8) = 7.957, p = .438$ Nagelkerke $R^2 = 8.4\%$). When the normative (FFM) traits were placed in the model first, as shown in Table 21, the variance explained related to lifetime history of suicidal thoughts and behaviors was significant at 6.5% ($X^2(5) = 19.830, p = .001$). Personality Functioning was then added to the model and significantly incremented the variance explained by the normative traits to 8.4% ($X^2(1) = 5.937, p = .015$). In addition, when Personality Functioning was placed first in the model, as shown in Table 22, the variance explained was significant at 2.5% ($X^2(1) = 7.400, p = .007$). When the normative personality traits were added to the model, they significantly incremented the variance explained on whether someone had a history of NSSI engagement to 8.4% ($X^2(5) = 18.366, p = .003$).

Within the logistic regression, the variables Personality Functioning (OR = 1.004, $p = .016$), Conscientiousness (OR = 2.010, $p = .036$), and Agreeableness (OR = 2.277, $p = .024$) demonstrated increased odds of lifetime prevalence of suicidal thoughts and behavior. Extraversion (OR = 0.364, $p = .006$) demonstrated decreased odds of historical suicidal behavior. When comparing the AIC, BIC, and AUC between the FFM and Personality Functioning (AIC =

534.4, BIC= 562.266, and AUC= .608) to the AMPD (AIC= 499.47, BIC= 527.306, and AUC= .713) regression models, the AMPD had the lowest AIC and BIC scores and the higher discrimination score with AUC; therefore, the best-fit model for previous suicidal thoughts and behaviors was the AMPD.

Discussion

The current study examined the utility of the Alternative Model of Personality Disorders in predicting self-harm behavior. Although few studies have examined the specific components of the AMPD (i.e., maladaptive traits and personality functioning) relationship to self-harm independently (Benzi et al., 2018; Somma et al., 2019; Turner et al., 2018) prior research has not examined the relationship between the AMPD and self-harm. Our findings suggest that maladaptive traits and personality functioning demonstrated unique relationships with NSSI and suicidal behavior. The AMPD was the best-fitting modeling and more accurate in predicting self-harm behavior, compared to the FFM model for historical NSSI engagement. Further, our findings also suggest that Criterion A, when combined with normative FFM traits demonstrated to be a better model fit compared to the AMPD regarding historical NSSI engagement but not with suicide.

The findings suggest that maladaptive personality traits are significantly related to self-harm behavior. Each maladaptive personality trait had a significant positive relationship to historical NSSI engagement and historical suicidal thoughts and behaviors. This was consistent with our hypotheses. The findings of this study also align with previous literature that suggests that Negative Affect, Detachment, Antagonism and Disinhibition are related to NSSI and suicide (Hasking et al., 2019; Somma et al., 2019; Turner et al., 2018). However, Psychoticism was the only maladaptive trait that had a significant relationship with prospective NSSI engagement.

This was not consistent with the hypothesis that Negative Affect, Disinhibition, Detachment, and Antagonism would be associated with a greater likelihood of prospective NSSI engagement. The relationships between prospective NSSI and psychoticism could likely be due to the maladaptive trait being strongly associated with thought dysfunction (Sellbom et al., 2019). Another potential explanation is that many individuals did not complete the follow-up survey, and those who did demonstrated less extreme scores on maladaptive personality traits. Further the base rate for prospective NSSI engaging was relatively low at 14.2%. These factors ultimately led to difficulties in finding relationships between the personality trait and prospective NSSI as well as potentially bias the observed relationships for prospective NSSI.

Overall, historical self-harm was related to each maladaptive personality traits. From a clinical perspective, this could help inform treatment with those who have engaged in self-harm. Personality traits have the potential to change very slowly over time, a change that typically is seen in behavioral manifestations (Clark, 2009; Sauer-Zavala et al., 2017). As a result, psychotherapy interventions can be used to aid in the treatment of maladaptive variants of traits that may be contributing to the initiation and maintenance of self-harm. For instance, individuals with high rates of neuroticism/negative affect could benefit from using Mindfulness-Based Cognitive Therapy, distress tolerance skills training, or cognitive restructuring to reduce the propensity for experiencing negative emotions by targeting the way in which individuals address distress and react to emotions (Bentley et al., 2014; Armstrong & Rimes, 2016). Further, relaxation strategies, monitoring one's thoughts, and social skills training (i.e., assertiveness training and learning conversation skills) have shown to be useful when working with individuals higher on the traits of Antagonism (low Agreeableness) and Detachment (low Extraversion; Glinski & Page, 2010). Therefore, understanding what personality characteristics

may be contributing to an individual's self-harm engagement is useful in informing and tailoring treatment protocols to the individual.

The current study also found that the AMPD Criterion A was significantly related with self-harm behavior. Specifically, consistent with the hypothesis, greater impairments in Personality Functioning were associated with historical and prospective NSSI and suicidal behavior. This relationship highlights how personality functioning is inherently tied to self-harm behavior. This finding is consistent with components of several theories of NSSI and suicide, which indicate interpersonal and intrapersonal factors confer risk for these behaviors (Claes et al., 2014; Gandhi et al., 2017; Glassmarm et al., 2007; Goldberg & Israelshvili, 2017; Luyckx et al., 2015b).

Further, it was found that Personality Functioning and the pathological personality traits, together, contributed to the prediction of historical NSSI and suicide. Personality Functioning was significantly related to self-harm, suggesting that individuals with worse impairments in interpersonal and intrapersonal functioning were more likely to have previously and prospectively engage in self-harm and had a history of suicidal thoughts and behaviors. Maladaptive traits, likewise, were significantly related to historical self-harm, suggesting that individuals with impairments in Negative Affect and Detachment (specific to suicide) are more likely to have previously engaged in NSSI or had suicidal thoughts and behaviors. Contrary to the hypothesis related to prospective NSSI, maladaptive traits were not related to future NSSI. Further, maladaptive traits and Personality Functioning, together, did not increment the prediction of historical or prospective self-harm or suicide. This suggests that the pathology measured in Criterion A may already be accounted for in Criterion B. This is consistent with the literature that suggests that Criterion A and B of the AMPD may not be distinct constructs

(Anderson & Sellbom, 2018; Clark & Ro, 2014; Nuzum et al., 2019). One clinical implication of this finding is that it may not be necessary to assess for both Criterion A and B; therefore, reducing the burden of how many measures an individual needs to complete to assess for NSSI and suicide risk.

In addition, the results suggest that the Alternative Model of Personality Disorders explained greater variance with historical self-harm compared to the Five Factor Model. There is a large amount of support suggesting that the FFM normative personality traits are relevant for predicting NSSI (Claes et al., 2010; Lynam et al., 2011; Mullins-Sweatt et al., 2013). However, this model does not account for personality pathology's role in the prediction of NSSI and suicide. Therefore, this study compared the two models to determine which is better able to inform and identify risk for self-harm and suicidal behavior. The results of this study supported the hypothesis that the Alternative Model of Personality Disorders would explain greater variance within self-harm compared to the Five Factor Model. Specifically, the AMPD demonstrated to be a better model fit than the FFM for historical NSSI and suicide. However, regarding prospective NSSI engagement, neither the AMPD nor the FFM significantly predicted who would engage in NSSI in the following two weeks. This suggests that neither model sufficiently fit the data. Therefore, it seems that personality traits and Personality Functioning are associated with lifetime engagement in self-harm behavior; however, these personality factors are not able to accurately predict short-term engagement in NSSI. Overall, this relationship validates the AMPD as a model that offers more precise information at the extreme ends of the trait spectrum as many individuals who engaged in self-harm also had elevated scores on various personality traits (Suzuki et al., 2015). Therefore, the AMPD was better able to account for

personality pathology, allowing for a more inclusive, accurate prediction of who might engage in self-harm historically compared to the FFM.

Further, we found that adding Criterion A of the AMPD combined with the FFM traits led to an increase in explained variance of NSSI. The FFM had a large body of literature that supports the relationships with NSSI behaviors (Claes et al., 2010; Geusen & Beullens, 2018; Lynam et al., 2011; Mullins-Sweatt et al., 2013; Rottman et al., 2009; Widiger & Mullins-Sweatt, 2009; Widiger & Trull, 2007). However, the FFM was developed to assess normative personality characteristics and is likely not capturing impairment in personality functioning—which is assessed within the AMPD Criterion A (Hopwood et al., 2019; Widiger & Mullins-Sweatt, 2010). Similarly, one of the critiques and limitations of the FFM is that it relies solely on traits to explain personality which does not convey information for the fluctuating quality of personality (McAdams, 1992; Trull & Widiger, 2013). Therefore, by incorporating Personality Functioning, which accounts for the individuals' perceptions of themselves or others, to the normative traits, personality pathology was able to account for additional variance attributed to pathology that is not accounted for within the FFM. In addition, the FFM traits were able account for the general style of behavior while Criterion A of the AMPD accounts for personality pathology.

Specifically, we found that when Personality Functioning was added to the FFM traits, Personality Functioning incrementing the utility of the FFM in predicting self-harm and the overall model demonstrated to be a better model fit than the AMPD for historical NSSI. These results support the literature that suggests that the FFM traits are correlated with NSSI and validated the need for an alternative model to assess for personality pathology, a significant factor that is absent from the normative personality model (Benzi et al., 2018; Brown, 2009; Claes et al., 2010; MacLaren & Best, 2010; You et al., 2016).

Contrary to our hypothesis, the AMPD was the best fit model for lifetime prevalence of suicidal behavior. This is likely due to suicidal behavior being the result of more severe psychopathology and distress than NSSI. Specifically, those who engage in suicidal behaviors are likely experiencing intolerable psychological distress in which individuals may view suicide as their only escape (Pompili et al., 2015). This differs from NSSI in which individuals engage in self-harm primarily to reduce overwhelming negative emotions (Breen et al., 2013; Edmondson et al., 2016; Schoenleber & Berenbaum, 2012). In addition, some individuals may find that NSSI behaviors are no longer successful in serving its function (i.e., reducing emotional distress) and, as a result, suicide ideation may then develop as they may feel more hopeless about their situation (Stewart et al., 2017; Taliaferro & Muehlenkamp, 2014). Therefore, based on the increased severity of symptomology association with suicide, individuals with a history of suicidal thoughts and behaviors likely have a higher prevalence of pathology compared to those who just engage in NSSI. As a result, maladaptive personality traits maybe capturing the information at the maladaptive levels of the trait spectrum that is overlooked when using normative traits.

There are a few limitations related to this study. First, NSSI and suicide were treated as binary outcomes. Though this is consistent with previous research due to NSSI historically having lower base rates, (Brickman et al., 2014; Gratz, 2001; Wester, et al., 2017; Whitlock et al., 2011; Whitlock et al., 2006), the current study found that 72.5% of participants engaged in some form of NSSI historically. The elevated base rate could potentially be due to the data having been collected during the COVID-19 pandemic which has affected overall psychological distress within the public—which could have led to individuals engaging in self-harm who normally would not have (Xiong et al., 2020). Therefore, individuals who had an extensive

history of self-harm, those who had only engaged in self-harming behaviors once, or those who may have only engaged in NSSI because of pandemic-related stressors, were characterized as one group as if their behavior was the same. However, those who began engaging in self-harm prior to and/or despite of the pandemic may be more related to early signs of personality impairment as opposed to those who may have engaged in NSSI as a coping mechanism to the added stress of the pandemic—not necessarily in relation to the presence of pathology. As a result, there was significant variability with whom was identified as engaging in self-harm limiting the understanding of severity of self-harm’s relation to the AMPD.

Another limitation was the low response rate for the second assessment and, subsequently, the differences between participants who completed both assessments compared to only the initial assessment. Those who completed the entire study had less severe personality pathology compared to those who only participated in the first survey. Therefore, the results pertaining to the perspective NSSI engagement are limited to individuals with less severe personality and psychopathology—who are also less likely to engage in self-harm. As a result, these findings may not generalize to other populations and are limited to the range of characteristics within this group and history of previous NSSI.

In addition, the sample was generally less diverse than the general population. Although we intentionally only recruited biological females between the ages of 18-24, a significant portion of the sample identified as Caucasian. Despite efforts to collect a diverse sample by using Amazon MTurk as opposed to relying exclusively on an undergraduate sample at a midwestern university, the results are limited to Caucasian females. Further, the current study relied solely on self-report data. This leads to several biases that need to be considered when interpreting the results. Due to the nature of self-report studies, participants are asked to be introspective and

provide retrospective report of specific behaviors that may have begun many years prior to their participation. Therefore, participants may over or under report their self-harm behavior as they must think back to what types of behaviors they had engaged in, how often they may have engaged in them, or they may be unable to accurately respond due to individual limits in self-reflection and ability to accurately remember their own behavior.

Future research may seek to better understand how the AMPD may be used to distinguish between groups of those who self-harm. Specifically, this study showed that the AMPD Criterion A was shown to be related to NSSI in general, however it is unclear in what way Criterion A is related to self-harm. For example, Personality Functioning may be related to frequency of self-harm, age of onset, or severity due to these factors of NSSI relating to overall pathology (Klonsky & Olino, 2008). Further, some individuals may try NSSI once but not use it again and they may differ in Personality Functioning compared to those individuals who persist in NSSI engagement. Similarly, there may be distinct differences among those who have attempted suicide and engage in NSSI compared to those who just engage in NSSI. Therefore, distinguishing how Personality Functioning, as well as maladaptive personality traits, may differ among these distinct groups would clarify the underlying factors contributing to self-harm engagement. Personality Functioning may also relate to the function of self-harm and, as a result, may help highlight appropriate interventions as well as prognosis for individuals engaging in NSSI. More precise understanding of how the AMPD is related to NSSI and suicide could further the understanding of self-harm engagement.

In addition, assessing how the AMPD relates to male's, individuals from the LGBTQIA+ community, as well as those from racial and ethnically diverse groups who engage in NSSI and suicidal thoughts and behaviors is needed. There are various gender differences among those

who engage in self-harm which supported the intent of limiting the study to include females, specifically to reduce variance within the data. However, as a result, it is unclear how the current study's findings would relate to males and future research is needed to address the AMPD's relationship among males who self-harm. Currently, around 4.1% of males have engaged in self-harm at least once in their life (Somberger et al., 2012). Males are more likely to engage in high-risk behaviors that might manifest in provoking fights with others, reckless driving, and burning oneself, engage in self-harm later in life compared to females, and tend to not endorse emotion-regulation as a function for self-harm which differs greatly from females (Bresin & Schoenleber, 2015; Green & Jakupcak, 2016; Victor et al., 2018).

Similarly, those who identify as a part of the sexual and gender minority community experience high rates of psychological distress related to their identity, social relationships, and/or with feelings of shame or guilt (Aboussouan et al., 2019; Meyer, 2003). As a result, these individuals tend to be at an increased risk for self-harming behavior (Arcelus et al., 2016; Bubsy et al., 2020). Further, there are various differences in self-harm prevalence amongst different racial and ethnic identities. The literature suggests that those who are Native American and biracial have significantly higher rates of NSSI than Caucasians, individuals from the Hispanic or Latinx communities have similar rates to Caucasian peers, and individuals who are African American or Black and Middle Eastern have the lowest rates of self-harm behavior (Croyle, 2007; Gholamrezaei et al., 2017; Kutentzel et al., 2012). Therefore, it is likely that the AMPD does not relate to males, the LGBTQIA+ community, or individuals from racial and ethnic minorities in the same way it has been shown to relate to biologically female Caucasians.

Overall, the current study examined the relationship between the Alternative Model of Personality Disorders from the Five Factor Model in predicting self-harm behavior. The

findings of the current study support the use of the AMPD over the FFM traits alone in assessing NSSI and suicidal behavior. The AMPD Criterion A and B both accounted for personality pathology and, as a result, each demonstrated utility in identifying prior NSSI engagement. Though Personality Functioning did not increment the prediction of the maladaptive personality traits, it did significantly increment the variance explained by the normative traits. This indicates that personality traits are not enough to understand self-harm's relationship with personality and accounting for personality pathology is necessary. When directly compared to the FFM the AMPD was better able to explain the relationship between personality and NSSI and suicidal thoughts and behavior. Therefore, the AMPD should be used to assess for these maladaptive behaviors as opposed to normative trait models. Ultimately, this study allows for a more comprehensive understanding of how Personality Functioning and personality traits can better assess those at risk and help inform treatment for those engaging in self-harm.

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Table 1*AMPD traits relationship to the FFM traits*

AMPD Traits	AMPD Traits Measure	Relation to FFM Traits
Negative Affect	Emotional lability	Neuroticism (+)
Detachment	Withdrawal, avoidance	Extraversion (-)
Disinhibition	Impulsivity, distractibility	Conscientiousness (-)
Antagonism	Manipulativeness, grandiosity	Agreeableness (-)
Psychoticism	Unusual beliefs and experiences	Openness to Experience (-)

Table 2
Participant Demographic Characteristics

Demographics	Total Sample	MTurk (N= 275)	Undergraduates (N= 125)	X ²	df
Age ^A	21.77 (2.31)	22.79(1.91)	19.52(1.28)		
Gender				2.988	3
Female	99.00%	99.27%	99.84%		
Male	0.00%	0.36%	0.00%		
Transgender	0.30%	0.00%	0.80%		
Other	0.50%	0.36%	0.80%		
Race/Ethnicity ^B				1.231	1
Caucasian	88.3%	89.5%	85.6%		
All Other Race/Ethnicities	11.9%	10.6%	14.4%		
African American or Black	2.3%	1.1%	4.8%		
Latino/a/x	2.8%	2.5%	3.2%		
Asian American	4.0%	5.1%	1.6%		
Native American or Alaskan Native	2.0%	1.5%	3.2%		
Other	0.8%	0.4%	1.6%		
Education				230.900***	7
Less than high school	1.3%	1.5%	0.8%		
High school and graduate equivalent	12.1%	6.6%	24%		
Some college	29.0%	10.2%	70.4%		
Associate or 2-year degree	1.5%	1.1%	2.4%		
Bachelor's degree or 4-year degree	28.5%	41.1%	0.8%		
Some graduate or professional studies	2.3%	2.5%	1.6%		
Master's degree	25.5%	37.1%	0.0%		

Note. ^A Mean (Standard Deviation). ^B Chi square analysis on undergraduate and MTurk sample conducted between Caucasian and All Other Race/Ethnicities, collectively, due to the limited number of participants identifying as various race/ethnicities.
*p < .05, **p < .01, ***p < .001.

Table 3*Mean and Standard Deviations among the variables for the total sample*

	Mean	SD	Skew	Kurtosis
Personality Functioning				
Total	326.125	87.071	-0.129	-0.743
Interpersonal	143.630	41.763	-0.091	-0.830
Intrapersonal	182.495	47.642	-0.171	-0.654
AMPD Traits				
Negative Affect	1.615	0.607	-0.242	-0.056
Detachment	1.276	0.700	-0.133	-0.801
Antagonism	1.326	0.729	-0.226	-1.005
Disinhibition	1.388	0.640	-0.189	-0.501
Psychoticism	1.388	0.721	-0.301	-0.839
FFM Traits				
Neuroticism	3.329	0.498	0.372	-0.012
Extraversion	3.470	0.476	0.213	0.044
Conscientiousness	3.458	0.452	0.298	0.221
Agreeableness	3.532	0.446	0.210	0.007
Openness to Experience	3.450	0.475	0.312	-0.216

Table 4
Correlations Between Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 NA	1.00												
2 DET	0.596*	1.00											
3 ANT	0.467*	0.786*	1.00										
4 DIS	0.699*	0.773*	0.730*	1.00									
5 PSY	0.638*	0.821*	0.823*	0.824*	1.00								
6 Total	0.494*	0.826*	0.699*	0.832*	0.823*	1.00							
7 INTER	0.592*	0.818*	0.829*	0.799*	0.829*	0.970*	1.00						
8 INTRA	0.706*	0.792*	0.733*	0.821*	0.786*	0.977*	0.897*	1.00					
9 NEUR	0.405*	0.495*	0.448*	0.499*	0.533*	0.494*	0.498*	0.467*	1.00				
10 EXT	0.375*	0.532*	0.573*	0.559*	0.570*	0.581*	0.588*	0.547*	0.602*	1.00			
11 CONS	0.421*	0.377*	0.263*	0.460*	0.400*	0.389*	0.347*	0.407*	0.650*	0.542*	1.00		
12 AGR	0.496*	0.397*	0.377*	0.512*	0.467*	0.453*	0.437*	0.446*	0.650*	0.621*	0.635*	1.00	
13 OPEN	0.327*	0.494*	0.566*	0.493*	0.552*	0.529*	0.541*	0.492*	0.573*	0.733*	0.469*	0.605*	1.00

Note. NA= Negative Affect, DET= Detachment, ANT= Antagonism, DIS= Disinhibition, PSY= Psychoticism, INTER= Interpersonal, INTRA= Intrapersonal, NEUR= Neuroticism, EXT= Extraversion, CONS= Conscientiousness, AGR= Agreeableness, OPEN= Openness to experience.

* Significant at the <.001 level (2-tailed).

Table 5*Differences between those who completed part two from those who only completed part one*

	Completed Initial Survey Only		Completed Follow-Up Survey		X ²	df
	<i>n</i>	%	<i>n</i>	%		
Historic NSSI Engagement	220	55.00	70	17.50	24.828***	1
Suicidal Thoughts and Behaviors	151	37.75	67	16.75	0.059	1
Race/Ethnicity					.591	1
Caucasian	201	50.26	152	38.0		
All other race/ethnicities	19	4.75	28	7.0		
Education					29.099***	7
Less than high school	3	0.75	2	0.40		
High school and graduate equivalent	23	5.75	24	6.00		
Some college	47	11.75	69	17.25		
Associate or 2-year degree	0	0.00	6	1.50		
Bachelor's degree or 4-year degree	78	19.50	36	9.00		
Some graduate/professional schooling	5	1.25	4	1.00		
Master's degree	64	16.00	38	9.50		

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

Table 6*Differences between those who completed part two from those who only completed part one*

	Completed Initial Survey Only		Completed Follow-Up Survey		<i>t</i> (<i>df</i>)	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Age	22.06	2.29	21.42	2.28	2.796(398)**	2.286
Criterion A	348.93	80.00	298.06	87.43	6.044(395)***	83.410
Negative Affect	1.68	0.57	1.53	0.64	2.420(397)**	0.604
Detachment	1.44	0.66	1.07	0.70	5.461(397)***	0.676
Antagonism	1.50	0.69	1.12	0.72	5.398(396)***	0.705
Disinhibition	1.56	0.58	1.18	0.65	6.004(396)***	0.613
Psychoticism	1.53	0.64	1.14	0.75	5.647(396)***	0.694
Neuroticism	3.41	0.53	3.24	0.44	3.420(398)***	0.491
Extraversion	3.58	0.48	3.34	0.44	5.012(398)***	0.462
Conscientiousness	3.50	0.48	3.40	0.42	2.221(398)*	0.450
Agreeableness	3.61	0.47	3.44	0.40	3.881(398)***	0.439
Openness	3.55	0.50	3.33	0.41	4.553(398)***	0.464

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

Table 7*Point-Biserial Correlations for Personality and Self-Harm behavior*

	Historical NSSI	Prospective NSSI	History of Suicide
Personality Functioning			
Total Score	0.258***	0.128*	0.136**
Maladaptive Personality Traits			
Negative Affect	0.286***	0.106	0.321***
Detachment	0.266***	0.095	0.192***
Antagonism	0.278***	0.101	0.105*
Disinhibition	0.292***	0.109	0.153**
Psychoticism	0.309***	0.141*	0.133**
Normative Personality Traits			
Neuroticism	0.218***	0.018	0.110*
Extraversion	0.218***	-0.030	0.026
Conscientiousness	0.209***	0.047	0.162**
Agreeableness	0.282***	0.000	0.162**
Openness to Experience	0.259***	-0.015	0.070

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

Table 8*Binary Logistic Regression for Historical NSSI Engagement and AMPD: Traits First*

	R^2	β	SE	Wald's Z	OR	CI 95%
Step 1	.155***					
(Intercept)		-0.899**	0.335	7.186	0.407	
Negative Affect		0.583*	0.276	4.459	1.792	1.043-3.079
Detachment		-0.109	0.321	0.115	0.897	0.487-1.682
Antagonism		0.350	0.309	1.287	1.419	0.775-2.599
Disinhibition		0.135	0.358	0.143	1.145	0.568-2.310
Psychoticism		0.395	0.373	1.121	1.484	0.715-3.080
Step 2	.155					
(Intercept)		-0.731	0.564	1.678	0.482	
Negative Affect		0.611*	0.286	4.561	1.841	1.052-3.225
Detachment		-0.072	0.337	0.045	0.931	0.481-1.800
Antagonism		0.391	0.328	1.422	1.478	0.778-2.810
Disinhibition		0.175	0.374	0.220	1.192	0.573-2.478
Psychoticism		0.405	0.374	1.172	1.499	0.720-3.118
Criterion A Total		-0.001	0.003	0.137	0.999	0.993-1.005

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Table 9

Binary Logistic Regression for Historical NSSI Engagement and AMPD: Personality Functioning First

	R^2	β	SE	Wald's Z	OR	CI 95%
Step 1	.111***					
(Intercept)		-1.411**	0.443	10.150	0.244	
Criterion A Total		0.008***	0.001	28.742	1.008	1.005-1.010
Step 2	.155*					
(Intercept)		-0.731	0.564	1.678	0.482	
Negative Affect		0.611*	0.286	4.561	1.841	1.052-3.225
Detachment		-0.072	0.337	0.045	0.931	0.481-1.800
Antagonism		0.391	0.328	1.422	1.478	0.778-2.810
Disinhibition		0.175	0.374	0.220	1.192	0.573-2.478
Psychoticism		0.405	0.374	1.172	1.499	0.720-3.118
Criterion A Total		-0.001	0.003	0.137	0.999	0.993-1.005

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Table 10*Binary Logistic Regression for Prospective NSSI Engagement and AMPD: Traits First*

	R^2	β	SE	Wald's Z	OR	CI 95%
Step 1	.037					
(Intercept)		-1.945***	0.476	16.674	0.143	
Negative Affect		0.134	0.376	0.127	1.144	0.547-2.390
Detachment		-0.322	0.431	0.558	0.725	0.311-1.687
Antagonism		-0.051	0.407	0.016	0.950	0.428-2.111
Disinhibition		-0.055	0.510	0.012	0.946	0.348-2.571
Psychoticism		0.754	0.533	2.000	2.126	0.747-6.049
Step 2	.040					
(Intercept)		-2.415**	0.792	9.298	0.089	
Negative Affect		0.061	0.390	0.025	1.063	0.495-2.281
Detachment		-0.440	0.461	0.910	0.644	0.261-1.589
Antagonism		-0.140	0.426	0.109	0.869	0.377-2.001
Disinhibition		-0.162	0.530	0.093	0.850	0.301-2.404
Psychoticism		0.711	0.539	1.740	2.036	0.708-5.855
Criterion A Total		0.003	0.004	0.566	1.003	0.995-1.012

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Table 11

Binary Logistic Regression for Prospective NSSI Engagement and AMPD: Personality Functioning First

	R^2	β	SE	Wald's Z	OR	CI 95%
Step 1	.025*					
(Intercept)		-2.403***	0.608	15.610	0.090	
Criterion A Total		0.003*	0.002	3.987	1.004	1.000-1.007
Step 2	.040					
(Intercept)		-2.415**	0.792	9.298	0.089	
Negative Affect		0.061	0.390	0.025	1.063	0.495-2.281
Detachment		-0.440	0.461	0.910	0.644	0.261-1.589
Antagonism		-0.140	0.426	0.109	0.869	0.377-2.001
Disinhibition		-0.162	0.530	0.093	0.850	0.301-2.404
Psychoticism		0.711	0.539	1.740	2.036	0.708-5.855
Criterion A Total		0.003	0.004	0.566	1.003	0.995-1.012

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Table 12*Binary Logistic Regression for Suicidal Behavior and AMPD: Traits First*

	R^2	β	SE	Wald's Z	OR	CI 95%
Step 1	.172**					
(Intercept)		-1.697***	0.342	24.562	0.183	
Negative Affect		1.646***	0.297	30.644	5.188	3.896-9.294
Detachment		0.629*	0.306	4.233	1.876	1.030-3.415
Antagonism		0.034	0.296	0.013	1.034	0.579-1.846
Disinhibition		-0.586	0.354	2.749	0.556	0.278-1.113
Psychoticism		-0.593	0.356	2.677	0.558	0.278-1.122
Step 2	.182					
(Intercept)		-0.904	0.539	2.809	5.899	
Negative Affect		1.775***	0.308	33.179	2.202	3.225-10.790
Detachment		0.789*	0.320	6.087	1.260	1.176-4.123
Antagonism		0.231	0.314	0.543	0.676	0.681-2.332
Disinhibition		-0.392	0.368	1.132	0.589	0.328-1.391
Psychoticism		-0.529	0.359	2.167	0.994	0.292-1.191
Criterion A Total		-0.006	0.003	3.487	0.405	0.989-1.000

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Table 13*Binary Logistic Regression for Suicidal Behavior and AMPD: Personality Functioning First*

	R^2	β	SE	Wald's Z	OR	CI 95%
Step 1	.025**					
(Intercept)		-0.877*	0.398	4.859	0.416	
Criterion A Total		0.003**	0.001	7.418	1.003	1.001-1.006
Step 2	.182					
(Intercept)		-0.904	0.539	2.809	5.899	
Negative Affect		1.775***	0.308	33.179	2.202	3.225-10.790
Detachment		0.789*	0.320	6.087	1.260	1.176-4.123
Antagonism		0.231	0.314	0.543	0.676	0.681-2.332
Disinhibition		-0.392	0.368	1.132	0.589	0.328-1.391
Psychoticism		-0.529	0.359	2.167	0.994	0.292-1.191
Criterion A Total		-0.006	0.003	3.487	0.405	0.989-1.000

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Table 14
Comparing Models of Personality to assess Historical NSSI Engagement

	R^2	AIC	BIC	AUC	β	SE	Wald's Z	OR	CI 95%
AMPD	.155***	433.88	461.713	.770					
(Intercept)					-0.731	0.564	1.678	0.482	
Negative Affect					0.611*	0.286	4.561	1.841	1.052-3.225
Detachment					-0.072	0.337	0.045	0.931	0.481-1.800
Antagonism					0.391	0.328	1.422	1.478	0.778-2.810
Disinhibition					0.175	0.374	0.220	1.192	0.573-2.478
Psychoticism					0.405	0.374	1.172	1.499	0.720-3.118
Criterion A Total					-0.001	0.003	0.137	0.999	0.993-1.005
FFM	.142***	440.57	464.500	.697					
(Intercept)					-6.198***	1.285	23.276	0.002	
Neuroticism					0.150	0.357	0.177	1.162	0.577-2.338
Extraversion					-0.082	0.382	0.046	0.922	0.436-1.949
Conscientiousness					0.234	0.371	0.400	1.264	0.612-2.613
Agreeableness					0.982*	0.399	6.041	2.669	1.220-5.839
Openness					0.817*	0.382	4.566	2.263	1.070-4.785

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Table 15
Comparing Models of Personality to assess Prospective NSSI Engagement

	R^2	AIC	BIC	AUC	β	SE	Wald's Z	OR	CI 95%
AMPD	.040	269.86	294.449	.619	-2.415**	0.792	9.298	0.089	
(Intercept)					0.061	0.390	0.025	1.063	0.495-2.281
Negative Affect					-0.440	0.461	0.910	0.644	0.261-1.589
Detachment					-0.140	0.426	0.109	0.869	0.377-2.001
Antagonism					-0.162	0.530	0.093	0.850	0.301-2.404
Disinhibition					0.711	0.539	1.740	2.036	0.708-5.855
Psychoticism					0.003	0.004	0.566	1.003	0.995-1.012
Criterion A Total									
FFM	.026	276.73	297.880	.579	-1.529	1.411	1.174	0.217	
(Intercept)					0.070	0.492	0.020	1.073	0.409-2.815
Neuroticism					-0.387	0.501	0.596	0.679	0.255-1.813
Extraversion					0.487	0.494	0.970	1.627	0.618-4.284
Conscientiousness					-0.116	0.508	0.052	0.890	0.329-2.411
Agreeableness					0.034	0.503	0.005	1.035	0.386-2.771
Openness									

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Table 16
Comparing Models of Personality to assess Suicidal Behavior

	R^2	AIC	BIC	AUC	β	SE	Wald's Z	OR	CI 95%
AMPD	.183***	499.47	527.306	.713					
(Intercept)					-0.904	0.539	2.809	5.899	
Negative Affect					1.775	0.308	33.179	2.202	3.225-10.790
Detachment					0.789	0.320	6.087	1.260	1.176-4.123
Antagonism					0.231	0.314	0.543	0.676	0.681-2.332
Disinhibition					-0.392	0.368	1.132	0.589	0.328-1.391
Psychoticism					-0.529	0.359	2.167	0.994	0.292-1.191
Criterion A Total									
FFM	.062**	542.92	566.849	.637					
(Intercept)					-2.609**	0.969	7.254	0.074	
Neuroticism					-0.006	0.312	0.000	0.994	0.539-1.833
Extraversion					-0.769*	0.351	4.805	0.464	0.233-0.922
Conscientiousness					0.644	0.328	3.855	1.904	1.001-3.621
Agreeableness					0.769*	0.357	4.640	2.157	1.072-4.340
Openness					0.158	0.334	0.223	1.171	0.608-2.255

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Table 17*FFM and Personality Functioning predicting Historical NSSI engagement: Traits First*

	R^2	β	SE	Wald's Z	OR	CI 95%
Step 1	.146***					
(Intercept)		-6.298***	1.292	23.747	0.002	
Neuroticism		0.058	0.361	0.025	1.059	0.522-2.151
Extraversion		-0.090	0.384	0.055	0.914	0.431-1.938
Conscientiousness		0.285	0.373	0.583	1.329	0.640-2.760
Agreeableness		1.064**	0.404	6.943	2.898	1.313-6.394
Openness		0.811*	0.384	4.456	2.251	1.060-4.780
Step 2	.181**					
(Intercept)		-5.994***	1.324	20.483	0.002	
Neuroticism		-0.110	0.372	0.088	0.896	0.432-1.855
Extraversion		-0.445	0.405	1.206	0.641	0.289-1.418
Conscientiousness		0.330	0.384	0.742	1.391	0.656-2.951
Agreeableness		1.079**	0.415	6.752	2.942	1.304-6.638
Openness		0.668	0.391	2.917	1.951	0.906-4.200
Criterion A Total		0.006**	0.002	10.507	1.006	1.002-1.009

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Table 18

FFM and Personality Functioning predicting Historical NSSI engagement: Personality Functioning First

	R^2	β	SE	Wald's Z	OR	CI 95%
Step 1	.113***					
(Intercept)		-1.432**	0.443	10.475	0.239	
Criterion A Total		0.008***	0.001	29.523	1.008	1.005-1.010
Step 2	.181**					
(Intercept)		-5.994***	1.324	20.483	0.002	
Neuroticism		-0.110	0.372	0.088	0.896	0.432-1.855
Extraversion		-0.445	0.405	1.206	0.641	0.289-1.418
Conscientiousness		0.330	0.384	0.742	1.391	0.656-2.951
Agreeableness		1.079**	0.415	6.752	2.942	1.304-6.638
Openness		0.668	0.391	2.917	1.951	0.906-4.200
Criterion A Total		0.006**	0.002	10.507	1.006	1.002-1.009

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Table 19*FFM and Personality Functioning predicting Prospective NSSI engagement: Traits First*

	R^2	β	SE	Wald's Z	OR	CI 95%
Step 1	.010					
(Intercept)		-1.488	1.420	1.098	0.226	
Neuroticism		0.009	0.499	0.000	1.009	0.390-2.684
Extraversion		-0.352	0.502	0.490	0.703	0.263-1.883
Conscientiousness		0.499	0.495	1.014	1.647	0.624-4.350
Agreeableness		-0.064	0.510	0.016	0.938	0.345-2.549
Openness		-0.024	0.505	0.002	0.977	0.363-2.627
Step 2	.064**					
(Intercept)		-0.557	1.439	0.150	0.573	
Neuroticism		-0.186	0.512	0.133	0.830	0.304-2.262
Extraversion		-0.804	0.531	2.294	0.448	0.158-1.266
Conscientiousness		0.552	0.495	1.245	1.737	0.658-4.584
Agreeableness		-0.170	0.509	0.111	0.844	0.311-2.290
Openness		-0.256	0.509	0.252	0.774	0.285-2.101
Criterion A Total		0.007**	0.002	8.464	1.007	1.002-1.012

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Table 20

FFM and Personality Functioning predicting Prospective NSSI engagement: Personality Functioning First

	R^2	β	SE	Wald's Z	OR	CI 95%
Step 1	.025*					
(Intercept)		-2.389***	0.606	15.563	0.092	
Criterion A Total		0.003*	0.002	4.008	1.003	1.000-1.007
Step 2	.064					
(Intercept)		-0.557	1.439	0.150	0.573	
Neuroticism		-0.186	0.512	0.133	0.830	0.304-2.262
Extraversion		-0.804	0.531	2.294	0.448	0.158-1.266
Conscientiousness		0.552	0.495	1.245	1.737	0.658-4.584
Agreeableness		-0.170	0.509	0.111	0.844	0.311-2.290
Openness		-0.256	0.509	0.252	0.774	0.285-2.101
Criterion A Total		0.007**	0.002	8.464	1.007	1.002-1.012

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Table 21*FFM and Personality Functioning predicting Suicidal Behavior: Traits First*

	R^2	β	SE	Wald's Z	OR	CI 95%
Step 1	.065**					
(Intercept)		-2.664**	0.971	7.522	0.070	
Neuroticism		-0.089	0.316	0.080	0.915	0.493-1.698
Extraversion		-0.770*	0.352	4.791	0.463	0.233-0.923
Conscientiousness		0.676*	0.330	4.211	1.967	1.031-3.753
Agreeableness		0.833*	0.360	5.365	2.300	1.137-4.655
Openness		0.156	0.336	0.217	1.169	0.606-2.257
Step 2	.084*					
(Intercept)		-2.282*	0.985	5.366	0.102	
Neuroticism		-0.213	0.322	0.438	0.808	0.429-1.520
Extraversion		-1.011**	0.369	7.510	0.364	0.77-0.755
Conscientiousness		0.698*	0.334	4.380	2.010	1.045-3.864
Agreeableness		0.823*	0.363	5.130	2.277	1.117-4.640
Openness		0.047	0.341	0.019	1.048	0.537-2.045
Criterion A Total		0.004*	0.002	5.831	1.004	1.001-1.007

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Table 22*FFM and Personality Functioning predicting Suicidal Behavior: Personality Functioning First*

	R^2	β	SE	Wald's Z	OR	CI 95%
Step 1	.025**					
(Intercept)		-0.858*	0.396	4.684	0.424	
Criterion A Total		0.003**	0.001	7.254	1.003	1.001-1.006
Step 2	0.84**					
(Intercept)		-2.282*	0.985	5.366	0.102	
Neuroticism		-0.213	0.322	0.438	0.808	0.429-1.520
Extraversion		-1.011**	0.369	7.510	0.364	0.77-0.755
Conscientiousness		0.698*	0.334	4.380	2.010	1.045-3.864
Agreeableness		0.823*	0.363	5.130	2.277	1.117-4.640
Openness		0.047	0.341	0.019	1.048	0.537-2.045
Criterion A Total		0.004*	0.002	5.831	1.004	1.001-1.007

Note. OR = Odds Ratio, CI = Confidence Intervals for Odds Ratio.

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

Appendix A

LPRS-SR Page 1

LPFS - SR

Name/ID: _____

Instructions: For the following questions, please indicate the extent to which the statements are true for you:					
		Totally False, not at all True	Slightly True	Mainly True	Very True
1	Across many different situations, I manage to behave in a manner appropriate to that situation.	1	2	3	4
2	All I can really understand about other people are their weaknesses.	1	2	3	4
3	Almost no close relationship turns out well in the end.	1	2	3	4
4	Although I might have different feelings at different times, I can handle all of them pretty well.	1	2	3	4
5	Although I try, I can't seem to keep any successful, lasting relationships.	1	2	3	4
6	Although I value close relationships, sometimes strong emotions get in the way.	1	2	3	4
7	Events in my life can really change whether or not I feel good about myself.	1	2	3	4
8	Feedback from others plays a big role in determining what is important to me.	1	2	3	4
9	Getting close to others has little appeal to me.	1	2	3	4
10	Getting close to others just leaves me vulnerable and isn't really worth the risk.	1	2	3	4
11	I can appreciate the viewpoint of other people even when I disagree with them.	1	2	3	4
12	I can only get close to somebody who understands me very well.	1	2	3	4
13	I can only get close to someone who can acknowledge and address my needs.	1	2	3	4
14	I can step back and objectively evaluate the way that I'm feeling at any given time.	1	2	3	4
15	I can't always tell the difference between what is my opinion, and what is the way other people want me to think.	1	2	3	4
16	I can't even imagine living a life that I would find satisfying.	1	2	3	4
17	I can't stand it when there are sharp differences of opinion.	1	2	3	4
18	I don't have a clue about why other people do what they do.	1	2	3	4
19	I don't have many positive interactions with other people.	1	2	3	4
20	I don't pay much attention to, or care very much about, the effect I have on other people.	1	2	3	4
21	I don't understand what motivates other people at all.	1	2	3	4
22	I don't waste time thinking about my experiences, feelings, and actions.	1	2	3	4
23	I have a strong need for others to approve of me.	1	2	3	4
24	I have difficulty setting and completing goals.	1	2	3	4
25	I have little understanding of how I feel or what I do.	1	2	3	4
26	I have many satisfying relationships, both personally and on the job.	1	2	3	4
27	I have relationships, but not many that I consider to be very close.	1	2	3	4
28	I have some difficulty setting goals.	1	2	3	4
29	I have trouble deciding between different goals.	1	2	3	4
30	I mainly act in the moment, rather than focusing on long term goals.	1	2	3	4
31	I mainly pay attention to others to the extent that they are likely to impact me in some way.	1	2	3	4
32	I mainly pay attention to people based upon what they might do to me, or for me.	1	2	3	4
33	I never seem to have much hope that good things will happen to me.	1	2	3	4
34	I set personal standards for myself that are very difficult to satisfy.	1	2	3	4

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Instructions: For the following questions, please indicate the extent to which the statements are true for you:					
		Totally False, not at all True	Slightly True	Mainly True	Very True
35	I tend to feel either really good or really bad about myself.	1	2	3	4
36	I tend to let others set my goals for me, rather than come up with them on my own.	1	2	3	4
37	I try hard to be flexible and cooperative when dealing with others.	1	2	3	4
38	I typically understand other peoples' feelings better than they do.	1	2	3	4
39	I work on my close relationships, because they are important to me.	1	2	3	4
40	I'm confident about the difference between my values and those that others might want me to have.	1	2	3	4
41	I'm no good at stepping back and looking objectively at my life.	1	2	3	4
42	I'm not sure exactly what standards I've set for myself.	1	2	3	4
43	I'm only interested in relationships that can provide me with some comfort.	1	2	3	4
44	I'm very aware of the impact I'm having on other people.	1	2	3	4
45	In a close relationship, it's as if I can't live without the other person.	1	2	3	4
46	In close relationships I tend to be torn between being afraid and being "clingy".	1	2	3	4
47	In many situations I feel quite differently than others seem to expect me to feel.	1	2	3	4
48	In very trying times, I sometimes lose sight of what is important to me.	1	2	3	4
49	Interacting with other people usually leaves me feeling confused.	1	2	3	4
50	It seems as if most other people have their life together more than I.	1	2	3	4
51	I've got goals that are reasonable given my abilities.	1	2	3	4
52	I've had lasting relationships, but they haven't always been very satisfying.	1	2	3	4
53	Life is a dangerous place without a lot of meaning to it.	1	2	3	4
54	Many people around me have very destructive motives.	1	2	3	4
55	Most things that I do are a reaction to what others do.	1	2	3	4
56	My emotions rapidly shift around.	1	2	3	4
57	My life is basically controlled by the actions of others.	1	2	3	4
58	My motives are mainly imposed upon me, rather than being a personal choice.	1	2	3	4
59	My personal standards change quite a bit depending upon circumstances.	1	2	3	4
60	Other people often expect too much from me.	1	2	3	4
61	People think I am pretty good at reading the feelings and motives of others in most situations.	1	2	3	4
62	People think I'm a "hater", but it's often more related to them than to me.	1	2	3	4
63	Relationships are mainly a source of pain and suffering.	1	2	3	4
64	Sometimes all I care about are my goals.	1	2	3	4
65	Sometimes I am too harsh on myself.	1	2	3	4
66	Sometimes I feel that certain other people are just like me; other times I believe they are nothing like me at all.	1	2	3	4
67	Sometimes I'm not very cooperative because other people don't live up to my standards.	1	2	3	4
68	Sometimes it is easy for me to overlook the impact that I'm having on others.	1	2	3	4

LPFS - SR

Name/ID: _____

Instructions: For the following questions, please indicate the extent to which the statements are true for you:					
		Totally False, not at all True	Slightly True	Mainly True	Very True
69	The key to a successful relationship is whether I am getting my needs met.	1	2	3	4
70	The standards that I set for myself often seem to be too demanding, or not demanding enough.	1	2	3	4
71	The way that others perceive me is totally different from the way that I really am.	1	2	3	4
72	There are parts of my personality that just don't fit together very well.	1	2	3	4
73	When dealing with people, I mainly pay attention to how they are likely to affect me.	1	2	3	4
74	When feelings get too strong, I try to shut myself off from them.	1	2	3	4
75	When I disagree with others, there often isn't much use in trying to see things from their perspective.	1	2	3	4
76	When I feel that I've done something well, I'm almost always right.	1	2	3	4
77	When I'm not doing well at something, I might get very angry or feel ashamed about my abilities.	1	2	3	4
78	When I'm successful I tend to feel like an imposter.	1	2	3	4
79	When others disapprove of me, it's difficult to keep my emotions under control.	1	2	3	4
80	When thinking about myself, I can get pretty narrow in my focus.	1	2	3	4

Appendix B

The Big Five Inventory–2 (BFI-2)

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

1	2	3	4	5
Disagree strongly	Disagree a little	Neutral; no opinion	Agree a little	Agree strongly

I am someone who...

- | | |
|--|---|
| <p>1. ___ Is outgoing, sociable.</p> <p>2. ___ Is compassionate, has a soft heart.</p> <p>3. ___ Tends to be disorganized.</p> <p>4. ___ Is relaxed, handles stress well.</p> <p>5. ___ Has few artistic interests.</p> <p>6. ___ Has an assertive personality.</p> <p>7. ___ Is respectful, treats others with respect.</p> <p>8. ___ Tends to be lazy.</p> <p>9. ___ Stays optimistic after experiencing a setback.</p> <p>10. ___ Is curious about many different things.</p> <p>11. ___ Rarely feels excited or eager.</p> <p>12. ___ Tends to find fault with others.</p> <p>13. ___ Is dependable, steady.</p> <p>14. ___ Is moody, has up and down mood swings.</p> <p>15. ___ Is inventive, finds clever ways to do things.</p> <p>16. ___ Tends to be quiet.</p> <p>17. ___ Feels little sympathy for others.</p> <p>18. ___ Is systematic, likes to keep things in order.</p> <p>19. ___ Can be tense.</p> <p>20. ___ Is fascinated by art, music, or literature.</p> <p>21. ___ Is dominant, acts as a leader.</p> <p>22. ___ Starts arguments with others.</p> <p>23. ___ Has difficulty getting started on tasks.</p> <p>24. ___ Feels secure, comfortable with self.</p> <p>25. ___ Avoids intellectual, philosophical discussions.</p> <p>26. ___ Is less active than other people.</p> <p>27. ___ Has a forgiving nature.</p> <p>28. ___ Can be somewhat careless.</p> <p>29. ___ Is emotionally stable, not easily upset.</p> <p>30. ___ Has little creativity.</p> | <p>31. ___ Is sometimes shy, introverted.</p> <p>32. ___ Is helpful and unselfish with others.</p> <p>33. ___ Keeps things neat and tidy.</p> <p>34. ___ Worries a lot.</p> <p>35. ___ Values art and beauty.</p> <p>36. ___ Finds it hard to influence people.</p> <p>37. ___ Is sometimes rude to others.</p> <p>38. ___ Is efficient, gets things done.</p> <p>39. ___ Often feels sad.</p> <p>40. ___ Is complex, a deep thinker.</p> <p>41. ___ Is full of energy.</p> <p>42. ___ Is suspicious of others' intentions.</p> <p>43. ___ Is reliable, can always be counted on.</p> <p>44. ___ Keeps their emotions under control.</p> <p>45. ___ Has difficulty imagining things.</p> <p>46. ___ Is talkative.</p> <p>47. ___ Can be cold and uncaring.</p> <p>48. ___ Leaves a mess, doesn't clean up.</p> <p>49. ___ Rarely feels anxious or afraid.</p> <p>50. ___ Thinks poetry and plays are boring.</p> <p>51. ___ Prefers to have others take charge.</p> <p>52. ___ Is polite, courteous to others.</p> <p>53. ___ Is persistent, works until the task is finished.</p> <p>54. ___ Tends to feel depressed, blue.</p> <p>55. ___ Has little interest in abstract ideas.</p> <p>56. ___ Shows a lot of enthusiasm.</p> <p>57. ___ Assumes the best about people.</p> <p>58. ___ Sometimes behaves irresponsibly.</p> <p>59. ___ Is temperamental, gets emotional easily.</p> <p>60. ___ Is original, comes up with new ideas.</p> |
|--|---|

Please check: Did you write a number in front of each statement?
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Appendix C

Personality Inventory for DSM-5 Faceted Brief Form (PID-5-FBF)–Adult

Name/ID: _____ Age: ____ Sex: __Male __Female Date: _____

Instructions to the individual receiving care: This is a list of things different people might say about themselves. We are interested in how you would describe yourself. There are no right or wrong answers. So you can describe yourself as honestly as possible, we will keep your responses confidential. We'd like you to take your time and read each statement carefully, selecting the response that best describes you.					Clinician Use	
Item	Very False or Often False	Sometimes or Somewhat False	Sometimes or Somewhat True	Very True or Often True		Item Score
1	Plenty of people are out to get me.	0	1	2	3	
2	I feel like I act totally on impulse.	0	1	2	3	
3	I change what I do depending on what others want.	0	1	2	3	
4	I usually do what others think I should do.	0	1	2	3	
5	I usually do things on impulse without thinking about what might happen as a result.	0	1	2	3	
6	Even though I know better, I can't stop making rash decisions.	0	1	2	3	
7	I really don't care if I make other people suffer.	0	1	2	3	
8	I always do things on the spur of the moment.	0	1	2	3	
9	Nothing seems to interest me very much.	0	1	2	3	
10	People have told me that I think about things in a really strange way.	0	1	2	3	
11	I almost never enjoy life.	0	1	2	3	
12	I am easily angered.	0	1	2	3	
13	I have no limits when it comes to doing dangerous things.	0	1	2	3	
14	To be honest, I'm just more important than other people.	0	1	2	3	
15	It's weird, but sometimes ordinary objects seem to be a different shape than usual.	0	1	2	3	

Name/ID (individual receiving care): _____

Personality Inventory for DSM-5 Faceted Brief Form (PID-5-FBF)–Adult, continued

16	I do a lot of things that others consider risky.	0	1	2	3
17	I worry a lot about being alone.	0	1	2	3
18	I often make up things about myself to help me get what I want.	0	1	2	3
19	I keep approaching things the same way, even when it isn't working.	0	1	2	3
20	I do what other people tell me to do.	0	1	2	3
21	I like to take risks.	0	1	2	3
22	Others seem to think I'm quite odd or unusual.	0	1	2	3
23	I love getting the attention of other people.	0	1	2	3
24	I worry a lot about terrible things that might happen.	0	1	2	3
25	I have trouble changing how I'm doing something even if what I'm doing isn't going well.	0	1	2	3
26	The world would be better off if I were dead.	0	1	2	3
27	I keep my distance from people.	0	1	2	3
28	I don't get emotional.	0	1	2	3
29	I prefer to keep romance out of my life.	0	1	2	3
30	I don't show emotions strongly.	0	1	2	3
31	I have a very short temper.	0	1	2	3
32	I get fixated on certain things and can't stop.	0	1	2	3
33	If something I do isn't absolutely perfect, it's simply not acceptable.	0	1	2	3

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Name/ID (individual receiving care): _____

Personality Inventory for DSM-5 Faceted Brief Form (PID-5-FBF)–Adult, *continued*

34	I often have unusual experiences, such as sensing the presence of someone who isn't actually there.	0	1	2	3	
35	I'm good at making people do what I want them to do.	0	1	2	3	
36	I'm always worrying about something.	0	1	2	3	
37	I'm better than almost everyone else.	0	1	2	3	
38	I'm always on my guard for someone trying to trick or harm me.	0	1	2	3	
39	I have trouble keeping my mind focused on what needs to be done.	0	1	2	3	
40	I'm just not very interested in having sexual relationships.	0	1	2	3	
41	I get emotional easily, often for very little reason.	0	1	2	3	
42	Even though it drives other people crazy, I insist on absolute perfection in everything I do.	0	1	2	3	
43	I almost never feel happy about my day-to-day activities.	0	1	2	3	
44	Sweet-talking others helps me get what I want.	0	1	2	3	
45	I fear being alone in life more than anything else.	0	1	2	3	
46	I get stuck on one way of doing things, even when it's clear it won't work.	0	1	2	3	
47	I'm often pretty careless with my own and others' things.	0	1	2	3	
48	I am a very anxious person.	0	1	2	3	
49	I am easily distracted.	0	1	2	3	
50	It seems like I'm always getting a "raw deal" from others.	0	1	2	3	
51	I don't hesitate to cheat if it gets me ahead.	0	1	2	3	

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Name/ID (individual receiving care): _____

Personality Inventory for DSM-5 Faceted Brief Form (PID-5-FBF)–Adult, continued

52	I don't like spending time with others.	0	1	2	3	
53	I never know where my emotions will go from moment to moment.	0	1	2	3	
54	I have seen things that weren't really there.	0	1	2	3	
55	I can't focus on things for very long.	0	1	2	3	
56	I steer clear of romantic relationships.	0	1	2	3	
57	I'm not interested in making friends.	0	1	2	3	
58	I'll do just about anything to keep someone from abandoning me.	0	1	2	3	
59	Sometimes I can influence other people just by sending my thoughts to them.	0	1	2	3	
60	Life looks pretty bleak to me.	0	1	2	3	
61	I think about things in odd ways that don't make sense to most people.	0	1	2	3	
62	I don't care if my actions hurt others.	0	1	2	3	
63	Sometimes I feel "controlled" by thoughts that belong to someone else.	0	1	2	3	
64	I make promises that I don't really intend to keep.	0	1	2	3	
65	Nothing seems to make me feel good.	0	1	2	3	
66	I get irritated easily by all sorts of things.	0	1	2	3	
67	I do what I want regardless of how unsafe it might be.	0	1	2	3	
68	I often forget to pay my bills.	0	1	2	3	
69	I'm good at conning people.	0	1	2	3	

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Name/ID (individual receiving care): _____

Personality Inventory for DSM-5 Faceted Brief Form (PID-5-FBF)–Adult, continued

70	Everything seems pointless to me.	0	1	2	3
71	I get emotional over every little thing.	0	1	2	3
72	It's no big deal if I hurt other peoples' feelings.	0	1	2	3
73	I never show emotions to others.	0	1	2	3
74	I have no worth as a person.	0	1	2	3
75	I am usually pretty hostile.	0	1	2	3
76	I've skipped town to avoid responsibilities.	0	1	2	3
77	I like being a person who gets noticed.	0	1	2	3
78	I'm always fearful or on edge about bad things that might happen.	0	1	2	3
79	I never want to be alone.	0	1	2	3
80	I keep trying to make things perfect, even when I've gotten them as good as they're likely to get.	0	1	2	3
81	My emotions are unpredictable.	0	1	2	3
82	I don't care about other peoples' problems.	0	1	2	3
83	I don't react much to things that seem to make others emotional.	0	1	2	3
84	I avoid social events.	0	1	2	3
85	I deserve special treatment.	0	1	2	3
86	I suspect that even my so-called "friends" betray me a lot.	0	1	2	3
87	I crave attention.	0	1	2	3

Personality Inventory for DSM-5 Faceted Brief Form (PID-5-FBF)–Adult (100 Item Version), page 5
 Maples JL, Carter NT, Few LR, Crego C, Gore WL, Samuel DB, Williamson RL, Lynam DR, Widiger TA, Markon KE, Krueger RF, & Miller, JD.
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 and by clinicians for use with their patients.

Name/ID (individual receiving care): _____

Personality Inventory for DSM-5 Faceted Brief Form (PID-5-FBF)–Adult, continued

88	Sometimes I think someone else is removing thoughts from my head.	0	1	2	3	
89	I simply won't put up with things being out of their proper places.	0	1	2	3	
90	I often have to deal with people who are less important than me.	0	1	2	3	
91	I get pulled off-task by even minor distractions.	0	1	2	3	
92	I try to do what others want me to do.	0	1	2	3	
93	I prefer being alone to having a close romantic partner.	0	1	2	3	
94	I often have thoughts that make sense to me but that other people say are strange.	0	1	2	3	
95	I use people to get what I want.	0	1	2	3	
96	I've had some really weird experiences that are very difficult to explain.	0	1	2	3	
97	I like to draw attention to myself.	0	1	2	3	
98	Things around me often feel unreal, or more real than usual.	0	1	2	3	
99	I'll stretch the truth if it's to my advantage.	0	1	2	3	
100	It is easy for me to take advantage of others.	0	1	2	3	

Appendix D

INVENTORY OF STATEMENTS ABOUT SELF-INJURY (ISAS) – SECTION I. BEHAVIORS

This questionnaire asks about a variety of self-harm behaviors. Please only endorse a behavior if you have done it intentionally (i.e., on purpose) and without suicidal intent (i.e., not for suicidal reasons).

1. Please estimate the number of times in your life you have intentionally (i.e., on purpose) performed each type of non-suicidal self-harm (e.g., 0, 10, 100, 500):

Cutting Biting Burning

- _____ Severe Scratching
- _____ Banging or Hitting Self
- _____ Interfering w/ Wound Healing
- _____ Carving
- _____ Pinching
- _____ Pulling Hair
- _____ (e.g., picking scabs)
- _____ Rubbing Skin Against Rough Surface
- _____ Sticking Self w/ Needles
- _____ Swallowing Dangerous Substances
- _____ Other _____,

***Important:* If you have performed one or more of the behaviors listed above, please complete the final part of this questionnaire. If you have not performed any of the behaviors listed above, you are done with this particular questionnaire and should continue to the next.**

2. If you feel that you have a *main* form of self-harm, please circle the behavior(s) on the first page above that you consider to be your main form of self-harm.

3. At what age did you:

First harm yourself? _____ Most recently harm yourself? _____
(approximate date – month/date/year)

4. Do you experience physical pain during self-harm?

Please circle a choice: YES SOMETIMES NO

5. When you self-harm, are you alone?

Please circle a choice: YES SOMETIMES NO

6. Typically, how much time elapses from the time you have the urge to self-harm until you act on the urge?

Please circle a choice:

< 1 hour 1 - 3 hours

6 - 12 hours 12 - 24 hours

3 - 6 hours > 1 day

7. Do/did you want to stop self-harming?

Please circle a choice: YES NO

Instructions

This inventory was written to help us better understand the experience of non-suicidal self-harm. Below is a list of statements that may or may not be relevant to your experience of self-harm. Please identify the statements that are most relevant for you:

- Circle **0** if the statement **not relevant** for you at all
- Circle **1** if the statement is **somewhat relevant** for you
- Circle **2** if the statement is **very relevant** for you

“When I self-harm, I am ...	<u>Response</u>		
1. ... calming myself down	0	1	2
2. ... creating a boundary between myself and others	0	1	2
3. ... punishing myself	0	1	2
4. ... giving myself a way to care for myself (by attending to the wound)	0	1	2
5. ... causing pain so I will stop feeling numb	0	1	2
6. ... avoiding the impulse to attempt suicide	0	1	2
7. ... doing something to generate excitement or exhilaration	0	1	2
8. ... bonding with peers	0	1	2
9. ... letting others know the extent of my emotional pain	0	1	2
10. ... seeing if I can stand the pain	0	1	2
11. ... creating a physical sign that I feel awful	0	1	2
12. ... getting back at someone	0	1	2
13. ... ensuring that I am self-sufficient	0	1	2
14. ... releasing emotional pressure that has built up inside of me	0	1	2
15. ... demonstrating that I am separate from other people	0	1	2
16. ... expressing anger towards myself for being worthless or stupid	0	1	2

Response Key: 0 – not relevant, 1 – somewhat relevant, 2 – very relevant

“When I self-harm, I am ...

17. ... creating a physical injury that is easier to care for than my emotional distress	0	1	2
18. ... trying to feel something (as opposed to nothing) even if it is physical pain	0	1	2
19. ... responding to suicidal thoughts without actually attempting suicide	0	1	2
20. ... entertaining myself or others by doing something extreme	0	1	2
21. ... fitting in with others	0	1	2
22. ... seeking care or help from others	0	1	2
23. ... demonstrating I am tough or strong	0	1	2
24. ... proving to myself that my emotional pain is real	0	1	2
25. ... getting revenge against others	0	1	2
26. ... demonstrating that I do not need to rely on others for help	0	1	2
27. ... reducing anxiety, frustration, anger, or other overwhelming emotions	0	1	2
28. ... establishing a barrier between myself and others	0	1	2
29. ... reacting to feeling unhappy with myself or disgusted with myself	0	1	2
30. ... allowing myself to focus on treating the injury, which can be gratifying or satisfying	0	1	2
31. ... making sure I am still alive when I don't feel real	0	1	2
32. ... putting a stop to suicidal thoughts	0	1	2
33. ... pushing my limits in a manner akin to skydiving or other extreme activities	0	1	2
34. ... creating a sign of friendship or kinship with friends or loved ones	0	1	2
35. ... keeping a loved one from leaving or abandoning me	0	1	2
36. ... proving I can take the physical pain	0	1	2
37. ... signifying the emotional distress I'm experiencing	0	1	2
38. ... trying to hurt someone close to me	0	1	2
39. ... establishing that I am autonomous/independent	0	1	2

Response Key: 0 – not relevant, 1 – somewhat relevant, 2 – very relevant

(Optional) In the space below, please list any statements that you feel would be more accurate for you than the ones listed above:

(Optional) In the space below, please list any statements you feel should be added to the above list, even if they do not necessarily apply to you:

Appendix E

SBQ-R - Scoring

Item 1: taps into <i>lifetime</i> suicide ideation and/or suicide attempts			
Selected response 1	Non-Suicidal subgroup	1 point	
Selected response 2	Suicide Risk Ideation subgroup	2 points	
Selected response 3a or 3b	Suicide Plan subgroup	3 points	
Selected response 4a or 4b	Suicide Attempt subgroup	4 points	Total Points
<hr/>			
Item 2: assesses the <i>frequency</i> of suicidal ideation over the past 12 months			
Selected Response:	Never	1 point	
	Rarely (1 time)	2 points	
	Sometimes (2 times)	3 points	
	Often (3-4 times)	4 points	
	Very Often (5 or more times)	5 points	Total Points
<hr/>			
Item 3: taps into the <i>threat</i> of suicide attempt			
Selected response 1		1 point	
Selected response 2a or 2b		2 points	
Selected response 3a or 3b		3 points	Total Points
<hr/>			
Item 4: evaluates <i>self-reported likelihood</i> of suicidal behavior in the future			
Selected Response:	Never	0 points	
	No chance at all	1 point	
	Rather unlikely	2 points	
	Unlikely	3 points	
	Likely	4 points	
	Rather Likely	5 points	
	Very Likely	6 points	Total Points
<hr/>			
Sum all the scores circled/checked by the respondents.			
The total score should range from 3-18.			Total Score
<hr/>			