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UNIVERSITY OF CALIFORNIA
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Identity Processes and Self-Injury

A Dissertation submitted in partial satisfaction
of the requirements for the degree of

Doctor of Philosophy

in

Sociology

by

Melanie A. Kushida

December 2021

Dissertation Committee:

Dr. Jan E. Stets, Chairperson

Dr. Sharon Oselin

Dr. Bruce Link

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2021

The Dissertation of Melanie A. Kushida is approved:

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University of California, Riverside

~ To My Mom and Dad ~

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ABSTRACT OF THE DISSERTATION

Identity Processes and Self-Injury

by

Melanie A. Kushida

Doctor of Philosophy, Graduate Program in Sociology
University of California, Riverside, December 2021
Dr. Jan E. Stets, Chairperson

Self-injury is a growing public health concern that impacts individuals of all ages, genders, and racial-ethnic backgrounds. While research on self-injury has primarily been conducted from a psychological and clinical perspective, this dissertation takes a social psychological approach to examine the role of identity verification on self-injury and the anticipation of rejection and internalization of stigma that ensues. Using cross-sectional survey data from 487 college students, I examine how identity verification of six different identities (student, friend, child, dominant, gender, and moral) might be related to self-injury and its outcomes (anticipation of rejection and internalization of stigma) through one's affective state. I also consider how factors such as attitudes towards self-injury, life events, self-injury ideation, and demographic factors (gender, race/ethnicity, income, and religion) might be associated to self-injury and its outcomes.

I perform a logistic regression to assess identity verification as a precipitator of self-injury. Results indicate that verification of the dominant, moral, and friend identity have a negative effect on the affective states that are associated with self-injury.

Furthermore, to assess the effect of identity verification on the anticipation of rejection and internalization of stigma, I use multiple regression analyses. The findings indicate similar results to self-injury for anticipation of rejection; verification is negatively related to anticipating rejection through one's affective state. However, results indicate that affective state is not related to internalization of stigma. Rather, anticipation of rejection is a strong contributor of internalization of stigma, which suggests that identity verification may indirectly effect internalization of stigma through affective state and anticipation of rejection. Additional analyses provide support for this relationship. These findings extend work on self-injury by highlighting the role of identity verification on self-injury and its outcomes of anticipating rejection and internalizing stigma. The final chapter of the dissertation provides a greater discussion of the key insights from the results and describes recommendations for future research.

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Chapter 1: Introduction

Self-injury, also known as self-harm, is a widespread public health issue that affects individuals of all ages, genders, and racial/ethnic groups. For the purpose of this study, I define self-injury as the non-suicidal, deliberate destruction of one's own body using methods such as cutting, burning, branding, scratching, head banging, hitting, and more (Adler and Adler 2011). Beginning in the 1990s and early 2000s, researchers became invested in self-injury as an emerging social phenomenon first noticed in the adolescent community. From 1998 to 2016, self-injury rates among adolescents ranged between 8 and 47% (Cipriano, Cella, and Cotrufo 2017). While most prevalent among teens, self-injury also is common among young adults. Between 1998 and 2016, self-injury rates among adults ranged between 4 and 23% (Cipriano et al. 2017). During that time, the average self-injury rate among young adult college students was 39% (Cipriano et al. 2017). Research suggests that between 15-25% of adolescents and young adults have engaged in self-injury at least once in their lifetime and about 4% of adults occasionally self-injure (Self-Injury Outreach and Support 2018).

The COVID-19 pandemic is suggested to have worsened mental health leading to increased self-injury rates among adolescents and young adults (Tang et al. 2021; Zetterqvist et al. 2021). Research suggests that from April 2019 to April 2020, there was a 99.8% increase in self-injury rates for adolescents between the ages of 13 and 18. In the northeast of the United States, there was a 333.93% increase in self-injury rates between August 2019 and August 2020 (Fair Health Inc. 2021). Researchers suspect that the increase in self-injury rates may be due to greater depression, anxiety, and post-traumatic

symptoms because of stress, isolation, and loss associated with the pandemic. As a widespread public health concern and growing social problem, researchers are motivated to understand the various precipitators and outcomes of self-injury.

Recently, researchers have speculated that self-injury may be a problematic behavior used to manage self and identity issues such as having low self-esteem or receiving negative self-views from others (Breen, Lewis, and Sutherland 2013; Seals and Young 2003). While this has been proposed, there is little research that has examined self-injury as it relates to self and identity issues, particularly when considering meanings associated with how individuals see themselves (identities) and perceptions of social interactions. Additionally, while self-injury has generally been perceived as a private or personal matter, recent research recognizes a social component of self-injury that has largely been neglected. As a social behavior, self-injury can be a behavioral response to a negative affective state and stressors that emerge in social interactions (Brossard 2018; Steggals, Graham, and Lawler 2020).

The current study uses identity theory to assess how people's perceptions of how others see them compared to how they see themselves (the verification process) might be associated with the affective state of depression and anxiety, and low self-esteem, which may be related to self-injury. Identity theorists argue that individuals seek to have others see them in the same way that they see themselves (identity verification). When this occurs, individuals feel positive emotions and have higher self-esteem (Burke and Stets 2009; Cast and Burke 2002; Stets and Burke 2014). However, if individuals perceive that others do not see them in the same way that they see themselves (identity non-

verification), this produces negative emotions and lower self-esteem (Cast and Burke 2002; Marcussen 2006; Stets and Asencio 2008; Stets and Burke 2014; Stets and Trettevik 2014). Based on prior research suggesting self-injury as a behavior associated with self and identity issues, and identity research suggesting verification has a positive effect on emotions and psychological outcomes, I examine identity verification as a precipitator of self-injury via one's affective state (that is, depression and anxiety and low self-esteem).

Furthermore, this study examines how identity processes are associated with anticipation of rejection and internalization of stigma that is associated with self-injury. Research suggests that self-injury is a stigmatized behavior that may result in rejection from others, low self-esteem, and other negative outcomes (Burke et al. 2019; Law, Rostill-Brookes, and Goodman 2009; Lloyd, Blazely, and Phillips 2018; Piccirillo et al. 2020). In the current study, I examine whether identity verification is related to anticipation of rejection for engaging in self-injury, and if it also is related to internalizing stigma associated with self-injury. Like the effect of identity verification on self-injury, I predict that the effect of identity verification operates indirectly through one's affective state. Additionally, in assessing the role of identity verification on self-injury and its outcomes through one's affective state, this study also explores what identities may be relevant to self-injury and the anticipation of rejection and internalization of stigma that follows. In using a social psychological approach, this study seeks to address two broader research questions: 1) how is identity verification related to

self-injury, and 2) how might verification also be related to anticipating rejection and internalizing stigma that is associated with self-injury?

I develop a theoretical model that illustrates the precipitators of self-injury as suggested in previous research such as demographic characteristics, attitudes towards self-injury, life events, affective states of depression and anxiety and self-esteem, and self-injury ideation. Additionally, this theoretical model illustrates the outcomes of self-injury: anticipation of rejection and internalization of stigma. I extend research on self-injury by including identity verification to the theoretical model as a precipitator of self-injury and its outcomes. Based on previous research, I predict that identity verification will be negatively related to self-injury through one's affective state (Cast 2004; Cast and Burke 2002; Stets and Burke 2014). I also predict that identity verification will be negatively related to anticipation of rejection and internalization of stigma through one's affective state.

To examine the effect of identity verification on self-injury and its outcomes, I distribute an online survey to 487 undergraduate students at a large western university. Findings from this study contributes to prior research on self-injury by assessing how our identities, our interactions, and our experiences in the social environment might be associated with maladaptive coping strategies like self-injury. In addition to examining how identity verification might be associated with self-injury, this study can provide an understanding of how verification affects a counter-normative and stigmatized behavior such as self-injury. Finally, this study provides insight on how identity processes are associated with the anticipation of rejection and internalization of stigma that is

associated with self-injury. Given that self-injury is a heavily stigmatized behavior, it is important to assess stigma as outcomes associated with self-injury and examine how identity processes such as verification might be related.

Dissertation Outline

In the next chapter, I discuss the theory and introduce my hypotheses. I also present my theoretical model and discuss the precipitators of self-injury and its outcomes. In describing identity verification as a precipitator of self-injury, I present identity theory, which forms an important basis for this study. Then, I discuss self-injury as a stigmatized behavior in which individuals may anticipate rejection from others or internalize stigma. I also describe how identity verification may be related to anticipating rejection and internalizing stigma that is associated with self-injury through affective state.

In chapter 3, I describe my methodological approach including my research protocol and survey measures. Due to the COVID-19 pandemic, all data are collected online through Qualtrics. However, due to the sensitive nature of this study, all research participants were monitored via Zoom while completing the survey. I detail the recruitment process, safety measures taken to protect research participants, and how variables were constructed and coded.

In chapter 4, I present my analytical strategy and research findings. I describe the characteristics of my sample and provide the correlations among the variables used in the analyses. To test my hypotheses, I perform a logistic regression to examine the effect of verification on self-injury through one's affective state. I also perform multiple regressions to examine the effect of verification on one's affective state, and how

affective state might be related to anticipation of rejection and the internalization of stigma that is associated with self-injury.

Chapter 5 provides a discussion of the significant findings. Since the main contribution of this study is the role of identity verification on self-injury and its outcomes, I focus on these effects. I also discuss other relevant precipitators of self-injury, anticipation of rejection, and the internalization of stigma. I discuss how a lack of verification as well as other factors such as being female, being Asian, and having positive attitudes toward self-injury are potential stressors that contribute to a negative affective state, and, in turn, self-injury. For anticipation of rejection, I argue that certain factors such as engaging in self-injury ideation or having a negative affective state may make individuals more susceptible to anticipating rejection from others by making individuals feel like negative stereotypes are more likely to apply to them. Then, I discuss anticipation of rejection as a strong contributor to the internalization of stigma. Finally, I provide multiple explanations for the relevance of the dominant, moral, and friend identities on the affective states that are related to self-injury and its outcomes. I conclude with a discussion of the limitations and the broader impact of this study.

I present my concluding statements in Chapter 6. I review the key findings of this research and important lessons learned on the role of identity verification on self-injury and its outcomes. I also introduce areas of future research. Specifically, I describe potential areas of future research on the type of verification (over-verification or under-verification) and how this might relate to self-injury. I also describe future research on understanding the meanings behind self-injury behavior held by those who engage in

self-injury and how self-injury can be examined as an aggressive behavior towards the self. Finally, I summarize this chapter by describing how the COVID-19 pandemic may have an impact on self-injury.

Chapter 2: Theory

This study takes a social psychological approach to examining self-injury by assessing how our perceptions of how others see us compared to how we see ourselves might be related to self-injury, and how this also might be related to anticipating rejection and internalizing stigma that is associated with self-injury. In this chapter, I begin by discussing the various approaches used to study self-injury. Then, I present my theoretical model and discuss the theoretical foundations of the precipitators of self-injury and its outcomes (anticipation of rejection and internalization of stigma). Specifically, I discuss the role of identity verification as a social psychological factor that may be related to self-injury through one's affective states of depression and anxiety and self-esteem. In describing identity verification, I explain identity theory, which I draw upon as the theoretical framework of this study. Then, I discuss self-injury as a stigmatized behavior in which individuals may anticipate rejection from others or internalize stigma. I also describe how identity verification may be related to the rejection and stigma that is associated with self-injury. To conclude, I present a summary of my hypotheses which address two broader research questions: 1) how is verification related to self-injury, and 2) how might this also be related to anticipating rejection and internalizing stigma that is associated with self-injury?

Background

Primarily studied in psychology and mental health, self-injury has largely been assessed as a psychological disorder or a symptom of other psychological disorders such as borderline personality disorder (McAllister 2003; Selby et al. 2012). From this

perspective, self-injury is treated as a psychological condition rooted in personality development and neurological differences. Additionally, since most people who self-injure engage in the behavior alone, self-injury has been seen as a private matter. However, recent research argues that there is a social component of self-injury that has been neglected.

From a social perspective, self-injury can be communicative, relational, and interactional; it can be used to practice self-control by regulating extreme negative emotions, and as a response to the various strains exerted by an individual's social environment (Brossard 2018; Steggals, Graham, and Lawler 2020). Brossard (2018) argues that self-injury is associated with social interactions such as family relationships, peer groups, and romantic relationships that might make us feel bad, and that individuals' social positions (that is, class, gender, age, and race/ethnicity) relate to self-injury. Through this social lens, we can begin to explain why otherwise "healthy" individuals, who have not been diagnosed with a mental illness or disorder, might engage in self-injury.

While prior research argues that self-injury can be the result of unsupportive environments or disruptive relationships in early life that are often linked to childhood trauma and parental rejection (Everett and Gallop 2000; Maris 1997; Quirk et al. 2015), these studies primarily focus on the psychological development of the self (that is, the self-concept, rumination, and emotional regulation) (Glenn et al. 2011; Quirk et al. 2015). It is important to note that experiences with self-injury, emotional regulation strategies, and rumination can differ among individuals given their social environments and social

positions. While greater attention should be brought to the social conditions surrounding self-injury, when the goal is to consider how the social environment influences the self, researchers need to examine various social psychological factors that can influence individuals' behavior. These factors can include individuals' meanings, perceptions, and interpretations of relationships and social experiences. We might consider the meanings behind individuals' behavior, how they interpret the behaviors of others and their experiences, and how they might use certain behaviors to signal specific meanings in interaction. Thus, it is important to focus on the meanings and interpretations individuals use to make sense of themselves and their social environment, and how this might shape behavior.

Drawing on a more social psychological lens to examine individual's meanings and perceptions of themselves and others in the context of self-injury, a relevant theory that addresses these concerns is identity theory. According to identity theory (Burke and Stets 2009), the meanings that people attribute to themselves as a person, in a role, or as a group member are their identities. These self-meanings vary for individuals and are shaped by their social environment. Identity theorists argue that identities help us understand individuals' self-perceptions and social behavior within and across situations. I draw upon identity theory throughout this study as the theoretical framework of this research.

There is still little understanding of how self and identity processes such as how we see and feel about ourselves and our interactions with others in the social environment might relate to self-injury, and how self-injury might be used as a response to factors in

the social environment. How might our perceptions of how others see us influence how we feel about ourselves and contribute to self-injury?

Except for a few recent studies that assessed how self-injury could be used as a source of self and group identification (Breen, Lewis, and Sutherland 2013), identity formation (Gandhi et al. 2017, 2021), and identity confusion (when the identity has unclear goals and expectations) (Gandhi et al. 2016), there is minimal research that explores the relationship between self and identity processes and the social environment within the context of self-injury. For example, how might the way we see ourselves and our interactions with others in the social environment be related to self-injury? Although these prior studies consider self and identity processes, much of this research relies on Erikson's definition of identities which has mostly been used to describe life-span psychosocial development (Erikson 1994). This definition of identities pays less attention to how an individual perceives interactions in their social environment and how this relates to their own self-meanings, emotions, and behavior.

Gandhi and colleagues (2015) indicate that while there has been research on identity development and self-injury, there has been little research on identity distress and self-injury. It is not clear whether experiencing distress in certain identity domains such as long-term goals, career choices, friendship, sexual orientation, religion, values and beliefs, and group loyalties might contribute to self-injury. Their findings indicate that self-injury was influenced by distress experienced with long term goals, friendship, sexual orientation, and values and beliefs. Additionally, gender differences were observed; identity domains of career, friendship, and group loyalties were more distress

provoking for women than men (Gandhi et al. 2015). While this study introduces the notion that self-injury might be associated with experiencing distress related to individuals' identities, the focus of the study is on identity domains, which are areas of life where identities can be developed, rather than identities, which is an individual's view of themselves in various social positions (Burke and Stets 2009).

Researchers know little about the relationship between identities and self-injury when we conceptualize identities as meanings associated with how we see ourselves and consider our perceptions of how others see us compared to how we see ourselves (the verification process). Verification is associated with positive outcomes such as positive emotions and higher self-esteem. When individuals are not verified (that is, when an individual perceives that someone does not see them in the same way that they see themselves), this can produce negative outcomes such as distress and lower self-esteem (Burke 1991; Cast and Burke 2002; Large and Marcussen 2000; Marcussen 2006; Stets and Burke 2005; Stets and Burke 2014; Stets and Burke 2005; Stets and Trettevik 2014). Based on these findings, I use identity theory as the theoretical framework to assess the role of identity verification on self-injury and its outcomes.

By using a social psychological approach, this study contributes to prior research on self-injury by assessing how our identities, our interactions, and our experiences in the social environment might be associated with maladaptive coping strategies like self-injury. In addition to examining how identity verification might be associated with self-injury, this study also explores what identities may be relevant to self-injury. Based on prior research describing how certain roles such as being a son/daughter might be related

to self-injury (Brossard 2018; Gandhi et al. 2015), some identities may be more vulnerable to attacks on the self that may prompt self-injury. The current research considers identities, interactions with others, and our experiences in our social environment. Researchers can explore self-injury as a coping mechanism for managing self and identity challenges (that is, low self-esteem, receiving negative self-views from others, etc.) that develop in the social environment and compare it to other more conventional strategies previously illuminated in identity research such as changing self-meanings (Stets et al. 2020).

While identity theory has been successful in explaining how individuals negotiate and manage their identities after experiencing identity verification or non-verification, research has primarily focused on normative identities and conventional responses to identity non-verification such as changing self-meanings or engaging in behavior to change the meanings in the situation. Identity research has yet to focus on explaining how the verification process might be related to certain maladaptive responses like self-injury. In assessing the effect of verification on self-injury, this study can provide an understanding of how verification might operate with a counter-normative and stigmatized behavior.

For example, if an individual perceives that his boss saw his work performance as poor and he did not, identity theorists would argue that he would experience distress and other negative emotions such as anger, sadness, or frustration. He might decide to work harder or talk with his boss to see how he could improve his work performance. These

are relatively conventional responses to identity non-verification that could aid in achieving identity verification in later interactions.

However, if he decided to go to a bar and get drunk after receiving the non-verifying feedback, this would be a less conventional response. Some individuals also may respond with verbal altercations or even violence. Though individuals are more likely to use more conventional ways of managing situations, it is important to explore why some individuals might choose deviant or less conventional ways of responding to situations. Might these less conventional or deviant behaviors be a response to identity non-verification when the individual perceives that other conventional behaviors cannot change the meanings in the situation? Have they been socialized to respond in this manner?

Additionally, would verification reduce the likelihood of engaging in deviant or maladaptive coping behaviors like self-injury? Based on previous research suggesting positive outcomes from verification such as positive emotions and higher self-esteem (Cast and Burke 2002; Stets and Burke 2014), it is important to assess whether verification might be negatively related to maladaptive coping behaviors like self-injury because verification may make individuals feel accepted and supported by others.

Identity theory research has largely demonstrated a link between the verification process and emotions and self-esteem. But there has been little research in identity theory that has extended this link to examine behavior, particularly negative behaviors like self-injury. The current research contributes to identity theory by examining how verification might be associated with maladaptive behavioral responses like self-injury through the

affective states of depression and anxiety and self-esteem. By examining verification with a less conventional or maladaptive behavioral response, we can increase our understanding of the identity process. Additionally, by examining the role of identity verification on the affective states that might be related to self-injury, this study also provides a better understanding of what may contribute to feelings of depression and anxiety and low self-esteem that are often associated with self-injury.

This study also examines how identity processes are associated with the stigma that is associated with self-injury. Researchers argue that stigma can come in the form of public stigma (negative societal beliefs towards individuals who engage in a behavior or are part of a social category), self-stigma (internalizing negative stereotypes by stigmatized individuals), and symbolic interaction stigma (perceptions of rejection from others that may not have taken place but are potentially real and threatening to the individual) (Burke et al. 2019; Corrigan and Watson 2002; Link et al. 2015). Thus, individuals may anticipate rejection from others (symbolic interaction stigma) without internalizing negative stereotypes (self-stigma) and experience the same harmful effects (that is, lower self-esteem, depression, and anxiety).

The current study examines how our perceptions of how others see us compared to how we see ourselves (the verification process) might be related to how much we anticipate being rejected from others (symbolic interaction stigma) and internalize negative stereotypes (self-stigma). Given that stigma is a social phenomenon that considers perceptions, reactions from others, interaction, and self-views, it is important to understand how self and identity processes like verification also may be related to the

stigma (both self-stigma and symbolic interaction stigma) that is associated with self-injury.

Next, I present my theoretical model and describe the theoretical foundations for the various factors related to self-injury and its outcomes. Additionally, I discuss identity theory which is my theoretical framework for this study.

Theoretical Model

Figure 1 illustrates the theoretical pathways to self-injury, anticipation of rejection, and the internalization of stigma. In the theoretical model, factors on the left side of the model that have a theoretical path to self-injury, anticipation of rejection, and internalization of stigma are considered “precipitators” of these outcome variables. These factors such as gender, attitudes towards self-injury, affective state, and self-injury ideation may be related to self-injury and the rejection and stigma that follows. Within this model, I also include identity verification as a precipitator. Anticipation of rejection and the internalization of stigma are considered “outcomes” of self-injury because they arise as a result of engaging in self-injury behavior. Thus, in the theoretical model, a pathway is illustrated for self-injury to anticipation of rejection which also is associated the internalization of stigma. This suggests that individuals who engage in self-injury may anticipate rejection from engaging in self-injury, which may be associated with internalizing stigma.

(Figure 1 about here)

To briefly describe the theoretical pathways, I examine how demographic factors such as gender, race, income, and religion (shown on the left of the model) may be

related to self-injury, anticipation of rejection, and internalization of stigma (shown on the right of the model). In addition, I examine other variables discussed in previous research as being relevant to self-injury such as attitudes towards self-injury, life events, the affective states of depression and anxiety as well as self-esteem, and self-injury ideation. I include identity verification as a precipitator in the model that may be relevant to self-injury, anticipation of rejection, and the internalization of stigma. I develop a set of hypotheses surrounding the role of verification on self-injury and its outcomes, which I describe later in the chapter. In the next section, I describe the theoretical foundations of the precipitators of self-injury and how identity verification is included in the model.

Precipitators of Self-Injury

Gender

Several studies have assessed whether certain characteristics such as gender, race/ethnicity, income, and religious background might be associated with self-injury. While many studies on self-injury argue that self-injury is more common among women (Bresin and Schoenleber 2015; Favazza, DeRosear, and Conterio 1989; Gollust, Eisenberg, and Golberstein 2008; Kuentzel et al. 2012; Suyemoto 1998), recent research cannot find consistent support for this argument. Some studies find that men and women report similar rates of self-injury (Andover et al. 2010; Klonsky, Oltmanns, and Turkheimer 2003), while others find that men are more likely to self-injure than women (Muehlenkamp and Gutierrez 2004).

Some researchers argue that differences in how men and women regulate their emotions may be related to the differences in self-injury rates, with women more likely to

self-injure than men. Research suggests that women are more likely to ruminate compared to men which may play a large role in depression and anxiety that can lead to higher rates of self-injury (Nolen-Hoeksema 2012). Additionally, women are more likely to experience stress related to interpersonal conflicts which make them vulnerable to experiencing depression and anxiety and low self-esteem (Rudolph 2002). Some studies argue that men are more likely to engage in externalizing behaviors such as drug and alcohol abuse to regulate emotions than internalizing behaviors like self-injury (Keyes, Grant, and Hasin 2008). Men also may be less likely to report certain types of self-injury behavior compared to women. Specifically, men may be more likely to report self-injury when it is in the form of physical aggression such as hurting oneself by punching or kicking a wall because physical aggression may be more socially acceptable for males (Green and Jakupcak 2016). Thus, studies that examine self-injury as cutting, hair-pulling, or burning, may be less likely to capture self-injury rates among men.

Race/Ethnicity

An examination of racial/ethnic differences with self-injury also have produced mixed results. Some studies indicate that Whites compared to racial minorities are more likely to report a history of self-injury (Kuentzel et al. 2012; Muehlenkamp and Gutierrez 2007), while others argue that Blacks report significantly higher rates of self-injury compared to any other racial/ethnic group (Latzman et al. 2010). Some studies also indicate that African Americans and Asian Americans have significantly lower self-injury engagement than all other racial/ethnic groups (Wester and Trepal 2015). Furthermore, some argue that having multiple intersecting minority identities such as being a lower-

income Black woman is associated with greater endorsement of self-injury behavior because of greater exposure to minority stress (Angoff, McGraw, and Docherty 2021). Overall, it is unclear whether racial minorities are more likely to self-injure than Whites, and if certain racial minorities such as African Americans are more likely to self-injure than other racial minorities such as Latino/as.

Researchers argue that some of the differences between Whites and racial minorities on self-injury may be the result of racial minorities experiencing racial/ethnic discrimination and oppression that contributes to psychological distress and poor well-being (Angoff et al. 2021; Chesin, Moster, and Jeglic 2013). Additionally, culture plays an important role in self-injury as well. Individualistic cultures such as those found in Western societies (for example, the United States and Europe) emphasize self-determination and independence. For these Western societies, stress associated with not achieving individual goals and complying with expectations of high productivity may be related to self-injury (Kokaliari and Berzoff 2008). This might be able to explain why some studies report Whites as being more likely to engage in self-injury than other racial/ethnic groups.

The culture surrounding one's racial/ethnic group also is important to consider when assessing differences in self-injury rates among racial minorities. Cultural gender roles and one's ethnic identity might influence self-injury. For Hispanic male college students, a strong Mexican ethnic identity which emphasizes male gender roles of being socially responsible, strong, and in control, has been negatively associated with self-injury (Croyle 2007). Religion also can act as a protective factor against self-injury and is

often correlated to one's racial/ethnic background. For racial/ethnic groups that emphasize religion such as with Latinx communities and Catholicism, findings suggest a negative association with self-injury compared to non-religious individuals (Kuentzel et al. 2012). While these results have been mixed, these findings have prompted a larger discussion on how factors such as minority stress, culture, and religion may be related to the differing self-injury rates among different racial/ethnic groups.

Income and Religion

Another important factor associated with self-injury is income. Research suggests that lower income individuals are more vulnerable to self-injury than middle and higher income individuals (Gollust, Eisenberg, and Golberstein 2008; Nada-Raja et al. 2004). Researchers argue that this may be due to the higher rates of depression, anxiety, and suicidal ideation reported by individuals from a lower income, which is particularly pronounced amongst racial minorities. Additionally, for individuals who come from a lower income, they may struggle with getting access to mental health care which may prevent them from getting treatment for mental health conditions associated with self-injury such as depression and anxiety (Inckle 2020).

Finally, some studies suggest that religion may act as a protective factor against self-injury (Borrill, Fox, and Roger 2011; Gall and Guirguis-Younger 2013; Haney 2020). Religion may be linked to more positive mental health, lower depression and anxiety, as well as strong values against suicidal and self-injury behaviors (Borrill et al. 2011; Randolph-Seng et al. 2008).

While some results have been inconsistent, overall findings on demographic characteristics and self-injury suggest that gender, race/ethnicity, income, and religion have some effect on self-injury and need to be considered when examining what factors are related to the behavior. Broadly, prior research suggests that being female, a racial/ethnic minority, and low income may make individuals vulnerable to engaging in self-injury by being exposed to various stressors such as greater interpersonal conflict, racial/ethnic discrimination, and financial strain. However, being religious may be a positive coping strategy used to manage stress and reduce the likelihood of engaging in self-injury. Thus, these demographic factors are included in the model in Figure 1.

Attitudes towards Self-Injury

In the theoretical model, I also include attitudes towards self-injury. While certain demographic characteristics can influence our behaviors such that individuals who are more religious may be less likely to engage in self-injury, our behaviors also are heavily influenced by our attitudes. If you have attitudes against a behavior, you are less likely to want to engage in that behavior (Ajzen and Fishbein 1980). When it comes to self-injury, having less positive attitudes toward self-injury will be negatively associated with self-injury. While few studies assess the attitudes of people who self-injure, findings suggest that more favorable attitudes towards self-injury are positively associated with self-injury (Hasking and Rose 2016). This may be because individuals who have more positive attitudes towards self-injury are more likely to think or attempt self-injury during times of distress (self-injury ideation).

Also, individuals who have more positive attitudes towards self-injury may have more negative affective states of high depression and anxiety and low self-esteem. Given that self-injury is a counter-normative and stigmatized behavior, individuals who have more positive attitudes towards self-injury may feel bad about themselves because they understand that their views are counter-normative and stigmatized. In other words, holding counter-normative attitudes may be stressful for individuals, which may produce a negative affective state. This is illustrated in the theoretical model with a path linking attitudes toward self-injury to affective state.

Life Events

Additionally, stressful life events can impact whether someone engages in self-injury. Findings indicate that stressful life events in the contexts of school, peer relationships, romantic relationships, and family life are positively associated with self-injury (Steinhoff et al. 2020). Specifically, expectations of success in school often result in pressure and anxiety related to school performance that can prompt some adolescents to engage in self-injury as a coping mechanism (Adler and Adler 2011; Evans and Hurrell 2016). There also is consistent evidence to suggest that conflict in romantic relationships such as experiencing a break-up is associated with self-injury (Cerutti, Zuffianò, and Spensieri 2018; Miller et al. 2018; Steinhoff et al. 2020). Researchers argue that stressful life events such as academic struggles and break-ups may be related to self-injury through poor affective states such as higher depression and anxiety and lower self-esteem (Miller and Chung 2009; Steinhoff et al. 2020). Hence, in the theoretical model, life

events have a theoretical pathway to affective state, that is depression and anxiety and self-esteem, which is then related to self-injury ideation and self-injury.

Affective State

The relationship between depression and anxiety and self-esteem and self-injury has been extensively investigated. Several studies suggest that individuals who have higher levels of depression and anxiety are more likely to report self-injury (Andover et al. 2010; Gollust et al. 2008; Klonsky and Muehlenkamp 2007; Klonsky et al. 2003). Some individuals express self-injury as a coping mechanism when they feel depressed, anxious, desperate, and hopeless (Adler and Adler 2011). Individuals may use self-injury as a coping mechanism to regulate "...unbearable emotional pain into manageable physical pain" (Adler and Adler 2011:25). Individuals report feelings of euphoria, numbness, calm, and satisfaction after engaging in self-injury (Adler and Adler 2011; Michel, Valach, and Waeber 1994; Muehlenkamp et al. 2009; Nock and Prinstein 2004). As a coping mechanism, self-injury can provide relief from anxiety, depression, inconsistent emotions, loneliness, and racing thoughts (Adler and Adler 2011). Thus, these findings illustrate how higher depression and anxiety is related to maladaptive coping strategies such as self-injury.

Individuals with lower self-esteem also are more likely to report a history of self-injury (Forrester et al. 2017). This may be a result of adverse early life experiences between parents and children such as childhood abuse, which contribute to negative self-views such as high self-criticism, low self-regard, and self-hatred (Forrester et al. 2017; Klonsky and Muehlenkamp 2007). In a large study conducted by Adler and Adler (2011),

they examine the relationship between childhood trauma and self-injury. Based on 135 participant interviews, many individuals who experience childhood abuse or trauma often feel isolated or rejected from others, which contributes to lower self-esteem, feelings of loneliness, depression, and anxiety. In addition, individuals develop feelings of self-blame (i.e., feeling like they deserve the abuse or that they are to blame) or shame which lead to the desire to self-injure in an attempt to regulate negative emotions and provide individuals with a sense of control (Adler and Adler 2011; Michel et al. 1994; Muehlenkamp et al. 2009; Nock and Prinstein 2004).

Part of why our affective states of depression and anxiety and self-esteem influences our behavior is because our affective state influences our thoughts. Research suggests that feeling depressed may make individuals more susceptible to having thoughts of self-injury (self-injury ideation) because individuals may be feeling hopeless and are searching for a way to manage negative emotions (Zielinski et al. 2017). When individuals feel like more conventional strategies of managing distress such as talking to someone who supports them is unable to lessen negative emotions, feelings of hopelessness may result, and they may consider more maladaptive coping behaviors such as self-injury (Zielinski et al. 2017). This illustrates how our affective state, that is, feeling more depressed and anxious or having lower self-esteem, may induce thoughts of self-injury, which may prompt self-injury behavior (Andrewes et al. 2017; Fitzpatrick et al. 2020). In the theoretical model, affective state has a direct and indirect path to self-injury. The indirect theoretical pathway links affective state to self-injury through self-

injury ideation as previously described. While the direct path demonstrates affective state having a direct effect on self-injury.

While previous research has illustrated how various factors such as gender, attitudes towards self-injury, one's affective state, and self-injury ideation are associated with self-injury, little research has examined the role of the individual in the social environment and how one's meanings and perceptions of oneself and the person's interactions might be related to self-injury. In the following section, I describe identity verification. In describing identity verification, I also discuss identity theory, which is the theoretical framework of this study.

Identity Verification as a Precipitator of Self-Injury

Recent research speculates that self-injury may be a maladaptive coping behavior used to manage self and identity issues such as receiving negative self-views from others (Breen, Lewis, and Sutherland 2013; Seals and Young 2003). Researchers argue that individuals may use self-injury as a way to manage negative emotions related to a negative self-concept (Breen et al. 2013). While this has been proposed, there is little research that has examined self-injury as it relates to self and identity issues, particularly with the conceptualization of identities as containing meanings and guiding our social interactions.

As previously mentioned, the current study aims to address two broad research questions. How is identity verification (when we perceive others see us in the same way that we see ourselves) related to self-injury? And, how might this also be related to anticipating rejection and internalizing stigma that is associated with self-injury? In other

words, how might verification be related to whether individuals who self-injure anticipate rejection and internalize stigma associated with self-injury? In considering the role of verification on self-injury, and the rejection and stigma that follows, I include identity verification as a precipitator in the theoretical model.

Identity verification is rooted in identity theory, which focuses on how individuals perceive themselves, manage their identities, and how their identities can influence their emotions and behavior. Identities are a set of meanings individuals associate with a role they occupy (role identity), a group they belong to (group identity), a category that they are a member of (social identity), or a particular person to which they identify (person identity) (Burke and Stets 2009). For example, meanings associated with the role identity of student can include being “hardworking” and “dedicated.” A central premise in identity theory is that individuals seek to have others see them in the same way that they see themselves (identity verification). They do this by controlling perceptions in ways that match the meanings associated with their identity. This involves behaving in ways that “give off” those meanings. For example, if in the student identity, I see myself as “hardworking” and “dedicated,” I would act in ways that express being hardworking and dedicated to others, for example, taking the lead on group projects and doing extra credit assignments. Others as well as myself would observe this behavior and perceive me as hardworking and dedicated.

In identity theory, if individuals perceive that others do not see them in the same way that they see themselves (identity non-verification), they experience distress or negative emotions (Burke 1991; Burke and Stets 2009). This prompts them to engage in

meaningful behaviors to minimize the discrepancy between how they see themselves (stored in the identity standard) and how they perceive others see them (reflected appraisals or how persons think others see them). Ideally, behaviors that imply the same meanings as those in one's identity standard will result in identity verification. In the student identity, for example, if I perceive that others do not see me as "hardworking" and "dedicated," I will engage in behaviors that more forcefully show that I am hardworking and dedicated to try to reduce the discrepancy between the identity standard and reflected appraisals. Such behaviors might include spending more time studying, attending more office hours, or taking a larger role on group projects. Thus, these behaviors are used to resist and counteract non-verifying feedback.

People also may respond to identity non-verification by changing how they see themselves to align more with how they perceive others see them (that is, changing self-meanings) (Stets et al. 2020). In this instance, identity meanings slowly change in the direction of how the individual perceives others' see them. Given that individuals have multiple identities that are constantly active in various interactions, the identity verification process is an on-going feedback process where individuals consistently work to negotiate and manage their identities in interactions.

Research has investigated how individuals negotiate and manage their identities in interaction. The findings indicate that receiving verification produces positive emotions and result in individuals feeling worthy, efficacious, and authentic. Verification can act as a form of social support by making individuals feel like they are accepted by others for who they are (Burke and Stets 2009; Cast and Burke 2002; Stets and Burke 2014). On the

other hand, identity non-verification can be stressful for individuals, which produces negative emotions (Stets and Asencio 2008; Stets and Burke 2014; Stets and Trettevik 2014) and lower self-esteem (Cast and Burke 2002; Marcussen 2006; Stets and Burke 2014). When individuals perceive that others do not see them in the same way that they see themselves, this threatens stable self-meanings and reduces certainty and predictability in the environment, which may result in feeling distressed, having a low sense of control, and low mastery (Hogg 2011; Stets and Burke 2005; Swann 2011).

In identity theory, individuals have multiple identities based on the various positions they occupy in society such as being a student, friend, worker, or moral person. In the current study, I examine six different identities: gender, student, friend, child, dominant, and moral, which are chosen based on prior research suggesting a potential link to self-injury. Additionally, these identities each represent a particular base of identity (that is, a group, role, or person identity).

I examine gender identity, which is a group identity. It is the meanings associated with one's gender category as in being a woman or a man. Some findings suggest that conflict related to how we see ourselves in terms of our gender (gender identity) play a role in self-injury and suicidal behaviors by increasing the likelihood of depression and anxiety (O'Neil 2015). Generally, researchers find that when individuals perceive a lack of support or acceptance for how they see themselves in terms of their gender such as being assertive for men or nurturing for women, they experience distress and negative emotions (Arcelus et al. 2016; Liu, Rochlen, and Mohr 2005), which may prompt self-injury. While little research has examined individual meanings associated with one's

gender and self-injury, some research suggests that traditional gender meanings such as men being physically strong and aggressive might influence the types of self-injury behavior an individual chooses to engage in such as hitting or punching instead of cutting or burning (Green and Jakupcak 2016).

As a role identity is the student identity in which a person can receive feedback from others in the situation such as teachers, teaching assistants, and colleagues. Threats to an individual's student identity such as receiving a bad grade on an exam or failing a class may be related to self-injury because the individual may perceive this feedback as non-verifying, which leads to distress and negative emotions. Several studies indicate that higher levels of academic stress is related to self-injury because of a lower perceived ability to effectively regulate negative emotions (Adler and Adler 2011; Evans and Hurrell 2016; Kiekens et al. 2017). This is reflected in students who report being able to go without engaging in self-injury over the summer but relapse when the academic year starts (Adler and Adler 2011). Some of this may be due to negative relationships with peers at school and academic pressures to succeed.

Research also indicates that friendships play an important part in self-injury, particularly with adolescents and young adults. The friend identity is a role identity in which individuals may have meanings of being a fun person to be around, being supportive of peers, and feeling capable of maintaining friendships. Thus, if individuals perceive that others do not see them in the same way that they see themselves as a friend (non-verification), they may experience distress and negative emotions. Individuals who experience frequent peer victimization such as being bullied by peers and having more

negative perceptions of peers are at a higher risk of engaging in self-injury than those who experience more positive interactions with peers (Victor et al. 2019). Individuals who feel like they were not capable of being a good friend or socializing with others also are more likely to report self-injury (Victor et al. 2019).

The child identity also is a role identity where individuals have meanings associated with what it means to be a son or daughter. Generally, feedback is given by parents in the form of support, love, or praise. Individuals who perceive that they cannot communicate or connect with their parents may have difficulties receiving verification from their parents, which may lead to distress and negative emotions. Extensive research describes how negative parent-child relationships may be related to self-injury. Quirk and colleagues (2015) illustrate how early negative interactions with parents (e.g., parental rejection, neglect, etc.) generate expectations of abandonment, mistrust, and defeat. When individuals perceive that they are incapable of receiving the attention they desire, have failed in attempts to communicate their emotions to others, or have been unsuccessful in connecting with others, they may resort to self-injury behaviors (Muehlenkamp et al. 2013). On the other hand, there is evidence to suggest that positive relations with parents have a strong negative relationship with self-injury (Taliaferro et al. 2020). Thus, I examine how child identity verification might be related to self-injury and its' outcomes.

I also assess the dominant identity, which is a person identity, according to identity theory. This refers to meanings associated with power and control such as being assertive, demanding, and controlling (Stets et al. 2020). Some research on self-injury describes feelings of control, or a lack of control, as contributing to self-injury. Taliaferro

and colleagues (2020) argue that allowing individuals to feel empowered and in control over themselves and their future could improve their perceived ability to cope with disappointment and stressful life events, which can reduce the likelihood of engaging in self-injury. Hence, an individuals' ability to feel in control over themselves and their surrounding environment may make them feel more capable of regulating negative emotions. Additionally, a commonly reported motivation for engaging in self-injury is feeling out of control, in which self-injury is used to regain control and provide a sense of power to handle difficult situations (Polk and Liss 2009).

Finally, I examine whether the moral person identity is associated with self-injury. Generally, morality refers to cultural understandings of what is right or wrong, good or bad, and acceptable or unacceptable (Stets 2010; Turner and Stets 2006). When an individual applies this to the self, the individual has meanings associated with being right or wrong, good or bad, and acceptable or unacceptable. Furthermore, individuals' behaviors would align with perceptions of who they are as a moral person. In other words, if I see myself as having a high moral identity, I will try to engage in behaviors that are more culturally correct, good, and accepted. While the moral identity has yet to be examined with self-injury, individuals who see themselves as having a high moral identity may view self-injury as immoral because of cultural meanings of self-injury as being bad, rejection-worthy, and dangerous (Burke et al. 2019), and thus may be less likely to engage in self-injury.

While I have discussed many other relationships such as how demographic characteristics may be associated with self-injury, the current research aims to consider

identities and individuals' perceptions of how others view them in interaction. My hypotheses are developed to address the two broad research questions: 1) how is verification (when we perceive others see us in the same way that we see ourselves) related to self-injury, and 2) how might this also be related to anticipating rejection and internalizing stigma that is associated with self-injury? The central focus of this research is the role of verification on self-injury and its outcomes through one's affective state. By assessing the effect of verification on self-injury, this study contributes to self-injury research by considering how our identities and our perceptions of how others see us might influence self-injury. This study can provide a better understanding of how meanings of who individuals are compared to how they perceive others see them might produce certain affective states, which may produce certain maladaptive behaviors like self-injury.

In assessing the role of identity verification in the model, a path links demographic factors to identity verification. Some research suggests that status is related to identity verification such that a person with higher status is more likely to receive verification because the individual with a higher status often has more resources that can be used to verify an identity (Burke, Stets, and Cerven 2007; Cast, Stets, and Burke 1999; Stets et al. 2020). A path also links identity verification to affective state because of prior research in identity theory that finds verification is associated with positive emotions and is less likely to be associated with depression and anxiety, and low self-esteem (Cast 2004; Cast and Burke 2002; Large and Marcussen 2000; Marcussen 2006; Stets and Burke 2014). Thus, verification may be negatively related to self-injury by way of

providing a more positive affective state. A dotted arrow is used to illustrate this hypothesized relationship in the theoretical model. Based on these suggested relationships in prior research, I hypothesize:

H1: Identity verification will be negatively related to self-injury through one's affective state.

In the following section, I provide the foundation for understanding the outcomes of self-injury, that is, anticipating rejection and internalizing stigma, which addresses my second broad research question. In describing these outcomes, I begin with providing a background on three types of stigma: public stigma, symbolic interaction stigma, and self-stigma. In the current study, I assess how verification might be related to one form of symbolic interaction stigma (anticipation of rejection) and self-stigma (internalization of stigma). Following this, I discuss how various factors such as demographic characteristics, attitudes, life events, and affective state may be related to anticipating rejection from others and internalizing stigma associated with self-injury. Finally, I describe how verification might be related to the outcomes of self-injury.

Outcomes of Self-Injury

Public Stigma, Symbolic Interaction Stigma, and Self-Stigma

Public stigma refers to negative beliefs or stereotypes towards a behavior or group of individuals (Corrigan and Watson 2002; Link et al. 2015). It focuses on the reactions that members of society have for people who engage in a negative behavior or are part of a social category. For example, individuals who engage in self-injury can be described as “bad” or “rejection-worthy” (Burke et al. 2019; Law, Rostill-Brookes, and Goodman

2009; Lloyd, Blazely, and Phillips 2018; Piccirillo et al. 2020). Self-injury also has been perceived as a manipulative behavior used to get attention from others (Adler and Adler 2011; Lloyd et al. 2018). When perceived as a form of manipulation, individuals report lower levels of sympathy towards individuals who engage in self-injury and a lower desire to want to help the individual (Lloyd et al. 2018). Negative stereotypes associated with public stigma can lead to prejudice and discrimination for stigmatized individuals such as an unwillingness to hire stigmatized individuals or hostility in interactions (Corrigan and Watson 2002). Burke and colleagues (2019) find that participants report lower levels of acceptance for individuals with a history of self-injury as a friend, roommate, classmate, or romantic partner. When an individual accepts these negative stereotypes and internalizes them as part of who they are, they may experience negative outcomes such as low self-esteem (Corrigan and Watson 2002; Link et al. 2015).

However, researchers argue that stigma does not need to be internalized for harm to be produced. Symbolic interaction stigma is another form of stigma that refers to the process of anticipating how others may react or how interactions may transpire. Through symbolic interaction stigma, a stigmatized individual understands societal stereotypes and begins to think about how this might impact social interactions and levels of acceptance from others. Forms of symbolic interaction stigma include perceptions of societal devaluation and discrimination, a fear of being stereotyped (stigma consciousness), concern or anxiety about being rejected by others (rejection sensitivity), and perceptions of whether rejection will occur in interactions (anticipation of rejection). While imagined or rehearsed situations and perceptions are not necessarily taking place in interactions, for

the stigmatized individual, these imagined or rehearsed situations can feel real and result in harmful outcomes such as low self-esteem, isolation, and withdrawal (Link et al. 2015). Additionally, researchers suggest that forms of symbolic interaction stigma such as anticipation of rejection predicts the internalization of stigma.

Self-stigma, which is the internalization of negative stereotypes by a stigmatized individual, is another form of stigma. (Corrigan and Watson 2002). It has been perceived as a “second misfortune” of public stigma. Researchers argue that in the process of understanding the negative beliefs held by members of society on a behavior or towards a group of individuals (public stigma), a stigmatized individual may begin to accept stigmatizing images as part of who they are. For example, an individual who engages in self-injury might begin to see themselves as “bad” or “rejection-worthy.” Thus, the process of internalizing negative stereotypes occurs when a stigmatized individual is aware of public stigma, starts to believe negative stereotypes to be true, and determines that the negative stereotypes apply to themselves. Ultimately, this results in “self-esteem decrement” or a loss of esteem and respect for oneself (Corrigan and Watson 2002; Link et al. 2015).

While self-injury is recognized as a stigmatized behavior, research has primarily focused on the public and self-stigma associated with self-injury. However, researchers find that forms of symbolic interaction stigma are more common than self-stigma (Link et al. 2015). Given that symbolic interaction stigma is more common than self-stigma, and research suggesting anticipation of rejection predicts the internalization of stigma, the current study examines anticipation of rejection and the internalization of stigma

associated with self-injury. Specifically, I assess whether verification is associated with anticipating rejection and internalizing stigma associated with self-injury. In the model, self-injury is a condition within which anticipation of rejection and internalization of stigma can occur. Thus, anticipation of rejection and internalization of stigma are outcomes of self-injury. The current study examines these outcomes only with respect to individuals who have engaged in self-injury.

Anticipation of Rejection associated with Self-Injury

Anticipation of rejection is one form of symbolic interaction stigma. For individuals who self-injure and anticipate rejection from others, there is an understanding of the cultural meanings behind self-injury as “bad” or “rejection-worthy” (Burke et al. 2019; Law et al. 2009; Lloyd et al. 2018; Piccirillo et al. 2020). Thus, individuals who engage in this behavior may anticipate the social consequences that are associated with engaging in counter-normative behaviors. People who self-injure may anticipate negative reactions from others which can have an impact on how they feel about themselves and prompt them to withdraw or isolate themselves from others (Link et al. 2015). By imagining or rehearsing these situations, this also can prompt the internalization of stigma, which can lead to lower self-esteem.

To assess anticipations of rejection for individuals who engage in self-injury, researchers may ask about how often they worried what other people thought about them because they hurt themselves, or how often they felt like people might stop being their friend if they knew that they engaged in self-injury. Previous findings suggests that anticipation of rejection is associated with feeling a need to withdraw from others. It also

is the strongest contributor in predicting the internalization of stigma (self-stigma) (Link et al. 2015), which may be because individuals can ruminate on perceptions of rejection from others that make them feel bad.

Internalization of Stigma associated with Self-Injury

Previous research indicates that people who engage in self-injury may experience self-stigma, that is, accept public stigmatizing images and internalize negative stereotypes (internalization of stigma) (Corrigan and Watson 2002; Link et al. 2015). Individuals who engage in self-injury report feeling shame and embarrassment about their scars and being afraid of negative reactions from others (Bachtelle and Pepper 2015; Berger, Hasking, and Martin 2013; Burke, Olino, and Alloy 2017; Lewis and Mehrabkhani 2016). This suggests that individuals understand the public stigma and have internalized the negative stereotypes associated with self-injury. A fear of negative reactions from others because of their scars also suggests a level of symbolic interaction stigma experienced by individuals who self-injure. In the following section, I describe how various factors such as demographic characteristics may be related to the internalization of stigma associated with self-injury. Because there is less literature on the anticipation of rejection associated with self-injury, I provide speculations of how these factors may be associated with anticipating rejection associated with self-injury.

Self-Injury as a Stigmatized Behavior

Given that stigma (whether public, symbolic interaction, or self) is a social phenomenon rooted in social interactions, it is important to consider how certain characteristics such as gender, race/ethnicity, income, and religion might be associated

with stigma. For example, some findings suggest that women are less likely to experience public stigma associated with self-injury and other mental health conditions than men (Burke and McKeon 2007; Lloyd et al. 2018; Vogel et al. 2014). Researchers argue that this may be because of gender meanings of women being more emotional than men that make it more socially acceptable for women to experience mental and emotional distress than men. Additionally, these same gender meanings make it more socially acceptable for women to communicate about emotional distress and seek help compared to men (Vogel et al. 2014). Thus, women may be less likely to internalize stigma and anticipate rejection associated with self-injury because women are less likely to experience public stigma associated with self-injury compared to men.

Research also indicates that racial minorities, particularly Asian-Americans and Latino/as report higher levels of public stigma and self-stigma compared to Whites (Eylem et al. 2020; McGuire and Miranda 2008; Wong et al. 2017). Some researchers speculate that this may be the result of racial minorities experiencing both racial prejudice and discrimination and mental health stigma, which may prompt the internalization of stigma (Wong et al. 2017). While few studies have examined how individuals' social positions (gender, race/ethnicity, income, and religion) influences stigma associated with self-injury, broadly examined, findings suggest that marginalized groups (that is, racial minorities, gender and sexual minorities, lower-income groups, religious minorities, etc.) are more likely to experience stigma, both in the form of public stigma and self-stigma, than non-marginalized groups because of their exposure to greater prejudice and discrimination which can increase feelings of depression and

anxiety (Meyer 1995, 2003). Thus, there is evidence to suggest that marginalized groups (that is, racial minorities, gender and sexual minorities, lower-income groups, and religious minorities), who experience more prejudice and discrimination, may experience more internalization of stigma than non-marginalized groups. Furthermore, I speculate that for marginalized groups, they also may experience more anticipation of rejection (symbolic interaction stigma) than non-marginalized groups.

Attitudes towards self-injury, stressful life events, and affective state also can be related to anticipation of rejection and the internalization of stigma. Specifically, individuals who have more positive attitudes towards self-injury may be less likely to anticipate rejection and internalize stigma compared to those who have more negative attitudes towards self-injury. According to Adler and Adler (2011), the internet has allowed individuals who self-injure to form a community where self-injury can be embraced.

While the existence of a “pro-self-injury movement” is controversial, participants who took part in their study describe a philosophy behind the movement which includes views of self-injury as a lifestyle choice and a coping mechanism like drinking alcohol. Some participants describe self-injury as sustainable and productive in helping them cope with stressful events and negative emotions (Adler and Adler 2011). Part of the philosophy is accepting their scars and rejecting the stigma associated with self-injury. Individuals who carry more positive attitudes towards self-injury distance themselves from the stigma and instead, place the problem onto others: “[people who stigmatize self-

injury] are just getting after you or being upset because they don't understand what's going on... So it's their problem, not your problem" (Adler and Adler 2011: 179).

Thus, the "pro-self-injury movement" may be a stigma resistance strategy because individuals resist or are unaffected by negative stereotypes by believing in a philosophy that destigmatizes or rationalizes the behavior (Taft, Ballou, and Keefer 2013). This suggests that individuals who have more positive attitudes towards self-injury may be able to justify their behavior as rational and effective, but misunderstood by others, which may reduce feelings of stigma and the likelihood of internalizing negative stereotypes. Additionally, if the individual is more likely to justify their behavior and reduce feelings of stigma, I suspect that they may be less likely to anticipate rejection from others.

Stressful life events like break-ups or academic hardships also may make an individual more susceptible to experiencing self-stigma and anticipation rejection from others because the individual is already in a state of distress or strain. Stressful life events is considered a major predictor of depression and anxiety and lower self-esteem (Lee 2020; Michl et al. 2013), which is associated with stigma (Griffiths, Christensen, and Jorm 2008; Lysaker et al. 2012). Thus, when individuals experience a stressful life event such as a break-up or academic hardship, they may experience a more negative affective state of greater depression and anxiety and lower self-esteem, which may have a positive effect on anticipating rejection from others and internalizing stigma associated with self-injury. In the model, a theoretical path links life events to the outcomes of self-injury (anticipation of rejection and internalization of stigma) through affective state. This illustrates that stressful life events may be indirectly related to anticipation of rejection

and the internalization of stigma by producing a more negative affective state, as described in prior research.

While previous research has described how various social factors such as demographic characteristics may be related to the stigma associated with self-injury, researchers have yet to examine how identity verification might be related to stigma associated with self-injury. Given that stigma is a social phenomenon that heavily considers perceptions, reactions from others, interaction, and self-views, it is important to consider how our identities and our perceptions of how others see us might be related to the rejection and internalization of stigma associated with self-injury. In the current study, I include identity verification as a factor associated with stigma (both anticipating rejection and internalizing stigma) to examine how the way we see ourselves in various positions in society compared to how we think others see us might be related with these self-injury outcomes.

Identity Verification, Anticipating Rejection, and Internalizing Stigma

When individuals perceive that others see them in the same way that they see themselves (verification), this can be interpreted as a sign of support for who they are, which can have a positive effect on one's affective state (Cast and Burke 2002; Marcussen 2006; Stets and Burke 2014). Verifying feedback from others can make an individual feel like they are accepted and valued by others, capable and competent in having an effect on the environment, and that they can successfully portray their "authentic" self (Cast and Burke 2002; Stets and Burke 2014). This can produce a more positive affective state, that is, lower depression and anxiety and higher self-esteem (Cast

2004; Cast and Burke 2002; Stets and Burke 2014), which may be negatively related to stigma, both symbolic interaction stigma and self-stigma.

Because verification can be interpreted as a sign of support or acceptance from others for who they are, this would contradict feelings of rejection or a lack of support for who they are. Instead of an individual perceiving that they might be rejected by others for engaging in self-injury, being verified by others may reduce these anticipations because the individual may get a sense that they are already supported and accepted by others. Based on previous research suggesting verification can produce a more positive affective state by reducing feelings of depression and anxiety and promoting higher self-esteem (Cast 2004; Cast and Burke 2002; Stets and Burke 2014), I expect that the more positive affective state produced by verification may make individuals feel better about themselves and less likely to anticipate rejection from others. Thus, I hypothesize that:

H2: Identity verification will be negatively related to anticipation of rejection through one's affective state.

This is depicted in the model with an indirect path linking identity verification to anticipation of rejection by way of affective state (illustrated using dotted arrows).

One could argue that individuals can anticipate rejection without experiencing a negative affective state, but merely due to observing their surrounding environment and understanding that rejection is possible. The current study recognizes that this could be true since there are various factors that may be involved in determining whether individuals anticipate rejection such as being more attune to the perceptions and expectations of others. However, the purpose of this study is to introduce verification as

one of the various factors that may be related to anticipating rejection and internalizing stigma, which has yet to be discussed in prior research. Specifically, in assessing identity verification as a precipitator of anticipation of rejection through one's affective state, researchers can better understand how verification may be related to anticipating rejection from self-injury.

Additionally, when individuals are verified for who they are, they experience positive emotions and a boost to their self-esteem. Thus, individuals who are verified more often will likely have higher self-esteem than those who are verified less often (Cast and Burke 2002; Stets and Burke 2014). Research suggests that having higher self-esteem is useful for individuals, not only because it is associated with lower depression and anxiety, but also because self-esteem can act as a buffer by providing protection from harmful experiences (Cast 2004; Cast and Burke 2002).

Some researchers argue that individuals with high self-esteem are more likely to interpret feedback from others in a way that maintains positive self-views, or work to discredit the source of negative feedback in an attempt to maintain a positive self-image (Cast and Burke 2002). For example, high self-esteem individuals who self-injure may perceive negative stereotypes associated with self-injury as coming from individuals who are "misinformed." They also may justify their behavior as rational or effective, which is demonstrated by individuals who participate in the pro-self-injury movement. These are cognitive strategies used to manage negative feedback in an attempt to maintain a positive self-image (Cast and Burke 2002; Stets and Burke 2014). Thus, individuals who experience verification may be less likely to direct negative stereotypes towards

themselves because of having a more positive affective state of lower depression and anxiety and higher self-esteem, which would reduce the likelihood of internalizing stigma. My final hypothesis is:

H3: Identity verification will be negatively related to internalization of stigma through one's affective state.

Summary

To conclude, this study examines the effect of verification on self-injury, anticipation of rejection, and the internalization of stigma. Broadly, I expect that verification is associated with self-injury, anticipation of rejection, and the internalization of stigma through affective state based on previous research in identity theory illustrating the effect of verification on lower depression and anxiety and higher self-esteem (Burke and Stets 2009; Cast 2004; Stets and Burke 2014) . Specifically, I hypothesize that identity verification will be negatively related to self-injury through one's affective state (H1), identity verification will be negatively related to anticipation of rejection through one's affective state (H2), and identity verification will be negatively related to the internalization of stigma through one's affective state (H3). In assessing the effect of verification, this study also explores what identities are relevant to self-injury behavior and its outcomes.

If the findings support these hypotheses, this suggests that our perceptions of how others see us compared to how we see ourselves is an important precipitator associated with self-injury and its outcomes. This would highlight the need to examine social components of self-injury such as self-views in relation to our perceptions of how others

see us in the social environment. Additionally, because I hypothesize that verification is indirectly related to self-injury and its outcomes through one's affective state, support for these hypotheses could provide insight into what might contribute to the affective states associated with self-injury, anticipation of rejection, and the internalization of stigma. Specifically, might a lack of verification be associated with the affective states of depression and anxiety and low self-esteem that might be associated with self-injury? If this is true, what does this mean for how we can better support and care for those who engage in self-injury?

If the findings do not support the hypotheses, it may be the case that verification is not significantly related to self-injury and its outcomes. It may be that other precipitators such as attitudes towards self-injury, life events, or one's affective state are more crucial components of self-injury and its outcomes rather than verification.

By taking a social psychological approach to examining self-injury, this study contributes to prior research on self-injury by assessing how our identities, and perceptions of how others see us compared to how we see ourselves may be related to self-injury. Specifically, this study investigates how identity verification might be related to the affective states of depression and anxiety and self-esteem, which might be related to self-injury. This study also contributes to self-injury research by assessing what identities might be relevant to self-injury (that is, gender, student, friend, child, dominant, and moral). Based on prior research suggesting that stress or conflict related to an individuals' gender, being a student, friend, child (parent-child relationship), dominant person, and being a moral person might be related with self-injury, it is important to

assess whether these identities are relevant to self-injury because of verification or a lack of verification for these identities. This study also contributes to identity theory by examining the verification process with a counter-normative or stigmatized identity as well as investigating how verification can have an influence on behavior, particularly, a negative behavior like self-injury, through one's affective state.

Lastly, the current study contributes to research on stigma by assessing how verification, which has been demonstrated to have a positive effect on the self, might be related to two types of stigma: anticipation of rejection (symbolic interaction stigma) and internalization of stigma (self-stigma). Ultimately, this study provides an investigation of how identity processes such as verification might be associated with self-injury and the rejection and stigma that ensues. Findings from this study can introduce the importance of identities and verification on self-injury and the outcomes (anticipation of rejection and internalization of stigma) experienced by some individuals.

Chapter 3: Methods

Sample and Recruitment

During the summer and fall quarters in 2020, undergraduate college students are recruited at a large western university to take part in an online survey about hurting behaviors (N =1,485). Students are recruited from the following courses: Introduction to Sociology, Theoretical Perspectives in Sociology, Research Methods, Statistical Analyses, Sociological Imagination, Sociological Determinants of Health, Inequality and Social Class, Formal Organizations, and Sociology of Emotions. In most cases, an announcement is made about the study by either the researcher or the instructor during class. Additionally, students are given access to information about the study including the contact information for the researcher through their online class portal.¹ Although participants are recruited from only sociology classes, external validity is provided by recruiting from multiple lower and upper division classes from various specialized topics within sociology. This allows for a more diverse pool of participants to recruit from and a reduced likelihood of only sampling from participants who may have a specialized interest in the topic.

Students are told that the purpose of the study is to examine how students see themselves, their interactions with others, and how this might influence how they hurt themselves such as self-injury. They also are told that participation is voluntary and that their answers and participation will remain anonymous. Students who participated in the

¹ For one course (Sociological Determinants of Health), students were only notified about the study through a written announcement and recruitment flyer posted on their online class portal, which was provided by the researcher to the instructor.

survey are given extra credit in their course. The amount of extra credit provided is determined by the instructor, but generally ranged between two and three percent. Those students who would like to receive extra credit but did not want to participate in the study are given an alternate assignment which asks students about how they saw themselves in terms of their gender. Upon recruitment, participants are given a link to schedule an appointment time to participate in the online survey or contact the researcher to participate in the alternate assignment.

Due to the COVID-19 pandemic and resulting campus closure, all survey data are collected via zoom. For safety purposes, participants are required to have their video on during the entire duration of their participation in the study. This ensures that each participant can be monitored and assisted by the researcher if they have questions, or if they feel triggered by any mention of self-injury while completing the online survey. Given the sensitive nature of the study, the Institutional Review Board conducted a full board review to assess the risks involved and confirm that appropriate protections are being provided to ensure the safety of student participants, which includes the researcher being trained and certified by Mental Health First Aid USA to respond to early-stage mental health crises. Additionally, mental health resources are provided throughout the survey and discussed at the end of the survey for each participant. Finally, students who need additional resources are given the contact information to an on-campus psychologist who was informed about the study.

The survey took students approximately 15-30 minutes to complete.² Questions on the survey address identity verification (of the student, friend, child, dominant, gender, and moral identities), attitudes towards self-injury, history of self-injury, anticipation of rejection and the internalization of stigma, depression and anxiety, self-esteem, self-injury ideation, life events, and demographic information (that is, race/ethnicity, parents' income, religion, and gender).

Measures

Dependent Variables

Self-Injury. The Non-Suicidal Self-Injury Assessment Tool (NSSI-AT) (Whitlock, Exner-Cortens, and Purington 2014) is used to gather information on self-injury. To assess whether a participant engaged in self-injury, they are asked if they ever engaged in any of the following types of self-injury behavior with the purpose of intentionally hurting themselves. Response options include: "Scatched or pinched with fingernails or other objects to the point that bleeding occurs or marks remain on the skin," "Cut wrists, arms, legs, torso or other areas of the body," "Dripped acid onto skin," "Carved words or symbols into the skin." "Ingested a caustic substance(s) or sharp object(s)," "Bitten yourself to the point that bleeding occurs or marks remain on the skin," "Tried to break your bones," Broke your own bones," "Ripped or tore skin," "Burned wrists, hands, arms, legs, torso or other areas of the body," "Rubbed glass into skin or stuck sharp objects such as needles, pins, and staples into or underneath the skin," "Banged or punched objects to the point or bruising or bleeding," "Banged or punched oneself to the

² The survey was pre-tested prior to distribution to the student population.

point of bruising or bleeding,” “Intentionally prevented wounds from healing,” “Engaged in fighting or other aggressive activities with the intention of getting hurt,” “Pulled out hair, eyelashes, or eyebrows (with the purpose of intentionally hurting yourself),” and “I have never intentionally hurt myself in these ways.”

Thirty-seven percent (N= 180) of participants reported engaging in some type of intentionally harmful behavior towards oneself at some point in their lifetime. This was calculated based on how many participants indicated engaging in one or more behaviors with the purpose of intentionally hurting themselves. The remaining 63% reported never engaging in self-injury. Thus, self-injury is constructed as a dummy variable (coded as 1) with those who never engaged in self-injury as the comparison group (coded 0).

Of the 180 participants who reported engaging in some type of self-injury behavior, 37% indicated engaging in only one type of hurting behavior (that is, cutting, burning, hair-pulling, etc.). Twenty-eight percent engaged in two types of hurting behaviors. For example, a participant may engage in cutting and hair-pulling. Twelve percent engaged in three types of hurting behaviors at some point in their lifetime. Approximately 7% of participants who self-injured engaged in four different types of hurting behaviors. Finally, approximately 16% used five or more methods of self-injury behavior.

Anticipation of Rejection. Given the stigma associated with self-injury, the survey includes two scales to measure symbolic interaction stigma and self-stigma: anticipation of rejection and internalization of stigma. Modifications are made to both scales to address self-injury as opposed to the anticipation of rejection and internalization stigma

associated with developing a mental illness such as schizophrenia and entering a psychiatric hospital (Link et al. 2015). Link and colleagues (2015) suggest that anticipation of rejection predicts withdrawal and influences the internalization of stigma. I include five items to assess how often during the past three months participants worried about rejection from others because of self-injury. For example, participants are asked, “How often during the past three months did you worry what other people think about you because you hurt yourself?” Additionally, participants are asked, “How often during the past three months did you feel like people might stop being your friend if they knew you hurt yourself?” and “How often during the past three months did worrying about what other people might think about you hurting yourself make you feel like hiding from other people?” Responses options include “Not at all” (coded 0) to “Very strongly” (coded as 6). Table 1 provides the factor loadings for anticipation of rejection. Because the factor loadings reveal one underlying dimension that is reliable, a scale is created with the five items. A higher score represents greater anticipation of rejection.

[Table 1 about here]

Internalization of Stigma. The internalization of stigma measurement includes four items to evaluate current and recent feelings of embarrassment and shame associated with internalizing stigma. This highlights an important dimension of stigma, that is “self-stigma,” which focuses on the process of internalizing negative stereotypes (Link et al. 2015). Participants are asked, “Right now, how much shame do you feel due to hurting yourself?” or, they are asked, “How often in the past three months, did you feel embarrassed because you hurt yourself?” Response options include “Not at all” (coded 0)

to “Very strongly” (coded as 6). Table 2 provides the factor loadings for the items used to measure internalization of stigma. Factor loading scores indicate one underlying dimension with high reliability, so the items are summed to create a scale with a higher value representing greater internalization of stigma.

[Table 2 about here]

Independent Variables

Identity Verification. I examine several types of identities which encompass the three identity bases (that is, person, role, and group): the moral (person), dominant (person), student (role), and friend (role), son/daughter (role), gender (group) identity.

For participants who indicate a history of self-injury, they are asked about how they perceived others saw them during the time they engaged in self-injury. Specifically, they are asked to think about a time when they most seriously hurt themselves and indicate when that occurred. Responses are on a scale of 1 to 7. Options include: “Less than 1 week ago”, “Between 1 week and 1 month ago”, “Between 1 and 3 months ago”, “Between 3 and 6 months ago”, “Between 6 months and 1 year ago”, “Between 1 and 2 years ago”, and “More than 2 years ago”). Then, participants are asked to think about themselves in each of the above identities (student, dominant person, moral, and so forth), identify how they saw themselves at that time, and how they perceive they were seen by others. Hence, it is imperative that we capture data on identity experiences at the time of self-injury.

To measure identity verification for those who have not engaged in self-injury, participants are asked, “Think about how you see yourself as a (friend). How much do

you think others see you this way?”³ Responses are on a scale of 0 to 10 with 0 representing “Not at all,” and 10 representing “Completely.” A high score represents high identity verification. The scale was standardized so the mean scores for verification is 0 with a standard deviation of 1.

Self-Injury Ideation. Self-injury ideation is the intent to engage in deliberate harmful behaviors towards oneself. To measure self-injury ideation, participants are asked two questions: 1) “In the past 365 days, how often have you had thoughts about hurting yourself?” and 2) “In the past 365 days, how often have you attempted to hurt yourself?”⁴ Response options include “Never,” “Once in the past year,” “Once every few months,” “1-3 times a month,” “Once a week,” “2-3 times a week,” and “Everyday” (coded 0-6). These response options are derived from the Non-Suicidal Self-Injury Assessment Tool to assess frequency of self-injury behavior. The correlation of these two variables is high ($r = 0.60$). Both variables are added to represent a measure of self-ideation. A higher value represents greater self-injury ideation.

Depression and Anxiety. Depression and anxiety are assessed using six items from the Kessler-6 scale (Kessler et al. 2002). Participants are asked how often they felt nervous, hopeless, restless or fidgety, depressed, that everything was an effort, and worthless within the past 30 days. Responses (coded 0-4) include: “All of the time,” “Most of the time,” “Some of the time,” “A little of the time,” and “None of the time.”

³ For the dominant, gender, and moral identity, participants were asked to think about the identity in whatever way it means to them. This allows the participant to consider their own self-meanings with their dominant, gender, or moral identity.

⁴ Both questions were adopted from the Suicidal Ideation Attributes Scale (van Spijker et al. 2014). Questions were modified from the original scale to assess self-injury behaviors within the past year.

The factor loadings shown in Table 3, reveal that the items reflect a single dimension with good reliability, thus, they are summed to create a scale that measures depression and anxiety. A higher score indicates stronger feelings of depression and anxiety.

[Table 3 about here]

Self-Esteem. Self-esteem includes 21 items, which address the three dimensions of self-esteem: authenticity, self-worth, and self-efficacy (Stets and Burke 2014). Using a scale of 1-4, participants will be asked how strongly they agree (4) or disagree (1) with statements such as “I feel I am a person of worth, at least on an equal basis with others” (self-worth), “there is no way I can solve some of the problems I have” (self-efficacy), and “I feel most people don’t know the ‘real’ me” (authenticity).⁵ Factor loadings for the 21 items reveal a single scale with high reliability (see Table 4). Thus, the 21 items are summed to create a single measure of self-esteem. Participants with a higher score represents higher self-esteem.

[Table 4 about here]

Affective State. Prior literature suggests that higher self-esteem is associated with lower rates of self-injury (Forrester et al. 2017). Additionally, lower depression and anxiety is also associated with lower rates of self-injury (Selby et al. 2012). In assessing these two variables, the results indicate that depression and anxiety and self-esteem are highly correlated ($r = .67, p \leq .05$). Thus, because these two variables operate similarly on self-injury and the results indicate a high correlation, the two items were summed to

⁵ In assessing whether the three dimensions of self-esteem influence self-injury, rejection, or stigma, findings indicate no significant effects in the models. Thus, they are not included in the final analysis.

create an index that measures participants' affective state. A high score represents a more positive affective state, that is, higher self-esteem and lower depression and anxiety.

Attitudes toward Self-injury. To examine attitudes towards self-injury, I draw upon prior research and ask participants whether they think self-injury can be a way to deal with life situations and calm oneself, provide individuals with an escape or release from negative emotions, and potentially having more positive effects than negative effects. I develop a scale using the following 5 items:

1. Self-injury can be a way to calm oneself.
2. Self-injury provides individuals with an escape.
3. Self-injury is an unacceptable behavior.*
4. Self-injury is more likely to have more positive effects than negative effects.
5. Sometimes self-injury is understandable when a person engages in it.

Participants are given the items where response categories include “strongly disagree,” “disagree,” “agree,” and “strongly agree” (coded 1- 4). Item 3 (indicated with an asterisk) is reverse coded so that a higher score represents more positive views towards self-injury. To assess the validity of the scale, all items are pretested and then I conduct a factor analysis which suggests one underlying dimension with sufficient factor loadings. Following this, items are added together to create a single scale to measure attitudes towards self-injury (see Table 5 below).

[Table 5 about here]

Background Variables

I consider various factors that may influence other variables such as identity verification, attitudes, and affective state. Specifically, I account for disruptive events in school and in their personal life. Prior research argues that self-injury is the result of

unsupportive environments or disruptive relationships in early life (Everett and Gallop 2000; Maris 1997; Quirk et al. 2015). These experiences can produce various negative outcomes such as an inability to manage intense negative emotions (emotional regulation/dysregulation), increased rumination (tendency to repeatedly think about negative events and emotions), negative self-concepts such as self-hatred, and unhealthy or maladaptive coping strategies such as binge drinking, drug abuse, and self-injury (Adler and Adler 2011; Everett and Gallop 2000; McAllister 2003; Quirk et al. 2015).⁶ Research on self-injury and life events suggests that people who self-injure report experiencing more stressful life events. For adolescents and young adults, peer violence and romantic break-ups have strong associations with self-injury (Steinhoff et al. 2020).

In this study, I account for break-ups as a disruptive life event for the college sample. I ask participants if they experienced an end to a romantic relationship in their lifetime. Experiencing a break-up is coded 1 for “Yes” and 0 for “No.” I also ask if they experienced academic issues such as failing a class or being put on academic probation. I combine experiencing failing a class or being on academic probation into one variable ($r = 0.55$; $p \leq .05$). A higher score indicates experiencing both life events (failing a class and being placed on academic probation).⁷

⁶ The type of emotional regulation strategy such as using cognitive strategies (cognitive reappraisal) or suppression emotions (expression suppression) was included in the survey and assessed. However, findings indicate no significant effects in the models on self-injury, internalization of stigma, or anticipation of rejection. Thus, they are not included in the final analysis.

⁷ I explore other life events such as loss of a home, loss of a job, major move, marriage, divorce, being a victim of a disaster, victim of a crime, experiencing health issues, and having a child, but approximately 70-90% of participants reported never experiencing such life events. This indicates that these events may not be relevant for the sample, therefore, these events are not examined. 58% reported losing a loved one at some point in their life, but when included in a model assessing self-injury, stigma, or rejection, losing a loved one did not produce any significant effects. Thus, this variable is also excluded from the model.

While most students did not experience academic issues such as failing a class or being put on academic probation (61% never failed a class; 79% was never put on academic probation), these events are more relevant for a college sample than getting married and having a child. Similarly, 41% of respondents experienced a break-up at some point in their life, which is more relevant for a college sample than divorce or losing a job given the age demographic ($\mu = 21.3$ years old). Hence, academic issues and break-ups are the only life events included in the analyses.

Demographics. Background information includes gender, race/ethnicity, religious preference, and parents' income.⁸ Gender is coded 1 for women and 0 for men. For race/ethnicity, approximately 76% of the sample reported being Asian (N = 139) or Hispanic (N = 231). Thus, Asian and Hispanic are constructed as dummy variables (coded as 1). All other racial/ethnic groups are the comparison group (coded 0), which include white, black, Middle Eastern, biracial, and multiracial individuals. For religious preference, approximately 61% (N=297) identified as being religious. Within this category, participants identified as Catholic (33%), Christian/Protestant (17%), Muslim/Islam (4%), Buddhist (3%), Hindu (2%), Jewish (1%) or other (1%). The remaining 39% of the sample identified as non-religious. Because of the large number of participants identifying as non-religious or religious through Catholicism and Christianity/Protestant, religious is constructed as a dummy variable (coded as 1) with non-religious as the comparison group (coded 0). Finally, parent's income is measured as

⁸ I considered age in the model, but results indicated no significant effect. Therefore, it was excluded from the final analyses.

“less than \$15,000”, “\$15,000-34,000”, “35,000- 49,999”, “50,000- 74,999”, and “75,000 and more” (coded 0-5) (Berzofsky et al. 2015).

Chapter 4: Results

Analysis

The central focus of this study is to examine how identity verification is related to self-injury and its outcomes through one's affective state. First, I perform a multiple regression to investigate the effect of verification on affective state (that is, depression and anxiety and self-esteem). Next, I perform a multiple regression on self-injury ideation to assess the effect of affective state as a mediating variable for identity verification on self-injury ideation. I carry out these analyses because I am testing the relationship between a single continuous dependent variable and several independent variables (that is, gender, race/ethnicity, religion, parent's income, attitudes towards self-injury, life events, and identity verification). I provide standardized beta coefficients, which use standard deviations as their units.

Since self-injury is a dichotomous variable (coded 1 for self-injury and 0 for no self-injury), I estimate a logistic regression to examine the effect of verification on self-injury through one's affective state. I provide the odds ratio which are interpreted as values above 1 indicating an increase in the odds of engaging in self-injury for every one-unit increase in the independent variable. Additionally, values below 1 indicate a decrease in the odds of engaging in self-injury for every one-unit increase in the independent variable. Lastly, I implement multiple regression analyses to investigate how verification is indirectly associated to anticipation of rejection and the internalization of stigma through one's affective state for those reporting self-injury.

While 83% of my sample fall under the category of non-suicidal self-injury, 29 participants indicated engaging in self-injury with suicidal intent. To maximize my sample size but also consider any differences between the two groups, I examine differences between non-suicidal self-injurers and suicidal self-injurers in my sample and find few significant differences. Using t-tests, results indicate that suicidal self-injurers reported a significantly greater mean value for being religious than non-suicidal self-injurers ($p \leq .05$). I also estimate a groups model using structural equation modeling, which suggests that self-injury ideation has a positive impact on anticipating rejection for both suicidal and non-suicidal self-injurers. However, the effect is stronger for suicidal self-injurers ($\beta = .64$ compared to $\beta = .30$). Given that there are few significant differences between suicidal and non-suicidal self-injurers and that 83% of my sample are non-suicidal, I describe my sample as “non-suicidal self-injurers.”

To briefly review the focus of my study and hypotheses, my primary objective is to examine the effects of verification on self-injury and its outcomes (anticipation of rejection and internalization of stigma) through one’s affective state. My hypotheses address two broader research questions: 1) how is verification related to self-injury, and 2) how might this also be related to anticipating rejection and internalizing stigma that is associated with self-injury? I test whether identity verification will be negatively related to self-injury through one’s affective state (H1), identity verification will be negatively related to anticipation of rejection through one’s affective state (H2), and identity verification will be negatively associated with internalization of stigma through one’s

affective state (H3). Furthermore, I explore what identities are relevant to self-injury and its outcomes.

Results

Table 6 presents the means and standard deviations for the variables used in the analyses. Of the 1,485 students who were given an opportunity to complete the survey, 487 students participated, within which 37% (N=180) report engaging in some type of self-injury during their life ($M = .37, SD = .48$). For those who engaged in self-injury, participants report moderate levels of anticipation of rejection ($M = 9.37, SD = 4.27$) and the internalization of stigma ($M = 10.03, SD = 5.43$). Participants also report slightly negative attitudes towards self-injury ($M = 10.59, SD = 2.49$). For life events, 41% report experiencing an end to a relationship at some point in their life. Sixty percent of participants report experiencing academic issues such as failing a class or being placed on academic probation. In terms of affective state, participants report slightly positive affective states characterized by lower depression and anxiety and higher self-esteem ($M = 66.93, SD = 12.89$). Participants also report low levels of self-injury ideation ($M = .49, SD = .71$).

(Table 6 about here)

Table 7 provides the means for all variables used in the analyses for individuals who report engaging in self-injury and those who did not report a history of self-injury. The findings suggest that individuals who engage in self-injury are significantly more likely to have more positive attitudes towards self-injury than those who did not report self-injury ($M = 11.63$ vs. $M = 9.98, p \leq .01$). They also are more likely to experience an

end to a relationship ($M = .49$ vs. $M = .36$, $p \leq .01$) and engage in self-injury ideation compared to those who have not self-injured ($M = .94$ vs. $M = .22$, $p \leq .01$). Individuals who self-injure are less likely to have a more positive affective state ($M = 60.03$ vs. $M = 70.93$, $p \leq .01$) and be religious compared to those who have not self-injured ($M = .49$ vs. $M = .69$, $p \leq .01$). Additionally, the results indicate that those who engage in self-injury experience lower levels of verification for all identities compared to those who have not engaged in self-injury (student: $M = -.33$ vs. $M = .19$; friend: $M = -.41$ vs. $M = .24$; child: $M = -.22$ vs. $M = .13$; dominant: $M = -.31$ vs. $M = .18$; gender: $M = -.49$ vs. $M = .28$; moral: $M = -.53$ vs. $M = .31$, $p \leq .01$).

(Table 7 about here)

The correlations among the variables used in the analyses are presented in Table 8. All identity verification variables are positively associated with a more affective state (moral: $r = .31$, gender: $r = .21$, friend: $r = .27$, student: $r = .19$, dominant: $r = .24$, and child: $r = .13$, $p \leq .05$). A more positive affective state is negatively associated with attitudes towards self-injury ($r = -.32$, $p \leq .05$), academic issues ($r = -.10$, $p \leq .05$), self-injury ($r = -.41$, $p \leq .05$), anticipating rejection ($r = -.53$, $p \leq .05$), and internalizing stigma ($r = -.30$, $p \leq .05$).

(Table 8 about here)

Anticipation of rejection is positively associated with internalization of stigma ($r = .61$, $p \leq .05$). This is consistent with past findings that suggests anticipation of rejection is strongly associated with internalization of stigma (Link et al. 2015). The findings also indicate that more positive attitudes towards self-injury is positively associated with

anticipating rejection ($r = .18, p \leq .05$). Other variables that are positively associated with anticipating rejection include self-injury ideation ($r = .50, p \leq .05$) and being female ($r = .22, p \leq .05$). Finally, having a more positive affective state is negatively associated with anticipating rejection ($r = -.53, p \leq .05$). This also is true for internalizing stigma; having a more positive affective state is negatively associated with internalizing stigma from engaging in self-injury ($r = -.30, p \leq .05$). Both self-injury ideation and being female are positively associated with internalizing stigma ($r = .31$ and $r = .23$, respectively, $p \leq .05$).

Affective State and Self-Injury Ideation

Given that I hypothesize that identity verification has an indirect effect on self-injury and its outcomes through one's affective state, I begin by assessing the effect of verification on affective state. This is illustrated in the theoretical model with a pathway linking verification to affective state. The results are provided in Table 9, which indicates that verification is positively related to a more positive affective state, that is, lower depression and anxiety and higher self-esteem.

(Table 9 about here)

Verification of the friend identity is associated with a more positive affective state for participants ($\beta = .15, p \leq .01$). Moral identity verification also is associated with a more positive affective state ($\beta = .15, p \leq .01$). This is also true for dominant identity verification ($\beta = .14, p \leq .01$). Factors that are negatively related to a more positive affective state include having more positive attitudes towards self-injury ($\beta = -.21, p \leq .01$), being female ($\beta = -.09, p \leq .05$), and being Asian ($\beta = -.10, p \leq .05$). In other words, having more positive attitudes towards self-injury, being female, and being Asian is

associated with higher depression and anxiety and lower self-esteem (more negative affective state). But, being verified as a friend, a moral person, or a dominant person contributes to a more positive affective state. This supports previous arguments in identity theory which suggest that verification leads to positive emotions, lower depression and anxiety, and higher self-esteem (Burke 1991; Cast 2004; Stets 2006; Stets and Burke 2014). In the current study, I anticipate that the positive effect of identity verification on one's affective state will be negatively related to self-injury (H1).

I also examine what contributes to self-injury ideation since self-injury ideation is depicted as a mediating variable in the theoretical model between verification, affective state, and self-injury. Results indicate that attitudes towards self-injury and affective state are significantly related to self-injury ideation. Specifically, more positive attitudes towards self-injury is positively associated with self-injury ideation ($\beta = .14, p \leq .01$). A more positive affective state is negatively associated with self-injury ideation ($\beta = -.44, p \leq .01$). This indicates that a more positive affective state, which is an outcome of identity verification, is negatively related to thinking or attempting self-injury (self-injury ideation). Overall, these findings suggest that identity verification (particularly of the friend, dominant, and moral identity) are positively related to a more positive affective state, which is negatively related to self-injury ideation.

Self-Injury

Table 10 displays the results of a logistic regression used to examine the effect of identity verification on self-injury through one's affective state. The findings suggest that those who engage in self-injury ideation and have more positive attitudes towards self-

injury are more likely to engage in self-injury. Those who experienced self-injury ideation are almost four times the odds of engaging in self-injury than those who do not experience self-injury ideation (odds ratio = 3.63, $p \leq .01$). Additionally, the odds of engaging in self-injury increase by 17% for each standard deviation increase in attitudes towards self-injury (odds ratio = 1.17, $p \leq .01$). The factors negatively associated with self-injury include being religious and having a more positive affective state. The odds of engaging in self-injury decrease by 49% for each standard deviation increase in being religious (odds ratio = .51, $p \leq .01$). For affective state, the odds of engaging in self-injury decrease by 4% for each standard deviation increase in affective state (odds ratio = .96, $p \leq .01$).

(Table 10 about here)

These results provide support for the relationship between verification and self-injury through one's affective state. Specifically, the findings suggests that verification is associated with a more positive affective state, that is, lower depression and anxiety and higher self-esteem (Table 9), which is negatively associated with self-injury (Table 10). Thus, these findings support Hypothesis 1, identity verification is negatively related to self-injury through one's affective state. This is only relevant for the friend, dominant, and moral identity. In other words, when people see that others see them in the same way they see themselves as a friend, dominant person, or moral person, they are more likely to experience a more positive affective state, which makes them less likely to engage in self-injury.

Additionally, self-injury ideation is positively related to self-injury. Given that self-injury ideation is an outcome of affective state, the findings also indicate that one's affective state is related to self-injury through self-injury ideation. In the discussion, I elaborate on these findings and what might make verification of the friend, dominant, and moral identity relevant to one's affective state. Specifically, I provide potential explanations for why verification of the friend, dominant, and moral identity may be associated with the affective states that are also related to self-injury and its outcomes.

While prior literature has indicated that verification has a positive effect on emotions, self-esteem, and well-being (Burke 1991; Stets 2006; Stets et al. 2014), there is less research in identity theory that has illustrated how verification is related to one's affective state to influence behavior, specifically negative behaviors like self-injury. These findings support prior literature that suggests verification is related to lower depression and anxiety and higher self-esteem, but also contributes to identity theory research by illustrating how verification might be indirectly related to maladaptive behaviors like self-injury through one's affective state. Additionally, these findings highlight how verification might be related to the affective states of depression and anxiety and self-esteem that contribute to self-injury. This can provide researchers with an understanding of how verification might impact affective states that are often associated with self-injury and other mental health conditions and the importance of verifying others in interaction. I now present the findings on the outcomes of self-injury: anticipation of rejection and the internalization of stigma.

Anticipation of Rejection

To test Hypothesis 2, which states that identity verification will be negatively related to anticipation of rejection through one's affective state, I examine whether affective state, as an outcome of identity verification, is related to anticipation of rejection. Table 11 provides the standardized estimates of anticipation of rejection and internalization of stigma. Factors that are associated with anticipating rejection include affective state ($\beta = -.34, p \leq .01$), income ($\beta = -.19, p \leq .01$), self-injury ideation ($\beta = .41, p \leq .01$), academic issues ($\beta = .16, p \leq .05$), and religion ($\beta = .15, p \leq .05$).

(Table 11 about here)

This suggests that having a more positive affective state and having a high income are negatively associated with anticipating rejection. Additionally, engaging in self-injury ideation, experiencing academic issues, and being religious are positively associated with anticipating rejection. These findings support Hypothesis 2. Identity verification is positively related to one's affective state (Table 9), which is negatively related to anticipating rejection (Table 11). Thus, identity verification is negatively related to anticipation of rejection through one's affective state. In other words, if an individual is verified, they are less likely to experience a negative affective state of depression and anxiety and low self-esteem. As a result, they also will be less likely to anticipate rejection associated with engaging in self-injury. Finally, I examine the effect of verification on the internalization of stigma and present my results for Hypothesis 3.

Internalization of Stigma

To test Hypothesis 3, I assess whether affective state, which is an outcome of identity verification, is negatively associated with internalizing stigma. The results do not support Hypothesis 3. Findings indicate that anticipation of rejection is positively associated with internalization of stigma ($\beta = .61, p \leq .01$), as suggested in prior research (Link et al. 2015). Individuals who experience more anticipation of rejection from others because they engaged in self-injury are more likely to internalize stigma associated with self-injury. Furthermore, experiencing a romantic break-up is positively associated with internalizing stigma ($\beta = .15, p \leq .05$).

While these results do not support Hypothesis 3, it is likely that affective state did not yield significant effects because of the mediating role of anticipation of rejection on the internalization of stigma. Based on the analysis of affective state on anticipation of rejection, a more positive affective state is negatively associated with anticipating rejection. Furthermore, the results indicate that anticipating rejection is positively associated with internalizing stigma. Thus, this suggests that verification is positively associated to a more positive affective state, which has a negative effect on anticipating rejection, and which is negatively related to internalizing stigma.

Additional Analyses

To further examine the effect of verification on self-injury and its outcomes, I assess the indirect effects using structural equation modeling (RMSEA = 0.02). The results of these additional analyses are consistent with the prior results and provide more information on how verification might be related to self-injury and its outcomes.

Findings indicate that a more positive affective state is negatively associated with self-injury through a reduced likelihood of engaging in self-injury ideation ($\beta = -.12, p \leq .01$). More positive attitudes towards self-injury is positively associated with self-injury via a negative affective state and greater self-injury ideation ($\beta = .09, p \leq .01$). Finally, friend identity verification is negatively associated with self-injury through contributing to a more positive affective state and a reduction in self-injury ideation ($\beta = -.06, p \leq .01$). Moral identity verification also is negatively associated with self-injury through contributing to a more positive affective state and a reduction in self-injury ideation ($\beta = -.05, p \leq .01$). These indirect effects provide further support for the relationship between verification and self-injury.

In assessing the indirect effects on anticipating rejection using structural equation modeling, the results indicate that there are significant indirect effects for attitudes towards self-injury, friend identity verification, moral identity verification, and affective state. More positive attitudes towards self-injury is positively associated with anticipating rejection from engaging in self-injury through a more negative affective state, that is higher depression and anxiety and lower self-esteem, and an increase in self-injury ideation ($\beta = .15, p \leq .01$). Friend identity verification and moral identity verification are both negatively associated with anticipating rejection from engaging in self-injury through providing a more positive affective state and a reduction in self-injury ideation (friend: $\beta = -.10$; moral: $\beta = -.09, p \leq .01$). Finally, a more positive affective state, which is characterized by lower depression and anxiety and higher self-esteem, also is negatively associated with anticipating rejection associated with self-injury through a

reduction in self-injury ideation ($\beta = -.15, p \leq .01$). Overall, findings indicate that verification has a negative effect on self-injury and anticipation of rejection through affective state, as hypothesized, as well as through self-injury ideation.

In terms of internalization of stigma, there are indirect effects associated with attitudes towards self-injury, identity verification, affective state, and self-injury ideation. Like the indirect effect on self-injury, more positive attitudes towards self-injury is positively associated with internalizing stigma from engaging in self-injury via a negative affective state, greater self-injury ideation, and anticipation of rejection ($\beta = .16, p \leq .01$). For gender identity, verification is negatively associated with internalizing stigma associated with self-injury through anticipation of rejection ($\beta = -.13, p \leq .01$). Similarly, verification of one's moral identity is negatively associated with internalizing stigma associated with self-injury via a positive affective state, a reduction on self-injury ideation, and less anticipation of rejection ($\beta = -.10, p \leq .01$). In turn, a positive affective state is negatively associated with internalizing stigma associated with self-injury through a reduction in self-injury ideation and less anticipation of rejection ($\beta = -.28, p \leq .01$). Additionally, individuals who engage in self-injury ideation are more likely to internalize stigma from self-injury, via greater anticipation of rejection, than those who do not engage in ideation ($\beta = .25, p \leq .01$). Thus, these findings support Hypothesis 3; verification is negatively related to internalizing stigma indirectly through affective state.

Summary Findings

In conclusion, this study examined the effect of verification on self-injury and the rejection and stigma that ensues through one's affective state. Additionally, I explored

what identities are relevant to the affective states associated with self-injury and its outcomes. Table 9 indicates that verification is positively related to one's affective states of lower depression and anxiety and higher self-esteem. Findings also suggest that verification of the friend, dominant, and moral identity are positively associated with a more positive affective state. Verification of the student, child, and gender identity are not significant, which suggests that meanings associated with being a friend, a dominant person, and a moral person are particularly relevant to the affective states of depression and anxiety and self-esteem. Table 10 indicates that a more positive affective state is negatively related to self-injury. This also is supported by assessing the indirect effects of verification on self-injury using structural equation modeling. Given that identity verification is positively associated with a positive affective state, which is negatively related to self-injury, this finding supports Hypothesis 1.

This study also examined anticipation of rejection from others and the internalization of stigma associated with engaging in self-injury. Table 11 indicates that affective state is negatively related to anticipating rejection. In other words, having a more positive affective state reduces the likelihood of anticipating rejection from engaging in self-injury. Given that identity verification is positively related to affective state, this finding supports Hypothesis 2. An analysis of the indirect effects of verification on anticipation of rejection using structural equation modeling also finds support for this hypothesis. Identity verification is negatively related to anticipating rejection through one's affective state.

Finally, in Hypothesis 3, I anticipate that identity verification will be negatively related to the internalization of stigma through one's affective state. Table 11 reveals that only anticipation of rejection and experiencing an end to a relationship is significantly related to internalizing stigma. This suggests that identity verification is not significantly associated to internalizing stigma through one's affective state, as hypothesized. However, results from this study reveal that anticipation of rejection is positively related to internalization of stigma. In other words, anticipating rejection can contribute to the internalization of stigma. In assessing what contributes to anticipating rejection, results indicate that a positive affective state has a negative effect on anticipating rejection. Thus, it is likely that verification is related to internalizing stigma through one's affective state and anticipating rejection. Individuals who are verified will experience a more positive affective state, which reduces the likelihood of anticipating rejection, which reduces the likelihood of internalizing stigma.

Indeed, additional analyses reveal indirect effects for identity verification on internalization of stigma through affective state, self-injury ideation, and anticipation of rejection for the moral identity. For the gender identity, verification also has a negative indirect effect on internalizing stigma only through less anticipation of rejection. This suggests that verification is negatively related to internalizing stigma through affective state (for the moral identity), but it also occurs through self-injury ideation and anticipation of rejection. Future research is needed to further assess the effect of verification on internalization of stigma through affective state.

Overall, the findings indicate that verification has a negative effect on self-injury through one's affective state, particularly for the friend, dominant, and moral identity. This suggests that identity verification for being a friend, dominant person, and moral person is positively related to a more positive affective state. Based on logistic regression analyses on self-injury, a more positive affective state is negatively associated to self-injury.

For anticipation of rejection, the overall findings reveal that verification has a negative effect on anticipation of rejection through one's affective state. In other words, a more positive affective state, which is an outcome of identity verification, is negatively associated with anticipating rejection associated with self-injury. Finally, for internalizing stigma, the findings reveal no significant effect of one's affective state on internalizing stigma. However, additional analyses reveal that the effect of verification on internalizing stigma may occur indirectly through one's affective state, such as for the moral identity, or through anticipation of rejection, such as for the gender identity. It also is important to note that additional analyses reveal that verification may have an even more indirect relationship on self-injury and its outcomes through affective state, as hypothesized, as well as through self-injury ideation. In the following chapter, I discuss the implications of these results and provide possible explanations for the relevant identities associated with self-injury and its outcomes.

Chapter 5: Discussion

The current study examined how our perceptions of how others see us compared to how we see ourselves might be related to self-injury, and how this also might be related to anticipating rejection and internalizing stigma that is associated with self-injury. I used identity theory as the theoretical framework of this study to demonstrate how identity verification (when we think that how others see us is consistent with how we see ourselves) might be a precipitator of self-injury, anticipation of rejection, and the internalization of stigma through one's affective state. Drawing on previous research on identity theory, self-injury, and stigma, I provided a theoretical model that illustrates the precipitators of self-injury and its outcomes.

I developed three hypotheses which were presented in Chapter 2. I tested whether identity verification was negatively related to self-injury (H1), anticipation of rejection (H2), and internalization of stigma (H3) through one's affective state. In examining the effect of verification on self-injury and its outcomes through one's affective state, I also explored what identities (gender, student, friend, child, dominant, and moral) were relevant to self-injury, anticipation of rejection, and the internalization of stigma.

Prior identity research finds that verification is associated with positive emotions and is less likely to be associated with depression and anxiety, and low self-esteem (Cast 2004; Cast and Burke 2002; Large and Marcussen 2000; Marcussen 2006; Stets and Burke 2014). Verification can act as a form of social support by making individuals feel like they are accepted by others for who they are, which can make individuals feel worthy, efficacious, and authentic.

Thus, I predicted that identity verification would be negatively related to self-injury through providing a more positive affective state (H1). Specifically, in the theoretical model, affective state would mediate the relationship between verification and self-injury.

Additionally, the positive affective state resulting from verification might provide individuals with a buffer against anticipating rejection from others because individuals will be more likely to feel good about themselves. For example, individuals who are verified more often will likely have higher self-esteem than those who are verified less often (Cast and Burke 2002; Stets and Burke 2014). Having high self-esteem can provide protection from harmful experiences such as receiving negative self-views from others. Specifically, individuals may use cognitive strategies to maintain positive self-views such as discrediting the source of non-verifying feedback (Cast 2004; Cast and Burke 2002). Thus, instead of individuals perceiving that they might be rejected by others for engaging in self-injury, a positive affective state might act as a buffer against anticipation of rejection. This would suggest that identity verification would be negatively related to anticipation of rejection through providing a more positive affective state (H2).

Similarly, individuals with a positive affective state of low depression and anxiety and high self-esteem may be less likely to direct negative stereotypes towards themselves because these individuals may use cognitive strategies such as discrediting the source of any non-verifying feedback to maintain a positive self-view. For example, in response to stereotypes of people who self-injure as manipulative or attention-seeking, individuals with a more positive affective state may respond with claims that the source of feedback is not a good judge of their character or that they are an exception to those characteristics

in an attempt to maintain a positive self-view. As a result, a positive affective state would reduce the likelihood of internalizing stigma associated with self-injury. In other words, identity verification would be negatively associated to the internalization of stigma through providing a more positive affective state (H3).

I tested these hypotheses by administering an online survey to 487 undergraduate college students. The findings supported Hypothesis 1 and 2, with some support for Hypothesis 3. Results indicated that identity verification was negatively related to self-injury through one's affective state (H1). Likewise, identity verification was negatively related to anticipation of rejection through one's affective state (H2). However, the findings revealed that identity verification was not negatively related to internalization of stigma through one's affective state (H3). Table 11 indicated that affective state was not significantly associated with internalizing stigma. However, because one's affective state was negatively related to anticipation of rejection, and anticipation of rejection was positively related to the internalization of stigma, the effect of identity verification on internalization of stigma appeared to operate through one's affective state, which is related to anticipation of rejection, which then effected internalization of stigma. In this way, the path from identity verification to internalization of stigma was more indirect than hypothesized. Additional analyses revealed that verification of the moral identity is negatively related to internalization of stigma through one's affective state, self-injury ideation, and anticipation of rejection. Thus, there is some support for Hypothesis 3.

Additionally, the current study explored what identities may be relevant to self-injury and its outcomes through one's affective state. Table 9 revealed that verification of

the friend, dominant, and moral identity were significantly related to one's affective state, and later analyses revealed that one's affective state was negatively related to self-injury (Table 10) and anticipating rejection associated with self-injury (Table 11). Thus, being verified as a friend, dominant person, and moral person was particularly important to experiencing a more positive affective state of lower depression and anxiety and higher self-esteem, and, in turn, a reduction in self-injury and anticipating rejection.

In this chapter, I elaborate on my research findings. Since the main contribution of this study is the role of identity verification on self-injury and its outcomes through one's affective state, I focus on these effects. I discuss the relevance of the friend, dominant, and moral identity verification on the affective states that are related to self-injury and anticipation of rejection. I also discuss other important precipitators related to self-injury and its outcomes such as attitudes towards self-injury, one's religion, and life events. Finally, I conclude with a discussion of the broad implications of this study.

Precipitators of Self-Injury

Table 10 illustrated self-injury ideation, attitudes toward self-injury, one's affective state, and one's religion as important precipitators of self-injury. Self-injury ideation had the strongest effect on self-injury since individuals who had thoughts of or had been close to attempting self-injury were almost four times more likely to engage in self-injury at some point in their life. Individuals who engage in self-injury ideation already are cognitively exploring what engaging in self-injury would be like. For example, they may begin to think about self-injury as a useful tool to manage intense feelings and negative emotions without drawing attention from others. Eventually, these

thoughts of engaging in self-injury can have a strong positive effect on the likelihood of engaging in the behavior.

Positive attitudes towards self-injury also had a strong effect on self-injury behavior. This is likely because attitudes have a tendency to influence behavior. More favorable attitudes towards a behavior tend to be positively associated with engaging in that behavior (Hasking and Rose 2016; Kubrin, Stucky, and Krohn 2009). Individuals with more positive attitudes towards self-injury may not carry the same negative or stigmatizing ideas about self-injury such as the ideas that people who self-injure are “attention-seekers” or that self-injury is maladaptive. In the latter case, if individuals do not view self-injury as a maladaptive behavior, they may be more likely to consider self-injury as a viable coping mechanism during times of distress.

Another effect on self-injury was one’s affective state. Having a positive affective state of lower depression and anxiety and higher self-esteem was less likely to be associated with self-injury. Prior research indicates that individuals who have higher levels of depression and anxiety and lower self-esteem are more likely to report self-injury (Andover et al. 2010; Forrester et al. 2017; Gollust, Eisenberg, and Golberstein 2008; Klonsky and Muehlenkamp 2007; Klonsky, Oltmanns, and Turkheimer 2003). For individuals with more negative affective states, self-injury can be used as a coping mechanism to manage negative emotions, anxiety, and feelings of loneliness (Adler and Adler 2011).

One’s affective state also can indirectly effect self-injury through self-injury ideation or having thoughts of or attempting self-injury. The findings in Table 9

supported prior research that negative affective states such as being more depressed and anxious can lead to self-injury ideation by making individuals feel hopeless and search for a way to manage their negative emotions (Zielinski et al. 2017). When individuals feel like more conventional strategies of managing distress such as talking to a supportive other is unable to lessen negative emotions, feelings of hopelessness may result which may lead them to consider more maladaptive coping behaviors like self-injury (Zielinski et al. 2017). In other words, people may perceive that conventional strategies of managing distress are ineffective, which may lead them to consider more maladaptive coping behaviors.

Prior research suggests that stress may be an important precipitator of one's affective state that contributes to self-injury. Exposure to stress is positively associated to symptoms of depression, anxiety, and low self-esteem (Garber 2006; Moksnes et al. 2010; Waaktaar et al. 2004; Zuckerman 1989). While there are various definitions of stress, it generally refers to stimuli introduced to one's social environment which can cause concern, resistance, and exhaustion (Houston 1987; Kyrou and Tsigos 2009; McLeod and Lively 2007). Some argue that stress can make individuals vulnerable to experiencing a more negative affective state of high depression and anxiety and low self-esteem by reducing feelings of mastery (Pearlin et al. 1981). In this study, some of the indicators of one's affective state such as a lack of verification may be illustrative instances of stress that can produce a more negative affective state, which contributes to self-injury.

Importantly, I found that significant contributors to one's affective state that were associated with self-injury were verification of the dominant, moral, and friend identities (Table 9). The dominant and moral identity are considered person identities, which refer to meanings associated with how people see themselves as unique persons (Burke and Stets 2009). For the dominant identity, this refers to meanings associated with how individuals see themselves as dominant or submissive. This can encompass meanings of power and control such as being assertive, demanding, and controlling (Burke, Stets, and Savage 2021; Stets et al. 2020).

The moral identity refers to how persons see themselves as right or wrong, good or bad, and acceptable or unacceptable based on cultural understandings of morality (Stets 2010; Stets and Carter 2012; Turner and Stets 2006). Researchers argue that meanings associated with justice and care are important aspects of morality. Justice can include being honest, fair, truthful, hardworking, and principled, while care can include being caring, kind, helpful, generous, compassionate, friendly, and selfless (Stets and Carter 2012).

Finally, the friend identity is a role identity, which refers to meanings associated with a role individuals occupy in society (Burke and Stets 2009). These meanings can include being trustworthy, loyal, and supportive. Since the friend identity involves more intimate interaction with others in one's friend group, there is a socioemotional focus which can include meanings of goodness and acceptance, care and concern, and interdependence (Stets and Harrod 2004).

Being a dominant person, a moral person, and a friend are particularly important identities during adolescence and young adulthood when self-injury is most common. During this time, individuals are exploring who they are and transitioning from spending time with family to spending time with peers (Arnett 2007; Smetana, Robinson, and Rote 2015; Wagner et al. 2014). They may encounter new challenges around their identity or how they see themselves. They may engage in identity exploration to determine who they are and who they want to be (Arnett 2000; Smetana et al. 2015).

During identity exploration, individuals may experiment with various worldviews, occupations, and romantic relationships (Arnett 2000). For example, through romantic relationships, individuals may come to see themselves as very moral persons such that they are caring, selfless, and fair to their partners. Through experimenting with different occupations, an individual may come to learn that they enjoy leadership roles and might be a more dominant person such that they like to be in control and have power. Because adolescence and young adulthood are life stages characterized by identity exploration, the person identities of being dominant and moral may have a greater impact on one's affective state. Thus, a lack of verification of these identities may be negatively related to one's affective state, and, in turn, self-injury.

Looking more closely at these identities, for the dominant identity, researchers have argued that there is a motivation to achieve a sense of power and control that develops in adolescence and continues into young adulthood (Brockman 2018). Individuals start to struggle with issues of power particularly as they attempt to develop greater autonomy from their parents. During this time, achieving a sense of dominance

acts as a form of control and mastery (Brockman 2018; Burke et al. 2021; Stets et al. 2020) as they develop their unique skills and capabilities (Brockman 2018). A lack of verification of their dominant identity apparently can have exceptionally negative effects on their affective state.

Regarding the moral identity, research suggests that the meanings associated with being a moral person starts to develop during adolescence and young adulthood as individuals begin to see themselves in relation to others. They may start to understand who they are as moral persons in relation to others such as being caring, generous, and compassionate. They become more sensitive to the expectations and needs of others as well as how they may be responsible for what happens to others (Hardy and Carlo 2011). Thus, like the dominant identity, the moral identity is an important part of the identity exploration process during adolescence and young adulthood. A lack of verification of their moral identity may have an exceptionally harmful effect on one's affective states that are associated with self-injury.

Alongside identity exploration, adolescence and young adulthood is characterized by developing greater autonomy, specifically from the family unit. In attempting to individuate from the family, close relationships are developed among peers (Smetana et al. 2015). Thus, the friend identity may be particularly relevant. Individuals during this life stage may rely more heavily on peers than their family for support and verification for how they see themselves. Being perceived as trustworthy, loyal, and supportive as meanings associated with one's friend identity may be particularly relevant to feelings of depression, anxiety, and self-esteem, and, in turn, self-injury.

It is important to keep in mind that verification is achieved when there is a consistency between individuals' identity meanings and perceptions of how others see them (Burke and Stets 2009; Stets and Asencio 2008). Even if individuals have meanings of being a moral person that is less good or kind or fair, they still seek to have others view them in the same way that they see themselves. What is important is that the meanings associated with these identities, whatever they were to individuals, was significantly associated with the affective states that contributed to their self-injury. More generally, a lack of verification for these identity meanings (of being dominant, moral, or a friend) can act as a stressor on individuals that can negatively impact them and contribute to their self-injury. Research suggests that while exposure to stress has a negative effect on one's affective state, stress in the interpersonal context of relationships may be particularly stressful for individuals (Liu, Cheek, and Nestor 2016; Moksnes et al. 2010; Rudolph 2002).

Aside from identity verification, other factors were related to self-injury indirectly through one's affective state. Specifically, attitudes towards self-injury, being female, and being Asian were negatively associated with having a more positive affective state. According to the results in Table 9, attitudes toward self-injury was a strong contributor of one's affective state. Essentially, endorsing attitudes that harm oneself puts one in a negative affective state, which can contribute to self-injury.

Research suggests that women are more likely to ruminate compared to men, which may play a large role in depression and anxiety that can lead to higher rates of self-injury (Nolen-Hoeksema 2012). Research also suggests that women have lower self-

esteem than men during adolescence and young adulthood, which may be the result of greater body dissatisfaction and difficulty in coping with academic stress (Aanesen, Meland, and Torp 2017; Helwig and Ruprecht 2017). Further, women are exposed to higher levels of interpersonal stress than men and are more likely to interpret interpersonal conflict in ways that undermine their sense of self, which may make them more vulnerable to experiencing depression and anxiety and low self-esteem (Rudolph 2002). In turn, these negative affective states resulting from these stressors could lead to coping by way of self-injury.

As a racial/ethnic minority, being Asian may be associated with a more negative affective state because of exposure to minority stress as it relates to the “model minority” myth (Angoff, McGraw, and Docherty 2021). This myth depicts Asians as hardworking, intelligent, high achieving, uncomplaining, and self-reliant. Ultimately, they are portrayed as the epitome of assimilation into American society (Chao, Chiu, and Lee 2010; Trytten, Lowe, and Walden 2012), However, this myth may produce stress among Asian Americans which produces negative affective states.

Research indicates that Asian Americans experience pressure to meet parental expectations of high academic achievement and live up to the “model minority” stereotype along with other minority stresses such as balancing two different cultures and communicating with parents, family obligations based on the strong family values, and racial discrimination and isolation (Lee et al. 2009). Thus, the pressure and conflict associated with the “model minority” stereotype and minority stress can act as stressors leading to negative emotions and symptoms of depression and anxiety and low self-

esteem (Atkin et al. 2018; Padgett et al. 2020). Furthermore, because of the model minority myth perpetuating images of Asians being “self-reliant” and “uncomplaining” as well as Asian cultural norms that stigmatize mental health treatment, many Asian Americans do not seek mental health treatment for depression and anxiety and other psychological conditions (Lee et al. 2009). This also may contribute to the negative affective states experienced by Asians, which is associated with self-injury.

More generally, each of the factors discussed above expose individuals to stressors, which have a negative effect on their affective state, which can lead to self-injury (Liu et al. 2016). Holding potentially counter-normative attitudes (positive attitudes towards self-injury), being female and experiencing potential body dissatisfaction, academic problems, and interpersonal conflict, and being Asian and being subjected to the “model minority” myth all contribute to negative feelings. Added to this is the stress of experiencing identity non-verification across some important identities. Together, these stressors may accumulate, take a toll on individuals affectively, and indirectly be related to self-injury.

In considering the background characteristics associated with self-injury, the results revealed that being religious was negatively related to self-injury. This was consistent with prior research that being religious may act as a protective factor against maladaptive coping behaviors, particularly when such behaviors are perceived as deviant or immoral (Borrill, Fox, and Roger 2011; Gall and Guirguis-Younger 2013; Haney 2020). Given that religion is closely associated with moral values, religious individuals may be less likely to engage in “immoral” behaviors. Religious individuals also may have

a supportive social network (that is, other religious individuals) that they can turn to during times of distress, which may reduce the likelihood of engaging in self-injury (Haney 2020).

Additionally, religious individuals may engage in positive religious coping such as praying, which is considered a form of “cognitive manipulation” that can be used to cope with stressful situations and difficult emotions (Haney 2020; Thoits 1990). Prayer, as a religious coping mechanism, can act as a form of social support that can be used to manage negative emotions by providing individuals with an other (such as God or another higher being) to express emotions and interact with, receive positive reflected appraisals to maintain positive self-views, and reinterpret situations to appear less negative or threatening (Sharp 2010). As a result, individuals may be less likely to engage in other coping behaviors, especially maladaptive behaviors like self-injury.

In sum, the findings supported prior research that self-injury ideation, attitudes towards self-injury, one’s affective state, and religion are precipitators of self-injury. However, what we learn from the current research is that identity verification has an important effect on one’s affective state that contributes to self-injury. When individuals do not receive verification for being a dominant person, a moral person, or a friend, this can be particularly stressful on the self, which can have a negative effect on one’s affective state, and, in turn, relate to self-injury. There are other factors as the results revealed that I discussed may be indicators of stress that are related to one’s affective state and self-injury such as being female. However, because identity verification as it

relates to self-injury has been a relatively unexplored area of investigation, the current study brings new insight into this area.

Outcomes of Self-Injury

Anticipation of Rejection

When examining whether individuals anticipate rejection for engaging in self-injury, it is important to consider whether they understand the public stigma associated with self-injury and the likelihood that they think those negative stereotypes might be directed at them in interactions. Given that anticipation of rejection is a form of symbolic interaction stigma, stigmatized individuals must understand societal stereotypes and begin to think about how this might impact social interactions and levels of acceptance from others (Link et al. 2015). If people do not understand the negative stereotypes associated with self-injury, or they believe others may not apply those stereotypes to them, they may be less likely to anticipate rejection from self-injury.

Table 11 revealed that self-injury ideation and one's affective state were the strongest contributors to anticipating rejection for self-injury. Individuals who engage in self-injury ideation may be more likely to anticipate rejection compared to those who do not engage in self-injury ideation because they are still contemplating engaging in a stigmatized behavior. While affective state was a strong contributor to anticipating rejection, it is important to remember that identity verification was a significant contributor to affective state. Identity verification was associated with an improved affective state, which, in turn, was negatively associated with anticipating rejection. This is particularly true for the dominant, moral, and friend identity. Thus, when individuals

experience a lack of verification in these identities, it not only indirectly is associated with self-injury through affective state, but also anticipation of rejection. Additional analyses on the indirect effect of verification on anticipation of rejection highlight particular importance to verification of the friend and moral identity having an indirect effect on anticipation of rejection through one's affective state and self-injury ideation.

Table 11 also showed that having a high income was negatively associated with anticipating rejection associated with self-injury. A high income may make individuals less likely to anticipate rejection associated with self-injury because individuals with a higher status have more resources than lower status persons that can be used to make them feel accepted and supported by others (Burke, Stets, and Cerven 2007; Cast, Stets, and Burke 1999; Stets et al. 2020). For example, individuals with high income may carry greater influence in getting others to see them as they see themselves. This influence and deference (on the part of others) may mean that negative stereotypes associated with self-injury are less likely to be directed towards them. As a result, they may be less likely to anticipate being rejected by others.

Religion also has an effect on anticipating rejection, although in contrast to its effect on self-injury, being religious was positively related to anticipating rejection. While religion is typically seen as a protective factor against stress and a more healthy coping mechanism (through providing coping mechanisms such as praying), being religious contributes to anticipation of rejection associated with self-injury. It may be that individuals who are religious anticipate more rejection associated with self-injury because they understand that they are engaging in a behavior that is culturally perceived

as wrong, bad, or unacceptable, and it goes against their religious or moral values. Thus, they may perceive that negative stereotypes associated with self-injury will be more likely to be directed towards them, which may lead to anticipation of rejection from others, especially other religious individuals in their social network.

Finally, experiencing academic issues was positively associated with anticipating rejection. Experiencing academic issues such as failing a class or being placed on academic probation may be perceived as a form of rejection or unacceptance. Individuals who experience academic issues may feel like they will not be accepted by others because they are unable to meet certain expectations to pass a class or maintain good standing at school. Thus, the meanings associated with not doing well in school such as failure or not being accepted can prompt anticipation of rejection in other aspects of the self such as being someone who engages in self-injury.

Overall, when assessing what factors contribute to anticipation of rejection for engaging in self-injury, the results revealed that self-injury ideation, one's affective state, income, religion, and academic issues were essential. Importantly, as hypothesized, identity verification had an indirect effect on anticipation of rejection through one's affective state. Similar to the indirect effect of verification on self-injury, a lack of verification can act as a stressor that contributes to a more negative affective state, which then becomes associated with anticipating rejection.

Internalization of Stigma

Anticipation of rejection was positively associated with the internalization of stigma. Indeed, prior research suggests that anticipation of rejection, which is a form of

symbolic interaction stigma, is positively related to the internalization of stigma (Link et al. 2015). For individuals who imagine or rehearse what interactions might look like if others knew that they engaged in self-injury, they can perceive rejection as a threat and withdraw from others, which can prompt the internalization of stigma (Link et al. 2015).

Contrary to what was hypothesized, one's affective state, which was an outcome of identity verification, did not have an effect on the internalization of stigma. However, since affective state had an effect on the anticipation of rejection, which, in turn, was strongly associated with the internalization of stigma, this suggested that identity verification had a more indirect effect on the internalization of stigma through one's affective state *and* anticipation of rejection. Thus, when individuals were not verified, they experienced a more negative affective state, which prompted greater anticipation of rejection from others. When individuals anticipated rejection from others, they also were more likely to internalize negative stereotypes associated with self-injury (internalization of stigma). Additional analyses revealed that verification of the moral identity was related to internalizing stigma through one's affective state, as hypothesized, but also through self-injury ideation, and anticipation of rejection. Thus, there is some support for Hypothesis 3.

While academic issues was a life event related to anticipating rejection, experiencing an end to a relationship was a life event that was positively associated with internalizing stigma associated with self-injury. Experiencing an end to a relationship such as a break-up can act as a stressor that may prompt individuals to think about themselves more negatively and direct negative stereotypes associated with self-injury

such as being “rejection-worthy” or “bad” to themselves (internalizing stigma). After experiencing a break-up, individuals who engage in self-injury may begin to direct negative stereotypes of self-injury such as being manipulative or attention-seekers to themselves, while ruminating or attempting to understand the break-up.

Through these findings, we learn that individuals who engage in self-injury and anticipate rejection associated with self-injury may experience various stressors such as a lack of verification or minority stress (for Asians), which can produce more negative affective states, which are associated with self-injury and anticipation of rejection. Additionally, for anticipation of rejection, some factors such as being religious and experiencing academic issues, may prompt individuals to perceive that negative stereotypes associated with self-injury are more likely to be directed towards them, which can contribute to anticipation of rejection. This may be because they are engaging in behaviors that conflict with religious values or because they perceive that the meanings associated with failing a class or being placed on academic probation make others less willing to accept them. Thus, when assessing the factors associated with self-injury and whether an individual anticipates rejection, it is important to consider one’s affective state and various stressors related to one’s social position such as being female or being Asian, as well as their interactions with others.

For the internalization of stigma, we learn that anticipation of rejection plays a large role in the internalization of stigma associated with self-injury. The findings illustrated that a lack of verification was related to the internalization of stigma through producing a more negative affective state, as well as through greater self-injury ideation,

and greater anticipation of rejection. Thus, when considering the relationship between identity verification and the internalization of stigma, it is important to consider feelings of depression and anxiety and self-esteem as well as whether they engage in self-injury ideation and anticipate rejection from others for engaging in self-injury.

Broad Implications

This study assessed how people's identities, and perceptions of how others see them compared to how they see themselves may be related to self-injury and its outcomes by way of their affective state. This study highlighted identity non-verification as a stressor that contributed to a more negative affective state, which was related to self-injury and anticipation of rejection. In addition to advancing identity theory and stigma research, the findings from this study provide us with useful information for how to help individuals who self-injure.

Prior research on self-injury emphasizes a need for support for those who self-injure. Particularly, there is a need to develop supportive relationships within the family and peer group (Lee 2020; Lloyd-Richardson et al. 2007). However, it is not clear what about support or a lack of support is related to self-injury. What we learn from this study is that part of what may be important is verification, that is, when an individual perceives that others see them in the same way that they see themselves. While verification can provide individuals with positive emotions and feelings of acceptance and support, verifying individuals for how they see themselves also can provide individuals with a sense of certainty and predictability over themselves and their surrounding environment (Hogg 2011).

It is important that close others such as family and peers take time to understand individuals' identity meanings and are sensitive to them in interactions. It may be particularly important for others to understand the meanings associated with how persons see themselves as a friend and being dominant and moral since these identities are significantly associated with the affective states that are relevant to self-injury.

Further, the findings from this study also highlighted the importance of identity verification on the anticipation of rejection associated with self-injury. Given that individuals who self-injure often experience some degree of public stigma, symbolic interaction stigma, and self-stigma, it is important for researchers to understand the various precipitators associated with anticipating rejection and internalizing stigma associated with self-injury. The findings from this study revealed that identity verification can minimize the effects of anticipating rejection for engaging in self-injury by producing a more positive affective state as well as reducing self-injury ideation. Again, this is especially true for the friend, dominant, and moral identity. When individuals receive verification and experience a more positive affective state, they are less likely to perceive that others will direct negative stereotypes associated with self-injury onto them. As a result, they are less likely to anticipate rejection, and, in turn, internalize stigma associated with self-injury. However, researchers also need to consider the role of income, religion, and stressful life events such as academic issues and break-ups as important precipitators of the rejection and stigma associated with self-injury.

Largely, these findings illustrated how verification is related to behavior, particularly maladaptive behaviors like self-injury. It is less clear how maladaptive

behaviors develop as a response to self and identity issues. These findings revealed that maladaptive behaviors may develop because of negative affective states of higher depression and anxiety and lower self-esteem, which is associated with a lack of verification. This aligns with prior identity research which suggests that identity non-verification leads to negative emotions, lower self-esteem, and feelings of depression and anxiety (Cast 2004; Cast and Burke 2002; Large and Marcussen 2000; Marcussen 2006; Stets and Burke 2014). However, this research goes a step further to demonstrate that these negative affective states resulting from a lack of verification also can contribute to the development of maladaptive behaviors like self-injury.

Chapter 6: Conclusion

Given the growing social concern over self-injury among adolescents, young adults, and more recently, children, this study examined the precipitators of self-injury and its outcomes (anticipation of rejection and internalization of stigma). This study highlighted the role of identity verification as a precipitator of self-injury and its outcomes through one's affective state. When individuals do not receive verification for how they see themselves as a dominant or moral person, or as a friend, this can be stressful and lead to negative affective states of depression and anxiety and low self-esteem, which the findings revealed was related to self-injury and anticipation of rejection.

An important takeaway of these findings is that stress can have a negative effect on one's affective states that is associated with self-injury. Part of the stress that might contribute to self-injury is a lack of verification for being a dominant or moral person, or being a friend. Additionally, being female, being Asian, and having more positive attitudes towards self-injury also expose individuals to stressors such as greater interpersonal conflict and minority stress that contribute to a negative affective state, which can be associated with self-injury.

Further, a negative affective state, which is an outcome of identity non-verification, may make individuals think that negative stereotypes associated with self-injury are more likely to be directed onto them, making them more likely to anticipate rejection. Other factors associated with anticipating rejection include engaging in self-injury ideation, having low income, being non-religious, and experiencing academic

issues. Overall, these factors along with a negative affective state may give individuals the perception that negative stereotypes associated with self-injury such as being bad or manipulative will be directed onto them, which may make them more likely to anticipate rejection.

For internalization of stigma, what we learn is that affective state is not a significant contributor. Instead, we see that anticipation of rejection had a strong effect, which suggests that identity verification may indirectly effect internalization of stigma through affective state and anticipation of rejection. Thus, a lack of verification makes individuals feel bad (high depression and anxiety and low self-esteem), which makes them more likely to anticipate rejection from others, and which then makes them more likely to internalize stigma for engaging in self-injury. Indeed, additional analyses indicate that verification of the moral identity had a more indirect effect on internalization of stigma through affective state, self-injury ideation, and anticipation of rejection.

In this chapter, I discuss the limitations and present areas of future research that can expand on the lessons learned from this study. Specifically, I describe additional research needed on the type of verification (over-verification or under-verification) and how this might relate to self-injury such as understanding the meanings behind self-injury behavior held by those who engage in self-injury. Additionally, I discuss research needed to understand the meanings associated with being a dominant or moral person and being a friend for individuals who engage in self-injury. I also discuss how self-injury can be examined as an aggressive behavior toward the self. I conclude with a discussion on how

the COVID-19 pandemic may have an impact on self-injury and the concern over increasing rates of self-injury.

Limitations and Future Research

Cross-Sectional vs. Longitudinal Design

While this study provided an examination of the role of identity verification on self-injury and its outcomes through one's affective state, there are some limitations. First, this study used a cross-sectional design, which did not allow me to examine the causal ordering of the variables. For example, although research suggests that anticipation of rejection contributes to the internalization of stigma (Link et al. 2015), over time, we might see that internalization of stigma influences anticipation of rejection. In other words, as we direct negative stereotypes towards the self, the effect of this over time may be that we may be more likely to anticipate being rejected from others in interactions.

As another example of the limitations of the cross-sectional design, in the theoretical model there is a path linking the affective states of depression and anxiety and self-esteem to self-injury. While this relationship has been discussed in previous research (Forrester et al. 2017; Michl et al. 2013; Zielinski et al. 2017), researchers also argue that engaging in self-injury might contribute to a more negative affective state of higher depression and anxiety and lower self-esteem because individuals understand the stigma associated with the behavior (Adler and Adler 2011; Claes et al. 2010). Additionally, while more positive attitudes towards self-injury were associated with self-injury (Hasking and Rose 2016), those who engage in self-injury may develop more positive

attitudes towards self-injury over time. As individuals learn how to self-injure and continue engaging in the behavior, they may develop more positive attitudes towards self-injury (Kubrin, Stucky, and Krohn 2009). Thus, the causal ordering cannot be assessed based on these findings. To better understand the causal ordering of these variables, future research should implement a longitudinal design.

In a longitudinal design, anticipation of rejection and the internalization of stigma, which are considered outcomes of self-injury in the theoretical model, may have an effect on one's affective state. Prior research indicates that rejection and stigma can have a negative effect on the affective states of depression and anxiety and self-esteem (Link et al. 2015). Thus, as individuals anticipate rejection and internalize stigma associated with self-injury, they may experience a more negative affective state. This also may increase the likelihood of engaging in self-injury ideation and self-injury if individuals use self-injury as a coping mechanism to manage negative affective states.

Although this study could not predict the causal ordering of the variables, this study provides an initial foundation for understanding how identity verification may be related to self-injury and its outcomes, which has yet to be examined in past research. Specifically, this study introduces identity verification as an important precipitator to self-injury, anticipation of rejection, and the internalization of stigma through one's affective state and self-injury ideation. Future research is needed to further examine this relationship as well as assess the causal ordering of variables included in this study.

Over-Verification vs. Under-Verification

Although this study demonstrated that identity verification was negatively related to self-injury through one's affective state, the findings did not provide much information on how self-injury might be used as a response to identity non-verification. The measure used to capture identity verification assessed a higher score (10) as "verification" while a lower score (0) was a lack of verification or "non-verification." Thus, while this measure revealed verification or non-verification, it did not indicate whether non-verification occurs because of over-verification or under-verification. Given that individuals engage in meaningful behaviors as a response to identity non-verification, it is essential to know whether non-verification occurs because of over-verification or under-verification to fully understand the link between verification and behavior.

According to identity theory, identity non-verification can occur by over-verifying one's meanings or under-verifying one's meanings (Burke and Stets 2009; Stets and Asencio 2008). Whether individuals experience over-verification or under-verification, a negative affective state prompts individuals to engage in meaningful behaviors to minimize the discrepancy between how they see themselves and how they perceive others see them. Ideally, engaging in behaviors that align with their identity meanings will result in identity verification.

For example, if individuals see themselves as only somewhat moral, but they perceive that others see them as highly moral, this over-verification would produce negative outcomes such as distress and a negative affective state. Individuals who are over-verified perceive that others view them as better than their identity meanings. They

may engage in maladaptive behaviors (like self-injury) to introduce negative meanings into the situation to lower others otherwise positive (moral) view of them and thus better align their identity meanings with how others see them. On the other hand, if individuals are under-verified such that they see themselves as being highly moral and they perceive that others see them as only somewhat moral, identity theorists argue that they will engage in meaningful behaviors to appear more moral to improve others otherwise negative (moral) view of them (Burke and Stets 2009). Self-injury behavior may not be useful in trying to appear more moral given the stigmatizing images surrounding self-injury. Thus, it is not clear why self-injury might be used if individuals are being under-verified. Future research may want to explore the identity meanings of those who engage in self-injury and the type of non-verification experienced by individuals who self-injure to see if self-injury typically occurs when there is over-verification.

Additionally, if individuals are using self-injury as a response to identity non-verification, and identity theory states that behaviors align with people's identity meanings, it is important to understand what self-injury means to individuals who engage in it, and how this might be related to how they see themselves. Do individuals who engage in self-injury see self-injury as a form of deviance? Do they see self-injury as a manipulative behavior or that they are manipulative? How do their meanings relate to their response to identity non-verification?

Identity Meanings associated with Self-Injury

Individuals engage in behaviors that align with their identity meanings. Thus, future research should explore how individuals who engage in self-injury describe

themselves as people who self-injure and within other identities such as being a dominant or moral person, or a friend. This can help researchers better understand how self-injury may be a response to identity non-verification. As someone who engages in self-injury, do individuals see themselves as manipulative because they understand cultural stereotypes of self-injury to mean engaging in a manipulative behavior? Or, do they rationalize that self-injury is an adequate coping mechanism, thus making them less likely to see themselves as bad or deviant for engaging in self-injury?

Adler and Adler (2011) suggest that individuals who engage in self-injury may not see themselves as deviant for engaging in self-injury, although there are negative cultural stereotypes associated with the behavior. Future research may seek to explore how individuals who engage in self-injury see themselves as “self-injurers” and assess how engaging in self-injury might influence their identity meanings over time. Specifically, as individuals continue to engage in self-injury, are they more likely to apply negative stereotypes associated with self-injury onto themselves as part of their identity meanings? This would provide insight into how identity meanings and behavioral meanings associated with self-injury may relate.

Further, given that the findings indicated being a dominant and moral person, and being a friend were relevant identities associated with the affective states that contribute to self-injury, future research may seek to examine the meanings associated with being a dominant person, moral person, and a friend for those who engage in self-injury. Do individuals who engage in self-injury see themselves as particularly dominant people such that they are very assertive, demanding, and controlling? Do they see themselves as

relatively less moral individuals compared to individuals who do not engage in self-injury? By exploring what these identities mean to individuals who engage in self-injury, these findings could provide researchers with a better understanding of how these identities may be related to self-injury.

Self-injury as Aggression Toward the Self

Recent research suggests that aggression is an important risk factor associated with non-suicidal self-injury. Aggression, including feelings of hostility, may act as a predictor of suicidal ideation, suicide, and other self-destructive behaviors. This is particularly true for individuals who have difficulty regulating emotions (Tang et al. 2013). Thus, some researchers consider self-injury to be a form of aggression directed toward the self which may have some similarities to aggression that is directed towards others.

Identity theory research has described aggression in the context of identity non-verification. Researchers argue that behavior is used to control perceptions. For example, by engaging in certain behaviors, individuals can showcase to others who they are or how they see themselves. When individuals do not receive verification from others for how they see themselves, this threatens stable self-meanings and certainty in interactions, as well as feelings of control and efficacy. As a response, individuals engage in controlling behaviors to change the meanings in the situation to receive verification and regain control over the environment. However, if individuals continue to experience identity non-verification and a lack of control, they may engage in aggressive behaviors to gain control (Stets and Burke 2005). Thus, aggressive behaviors can be used to change the

meanings in a situation and provide individuals with a sense of control. I anticipate that a similar process may occur for self-injury.

Based on findings from the current study and previous research, when individuals do not receive verification, individuals experience a more negative affective state of high depression and anxiety and low self-esteem as well as reduced feelings of control and efficacy. Individuals may engage in controlling behaviors to change the meanings in the situation and achieve verification and regain control over the environment. However, I predict that if controlling behaviors are ineffective, individuals may engage in self-injury. In this way, self-injury is an aggressive behavior directed toward the self in response to a lack of control and reduced feelings of efficacy (which is a component of self-esteem), which are outcomes of a lack of verification. Research suggests that self-injury can be used as a way to feel in control over oneself and the surrounding environment (Adler and Adler 2011). Thus, self-injury as an aggressive behavior may be used to regain control after it has been lost due to a lack of verification. However, now the issue becomes, why might some individuals engage in self-injury as a form of aggression toward the self, while others engage in aggression towards others such as towards your spouse (Stets and Burke 2005)?

I expect that one factor that may influence whether individuals engage in aggression toward the self versus aggression towards others may be the relative power and status of the individual and others in the situation (Stets and Burke 2005; Stets and Trettevik 2014). Specifically, the source of the lack of verification has an impact on our emotional response (Stets and Burke 2005), which may influence the likelihood of

engaging in aggression towards others or toward the self. If individuals experience a lack of verification from others who are more powerful and have a higher status such as parents (relative to children), research suggests that individuals may experience fear (Stets and Burke 2005; Stets and Trettevik 2014), which may make them less likely to engage in aggressive behaviors towards others. Additionally, when individuals perceive that they are personally responsible for the lack of verification (internal attribution) because they are not engaging in behaviors that successfully align with their identity meanings, they may feel embarrassment, shame, or even depression (Stets and Burke 2005; Stets and Trettevik 2014), which I predict might make them less likely to engage in aggressive behaviors towards others.

However, if individuals experience a lack of verification from others who they perceive as having less power and are lower status, they might experience anger or rage. Similarly, if individuals perceive that someone else is responsible for the lack of verification (external attribution), this also can result in individuals feeling annoyed or angry, which may make them more likely to direct aggression towards others. Thus, future research may want to explore self-injury as a form of aggression directed toward the self as a response to a lack of verification and assess the role of relative power and status of the individual and others in the situation. This can provide researchers with a more nuanced understanding of the various ways identity verification might be related to self-injury and highlight other factors that need to be considered when assessing the relationship between verification and self-injury such as power and status and internal or external attributions.

Self-Injury and COVID-19

Finally, with the ongoing pandemic and reported feelings of isolation, loneliness, depression, and anxiety, researchers and health care professionals are increasingly concerned about the rates of self-injury. During the COVID-19 pandemic, many adolescents and young adults found themselves transitioning to online learning environments, lacking social interactions with peers, and adjusting to the worries and concerns over their safety and the safety of their loved ones (Hasking et al. 2021). As a result, many researchers and health care professionals fear that the compound effects of stress related to the pandemic, social isolation, the movement in education to online platforms, and potential loss of loved ones will bring a rise to self-injury rates among adolescents and young adults. Indeed, non-suicidal self-injury increased approximately six percent during the spring of 2020 (24.4%) to the spring of 2021 (30.6%) COVID-19 (Zetterqvist et al. 2021).

Moreover, due to increased time at home, adolescents and young adults are spending more time on social media and other electronic devices, which researchers argue can exacerbate feelings of isolation (Hasking et al. 2021). For adolescents, social media interactions are replacing daily physical interactions and making adolescents and some young adults more reliant on online interactions and less willing to engage in physical interactions. Recent research suggests that extensive social media use during the pandemic has led to an increase in feelings of depression and anxiety for adults (Gao et al. 2020).

However, some researchers also argue that social media may play a beneficial role on self-injury by providing individuals who engage in self-injury with a distraction from self-injury urges and feelings of connectedness even if through an online platform. Furthermore, social media may allow adolescents and young adults to maintain communication with their social network during the pandemic, which can allow them to feel supported by peers and close others (Lewis and Seko 2016). Future research is needed to thoroughly examine how social media use might be related to self-injury during the pandemic. Overall, with the growing rate of self-injury and ongoing pandemic, future research can benefit from examining the effect of the pandemic on self-injury rates. Particularly, it would be useful to examine how the pandemic has changed perceptions of support, feelings of isolation and connectedness among individuals who self-injure, and how social media might moderate these effects.

In conclusion, this study highlights the importance of identity verification as a precipitator of self-injury and its outcomes through one's affective state. In addition to identity verification, I examined several other precipitators of self-injury and conclude that stressors related to being female, being Asian, having positive attitudes towards self-injury, and a lack of verification contribute to poor affective states, which were positively related to self-injury. Thus, stress, whether it is from a lack of verification, minority stress associated with being Asian, or greater interpersonal conflicts for women, is a significant contributor to self-injury by producing a more negative affective state.

Furthermore, in assessing the precipitators associated with anticipating rejection associated with self-injury, I indicate that some factors such as having a negative

affective state, engaging in self-injury ideation, having low income, being non-religious, and experiencing academic issues may make individuals think that negative stereotypes associated with self-injury are more likely to be directed onto them. When individuals understand negative stereotypes and associate that they may be directed onto them by others, they may be more likely to anticipate rejection.

While identity verification was not initially related to internalization of stigma through affective state as expected, I offered an alternative relationship for verification on the internalization of stigma, which suggested that identity verification is related to the internalization of stigma through affective state and anticipating rejection. This was later supported with additional analyses. This implies that anticipation of rejection is a strong contributor to the internalization of stigma, which has been suggested in prior research (Link et al. 2015). It also indicates that verification may have a more indirect effect on the internalization of stigma through affective state, self-injury ideation, and anticipation of rejection. Future research would benefit from further assessing this relationship.

What is still left to be examined is the type of non-verification experienced, identity meanings held by those who self-injure, and the perception of self-injury as an aggressive behavior using an identity theory perspective. However, the current study provides important insight into how self-injury might be used to manage self and identity issues which has been briefly described in prior self-injury research (Breen, Lewis, and Sutherland 2013). Additionally, this study highlights the social component of self-injury by examining social environmental factors associated with self-injury such as how individuals see themselves in relation to how they perceive others see them. As self-

injury rates rise, it is critical for researchers to continue this line of work to better understand the various precipitators of self-injury and its outcomes.

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Table 1. Factor Loadings for Anticipation of Rejection ($N=175$)

Item	Loading
How often during the past three months, did...	
1. you worry what other people might think about you because you hurt yourself?	.85
2. worrying about what other people might think about you hurting yourself make you feel like hiding from other people?	.84
3. you worry that people think of you as a person who hurts themselves and nothing else?	.79
How often in the past three months, did you...	
4. you feel that people might stop being your friend if they knew you hurt yourself?	.80
5. you feel that people would look down on you because you hurt yourself?	.86
Ω	.92

* $p \leq .05$

Table 2. Factor Loadings for Internalization of Stigma
($N=173$)

Item	Loading
Right now, how...	
1. much shame do you feel due to hurting yourself?	.89
2. embarrassed do you feel due to hurting yourself?	.87
How often in the past three months, did you...	
3. feel embarrassed because you hurt yourself?	.91
4. feel ashamed that you hurt yourself?	.89
Ω	.94

* $p \leq .05$

Table 3. Factor Loadings for Depression and Anxiety ($N = 487$)

Item	Loading
1. Nervous	.64
2. Hopeless	.78
3. Restless	.67
4. Depressed	.78
5. Effort	.65
6. Worthless	.77
Ω	.86

* $p \leq .05$

Depression = Hopeless, Depressed, Effort, and Worthless

Anxiety = Nervous and Restless

Table 4. Factor Loadings for Self-Esteem ($N = 487$)

Item	Loading
1) I feel I am a person of worth, at least on equal basis with others.	.67
2) I feel that I have a number of good qualities.	.67
3) I take a positive attitude towards myself	.76
4) On the whole, I am satisfied with myself.	.76
5) I usually feel good about myself.	.78
6) I feel I have much to offer as a person.	.64
7) I have a lot of confidence in the actions I undertake in my life.	.73
8) There is no way I can solve some of the problems I have.	-.38
9) I have little control over the things that happen to me.	-.39
10) There is little I can do to change many of the important things in my life.	-.64
11) I feel as if what happens to me is mostly determined by other people.	-.45
12) I certainly feel hopeless at times.	-.58
13) Sometimes I feel that I am not able to accomplish what I want.	-.55
14) I often feel unable to deal with the problems of life.	-.66
15) I feel most people don't know the 'real me'.	-.53
16) I find I can almost always be myself.	.59
17) I feel people expect me to be different than I really am.	-.51
18) I think most people accept who I really am.	.65
19) I just wish I were more able to be myself.	-.57
20) I feel the way in which I generally act reflects the 'real' me.	.56
21) I often do not feel I am myself.	-.67
Ω	.92

* $p \leq .05$

Table 5. Factor Loadings for Attitudes towards Self-Injury ($N = 487$)

Item	Loading
1. Self-injury can be a way to calm oneself.	.67
2. Self-injury provides individuals with an escape.	.58
3. Self-injury is an unacceptable behavior.	-.41
4. Self-injury is more likely to have more positive effects than negative effects.	.49
5. Sometimes self-injury is understandable when a person engages in it.	.47
Ω	.67

* $p \leq .05$

Item 3 is negative views towards self-injury

Table 6. Means and Standard Deviations for all Variables

Variables	<i>N</i>	<i>M</i>	<i>SD</i>	Range
Self-Injury	487	.37	.48	0-1
Anticipation of Rejection	175	9.37	4.27	5-17
Internalization of Stigma	173	10.03	5.43	4-19
Attitudes toward Self-Injury	484	10.59	2.49	5-16
End of a Relationship	486	.41	.49	0-1
Academic Issues	487	.60	.79	0-2
Student Verification	487	0	1	-2.56 - 1.23
Friend Verification	485	0	1	-3.06-.90
Child Verification	486	0	1	-2.28-1.04
Dominant Verification	486	0	1	-1.51-1.70
Gender Verification	485	0	1	-2.79-.76
Moral Verification	486	0	1	-2.88-1.07
Affective State	484	66.93	12.89	32-93
Self-Injury Ideation	479	.49	.71	0-2
Female	481	.77	.42	0-1
Hispanic/Latinx	484	.48	.50	0-1
Asian	484	.29	.45	0-1
Religious	485	.61	.49	0-1
Parent's income	476	2.75	1.85	0-5

Table 7. Means and Standard Deviations for all Variables by Self-Injury

Variables	No Self-Injury		Self-Injury	
	Mean	SD	Mean	SD
Attitudes toward Self-Injury	9.98**	2.41	11.63**	2.29
End of a Relationship	.36**	.48	.49**	.50
Academic Issues	.56	.77	.67	.82
Student Verification	.19**	.81	-.33**	1.19
Friend Verification	.24**	.75	-.41**	1.22
Child Verification	.13**	.91	-.22**	1.11
Dominant Verification	.18**	.93	-.31**	1.04
Gender Verification	.28**	.63	-.49**	1.29
Moral Verification	.31**	.62	-.53**	1.28
Affective State	70.93**	10.39	60.03**	13.96
Self-Injury Ideation	.22**	.45	.94**	.83
Female	.75*	.44	.82*	.38
Hispanic/Latinx	.49	.50	.46	.50
Asian	.28	.45	.30	.46
Religious	.69**	.46	.49**	.50
Parent's income	2.76	1.85	2.75	1.86

** $p \leq .01$; * $p \leq .05$

Anticipation of rejection and internalization of stigma are not included because they only applied to those who reported self-injury.

Table 8. Correlations Among Variables (N = 487)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	
1) Self-Injury	1.00																			
2) Internalization of Stigma	. ^a	1.00																		
3) Anticipation of Rejection	. ^a	.61*	1.00																	
4) Att. toward Self-Injury	.32*	.06	.18*	1.00																
5) End of a Relationship	.12*	.13	-.04	.14*	1.00															
6) Academic Issues	.07	.14	.12	.06	.28*	1.00														
7) Student Verification	-.25*	-.00	.10	-.08	-.06	-.00	1.00													
8) Friend Verification	-.31*	-.08	-.03	-.18*	-.03	-.02	.31*	1.00												
9) Child Verification	-.17*	.03	-.06	-.04	-.06	-.01	.23*	.17*	1.00											
10) Dominant Verification	-.24*	-.05	-.03	-.16*	.09*	.06	.21*	.20*	.12*	1.00										
11) Gender Verification	-.37*	-.08	-.14	-.18*	.00	.03	.32*	.20*	.23*	.14*	1.00									
12) Moral Verification	-.41*	-.08	-.14	-.17*	-.07	-.05	.25*	.35*	.20*	.25*	.22*	1.00								
13) Affective State	-.41*	-.30*	-.53*	-.32*	-.00	-.10*	.19*	.27*	.13*	.24*	.21*	.31*	1.00							
14) Self-Injury Ideation	.49*	.31*	.50*	.32*	.08	.02	.13*	-.25*	-.18*	-.11*	-.19*	-.23*	-.49*	1.00						
15) Female	.09	.23*	.22*	.06	.06	-.01	.07	-.02	.08	.06	.05	-.00	-.07	.09*	1.00					
16) Hispanic/Latinx	-.02	.09	-.01	-.10*	.02	.04	.00	-.07	.12*	-.00	.06	-.00	.12*	-.12*	.10*	1.00				
17) Asian	.02	-.14	.05	.05	-.12*	.01	.01	.11*	-.13*	-.07	-.06	.06	-.14*	.12*	-.06	-.61*	1.00			
18) Income	-.00	-.03	-.08	.05	.04	-.02	.01	.03	-.04	-.04	.00	.06	-.04	.10*	-.09	-.31*	.15*	1.00		
19) Religion	-.20	.13	.06	-.19*	-.08	-.10*	.08	.13*	.10*	.08	.10*	.19*	.14*	-.11*	.03	.11*	-.05	-.09	1.00	

* $p \leq .05$

^aCorrelations are not estimated for stigma and rejection with self-injury because these variables were only for those that engage in self-injury.

Table 9. Standardized Estimates for Affective State and Self-Injury Ideation

Independent Variables	Affective State		Self-Injury Ideation	
		SE		SE
Female	-.09*	1.27	.05	.07
Hispanic/Latinx	.06	1.21	-.00	.07
Asian	-.10*	1.51	.07	.08
Income	-.01	.30	.07	.02
Religious	-.00	1.14	-.01	.06
Attitudes toward Self-Injury	-.21**	.23	.14**	.01
End of a Relationship	.04	1.15	.07	.06
Academic issues	-.08	.69	-.05	.04
Affective State	-	-	-.44**	.00
Student Verification	.06	.60	-	
Friend Verification	.15**	.60	-	
Child Verification	.01	.57	-	
Dominant Verification	.14**	.57	-	
Gender Verification	.06	.58	-	
Moral Verification	.15**	.60	-	
<i>N</i>		458		456
<i>R</i> ²		.25		.29

** $p \leq .01$; * $p \leq .05$

Table 10. Logistic Regression for Self-Injury ($N = 456$)

Independent Variables	Self-Injury	95% CI	
Female	1.47	.82	2.63
Hispanic/Latinx	1.17	.63	2.20
Asian	.68	.35	1.32
Income	.92	.80	1.05
Religious	.51**	.31	.82
Attitudes toward Self-Injury	1.17**	1.05	1.30
End of a Relationship	1.57	.95	2.58
Academic Issues	1.03	.76	1.40
Affective State	.96**	.94	.98
Self-Injury Ideation	3.63**	2.44	5.40
Pseudo R^2			.27

** $p \leq .01$; * $p \leq .05$

Table 11. Standardized Estimates for Rejection and Stigma for Self-Injurers

Independent Variables	Anticipation of Rejection	SE	Internalization of Stigma	SE
Female	.01	.72	.07	.95
Hispanic/Latinx	.08	.67	-.03	.89
Asian	.09	.71	-.14	.96
Income	-.19**	.15	.00	.20
Religious	.15*	.53	.07	.72
Attitudes toward Self-Injury	.09	.12	-.07	.16
End of a Relationship	-.04	.57	.15*	.75
Academic Issues	.16*	.34	-.00	.47
Affective State	-.34**	.02	.01	.03
Self-Injury Ideation	.41**	.36	.02	.53
Anticipation of Rejection	-	-	.61**	.10
<i>N</i>		162		160
<i>R</i> ²		.46		.43

** $p \leq .01$; * $p \leq .05$