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## Perfectionism and Interpersonal Theory of Suicide: Thwarted Belongingness and Perceived Burdensomeness as Mediators of Multidimensional Perfectionism and Suicide Ideation

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PERFECTIONISM AND INTERPERSONAL THEORY OF SUICIDE: THWARTED  
BELONGINGNESS AND PERCEIVED BURDENSOMENESS AS MEDIATORS OF  
MULTIDIMENSIONAL PERFECTIONISM AND SUICIDE IDEATION

By

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## ABSTRACT

The current study was conducted to investigate the associations among multidimensional perfectionism, suicidal ideation, and the interpersonal theory of suicide. The author's primary purpose was to focus on the mediating effects of the social dimensions of suicidality (thwarted belongingness and perceived burdensomeness) on suicidal ideation and social dimensions of perfectionism (other-oriented and socially prescribed). A sample of 266 undergraduate and graduate students at a large southeastern university completed the Multidimensional Perfectionism Scale, the Interpersonal Needs Questionnaire, Beck Scale for Suicide Ideation (Worst), Beck Scale for Suicide Ideation (Current), Psychological Distress Index, Beck Hopelessness Scale, and demographic measures. Analysis confirmed that all perfectionism dimensions were positively associated with suicidal ideation. Thwarted belongingness and perceived burdensomeness were positively associated with suicidal ideation, as expected. Mediation analyses revealed partial mediation by perceived burdensomeness of socially prescribed perfectionism and suicidal ideation and self-oriented perfectionism and suicidal ideation. Perceived burdensomeness fully mediated the relationship between other-oriented perfectionism and suicidal ideation. Thwarted belongingness fully mediated the relationship between other-oriented perfectionism, socially prescribed perfectionism, and self-oriented perfectionism, respectively, with suicidal ideation. Results suggest social isolation is at play when perfectionists are experiencing suicidal ideation. Particularly, perfectionists who believe others have unrealistic standards of perfection as well as perfectionists who have unrealistic standards of perfection for others may experience perceptions that they are unable to fit into social groups due to these standards. Clinicians working with perfectionist clients should target not only maladaptive thinking, but also interpersonal interactions.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Suicide on College Campuses

With over 1,000 suicides on college campuses each year, it is the second most common cause of death among college students, at a rate of between 5 and 7.5 per 100,000 college students (Suicide Statistics, 2016). Drum, Brownson, Burton Denmark and Smith's (2009) study of 26,451 college students across 70 colleges and universities reported that over half of students sampled reported some form of suicidal thinking over their lifetime. Further, 18% of undergraduates and 15% of graduate students reported they had seriously considered attempting suicide at some point in their lives. College is a major transition period for many youth in the United States and brings its own stressors, which may create different risk factors for suicidal ideation than those experienced outside the college population. Mood disorders, anxiety and eating disorders, substance use or dependence, family history, isolation, and perceived burdensomeness and thwarted belongingness are only a few items on a long list of potential suicide risk factors (Centers for Disease Control and Prevention, 2016). However, there is no agreed upon set of factors for determining suicide risk, though Joiner's Interpersonal Needs Questionnaire has shown high validity and reliability (Joiner, 2009; Van Orden, Witte, Gordon, Bender, & Joiner, 2008). College students face these factors as well as a new environment, separation from family and previous social networks, new exposure to drugs and alcohol, and the academic and extracurricular demands of college life (Suicide Statistics, 2016).

With student suicides making a stronger presence in the media, increasingly more attention has been brought to examining suicide and suicide ideation, risk factors, and prevention among college students, and what characteristics may put this population at such a high risk.



Suicides like that of University of Pennsylvania freshman and student athlete Madison Holleran often raise questions because of her perceived level of popularity and success. An Ivy League track and field star, Madison had no history of mental illness and no drug problems. However, a family friend said after her death in January 2014, “She got a 3.5 [GPA] her first semester, and I think just the high expectations that she put on herself was that that’s [her GPA] just not acceptable” (Spargo, 2015).

The push to be “the best” in American society puts an enormous amount of pressure on individuals, particularly students, who are expected to achieve academic and extracurricular success. Perfectionists may internalize this notion and feel that they can then only be considered successful if they perform at the very top; even then, it is often not enough. Baumeister’s “escape from the self” model sheds some light on these types of suicides, suggesting a hyperawareness of perceived shortcomings and inability to meet unrealistic self-imposed or other-imposed demands of success contributes to a desire to commit suicide (Baumeister, 1990). While attention to detail and ambition can be positive characteristics associated with perfectionism; maladaptive perfectionism, particularly social dimensions of perfectionism, may lead to social isolation and, eventually, suicide ideations (Blankstein et al., 2007; Hamilton & Schweitzer, 2000; Hewitt et al., 2014; Muyan & Chang, 2015).

The present study examined the existing literature on the dimensions of perfectionism, the components of the interpersonal theory of suicide (Van Orden, Merrill, & Joiner, 2009), and how perfectionism and suicide ideation may interact. Given the evidence in current literature of the prominence of social factors on both perfectionism and suicide ideation, which was examined in the following literature review, this study focused on the social dimensions of perfectionism (socially prescribed perfectionism and other-oriented perfectionism) and the two social

components of the interpersonal theory of suicide (thwarted belongingness and perceived burdensomeness). Research using Joiner's theory in conjunction with perfectionism is limited, and to the researcher's knowledge there has not been a study to look specifically at the social dimensions of the MPS (Multidimensional Perfectionism Scale) and suicide ideation, using thwarted belongingness and perceived burdensomeness as mediating variables. The current research is consistent in showing an association between higher levels of perfectionism and higher levels of suicide ideation (Blankstein et al., 2007; Hamilton & Schweitzer, 2000; Hewitt et al., 2014; Muyan & Chang, 2015). Additionally, thwarted belongingness and perceived burdensomeness, along with acquired capability, have been shown to be reliable predictors of suicide risk (Van Orden, Merrill, & Joiner, 2005). Because these relationships appear to be consistent, this study attempted to gather more insight into the relationship between perfectionism and suicide ideation, using thwarted belongingness and perceived burdensomeness respectively as mediators of socially prescribed perfectionism and suicide ideation and other-oriented perfectionism and suicide ideation.

## **1.2 Perfectionism**

Perfectionism is generally accepted as a multidimensional phenomenon, occurring in both personal and social dimensions (Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991). In all dimensions, perfectionism includes both setting and maintaining unrealistically high standards and expectations, as well as overly critical self-evaluations (Hewitt, Newton, Flett, & Callander, 1997, p. 95). Hamachek (1978) divided perfectionism as "normal" and "neurotic", with the primary distinction being that a neurotic perfectionist never feels good enough, even when the person is successful. Normal perfectionists feel pleasure from striving for

success and overcoming obstacles, while neurotic perfectionists maintain a fear of failure. Frost et al. (1993) similarly identified adaptive and maladaptive perfectionism. Maladaptive perfectionists focus on mistakes and failures, rather than deriving positive experiences from achievements. Adaptive and maladaptive perfectionism can be further understood in the context of three dimensions: self-oriented perfectionism (SOP), other-oriented perfectionism (OOP), and socially prescribed perfectionism (SPP) (Hewitt & Flett, 1991).

Self-oriented perfectionism involves setting high standards for oneself and “stringently evaluating and censuring one’s own behavior” (Hewitt & Flett, 1991, p. 457). SOP includes a motivational component of aspiring towards perfection and avoiding failures in one’s life; however, it has also been shown as associated with both mood and eating disorders. These can result from a discrepancy between the actual self and ideal self. For example, if a perfectionist student sees his or her ideal self as maintaining an unhealthy and unachievably thin weight, he or she will likely continue to view his or her actual self as overweight until this standard is achieved. Here, self-oriented perfectionism is no longer motivational but is maladaptive.

Other-oriented perfectionism revolves around the expectations and beliefs of the capabilities of others (Hewitt & Flett, 1991). OOP places high importance on the perfection of others and over-critically evaluates others’ performance. OOP can lead to other-directed blame, hostility, loneliness, and family problems. Other-oriented perfectionists often hold irrational “other-oriented should” beliefs which could contribute to interpersonal dysfunction (Hewitt & Flett, 1991, p. 457). However, it has also been associated with leadership ability and potentially facilitating others’ motivation. A team leader who holds high expectations and beliefs of the capabilities of others may push group members to perform better, contribute more, or think more critically than they otherwise would have without this push.

Socially prescribed perfectionism is described as the perceived need to achieve standards and expectations set by significant others in the person's life (Hewitt & Flett, 1991). As opposed to OOP, where the perfectionist sets unrealistic standards for others to meet, the SPP individual feels that others have set unrealistic standards for them, evaluate them harshly, and pressure them to be perfect. Those with high levels of SPP often experience depression, anxiety, and anger as a result of the failure to meet perceived unrealistic and unfair standards. The Multidimensional Perfectionism Scale (MPS) developed by Hewitt and Flett (1990) examines perfectionism in these three areas and has demonstrated high internal consistency, test-retest reliability, and high validity for the subscales of perfectionism.

In order to develop the MPS, 156 psychology students at York University (52 men, 104 women) with a mean age of 21 were each presented descriptive passages, which reflected the three perfectionism dimensions (Hewitt & Flett, 1991). These descriptions were derived from case descriptions and theoretical discussions. Students were asked to generate items from these descriptions that could be rated for agreement on a 7-point Likert scale. 122 items were then administered to the subjects who rated each item and also completed the Marlowe-Crowne Social Desirability Scale to control for social desirability bias. The final items resulting in the 45-item MPS were selected if they had a mean score between 2.5 and 5.5, a correlation of .40 with the respective subscale, and a correlation less than .25 with social desirability (Hewitt & Flett, 1991). Item-to-subscale total correlations indicated a range between .51 and .73 for self-oriented items, .43 and .64 for other-oriented items, and .51 and .73 for socially prescribed items. Coefficient alphas were .86, .82, and .87 respectively. Small correlations (-.25 and -.39) were found between social desirability and other-oriented perfectionism and socially prescribed perfectionism. However, these results indicated that these subscales are likely good indicators for

each category and do not simply reflect social desirability. The results showed adequate internal consistency and low subscale intercorrelations, indicating that each subscale is fairly distinct and are not alternate forms of the same measure.

### **1.3 Perfectionism and Suicide Ideation**

Current literature on the association between perfectionism and suicide ideation supports the hypothesis that perfectionism may indeed be a predictive factor of suicide ideation. More broadly, maladaptive perfectionism is often an indicator of psychological distress. A study conducted by Hamilton and Schweitzer (2000) in Australia examined the association of perfectionism and suicide ideation in 405 university students with a mean age of 23. Students completed the General Health Questionnaire to assess suicide ideation and the Multidimensional Perfectionism Scale (MPS) to assess perfectionism. The MPS includes six subscales, which researchers used to assess if particular dimensions of perfectionism were more strongly correlated with suicide ideation. The six subscales are: Personal Standards, Concern over Mistakes, Doubts about Actions, Parental Criticism, Parental Expectations, and Organization (Hamilton & Schweitzer, 2000). This study did not include the Organization category. The General Health Questionnaire (GHQ-28) was used to determine suicide ideation through four questions: 'Have you recently felt that life isn't worth living?'; 'Have you recently thought of the possibility that you might do away with yourself?'; 'Have you recently found yourself wishing you were dead and away from it all?'; and 'Have you recently found that the idea of taking your own life kept coming into your mind?' (Hamilton & Schweitzer, 2000). Students were placed into groups based on the absence or presence of suicide ideations. 83% of all subjects denied thoughts of suicide. The study found that those in the suicide ideation group received higher

scores on the GHQ (psychological distress) and the MPS (perfectionism). Further, those in the suicide ideation group scored significantly higher in the CM (concern about mistakes) subscale and D (doubts about actions) subscale. Non-significant between-group differences were found for PC (parental criticism), PE (parental expectations), and PS (personal standards). The study identified CM and D as passive perfectionism and PC, PS, and PE as active perfectionism. While these results give some indication of perfectionist qualities associated with suicide, these particular subscales focus more heavily on parental components rather than socially prescribed perfectionism in general. Concern over mistakes and doubts about actions could fall into both self-oriented perfectionism and socially prescribed perfectionism (Hamilton & Schweitzer, 2000).

Muyan and Chang (2015) conducted a similar study at a university in Ankara, Turkey. Assessing 288 college students, the researchers sought to identify perfectionism and loneliness as possible risk factors of suicide. A Turkish adaptation of the MPS was used to assess dimensions of perfectionism using the same six subscales (Muyan & Chang, 2015). In contrast to the four short GHQ questions used in Hamilton and Schweitzer's (2000) study, Muyan and Chang (2015) used both the Beck Depression Inventory (BDI) (Turkish adaptation) as a "distal measure of suicidal risk" and the Frequency of Suicide Ideation Inventory (FSII) as a proximal measure. Inclusion of the BDI allowed researchers to determine correlation between perfectionism subscales and suicide risk while controlling for depressive symptoms. Results showed a positive correlation between perfectionism and suicide ideation, particularly in the Concern Over Mistakes, Doubts About Actions, Parental Expectations, and Parental Criticism subscales, but not with Organization or Personal Standards, similar to Hamilton and Schweitzer (2000) who also found no significant correlation between personal standards and suicide ideation (Muyan &

Chang, 2015). Perfectionism dimensions accounted for 15% of variance in depressive symptoms; however, Doubts About Actions and Parental Criticism were the only significant predictors of depressive symptoms (Muyan & Chang, 2015). Perfectionism dimensions accounted for a 13% variance in suicide ideation, again with Doubts About Actions and Parental Criticism being the significant predictors. Finally, after controlling for depressive symptoms, perfectionism dimensions accounted for 4% of unique variance in suicide ideation, with Parental Criticism being the only significant predictor (Muyan & Chang, 2015).

While Muyan and Chang's (2015) study is overall in agreement with Hamilton and Schweitzer (2000) in that there is a significant, positive correlation between perfectionism and suicide ideation, Muyan and Chang (2015) show Parental Criticism as the most significant dimension of perfectionism leading to suicide ideation, while Hamilton and Schweitzer showed Concern Over Mistakes and Doubts About Actions as the most significant. Importantly, there are likely major cultural differences between Australian university students and their families and Turkish university students and their families. Gencoz and Or (2006) found "lack of family coherence" to be a significant predictor of suicide ideation in Turkish college students. Thus, the collectivist nature of Turkish culture likely has an effect on perfectionism dimensions. Chang et al. (2011) addressed this, comparing Turkish findings to those of Latinas/os, which revealed Parental Expectations, not criticism, as a significant predictor of depressive symptoms. It is possible that people from more individualistic cultures show a greater significance of Concern Over Mistakes and Doubts About Actions, while people from more collectivist cultures show a greater significance of perfectionism subscales dealing with parental influence. Cultural conceptions of perfectionism are undoubtedly important factors when examining perfectionism

and suicide ideation. Nonetheless, both Australian and Turkish university students showed a significant correlation between perfectionism and suicide ideation.

Previous research has demonstrated that particular facets of perfectionism are associated with higher suicide ideation scores. Hewitt, Caelian, Chen, and Flett (2014) addressed multiple dimensions of perfectionism at the onset of their study on a group of 55 adolescent psychiatric outpatients at a hospital in British Columbia, Canada. Controlling for severity of depression and hopelessness, the study sought to examine more in-depth several indices of suicidality, as opposed to only ideation, and to apply the perfectionism diathesis-stress model (Hewitt et al., 2014). Proposed by Hewitt and Flett in 1993 and 2002 studies, the perfectionism diathesis-stress model posits, “dimensions of perfectionism can act as vulnerability factors in depression and suicidality by enhancing the aversiveness of extant stress,” (Hewitt & Flett, 1993; Hewitt, Caelian, Flett, Sherry, Collins, & Flynn, 2002; Hewitt et al., 2014). The model assumes that perfectionist individuals experience more severe psychological symptoms (Hewitt et al., 2014). The study demonstrated that socially prescribed perfectionism (SPP) was correlated with suicide potential even after controlling for hopelessness and depression, but self-oriented perfectionism (SOP) was not (Hewitt et al., 2014). However, SPP was not associated with suicide ideation, as it has been in other studies. In relation to the perfectionism diathesis-stress model, SPP was associated with higher levels of daily hassles and with higher levels of suicide potential (potential including other risk factors for suicide besides suicidal thoughts, such as recent or history of past attempts, talking about death, and threatening suicide) (Hewitt et al., 2014). These results may indicate a more prominent effect of daily stress compared to major life stressors on increased suicide potential (Hewitt et al., 2014).



While examining the association of perfectionism broadly defined and suicide ideation is helpful, assessing mediators and moderators can give a clearer picture as to which variables may influence the relationship between maladaptive perfectionism and suicide ideation. Blankstein et al. (2007) found that MPS subscales accounted for women and men, respectively, with 23% and 19% variance in achievement hopelessness, 20% and 32% in interpersonal hopelessness, and 18% and 35% in suicide ideation. These results suggest gender may be an important differentiating factor in individuals with perfectionist traits and suicide ideation. As predicted, SPP was a positive predictor of suicide risk variables for both women and men (Blankstein et al., 2007). In terms of moderators, women with higher SPP scores who were experiencing greater social hassles reported more suicide ideation, while men higher in SPP experiencing greater academic hassles reported more suicide ideation (Blankstein et al., 2007). Perfectionism accounts for more variance in suicide ideation in men than in women, and men and women demonstrate different moderating variables that potentially contribute to the ideation (academic hassles and social hassles, respectively). It is possible then that because suicide ideation was higher in women with high SPP scores experiencing social hassles, social isolation may have a more negative impact on women than men.

Support systems also appear to be important moderators of perfectionism and suicide ideation. Support from a significant other buffered the link between SOP and suicide ideation in women (Blankstein et al., 2007). Further, other oriented perfectionists (OOP) with the lowest levels of perceived family support reported the highest levels of suicide ideation, while those with high levels of OOP with the highest levels of perceived family support reported the lowest levels of suicide ideation (Blankstein et al., 2007). The socially prescribed perfectionism and other-oriented perfectionism subscales of perfectionism appear to be related to stronger

associations between suicide ideation and perfectionism (Blankstein et al., 2007; Hamilton & Schweitzer, 2000; Hewitt et al., 2014; Muyan & Chang, 2015). Taking into account Joiner's (2005) intrapersonal-psychological theory of suicide, perfectionism could potentially act as a mediator between the socially oriented factors of suicidality (i.e., thwarted belongingness and perceived burdensomeness) and suicide ideation.

#### **1.4 Thwarted Belongingness**

The interpersonal-psychological theory of suicide (Van Orden, Merrill, & Joiner, 2005) suggests that an individual is more likely to attempt suicide if they maintain two persistent psychological mindsets, perceived burdensomeness and low belongingness or social alienation, and have acquired the capability to enact lethal self-harm. Perceived burdensomeness and thwarted belongingness account for the desire to die, while capability relates to the ability to act on this desire. In constructing this theory, Joiner noted that social isolation was one of the strongest predictors of not only suicide ideation, but also suicide attempts and lethal suicidal behavior throughout the lifespan (Joiner, 2005; Van Orden et al., 2010). When one does not meet interpersonal needs of social connectedness, the individual may begin to desire death. This need to belong is described by Baumeister and Leary (1995) as being comprised of two factors: the need for frequent, positive or pleasant interactions with the same individuals, and these interactions occurring long-term conceptualized as stable caring and concern.

Similarly, Joiner (2005) categorizes these factors as loneliness and the absence of reciprocally caring relationships. Thwarted belongingness is conceptualized as a cognitive-affective state, rather than a consistent trait in an individual, and can manifest partially, as Joiner describes thwarted belongingness as multidimensional, like perfectionism (Van Orden et al.,

2010). An individual with high levels of socially prescribed perfectionism may believe that the standards set by others are too high for them to meet or that they consistently fail to meet the standards of others. Such perceptions may lead to social isolation and loneliness and the individual may perceive him or herself to be burdensome to others and unable to fit in. The psychological distress endured by the socially prescribed perfectionist may in turn lead to suicide ideation. Alternatively, an individual with high levels of other-oriented perfectionism may feel that no one is able to meet the standards and expectations the individual has set, and would also be likely to experience social isolation and loneliness. This type of perfectionist may not perceive him or herself to be a burden but may still experience the psychological distress of thwarted belongingness, which could lead to suicide ideation.

### **1.5 Perceived Burdensomeness**

Perceived burdensomeness is the other key component of social connectedness in Joiner's theory. The interpersonal theory draws on Sabbath's (1969) family systems theory of adolescent suicidal behavior, specifically the notion that adolescents may believe they are expendable members of the family (Van Orden, Witte, Cukrowicz, Braithwaite, Selby, & Joiner, 2010). Perceived burdensomeness in the interpersonal theory expands on the family system to include close others in general. As with thwarted belongingness, perceived burdensomeness is conceptualized in two dimensions: believing the self to be so flawed that one is a liability or burden on others, and cognitions of self-hatred (Van Orden et al., 2010). Joiner's theory notes that individuals who perceive themselves as burdensome on multiple others rather than a single other may experience more psychological distress; however, more extreme perceptions of burdensomeness on one other may also be particularly distressing.

An individual who feels they are constantly failing to meet the expectations and standards of others is likely to begin to feel as though they are a burden on others as a result of their perceived failings. Perceived burdensomeness in turn will likely lead to social isolation and loneliness. However, unlike with thwarted belongingness, perceived burdensomeness likely would not occur in an individual with high levels of OOP who feels that others cannot meet his or her standards. Rather, they would likely perceive others as burdensome. Higher levels of OOP have been shown as associated with grandiose narcissism, or an inflated positive self-image of one's skills and authority, and display of behaviors such as exploitativeness, devaluing others, and entitlement rage (Stoeber, Sherry, & Nealis, 2015). Such individuals may not perceive themselves as burdensome on others as they generally remain unaware of their effects on others (Stoeber et al., 2015).

### **1.6 Linking Interpersonal Theory of Suicide, Perfectionism, and Suicide Ideation**

The interpersonal theory of suicide (Van Orden et al., 2005) Interpersonal Needs Questionnaire shows thwarted belongingness and perceived burdensomeness as being two related, but distinct, factors, demonstrated through the Interpersonal Needs Questionnaire (Van Orden, Cukrowicz, Witte, & Joiner, 2012). The interpersonal theory of suicide has shown thwarted belongingness, perceived burdensomeness, and acquired capacity as strong and reliable predictors of suicide attempts, with thwarted belongingness and perceived burdensomeness leading first to suicide ideation. In order for a suicide attempt to occur, all three categories (thwarted belongingness, perceived burdensomeness, acquired ability) must be met, suggesting social connectedness as “fundamental human motivation” (Van Orden et al., 2012; Baumeister &

Leary, 1995, p. 497). With a strong theory in place, research has begun to examine mediators and moderators between Joiner's components and suicide ideation as well as suicide attempts.

Limited research has examined the relationship of Joiner's theory components to perfectionism; however, evidence suggests that perceived burdensomeness is a significant mediator between maladaptive perfectionism and suicide ideation (Rasmussen, Sligh, Wingate, Davidson, & Grant, 2012; Sligh, 2006; Wang, Wong, & Fu, 2013). Wang et al. (2013) sampled 466 (235 men, 231 women, mean age of 26.39) international Asian university students to examine the moderating effects of maladaptive perfectionism on perceived burdensomeness, thwarted belongingness, and suicide ideation. Instead of using the MPS to examine perfectionism multidimensionally, the study looked at the discrepancy component of the APS-R (Almost Perfect Scale – Revised), using Family Discrepancy and Personal Discrepancy as perfectionism dimensions. The Interpersonal Needs Questionnaire (INQ), Suicide Ideation Scale (SIS), Center for Epidemiological Studies – Depression Scale (CES-D), the FAPS, and the Acculturative Stress Scale for International Studies (ASSIS) were also administered. They found, as predicted, that Family Discrepancy exacerbated the effects of perceived burdensomeness and thwarted belongingness on suicide ideation. Perceived burdensomeness added a 10% incremental variance in predicting suicide ideation. Personal discrepancy and Family discrepancy did not add significant incremental variation in predicting suicide ideation. Interactions between perceived burdensomeness X person discrepancy and perceived burdensomeness X family discrepancy were significant at 3% variance. Interestingly, thwarted belongingness did not add significant variance in predicting suicide ideation. Because this study focused strictly on an Asian population, Family Discrepancy as a moderator makes sense in the context of collectivist culture,

but limits the applicability to other university students, and does not take into account other components of socially prescribed perfectionism.

Rasmussen, Slis, Wingate, Davidson, & Grant (2012) used perceived burdensomeness as a mediator of suicide ideation with perfectionism as a predictor. Participants in the study were 214 students ranging in age from 18 to 50 with a mean age of 20 years old. 57% of participants were women and 43% were men. Participants were given the Almost Perfect Scale-Revised, the Interpersonal Needs Questionnaire (INQ), Depressive symptom Inventory-Suicidality Subscale (DSI-SS), and the Center for Epidemiologic Studies Depression Scale (CES-D). Separate linear regressions found that maladaptive perfectionism predicted both suicidal ideation and perceived burdensomeness. The study found that perceived burdensomeness was indeed a mediator for perfectionism and suicide ideation, suggesting that the presence of perceived burdensomeness might cause enough psychological distress that it leads to suicide ideation. Though this study did not examine the role of thwarted belongingness in perfectionism and suicide ideation, it provides support for the interaction of perfectionism, social belongingness, and suicide ideation. Finally, Slis (2006) examined the mediating effects all three components of Joiner's theory on maladaptive perfectionism. Slis (2006) utilized the same dataset used in the 2012 Rasmussen study but included the Acquired Capability for Suicide Scale (ACSS). This study utilized the APS and INQ to assess perfectionism and the social connectedness components of Joiner's theory. Participants were categorized as adaptive perfectionists, maladaptive perfectionists, or non-perfectionists (Slis, 2006). Results showed that thwarted belongingness was the only component to have a partial mediating effect on maladaptive perfectionism. Perceived burdensomeness and acquired capability did not have a significant mediating effect.

## **1.7 Gaps in the Literature**

The limited research on Joiner's interpersonal theory of suicide and perfectionism does appear to show a mediating effect of the social connectedness components (thwarted belongingness and perceived burdensomeness) of the theory on perfectionism and suicide ideation, as well as a mediating effect of perfectionism on social connectedness and suicide ideation (Rasmussen, Slish, Wingate, Davidson, & Grant, 2012; Slish, 2006; Wang, Wong, & Fu, 2013). However, none of the current research specifically examines thwarted belongingness or perceived burdensomeness as mediators of socially prescribed perfectionism and other-oriented perfectionism individually on suicide ideation. Based on evidence of SPP and OOP predicting suicide ideation, thwarted belongingness and perceived burdensomeness may be mediating variables between SPP, OPP, and suicide ideation (Blankstein et al., 2007; Hamilton & Schweitzer, 2000; Hewitt et al., 2014; Muyan & Chang, 2015).

## **1.8 The Present Study**

The present study focused on the social components of both perfectionism and the interpersonal suicide theory. Based on the strength of perceived burdensomeness and thwarted belongingness on predicting suicide ideation (Rasmussen, Slish, Wingate, Davidson, Grant, 2012; Slish, 2006; Van Orden et al., 2010; Van Orden, Merrill, & Joiner, 2005; Wang, Wong, & Fu, 2013), and the strength of SPP and OOP on predicting suicide ideation (Blankstein et al., 2007; Hamilton & Schweitzer, 2000; Hewitt et al., 2014; Muyan & Chang, 2015), the present study examined the mediating effects of thwarted belongingness and perceived burdensomeness on SPP and OOP in relation to suicide ideation.

The research questions the present study addressed were as follows: (1) Does thwarted belongingness mediate the relationship between socially prescribed perfectionism and suicide ideation? (2) Does perceived burdensomeness mediate the relationship between socially prescribed perfectionism and suicide ideation? (3) Does thwarted belongingness mediate the relationship between other-oriented perfectionism and suicide ideation? (4) Does perceived burdensomeness mediate the relationship between other-oriented perfectionism and suicide ideation? It was hypothesized that: 1) Thwarted belongingness will fully mediate the effects of SPP and OOP on suicide ideation; 2) Perceived burdensomeness will fully mediate the effects of SPP and OOP on suicide ideation. Additionally, this study examined whether higher scores on the Hopelessness Scale (Beck, Lester & Trexler, 1974) and the Psychological Distress Scale (Ross & Zhang, 2008) correlate with higher scores on the SPP and OOP subscales.



## **CHAPTER TWO**

### **METHOD**

#### **2.1 Measures**

##### **2.1.1 Participants**

Demographic data was collected from participants, including age, gender, ethnicity, sexual orientation, and education (see Appendix A). 266 participants completed the questionnaire. Participants primarily identified as female (65%). The mean age was 20.7, with the majority of students identifying as second year students (22%) and third year students (25%). 80% identified as heterosexual. 64% identified as White, followed by 12% identifying as Hispanic or Latino and 8% identifying as Black or African American. The most commonly identified major was Exercise Science (n=30), followed by Psychology (n=28), Education (n=25), and Nursing (n=17). See Table 1.

##### **2.1.2 Multidimensional Perfectionism Scale (MPS)**

The MPS (Hewitt & Flett, 1990) is a 45-item self-report measure, which consists of three subscales intended to measure three dimensions of perfectionism: self-oriented perfectionism, socially prescribed perfectionism, and other-oriented perfectionism. The self-oriented perfectionism subscale consists of 15 items (items 1, 6, 8, 12, 14, 15, 17, 20, 23, 28, 32, 34, 36, 40, and 42) designed to measure self-directed perfectionistic beliefs and behaviors, such as setting stringent standards for oneself and critically and harshly evaluating one's behaviors (Hewitt & Flett, 1990). The socially prescribed perfectionism subscale consists of 15 items (items 5, 9, 11, 13, 18, 21, 25, 30, 31, 33, 35, 37, 39, 41, and 44) designed to measure beliefs and behaviors of socially prescribed perfectionism, including beliefs that significant others in the

perfectionist's life have set unattainable standards for them and evaluate them intensely critically, resulting in the perfectionist maintaining a need to be perfect and in depressive and anxious symptoms. The other-oriented perfectionism scale consists of 15 items (items 2, 3, 4, 7, 10, 16, 19, 22, 24, 26, 27, 29, 38, 43, and 45) designed to measure other-oriented perfectionism beliefs and behaviors, such as imposing exacting standards on others, evaluating others critically by such standards, and expecting perfection from others. Other-oriented perfectionists may direct blame outwards, lack trust in others, and feel hostility towards others (Hewitt & Flett, 1991). Each of the 45 items on the MPS is rated on a 7-point Likert scale ranging from (1) *Disagree* to (7) *Agree*.

The MPS has demonstrated strong psychometric properties through research evaluating multiple reliability and validity factors (Hewitt, Flett, Turnbull-Donovan, & Mikail, 1991). The original 162 items were generated from case studies and theoretical discussions, presented to a graduate student and three undergraduate students to rate for agreement, and narrowed down to 122 items to be rated on a 7-point Likert. Subjects completed the 122 potential items along with the Marlowe-Crowne Social Desirability Scale (Crowne & Marlowe, 1960). Items were selected if they had a mean score between 2.5 and 5.5, a correlation of greater than .40 with items' subscales, a correlation of less than .25 with other subscales, and a correlation less than .25 with social desirability (Crowne & Marlowe, 1960). Total item-to-subscale correlations ranged from .51 to .73 for self-oriented items, .43 and .64 for other-oriented items, and .45 to .71 for socially prescribed items. Coefficient alphas were .86, .82, and .87, respectively. The subscales did show some overlap, with intercorrelations ranging from .25 to .40.

In a separate study by Hewitt and Flett (1991), 1,106 university students and 263 psychiatric patients were administered the MPS. 25 subjects from a psychology class also

completed the MPS and were asked to have someone they know well fill out the MPS as well. Clinicians were asked to rate an additional 21 female and male psychiatric outpatients on the three perfectionism dimensions and then administer the MPS. Alpha coefficients were .89 for self-oriented perfectionism, .79 for other-oriented perfectionism, and .86 for socially prescribed perfectionism (Hewitt & Flett, 1991). Coefficient congruence was computed to determine if the factor structure was similar for the student and psychiatric patient samples. Congruence coefficients were .94 for self-oriented perfectionism, .93 for socially prescribed perfectionism, and .82 for other-oriented perfectionism (Hewitt & Flett, 1991).

In yet another study by Hewitt and Flett discussed in the same article (1991), 104 university students completed the MPS along with personality measures: Attitudes Towards Self, Self- and Other-Blame, the Authoritarianism Scale, the General Population Dominance Scale, Fear of Negative Evaluation, Irrational Beliefs Test, Locus of Control Scale, academic standards, the Narcissistic Personality Inventory, and the Symptom Checklist 90—Revised. Socially prescribed perfectionism was significantly correlated with demand for approval of others, fear of negative evaluation, and locus of control. It was not correlated with high self-standards, authoritarianism, or dominance. Other-oriented perfectionism was correlated with other-blame, authoritarianism, and dominance. All of the symptom scales of the SCL-90 were significantly correlated with self-prescribed perfectionism, with moderate correlations of the SCL-90 subscales to socially prescribed perfectionism. Only subscales for phobic anxiety and paranoia were correlated with other-oriented perfectionism. Finally, test-retest reliabilities were .88, .85, and .75 for self-oriented, other-oriented, and socially prescribed, respectively. See Appendix A for this survey.

### **2.1.3 Beck Scale for Suicide Ideation, Worst and Current (SSI-C, SSI-W)**

The Beck Scale for Suicide Ideation - Current (SSI-C) was developed by Beck, Kovacs, & Weissman (1979) to measure the severity of current suicidal intent. The scale examines several dimensions of destructive thoughts, plans, and expectations (Beck, Brown, & Steer, 1997). The SSI consists of 19 questions on various dimensions of suicide ideation including wish to live, wish to die, reasons for living/dying, active and passive desire, time frame, method, planning, etc. Each question is answered with 0, 1, or 2, each representing a different answer for each specific question. The scores of a sample of 90 patients hospitalized for suicide ideation demonstrated high internal consistency and inter-rater reliability, as well as moderate correlations between the Beck Hopelessness Scale and the Beck Depression Inventory (Beck et al., 1979). However, inpatients who took the SSI-C and later died by suicide did not score higher than inpatient participants who did not die by suicide (Beck, Steer, Kovacs, & Garrison, 1989).

Because of the lack of predictive ability, a second scale, the SSI-W was developed. In a 1999 study by Beck, Brown, Steer, Dahlsgaard, & Grisham, both scales were administered to 3,701 outpatients. Patients who scored 16 or higher on the SSI-W were 14 times more likely to die by suicide than those who scored less than 16. In comparison, patients who scored 2 or above on the SSI-C were only six times more likely to die by suicide than those who scored less than 2 on the SSI-C. The internal reliability for the SSI-W yielded a coefficient alpha of 0.89 and 0.84 for the SSI-C. Both scales were positively correlated with variables related to suicide ideation, such as a diagnosis of a mood disorder, comorbid disorder, personality disorder, the Beck Hopelessness Scale, the Beck Depression Inventory, and the revised Hamilton Psychiatric Rating Scale for Depression (Beck, Brown, & Steer, 1997). See Appendix A for this survey.

#### **2.1.4 Interpersonal Needs Questionnaire (INQ)**

The INQ was developed from Thomas Joiner's interpersonal theory of suicide in order to measure perceived burdensomeness and thwarted belongingness (Van Orden, Cukrowicz, Witte, & Joiner, 2011). The INQ consists of two subscales; items 1 through 6 measure perceived burdensomeness and items 7 through 15 measured thwarted belongingness. Items 7, 8, 10, 13, 14, and 15 are reverse coded. Examples of perceived burdensomeness questions include, "These days, the people in my life would be better off if I were gone"; "These days, I think my death would be a relief to the people in my life"; and "These days, I think I am a burden on society". Examples of thwarted belongingness questions include, "These days, I feel disconnected from other people"; "These days, I often feel like an outsider at social gatherings"; and "These days, I am close to other people". Each item is rated on a 7-point Likert scale ranging from (1) *Not true at all for me* to (7) *Very true for me*. Thwarted belongingness is defined as a psychologically painful mental state that occurs when the basic human need of connectedness is unmet (Van Orden et al., 2011). The thwarted belongingness component uses types of social isolation as indicators. Perceived burdensomeness is defined as a mental state resulting from perceptions that those around the individual would be better off if he or she were gone, indicating the need for social competence is unmet (Van Orden et al., 2011). Perceived burdensomeness examines unemployment, family discord, and functional impairment. Internal consistency for the thwarted belongingness and perceived burdensomeness subscales were .85 and .89, respectively. Thwarted belongingness and perceived burdensomeness have demonstrated related interpersonal constructs but are distinct overall constructs nonetheless. Results from psychometric evaluations also reveal that the INQ is applicable to clinical outpatients and older adults, in addition to the

undergraduate population originally tested (Van Order et al., 2011). See Appendix A for this survey.

### **2.1.5 Beck Hopelessness Scale (HS)**

The HS was developed to identify participants' negative tendencies in order to study hopelessness as an element in psychopathologies (Beck, Weissman, Lester, & Trexler, 1974). The original HS was administered to 294 hospitalized patients who had previous suicide attempts and to a random sample of depressed and nondepressed patients. The scale consists of 20, negative expectancy items regarding the future, rated either true or false (given a value of 0 or 1). 9 items were keyed false and 11 keyed true, with the total hopelessness score being the sum of all items. Example questions include, "Things just won't work out the way I want them to"; "In the future, I expect to succeed in what concerns me most"; and "I might as well give up because I can't make things better by myself". Coefficient alpha analysis to determine internal consistency revealed a reliability coefficient of .93 (Beck et al., 1974). Item-total correlation coefficients ranged from .39 to .76. See Appendix A.

### **2.1.6 Psychological Distress Index**

The 4-item Psychological Distress Index was developed to assess mental and emotional suffering as a result of anxiety and depression (Ross & Zhang, 2008). The items ask participants to rate how often they feel fearful or anxious, lonely and isolated, useless, and happy on a scale from 1 to 5 (never, seldom, sometimes, often, or always). Scores are calculated from the mean of all four items. The alpha reliability for this construct was .56 with a single factor above .4 (Ross & Zhang, 2008). See Appendix A.

## 2.2 Procedures

The present study was approved by the university institutional review board (IRB). A survey was presented in the form of an online Qualtrics questionnaire. Participants were acquired through an online research pool through the College of Education at Florida State University, through emails distributed to several classes in the College of Nursing at Florida State University, and through fliers posted in the Department of Psychology and around campus at FSU. Compensation in the form of a gift-card raffle was offered to participants who chose to provide their email. Additionally, students enrolled in certain classes in the College of Education participating through the COE subject pool had the option to receive course credit or extra credit, depending on instructor permission. Participants were required to check an agreement box after reading the informed consent provided. Participants were required to be at least 18 years old and enrolled at Florida State University as a graduate or undergraduate student. Additionally, participants were provided with contact information for the University Counseling Center and National Suicide Prevention Lifeline throughout the survey, as well as at the conclusion. Doctoral level psychology students with clinical experience were on-call during open survey hours to respond to participants who indicated high levels of current suicidal ideation within 24 hours. Students were required to provide their phone numbers so doctoral students could contact them in the event that they indicated high levels of current suicidal thoughts.

All measures were compiled into a Qualtrics survey online. Participants completed demographic questions, the Multidimensional Perfectionism Scale, the Beck Scale for Suicide Ideation (Worst and Current), the Interpersonal Needs Questionnaire, the Beck Hopelessness Scale, and the Psychological Distress Index.

## 2.3 Data Analysis

Descriptive statistics and correlation coefficients between the three dimensions of perfectionism (self-oriented, other-oriented, socially prescribed), the two components of the interpersonal theory of suicide (thwarted belongingness, perceived burdensomeness), and suicidal ideation were calculated. Descriptive statistics and correlation coefficients were also calculated between each dimension, each interpersonal category, and hopelessness and distress for exploratory analysis. It was hypothesized that each dimension of perfectionism would be positively correlated with each interpersonal category, as well as with suicidal ideation. Previous literature has demonstrated a positive correlation between maladaptive perfectionism and suicidal ideations. It was also hypothesized that each interpersonal category would be positively correlated with suicidal ideation, as demonstrated by prior research and theory.

The primary data analysis examined the mediating effects of thwarted belongingness and perceived burdensomeness on the relationship between each dimension of perfectionism and suicidal ideation. The hypothesized path model is shown in Figure 1.

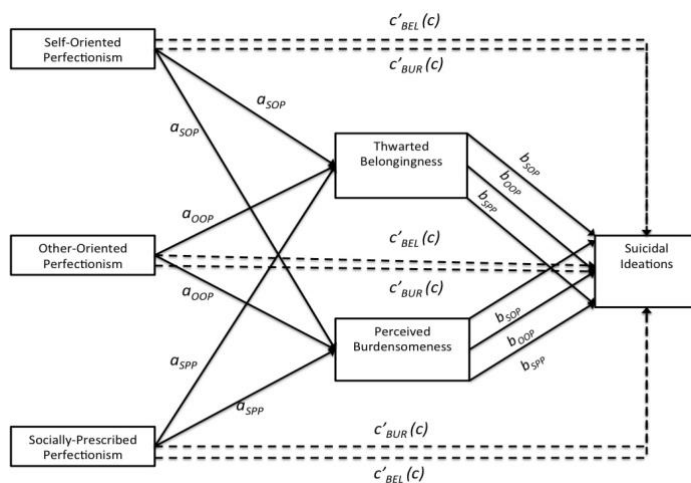


Figure 1. Hypothesized path model of mediation.



In order to test for mediation, Baron and Kenny's (1986) four-step model was utilized. Baron and Kenny's model asserts that the first three steps must be met in order to determine partial or full mediation. The fourth step establishes full mediation. These steps are as follows:

1. Show the causal variable is correlated with the outcome. Use Y as the criterion variable in the regression equation and X as a predictor.
2. Show that the causal variable is correlated with the mediator (path *a*). Use M as the criterion variable in the regression equation and X as a predictor.
3. Show that the mediator affects the outcome variable (path *b*). Use Y as the criterion variable in a regression equation and X and M as predictors.
4. To establish that M completely mediates the X-Y relationship, the effect of X on Y controlling for M (path *c'*) should be zero (Baron & Kenny, 1986).

For the present study, each dimension of perfectionism (causal variables) was tested for correlation with the outcome variable of suicidal ideation through linear regression (path *c*). Next, each dimension of perfectionism was tested for correlation with thwarted belongingness and perceived burdensomeness (mediator variables), respectively, through linear regression (path *a*). Finally, multiple regression analyses were run for each pairing of causal variables and mediator variables to demonstrate effects of the mediators on the outcome variable. The assumptions of multiple regression were tested. Multiple regression requires four assumptions to be met: (1) Variables are normally distributed; (2) There is a linear relationship between the independent and dependent variables; (3) Variables are measured reliably; and (4) Homoscedasticity of variance across all levels of the independent variable (Osborne, Waters, & Waters, 2002). Both partial and full mediation were of consideration to the present study; thus, step 4 was not utilized in all analyses.

In order to test the significance of the indirect effect of each causal variable on the outcome variable, a Sobel (1982) test analysis was conducted for each proposed pathway. The Sobel test examines the unstandardized coefficients for both the *a* and *b* pathways, as well as the standard error for each pathway. An interactive calculation tool developed by Preacher and Leonardelli (2001) was used to perform Sobel calculations. Additionally, the percent mediation measure was utilized to supplement path analyses. Kenny, Kashy, & Bolger (1998) propose this measure as the direct effect divided by the total effect, or  $(a*b)/c$ . Kenny et al. (1998) note that this measure can be highly unstable and should only be used with large samples, and where standardized *c* is greater than .2. Using this method relies on the rule of thumb that in order to claim full mediation, the percent mediation should be at least .8. Lastly, Cohen's  $f^2$  was calculated to determine effect size for each *c'* pathway. Rule-of-thumb cutoffs for small, medium, and large mediation effects are .14, .39, and .59, respectively (Cohen, 1988). Cohen's  $f^2$  values were calculated using an interactive program created by Soper (2017).

## CHAPTER THREE

### RESULTS

#### 3.1 Descriptive Statistics and Correlations

First, total scores on the Multidimensional Perfectionism Scale (MPS) were found to be significantly, moderately, positively correlated with total scores on the Beck Scale for Suicidality (SSI-W) ( $r=.43$ ,  $r^2=.18$ ,  $p < .001$ ). Total MPS scores were significantly, moderately, positively correlated with total Interpersonal Needs Questionnaire (INQ) scores ( $r=.56$ ,  $r^2=.32$ ,  $p < .001$ ). SSI-W scores were significantly, strongly, positively correlated with INQ scores ( $r=.67$ ,  $r^2=.45$ ,  $p < .001$ ). SSI-W scores were significantly, moderately, positively correlated with each dimension of perfectionism. See Table 2.

**Table 1**

*Frequencies, percent total, and mean age.*

Demographic	Frequency (n)	%	Mean (SD)
<u>Age</u>			21 (3)
<u>Gender</u>			
Male	66	22.1	
Female	195	65.4	
Other	3	1.1	
Prefer not to answer	2	0.7	
Missing	32	10.7	
<u>Sexual Orientation</u>			
Heterosexual	238	79.9	
Gay	1	0.3	
Lesbian	5	1.7	
Bisexual	14	4.7	
Other	5	1.7	

**Table 1 Continued**

Demographic	Frequency (n)	%	Mean (SD)
Missing	32	10.7	
<u>Ethnicity</u>			
White	190	63.8	
Black/AA	23	7.7	
American Indian/Alaska Native	2	0.7	
Asian	3	1	
Hawaiian/Pacific Islander	1	0.3	
Hispanic/Latino	27	12.4	
Other	10	3.4	
Missing	32	10.7	
<u>Year in School</u>			
1st year	46	15.4	
2nd year	66	22.1	
3rd year	74	24.8	
4th year	55	18.5	
5th year senior	8	2.7	
Master's	12	4	
Doctoral	5	1.7	
Missing	32	10.7	

*Note.* Other responses to gender included gender nonconforming (n=1), gender fluid (n=1), and nonbinary (n=1). Other responses to sexual orientation included demisexual (n=1), heteroflexible (n=1), pansexual (n=1), and queer (n=2).

**Table 2**

*Pearson r correlations and  $r^2$  values for each dimension of MPS, INQ, and SSI-W without regression.*

<u>Dimension</u>	Thwarted Belongingness		Perceived Burdensomeness		Suicidal Ideation	
	<i>r</i>	$r^2$	<i>r</i>	$r^2$	<i>r</i>	$r^2$
Self-Oriented Perfectionism	0.47	0.22	0.41	0.17	0.37	0.14
Other-Oriented Perfectionism	0.48	0.23	0.32	0.1	0.32	0.1

**Table 2**  
**Continued**

<u>Dimension</u>	Thwarted Belongingness		Perceived Burdensomeness		Suicidal Ideation	
	<u>r</u>	<u>r<sup>2</sup></u>	<u>r</u>	<u>r<sup>2</sup></u>	<u>r</u>	<u>r<sup>2</sup></u>
Socially Prescribed Perfectionism	0.61	0.38	0.47	0.22	0.47	0.22

### 3.2 Mediation Analyses

Following Baron and Kenny's method, each pathway from the predictor variables (*a*) of self-oriented perfectionism (SOP), other-oriented perfectionism (OOP), and socially prescribed perfectionism (SPP) to the mediator variables of thwarted belongingness and perceived burdensomeness was significant. Each pathway from mediator variables of thwarted belongingness and perceived burdensomeness to the outcome variable of suicidal ideation (*b*), was significant. Based on Baron and Kenny's fourth step criteria for determining full mediation, *c'* pathways (perfectionism dimension to interpersonal category to suicidal ideation) for socially prescribed perfectionism and suicidal ideation by thwarted belongingness ( $c'=.14, p=.02$ ), socially prescribed perfectionism and suicidal ideation by perceived burdensomeness ( $c'=.17, p=.001$ ), and self-oriented perfectionism and suicidal ideation by perceived burdensomeness ( $c'=.13, p=.01$ ) indicated partial mediation with standardized coefficients for each *c'* pathway remaining significant but decreasing from the *C* pathway. Full mediation was observed in total MPS scores and suicidal ideation by total INQ scores ( $c'=.07, p=.16$ ). Full mediation was observed in other-oriented perfectionism and suicidal ideation by thwarted belongingness ( $c'=.03, p=.59$ ), other-oriented perfectionism and suicidal ideation by perceived burdensomeness

( $c'=.08, p=.11$ ), and self-oriented perfectionism and suicidal ideation by thwarted belongingness ( $c'=.01, p=.052$ ). Path analyses values can be found in Figure 2.

Sobel tests were conducted to determine the significance of each indirect effect of the predictor variables on the outcome variables. Sobel tests revealed that the indirect effect was significant for each pathway, with the exception of self-oriented perfectionism and suicidal ideation mediated by perceived burdensomeness ( $t(2)=1.66, SE=.03, p=.10$ ), Sobel test values can be found in Table 3. Next, effect size was calculated using Cohen's  $f^2$  for multiple regression.  $R^2$  values for  $c'$  pathways (mediating variables as regressors) were used to calculate Cohen's  $f^2$  values. All effect sizes exceeded the cutoff for a "large" effect size at .59 (Cohen, 1988). Values for effect sizes can be found in Table 3.

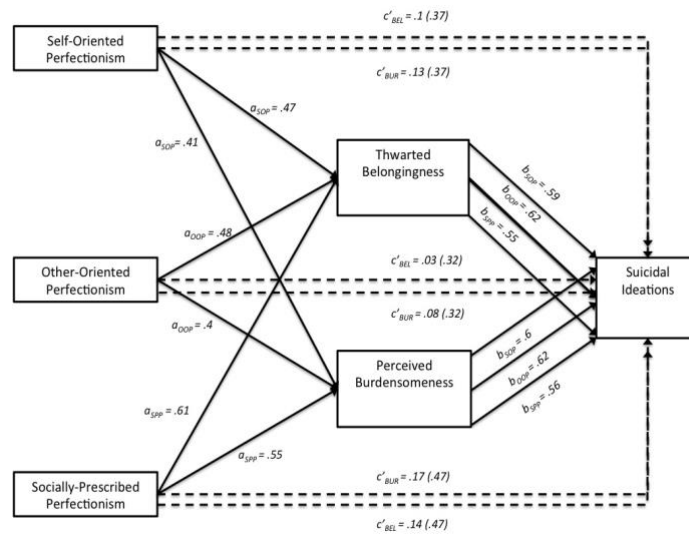


Figure 2. Standardized coefficients for mediation pathway analyses. All values were significant at  $p < .001$ .

To supplement the four-step mediation analyses, percent mediation was conducted for each pathway using the indirect effect divided by the direct effect. Kenny (2001) suggests 0.8 as

the minimum percent mediated to claim full mediation. Based on these criteria, MPS total scores' effects on SSI-W scores were fully mediated by INQ total scores ( $P_M=.87$ ). Self-oriented perfectionism and suicidal ideation was fully mediated by thwarted belongingness ( $P_M=.80$ ). Other-oriented perfectionism and suicidal ideation was fully mediated by thwarted belongingness ( $P_M=.95$ ). Socially prescribed perfectionism and suicidal ideation was fully mediated by thwarted belongingness ( $P_M=.82$ ). Self-oriented perfectionism and suicidal ideation was partially mediated by perceived burdensomeness ( $P_M=.72$ ), however, Sobel tests indicated the indirect effect was not significant. Other-oriented perfectionism and suicidal ideation was fully mediated by perceived burdensomeness ( $P_M=.81$ ). Socially prescribed perfectionism and suicidal ideation was partially mediated by perceived burdensomeness ( $P_M=.76$ ).

Because percent mediation is considered to be a very liberal test, claims of full mediation are likely highly biased, but provide informative data in conjunction with four-step analyses, Sobel tests, and Cohen's  $f^2$ . Nonetheless, percent mediation partial and full mediation designations appeared to match those of the path analyses, with the exception of socially prescribed perfectionism and suicidal ideation mediated by thwarted belongingness, which was found to show partial mediation by the path analysis and full mediation by the percent mediation analysis.

Hopelessness and distress were also examined in place of suicidal ideation as an outcome variable. Each dimension of perfectionism and hopelessness (Table 4) and distress (Table 5) outcomes respectively were partially mediated by thwarted belongingness and perceived burdensomeness. Total MPS scores and distress outcomes were not mediated by total INQ scores ( $p=.25$ ) (Table 5).

**Table 3**

Mediation analyses with **SUICIDAL IDEATION** as the outcome variable including standardized coefficients ( $c'$ ), Sobel test statistics, standard error (SE), Cohen's  $f^2$  for effect size, and percent mediation ( $P_M$ ).

Dimension	Thwarted Belongingness					Perceived Burdensomeness				
	$c'$	Sobel	SE	$f^2$	$P_M$	$c'$	Sobel	SE	$f^2$	$P_M$
Self-Oriented Perfectionism	0.1**	7.06*	0.01	0.7	0.8	0.13	1.66	0.03	0.76	0.72
Other-Oriented Perfectionism	0.03**	7.31*	0.00	0.68	0.95	0.08**	6.52*	0.01	0.75	0.81
Socially Prescribed Perfectionism	0.14 <sup>Δ</sup>	7.85*	0.01	0.7	0.82	0.17 <sup>Δ</sup>	7.66*	0.01	0.78	0.76
INQ Total										
Dimension	$c'$	Sobel	SE	$f^2$	$P_M$					
MPS Total	0.07**	8.5*	0.00	0.8	0.87					

Note. Significant at the  $p < .01$  levels. Full mediation is indicated by ( $c'$ ) \*\*. Partial mediation is indicated by ( $c'$ ) <sup>Δ</sup>.

**Table 4**

Mediation analyses with **HOPELESSNESS** as the outcome variable, including standardized coefficients ( $c'$ ), Sobel test statistics, standard error (SE), Cohen's  $f^2$  for effect size, and percent mediation ( $P_M$ ).

Dimension	Thwarted Belongingness					Perceived Burdensomeness				
	$c'$	Sobel	SE	$f^2$	$P_M$	$c'$	Sobel	SE	$f^2$	$P_M$
Self-Oriented Perfectionism	0.43 <sup>Δ</sup>	7.26*	0.02	0.95	0.66	0.5 <sup>Δ</sup>	5.85*	0.02	0.74	0.5
Other-Oriented Perfectionism	0.55 <sup>Δ</sup>	7.38*	0.02	1.36	0.61	0.61 <sup>Δ</sup>	5.85*	0.02	1.15	0.45
Socially Prescribed Perfectionism	0.6 <sup>Δ</sup>	9.03*	0.03	1.31	0.75	0.17 <sup>Δ</sup>	7.08*	0.02	1.19	0.6



**Table 4**  
**Continued**

	INQ Total				
<u>Dimension</u>	<u>c'</u>	<u>Sobel</u>	<u>SE</u>	<u>f<sup>2</sup></u>	<u>P<sub>M</sub></u>
MPS Total	0.6 <sup>Δ</sup>	1.34*	0.01	1.34	0.68

Note. Significant at the p<.01\* levels. Full mediation is indicated by (c) '\*\*\*. Partial mediation is indicated by (c') <sup>Δ</sup>

**Table 5**

*Mediation analyses with **DISTRESS** as the outcome variable, including standardized coefficients (c'), Sobel test statistics, standard error (SE), Cohen's f<sup>2</sup> for effect size, and percent mediation (P<sub>M</sub>).*

	Thwarted Belongingness					Perceived Burdensomeness				
<u>Dimension</u>	<u>c'</u>	<u>Sobel</u>	<u>SE</u>	<u>f<sup>2</sup></u>	<u>P<sub>M</sub></u>	<u>c'</u>	<u>Sobel</u>	<u>SE</u>	<u>f<sup>2</sup></u>	<u>P<sub>M</sub></u>
Self-Oriented Perfectionism	0.28 <sup>Δ</sup>	8.32*	0.01	2.3	0.99	0.37 <sup>Δ</sup>	6.9*	0.01	1.46	0.65
Other-Oriented Perfectionism	0.31 <sup>Δ</sup>	8.49*	0.01	2.44	0.95	0.41 <sup>Δ</sup>	6.9*	0.01	0.62	0.55
Socially Prescribed Perfectionism	0.39 <sup>Δ</sup>	11.34*	0.01	2.89	1.0	0.51 <sup>Δ</sup>	9.21*	0.01	1.63	0.79
	INQ Total									
<u>Dimension</u>	<u>c'</u>	<u>Sobel</u>	<u>SE</u>	<u>f<sup>2</sup></u>	<u>P<sub>M</sub></u>					
MPS Total	0.37	1.15	0.03	2.64	1.0					

Note. Significant at the p<.01\* levels. Full mediation is indicated by (c) '\*\*\*. Partial mediation is indicated by (c') <sup>Δ</sup>.

## CHAPTER FOUR

### DISCUSSION

#### 4.1 Discussion

The present study sought to further understand the relationship between multidimensional perfectionism and suicidal ideation, using three dimensions of perfectionism (self-oriented, other-oriented, socially prescribed) and two components of the interpersonal theory of suicide (thwarted belongingness, perceived burdensomeness). The relationship between other-oriented (OOP) and socially prescribed perfectionism (SPP), respectively, and suicidal ideation was hypothesized to be partially mediated by thwarted belongingness and perceived burdensomeness. The focus on OOP and SPP stemmed from literature connecting social isolation with suicidal ideation, and the socially isolating effects that may arise from OOP and SPP (Blankstein et al., 2007; Hamilton & Schweitzer, 2000; Hewitt et al., 2014; Muyan & Chang, 2015). It was hypothesized that: 1) Thwarted belongingness will fully mediate the effects of SPP and OOP on suicide ideation; 2) Perceived burdensomeness will fully mediate the effects of SPP and OOP on suicide ideation.

Both mediation path analysis and percent mediation analysis revealed that OOP and suicidal ideation was fully mediated by both thwarted belongingness and perceived burdensomeness. Baron method mediation path analysis revealed that SPP and suicidal ideation was partially mediated by both thwarted belongingness and perceived burdensomeness, while percent mediation analysis suggested that SPP and suicidal ideation was fully mediated by thwarted belongingness. Given that the  $c'$  pathway for SPP and thwarted belongingness was not significant at the  $p < .01$ , in conjunction with the percent mediation of .82, full mediation of SPP and suicidal ideation by thwarted belongingness is assumed. Thus, the effects of OOP and SPP on

suicidal ideation were fully mediated by thwarted belongingness. The effects of OOP on suicidal ideation were fully mediated by perceived burdensomeness. The effects of SPP on suicidal ideation were partially mediated by perceived burdensomeness, indicating that other factor(s) were likely influencing the relationship between SPP and suicidal ideation, aside from perceived burdensomeness. The effect of SOP on suicidal ideation was not mediated by perceived burdensomeness.

When the mediating variable, thwarted belongingness, is controlled for, the relationships between other-oriented perfectionism and socially prescribed perfectionism, respectively, with suicidal ideation are no longer significant. Similarly, when the mediating variable of perceived burdensomeness is controlled for, the relationship between other-oriented perfectionism and suicidal ideation is no longer significant. The relationship between socially prescribed perfectionism and suicidal ideation is still significant when controlling for perceived burdensomeness, but the strength of the relationship is weakened by partial mediation. Perceived burdensomeness and thwarted belongingness mediate the relationships between OOP and SPP and suicidal ideation. In other words, the relationship between OOP or SPP and suicidal ideation did not exist without the presence of higher levels of thwarted belongingness. The relationship between OOP and suicidal ideation did not exist without the presence of higher levels of perceived burdensomeness, and the relationship between SPP and suicidal ideation was influenced by perceived burdensomeness.

These results are congruent with literature examining the role of social isolation as a significant factor in the development of suicidal ideation, and the role of perfectionism in social isolation. Hewitt and Flett (1991) showed a correlation between socially prescribed perfectionism and demand for approval of others, fear of negative evaluation, and locus of control. Other-

oriented perfectionism was correlated with other-blame, authoritarianism, and dominance. Individual traits like fear of negative evaluation and demand for approval of others, as well as other-blame and authoritarianism, are all factors that, if experienced in high enough levels and often enough, can lead to social isolation. Joiner (2005), Van Orden et al. (2010), and Baumeister and Leary (1995) all emphasize a lack of social connectedness and the unmet need to belong as psychologically damaging to the individual, with Joiner (2005) noting that social isolation is one of the strongest predictors of suicidal ideation, attempts, and lethal suicidal behavior.

In contrast to the full mediation of OOP and suicidal ideation in the present study, Rasmussen et al. (2012), found perceived burdensomeness to be a partial mediator of perfectionism and suicidal ideation. However, the Rasmussen et al. study examined perfectionism as a whole using the Almost Perfect Scale (APS), not the Multidimensional Perfectionism Scale, and did not break down the dimensions. Sligh et al. (2006) categorized perfectionists as adaptive, maladaptive, or not perfectionists using the APS and only found a partial mediating effect of thwarted belongingness on the effects of maladaptive perfectionism and suicidal ideation. The present study, however, found full mediation of thwarted belongingness on the effects of all dimensions of perfectionism on suicidal ideation, and full mediation of perceived burdensomeness on two out of three dimensions (SOP, OOP).

Results from mediation analyses with SOP, OOP, and SPP as predictors and hopelessness and distress as outcomes, respectively, provide an important comparison to mediation analyses with suicidal ideation as an outcome. Each relationship was only partially mediated, with generally overall smaller percent mediation results. No pathway with hopelessness or distress as an outcome demonstrated full mediation by thwarted belongingness or perceived burdensomeness, in contrast to three pathways with suicidal ideation as an outcome demonstrating full mediation, as well as

overall MPS scores and INQ scores demonstrating full mediation with suicidal ideation as an outcome. While perfectionistic students experiencing suicidal ideations also experience hopelessness and distress, thwarted belongingness and perceived burdensomeness do not fully explain the relationship between perfectionism and distress or hopelessness. Consistent with current literature, thwarted belongingness and perceived burdensomeness are more closely associated with suicidal ideation. Although perceived burdensomeness has demonstrated the strongest predictive power of suicidality as opposed to thwarted belongingness, results of the present study suggest thwarted belongingness may be a stronger predictor of suicidality in perfectionists.

#### **4.2 Implications and Future Directions**

Results from this study in conjunction with previous research emphasize the need for higher education personnel, parents, and peers to be aware of potential warning signs and vulnerabilities of suicidal ideation, including those signs not as intuitive or obvious as severe depression. For example, professors may notice signs of perfectionism in a student's work and behavior in class. OOP students may have difficulties working with classmates on group projects, while SPP students may feel overwhelmed by classes with numerous assignments and fail to complete assignments on time. Peers can observe perfectionism behavior in friends displaying unwarranted concern over assignments and responsibilities, particularly if the individual is beginning to isolate his or herself from social groups. Additionally, mental health professionals on college campuses should be aware of different types of perfectionism, and consider addressing perfectionism behavior with students, particularly if they are exhibiting other warning signs of suicide or depression. A perfectionist student may present with primary concerns about social

isolation and loneliness, without realizing that other-oriented or socially prescribed perfectionism is the root of their isolation and could benefit from perfectionism-focused treatment.

In contrast, students who display perfectionist traits when presenting for treatment may also receive Cognitive Behavioral Therapy (CBT) focused on eliminating perfectionistic thinking. Additionally, these students may further benefit from interpersonal therapy. As thwarted belongingness and perceived burdensomeness explain or partially explain each perfectionism dimension's relationship with suicidal ideation, perfectionist students may need treatment addressing interpersonal skills, such as effective communication, healthy relationships, and examining their current interpersonal styles. CBT in conjunction with interpersonal examination and skills training may help target both areas perfectionist students might be struggling.

Given that results from this study show greater mediation than other studies addressing perfectionism and suicidal ideation, more research should address socially prescribed perfectionism and other-oriented perfectionism and their unique relationships to suicidal ideation, thwarted belongingness, and perceived burdensomeness. More conservative mediation analysis would be beneficial to determining the true effects of perfectionism on suicidal ideation by the interpersonal theory of suicide. Qualitative research examining perfectionists' perceptions of their primary problems, suicidal ideations, and psychological distress may also be beneficial to constructing a more complete picture of student perfectionists and suicidality on college campuses.

Finally, results from the present study provide additional support for the Interpersonal Theory of Suicide by demonstrating strong, positive correlational relationships between thwarted belongingness, perceived burdensomeness, and suicidal ideation. By comparing INQ mediation results with suicidal ideation as an outcome variable to mediation results of hopelessness and

distress as outcome variables, thwarted belongingness and perceived burdensomeness are further emphasized as constructs unique in their relationship to predicting suicidal ideation.

### **4.3 Study Limitations**

Participants in the present study were self-selected and all measures were self-reported. While the measures used have demonstrated strong reliability and validity, students may not always be aware of their internal functioning nor be able to accurately articulate this. Demographics for the present study did not reflect significant diversity within the sample; as such, future studies may attempt to acquire a more diverse sample population. Additionally, mediation path analyses and percent mediation leave room for a higher potential of bias and error as compared to more rigorous mediation statistical analyses such as bootstrapping. However, the sample size for the present study was not large enough to appropriately utilize bootstrapping. The mean score on the SSI-W was 4.8 out of a maximum 35, indicating low overall suicidal ideation in the sample. Future studies would benefit from a sample with a higher range of suicidal ideation.

## APPENDIX A

### SURVEY

#### **Thwarted Belongingness and Perceived Burdensomeness as Mediators of Multidimensional Perfectionism and Suicide Ideation in University Students**

##### **\*Survey\***

*The following are general demographic questions. Please select or fill in your response for each question.*

Age?

Fill in age \_\_\_\_\_

Gender?

Male

Female

Transgende

r

Other, please indicate \_\_\_\_\_ Prefer not to answer

Ethnicity?

White

Hispanic or Latino

Black or African American

Native American or American Indian

Asian/Pacific Islander

Other, please indicate \_\_\_\_\_

Sexual Orientation?

Heterosexual

Gay

Lesbian

Bisexual

Other, please indicate \_\_\_\_\_ Prefer not to answer

Grade Level?

1<sup>st</sup> year

2<sup>nd</sup> year

3<sup>rd</sup> year

4<sup>th</sup> year



5<sup>th</sup> year senior  
Master's Student  
Doctoral Student

Major/Program of study?

Fill in \_\_\_\_\_

*Listed below are a number of statements concerning personal characteristics and traits. Read each item and decide whether you agree or disagree & to what extent.*

1. When I am working on something, I cannot relax until it is perfect.

Disagree                      Agree  
1 2 3 4 5 6 7

2. I am not likely to criticize someone for giving up too easily.

Disagree                      Agree  
1 2 3 4 5 6 7

3. It is not important that people I am close to are successful.

Disagree                      Agree  
1 2 3 4 5 6 7

4. I seldom criticize my friends for accepting second best.

Disagree                      Agree  
1 2 3 4 5 6 7

5. I find it difficult to meet others' expectations of me.

Disagree                      Agree  
1 2 3 4 5 6 7

6. One of my goals is to be perfect in everything I do.

Disagree                      Agree  
1 2 3 4 5 6 7

7. Everything that others do must be of top-notch quality

Disagree                      Agree  
1 2 3 4 5 6 7

8. I never aim for perfection on my work

Disagree                      Agree  
1 2 3 4 5 6 7

9. Those around me readily accept that I can make mistakes too

Disagree                      Agree  
1 2 3 4 5 6 7

10. It doesn't matter when someone close to me does not do their absolute best

Disagree                      Agree  
1 2 3 4 5 6 7

11. The better I do, the better I am expected to do

Disagree                      Agree  
1 2 3 4 5 6 7

12. I seldom feel the need to be perfect

Disagree                      Agree  
1 2 3 4 5 6 7

13. Anything that I do that is less than excellent will be seen as poor work by those around me

Disagree                      Agree  
1 2 3 4 5 6 7

14. I strive to be as perfect as I can be

Disagree                      Agree  
1 2 3 4 5 6 7

15. It is very important that I am perfect in everything I attempt

Disagree                      Agree  
1 2 3 4 5 6 7

16. I have high expectations for the people who are important to me

Disagree                      Agree  
1 2 3 4 5 6 7

17. I strive to be the best at everything I do

Disagree                      Agree  
1 2 3 4 5 6 7

18. The people around me expect me to succeed at everything I do

Disagree                      Agree  
1 2 3 4 5 6 7

19. I do not have very high standards for those around me

Disagree                      Agree  
1 2 3 4 5 6 7

20. I demand nothing less than perfection of myself

Disagree                      Agree  
1 2 3 4 5 6 7

21. Others will like me even if I don't excel at everything

Disagree                      Agree  
1 2 3 4 5 6 7

22. I can't be bothered with people who won't strive to better themselves

Disagree                      Agree  
1 2 3 4 5 6 7

23. It makes me uneasy to see an error in my work

Disagree                      Agree  
1 2 3 4 5 6 7

24. I do not expect a lot from my friends

Disagree                      Agree  
1 2 3 4 5 6 7

25. Success means that I must work even harder to please others

Disagree                      Agree  
1 2 3 4 5 6 7

26. If I ask someone to do something, I expect it to be done flawlessly

Disagree                      Agree  
1 2 3 4 5 6 7

27. I cannot stand to see people close to me make mistakes

Disagree                      Agree  
1 2 3 4 5 6 7

28. I am perfectionistic in setting my goals

Disagree                      Agree  
1 2 3 4 5 6 7

29. The people who matter to me should never let me down

Disagree                      Agree  
1 2 3 4 5 6 7

30. Others think I am okay, even when I do not succeed

Disagree                      Agree  
1 2 3 4 5 6 7

31. I feel that people are too demanding of me

Disagree                      Agree  
1 2 3 4 5 6 7

32. I must work to my full potential at all times

Disagree                      Agree  
1 2 3 4 5 6 7

33. Although they may not say it, other people get very upset with me when I slip up

Disagree                      Agree  
1 2 3 4 5 6 7

34. I do not have to be the best at whatever I am doing

Disagree                      Agree  
1 2 3 4 5 6 7

35. My family expects me to be perfect

Disagree                      Agree  
1 2 3 4 5 6 7

36. I do not have very high goals for myself

Disagree                      Agree  
1 2 3 4 5 6 7

37. My parent rarely expected me to excel in all aspects of my life

Disagree                      Agree  
1 2 3 4 5 6 7

38. I respect people who are average

Disagree                      Agree  
1 2 3 4 5 6 7

39. People expect nothing less than perfection from me

Disagree                      Agree  
1 2 3 4 5 6 7

40. I set very high standards for myself

Disagree                      Agree  
1 2 3 4 5 6 7

41. People expect more from me than I am capable of giving

Disagree                      Agree  
1 2 3 4 5 6 7

41. I must always be successful at school or work

Disagree                      Agree  
1 2 3 4 5 6 7

43. It does not matter to me when a close friend does not try their hardest

Disagree                      Agree  
1 2 3 4 5 6 7

44. People around me think I am still competent even if I make a mistake

Disagree                      Agree  
1 2 3 4 5 6 7

45. I seldom expect others to excel at whatever they do.

Disagree                      Agree  
1 2 3 4 5 6 7

*Think back to a time in your life when you felt the most distressed. The following questions ask you to think about your thoughts and feelings during this time. Please base your responses on how you felt during the most distressing period of time in your life. Use the rating scale to find the number that best matches how you felt and select that number.*

**1. Wish to live**

Moderate to strong 0

Weak 1

None 2

**2. Wish to die**

None 0

Weak 1

Moderate to strong 2

**3. Reasons for living/dying**

For living outweigh for dying 0

About equal 1

For dying outweigh for living 2

**4. Desire to make active suicide attempt**

None 0

Weak 1

Moderate to strong 2

**5. Passive suicidal desire**

Would take precautions to save life 0

Would leave life/death to chance 1

Would avoid steps necessary to save or maintain life 2

**1. Duration of suicide ideation/wish**

- Brief fleeting periods 0
- Longer periods 1
- Continuous (chronic) or almost continuous 2

**2. Frequency of suicide ideation**

- Rare/occasional 0
- Intermittent 1
- Persistent or continuous 2

**3. Attitude toward ideation/wish**

- Rejecting 0
- Ambivalent indifferent 1
- Accepting 2

*Think back to a time in your life when you felt the most distressed. The following questions ask you to think about yourself and other people. Please respond to each question by using your own beliefs and experiences, NOT what you think is true in general, or what might be true or other people. Please base your responses on how you felt during the most distressing period of time in your life. Use the rating scale to find the number that best matches how you feel and select that number.*

1. These days, the people in my life would be better off if I were gone.  

Not true at all for me	Somewhat true for me	Very true for me
1	2 3 4	5 6 7
  
2. These days, the people in my life would be happier without me.  

Not true at all for me	Somewhat true for me	Very true for me
1	2 3 4	5 6 7
  
3. These days, I think I am a burden on society.  

Not true at all for me	Somewhat true for me	Very true for me
1	2 3 4	5 6 7
  
4. These days, I think my death would be a relief to the people in my life.  

Not true at all for me	Somewhat true for me	Very true for me
1	2 3 4	5 6 7
  
5. These days, I think people in my life wish they could be rid of me.  

Not true at all for me	Somewhat true for me	Very true for me
1	2 3 4	5 6 7

6. These days, I think I make things worse for people in my life.  
 Not true at all for me                      Somewhat true for me                      Very true for me  
 1                      2 3                      4                      5 6                      7
7. These days, other people care about me.  
 Not true at all for me                      Somewhat true for me                      Very true for me  
 1                      2 3                      4                      5 6                      7
8. These days, I feel like I belong.  
 Not true at all for me                      Somewhat true for me                      Very true for me  
 1                      2 3                      4                      5 6                      7
9. These days, I rarely interact with people who care about me.  
 Not true at all for me                      Somewhat true for me                      Very true for me  
 1                      2 3                      4                      5 6                      7
10. These days, I am fortunate to have many caring and supportive friends. Not true at all for me                      Somewhat true for me                      Very true for me  
 1                      2 3                      4                      5 6                      7
11. These days, I feel disconnected from other people.  
 Not true at all for me                      Somewhat true for me                      Very true for me  
 1                      2 3                      4                      5 6                      7
12. These days, I often feel like an outsider in social gatherings.  
 Not true at all for me                      Somewhat true for me                      Very true for me  
 1                      2 3                      4                      5 6                      7
13. These days, I feel that there are people I can turn to in times of need.  
 Not true at all for me                      Somewhat true for me                      Very true for me  
 1                      2 3                      4                      5 6                      7
14. These days, I am close to other people.  
 Not true at all for me                      Somewhat true for me                      Very true for me  
 1                      2 3                      4                      5 6                      7
15. These days, I have at least one satisfying interaction every day.  
 Not true at all for me                      Somewhat true for me                      Very true for me  
 1                      2 3                      4                      5 6                      7

*Listed below are a number of statements concerning beliefs and thoughts about the future. Read each item and decide whether each statement is true or false for YOU.*

1. Things just won't work out the way I want them to.  
True  
False

2. I never get what I want so it's foolish to want anything.  
True  
False

3. I just don't get the breaks, and there's no reason to believe I will in the future.  
True  
False

4. It is very unlikely that I will get any real satisfaction in the future.  
True  
False

5. I don't expect to get what I really want.  
True  
False

6. My future seems dark to me.  
True  
False

7. The future seems vague and uncertain to me.  
True  
False

8. I can't imagine what my life would be like in ten years.  
True  
False

9. I look forward to the future with hope and enthusiasm.  
True  
False

10. I have great faith in the future.  
True  
False



11. When I look ahead to the future, I expect to be happier than I am now.  
True  
False
12. In the future, I expect to succeed in what concerns me most.  
True  
False
13. I can look forward to more good times than bad times.  
True  
False
14. When things are going badly, I am helped by knowing they can't stay that way forever.  
True  
False
15. I expect to get more of the good things in life than the average person.  
True  
False
16. All I can see ahead of me is unpleasantness rather than pleasantness.  
True  
False
17. There's no use in really trying to get something I want because I probably won't get it.  
True  
False
18. I might as well give up because I can't make things better by myself.  
True  
False
19. My past experiences have prepared me well for the future.  
True  
False
20. I have enough time to accomplish the things I most want to do.  
True  
False

*Listed below are a number of statements concerning different feelings. Read each item and indicate how often you experience each feeling.*

**How often do you feel...?**

(a) Fearful or anxious

(1) never (2) seldom (3) sometimes (4) often (5) always

(b) Lonely and isolated

(1) never (2) seldom (3) sometimes (4) often (5) always

(c) Useless

(1) never (2) seldom (3) sometimes (4) often (5) always

(d) Happy

(1) never (2) seldom (3) sometimes (4) often (5) always

*Thank you for completing this study!*

Please enter your email if you would like to participate in the random drawing for one of ten \$10 Amazon gift-cards.

Enter email \_\_\_\_\_

The FSU Counseling Center is located on the 2nd floor of the Askew Student Life Center. Call (850) 644-2003 to schedule an initial appointment. While not a complete list, some of the more common reasons students seek our services include adjustment issues, relationship concerns, problems with anxiety, depression or trauma, and even more severe mental health issues. We are also available for consultation on how to best help a friend or acquaintance who might be having a problem. The University Counseling Center also provides crisis walk-in services Monday to Friday, 8am-5pm. For more information about our services, visit our website at <http://counseling.fsu.edu/>. You can also call 800-273-TALK any time for telephone crisis counseling.

## **APPENDIX B**

### **IRB APPROVAL**

The Florida State University  
Office of the Vice President For Research  
Human Subjects Committee  
Tallahassee, Florida 32306-2742  
(850) 644-8673, FAX (850) 644-4392

#### **APPROVAL MEMORANDUM**

Date: 3/7/2017

To: Julia Morpeth

Address:

Dept.: EDUCATIONAL PSYCHOLOGY AND LEARNING SYSTEMS

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research

Perfectionism and Interpersonal Theory of Suicide: Thwarted Belongingness and Perceived Burdensomeness as Mediators of Multidimensional Perfectionism and Suicide Ideation

The application that you submitted to this office in regard to the use of human subjects in the research proposal referenced above has been reviewed by the Human Subjects Committee at its meeting on 01/11/2017. Your project was approved by the Committee.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 1/10/2018 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by

the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is FWA00000168/IRB number IRB00000446.

Cc: Martin Swanbrow Becker, Advisor  
HSC No. 2016.20000

## APPENDIX C

### INFORMED CONSENT

#### FSU Behavioral Consent Form

#### **Thwarted Belongingness and Perceived Burdensomeness as Mediators of Multidimensional Perfectionism and Suicide Ideation in University Students**

You are invited to be in a research study of suicide ideation, perfectionism, and belongingness. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by Erin Morpeth, a graduate student in the Mental Health Counseling program, Department of Educational Psychology and Learning Systems, College of Education.

#### **Background Information:**

The purpose of this study is: to assess if there is a relationship among thoughts of suicide, traits of perfectionism (i.e. striving for flawlessness, excessively high performance standards, overly critical self-evaluations), and thwarted belongingness (belief that one's need to belong is met or unmet) and perceived burdensomeness.

#### **Procedures:**

If you agree to be in this study, we would ask you to do the following things: Complete several online surveys regarding past and current suicidal thoughts and descriptions of yourself. This should take between 10 and 15 minutes.

#### **Risks and benefits of being in the Study:**

Risks to participants are considered minimal. However, the survey may ask you to recall events that you are uncomfortable thinking about. For example, the survey includes questions about difficult topics such as suicidal thoughts. If you become upset while filling out the questionnaires, you may wish to take a break from the survey and you may discontinue your participation at any time. You can also call the FSU Counseling Center at (850) 644-8255 to discuss any distressing or uncomfortable feelings or visit <http://counseling.fsu.edu/> for more information about the University Counseling Center.

There are no direct benefits to you for participating in this study. However, your participation may help in the future of identifying suicide risk factors in college students.

#### **Compensation:**

You may choose to provide an email address to be entered into a random drawing for one of ten \$10 Amazon gift-cards. Your email will not be associated with your responses to this survey and we will delete your email once the drawing is complete.

### **Confidentiality:**

The records of this study will be kept private and confidential to the extent permitted by law. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject. However, research information that identifies you may be shared with the FSU Institutional Review Board (IRB) and others who are responsible for ensuring compliance with laws and regulations related to research, including people on behalf of the Office for Human Research Protections (OHRP). Information that makes the identification of a subject possible will not be included in any type of report that may be published based on this study. Research records will be stored securely and only researchers will have access to the records. We will ask for your first and last name and phone number in the event that your responses warrant the need for a trained mental health professional to contact you by phone to conduct a risk assessment and connect you to the appropriate resources. This contact will only occur should you indicate on the survey that you are currently experiencing thoughts of suicide. If you indicate that you are having thoughts of suicide and either do not respond to our phone call to check in with you or we determine that you are at serious and / or imminent risk for suicide or self-harm we will share your name and contact information with campus staff/campus police in order for them to conduct a safety check with you. Once our contact with you is completed or it is determined that no risk assessment is needed, your name and phone number will be immediately deleted from all of our records and not linked to your responses. Should you choose to provide your email address to be entered into the drawing for a \$10 Amazon gift card, we will store your email address separately from your responses on a secured computer and we will delete all email addresses once winners are notified.

### **Voluntary Nature of the Study:**

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

### **Contacts and Questions:**

The researchers conducting this study are Erin Morpeth and Dr. Martin Swanbrow Becker. If you have a question later, you are encouraged to contact them at \_\_\_\_\_.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher(s), you are encouraged to contact the FSU IRB at 2010 Levy Street, Research Building B, Suite 276, Tallahassee, FL 32306-2742, or 850-644-8633, or by email at [humansubjects@fsu.edu](mailto:humansubjects@fsu.edu)

**Statement of Consent:**

I have read the above information. I have asked questions and have received answers. I consent to participate in the study (please click the appropriate box).

I agree

I do not agree

## REFERENCES

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## **BIOGRAPHICAL SKETCH**

Erin Morpeth earned her Bachelor of Science degree at Florida State University in Psychology and Religion in April of 2016, graduating Summa Cum Laude. She will earn her Master of Science and Education Specialist degrees in Mental Health Counseling from Florida State University in May of 2018. Erin completed her practicum experience at Tallahassee Memorial Hospital Behavioral Health and internship at FSU's University Counseling Center. She was a research team member in Dr. Martin Swanbrow Becker's suicide prevention lab in the FSU College of Education, contributing to research focusing on suicide gatekeeper training with resident assistants. The team was selected for presentations at the American Association of Suicidology national annual conference and the American Psychological Association national annual conference. Erin will continue pursuing research in suicidality and clinical training in university counseling centers as she earns a doctorate in Counseling Psychology at the University of Texas in Austin, beginning in August 2018.