

Copyright
by
Ashley Ellen Boynton
2017

The Dissertation Committee for Ashley Ellen Boynton Certifies that this is the approved version of the following dissertation:

**The Influence of Meaning in Life on the Relationship between
Perfectionism and Suicidality:
Implications for Interventions on College Campuses**

Committee:

David Drum, Supervisor

Chris Brownson

Germine Awad

Christopher McCarthy

Cassandre Alvarado

**The Influence of Meaning in Life on the Relationship between
Perfectionism and Suicidality:
Implications for Interventions on College Campuses**

by

Ashley Ellen Boynton

Dissertation

Presented to the Faculty of the Graduate School of
The University of Texas at Austin
in Partial Fulfillment
of the Requirements
for the Degree of

Doctor of Philosophy

The University of Texas at Austin

August 2017

Dedication

This dissertation is dedicated to my mother, Mary Lynn Boynton. Thank you for giving me a life that is full of meaning, and for always encouraging me to strive for my best.

Acknowledgements

This dissertation would not have been possible without the help and contributions of several important people. First, I would like to thank my adviser, Dr. David Drum, for the constant faith he has had in me, and for the many mind-expanding conversations we have had about my research. I consider myself very lucky to have an adviser, in research and in life, who is both kind and wise. Thank you also to Dr. Chris Brownson, who has provided me with guidance and support in innumerable ways. From acting as a mentor to me throughout my time spent pursuing my degree, to troubleshooting minor difficulties related to my research, he has always made time for me no matter how busy his schedule. I am incredibly thankful for his advice, guidance, and reassuring presence throughout this process. I would also like to thank Dr. Germaine Awad for her guidance and support, and for her patience as I struggled with my statistical analyses. I am thankful to Dr. Chris McCarthy for his willingness to consult and support me through this research. I also would like to extend my sincere gratitude and thanks to Dr. Cassandre Alvarado, for her enthusiasm, support, and willingness to help.

I am very fortunate to be a part of an incredible team of researchers who have been an invaluable source of support to me throughout my degree. Thank you to Marty, Elaine, and Adryon for acting as mentors to me as I began my research. Thank you also to my fellow team members Andrea, Elizabeth, Ben, Stuart, Erika, Sarah, Mike, and Chris. I am particularly grateful to Chris Runyon for his contributions. His edits and advice have been essential to the completion of this document. Thank you also to my friends who have supported me throughout this process. Carey, Kathy, Lindsey and Annie, I'm especially grateful to you for keeping me going and keeping me sane.

I would also like to acknowledge my father, the original Dr. Boynton, who worked to imbue in me the notion that I can accomplish anything I set my mind to, and my sister Abby, whose boldness and heart inspire me constantly. I am thankful towards the rest of my family as well, for their support and belief in me. And thank you to Lee. I wouldn't be where I am without you. Or maybe I would be, but I would be a whole lot less happy.

My research has been informed by my work with college students, in both clinical and non-clinical contexts, and I am incredibly grateful to the mentors and supervisors I have had who have encouraged me throughout my process. I would like to particularly thank my former supervisor Dr. George Hill, who taught me how to have fun with this work. I would also like to thank the staff of the Counseling and Mental Health Center at the University of Texas at Austin and the Colorado State University Health Network. The staff at both centers provided me with a wonderful workplace to grow and learn about college student mental health, and I treasure the relationships I have formed at these centers. Thank you also to all the students with whom I have had the pleasure to work, particularly the students of the Inspire Women's Leadership Program and the Bronx Academy of Letters. To the countless other friends, family, mentors, and students whose name I have not mentioned: Thank you for the collaboration, the commiseration, and the love.

**The Influence of Meaning in Life on the Relationship between
Perfectionism and Suicidality:
Implications for Interventions on College Campuses**

Ashley Ellen Boynton, Ph.D.

The University of Texas at Austin, 2017

Supervisor: David J. Drum

Recently, researchers and college stakeholders have called for suicide prevention initiatives that move beyond intervention at the individual level and address the mental health of the college student population as a whole. In an effort to inform those interventions, it is of value to identify risk and protective factors that may influence a student's likelihood to develop distressed and suicidal thoughts. Perfectionistic concerns (i.e., a perceived discrepancy between self and standards) have been identified as putting students at risk for distressed and suicidal thoughts. Studies of the relationship between perfectionistic standards (i.e., striving to meet high standards) and mental health outcomes have yielded mixed results. Presence of meaning in life has been identified as a factor that is protective against distressed and suicidal thoughts, whereas the search for meaning is often linked to negative mental health outcomes. Using archival data from a national survey collected in 2016 by the National Research Consortium of Counseling Centers in Higher Education, the current study sought to further investigate these risk and protective factors by determining whether either dimension of meaning in life might influence the relationship between perfectionism (in both its adaptive and maladaptive forms) and the continuum of distress and suicidality.

Hierarchical multiple regression was used to investigate the aforementioned relationships. Results indicated that neither having a sense of meaning, nor searching for meaning, played a significant role in influencing the associations between perfectionism and the distress and suicidality continuum. Results identified both perfectionistic concerns and searching for meaning as potential variables that place students at risk for progressing along the continuum of distress and suicidality, whereas the presence of meaning in life was identified as a factor that may protect against a student's progression along that continuum. Results did not support a relationship between perfectionistic standards and the distress and suicidality continuum. Implications of these findings are discussed in the context of population-based programming that could be introduced on college campuses to reduce the likelihood that a student would enter onto, and progress along, the continuum of distressed and suicidal thoughts.

Table of Contents

List of Tables	xii
List of Figures	xiv
Chapter One: Introduction	1
Chapter Two: Literature Review	6
Current Challenges Faced by Institutions of Higher Education	6
College Student Suicidality.....	8
The Need for College Suicide Prevention Efforts	9
The Distress and Suicidality Continuum	11
The Escape Theory of Suicide	13
Perfectionism	16
Early Definitions and Understandings of Perfectionism	16
Measurement of Perfectionism	17
Perfectionistic Striving and Mental Health Correlates	20
Perfectionistic Concerns and Mental Health Correlates	21
Perfectionistic Concerns and Suicidality	22
Meaning in Life.....	24
Presence of Meaning in Life and Mental Health Outcomes	26
Search for Meaning in Life and Mental Health Outcomes.....	27
Meaning in Life and College Students.....	28
Interventions to Enhance Meaning in Life.....	29
Meaning in Life as a Moderator Variable.....	31
Purpose of the Proposed Study	32
Research Questions	33
Chapter Three: Methodology.....	39
Participants.....	39
Procedures.....	43
Measures	45

Full Survey.....	45
Demographic Information.....	45
Distress and Suicidality Continuum.....	46
Short Almost Perfect Scale.....	47
Meaning in Life Questionnaire.....	48
Chapter Four: Results.....	50
Data Screening and Missing Data.....	50
Descriptive Statistics.....	53
Demographic Variables.....	54
Correlational Analyses.....	56
Primary Analyses.....	57
Hypothesis 1a.....	57
Hypothesis 1b.....	59
Hypothesis 2a.....	60
Hypothesis 2b.....	62
Hypothesis 2c.....	64
Hypothesis 2d.....	66
Chapter Five: Discussion.....	69
Discussion of Demographic Predictors.....	70
Correlations Between Predictor and Moderator Variables.....	71
Perfectionism and Suicidality.....	72
Meaning in Life and Suicidality.....	74
Moderation Analyses.....	76
Implications for Interventions on College Campuses.....	79
Strengths, Limitations, and Future Directions.....	86
Appendices.....	93
Appendix A: The Distress and Suicidality Continuum.....	93
Appendix B: The Short Almost Perfect Scale.....	94
Appendix C: The Meaning in Life Questionnaire.....	95

Appendix D: Full Survey Codebook.....	96
References.....	115

List of Tables

Table 1: Student Classification of Survey Participants.....	40
Table 2: Full Survey and Study Sample Demographics	41
Table 3: Frequencies of age and age range in study sample.....	43
Table 4: Percentage of Missing Data per Variable	50
Table 5: Descriptive Statistics for Continuous Study Variables.....	54
Table 6: Initial Regression Analyses of Demographic Variables on Distress and Suicidality Continuum Scores.....	55
Table 7: F-Statistics and Means of Demographic Variables of Interest	55
Table 8: Mean Distress and Suicidality Continuum Scores Across Religion.....	56
Table 9: Bivariate Correlations for All Study Variables	57
Table 10: Hierarchical Multiple Regression Analyses Predicting Distress and Suicidality Continuum Scores from Demographic Variables and Perfectionistic Striving.....	58
Table 11: Hierarchical Multiple Regression Analyses Predicting Distress and Suicidality Continuum Scores From Demographic Variables and Perfectionistic Concerns.	59
Table 12: Hierarchical Multiple Regression Analyses Predicting Distress and Suicidality Continuum Scores From Demographic Variables, Perfectionistic Striving, Presence of Meaning, and a Presence of MeaningXPerfectionistic Striving Interaction Term.	61

Table 13: Hierarchical Multiple Regression Analyses Predicting Distress and Suicidality Continuum Scores From Demographic Variables, Perfectionistic Striving, Search for Meaning, and a Search for MeaningXPerfectionistic Striving Interaction Term.	63
Table 14: Hierarchical Multiple Regression Analyses Predicting Distress and Suicidality Continuum Scores From Demographic Variables, Perfectionistic Concerns, Presence of Meaning, and a Presence of MeaningXPerfectionistic Concerns Interaction Term.	65
Table 15: Hierarchical Multiple Regression Analyses Predicting Distress and Suicidality Continuum Scores From Demographic Variables, Perfectionistic Concerns, Search for Meaning, and a Search for MeaningXPerfectionistic Concerns Interaction Term.	67

List of Figures

Figure 1: Frequencies of SAPS Standards Subscale Scores	51
Figure 2: Frequencies of Maximal Distress and Suicidality Continuum Responses	52

Chapter One: Introduction

The proposed study seeks to examine the relationship between perfectionism and suicide and hypothesizes that meaning in life may exert influence on that relationship. Colleges and universities are charged with promoting positive mental health among their students (Lamis & Lester, 2011), while also pushing their students to challenge preconceived notions, move towards adulthood, and leave college prepared to lead fulfilling professional lives (Johnasson & Felten, 2014). This places colleges in a difficult position when balancing the desire to protect the well-being of their students with the need to create the challenging conditions required to foster growth and change. Recent media attention has been given to the perfectionistic attitudes of college students (Deresiewicz, 2013) and to the role that cultural demands for “effortless perfection” as well as intense academic demands on college campuses may play in augmenting the relationship between perfectionism and suicidal thoughts and behaviors (Scelfo, 2015). In an effort to decrease the number of students who die by suicide, recent attention in research and campus policy has been given to suicide prevention efforts that can help to reduce the rates of suicide on college campuses (Drum et al., 2009; Drum & Denmark, 2011). Perfectionism has been implicated as a target that is not only tied to general mental-well being on college campuses, but in its more maladaptive form is a strong predictor of distress and suicidality (Flett, Hewitt, & Heisel, 2014), thus making it an important variable for college administrators to consider.

In addition to working to reduce maladaptive perfectionism and college student suicide on campuses, colleges and universities are also responding to pressure to assert the relevance of the on-campus experience in a time when online learning opportunities are becoming more readily available. This has prompted some researchers to emphasize the transformative power of the college experience, claiming that while on campus, many

students engage in the meaning-making process, challenge their preconceived notions, and develop of a sense purpose in their pursuits (Johansson & Felten, 2014; Delbanco, 2012). This suggests that meaning in life may be one element of the on-campus college experience that college administrators seek to highlight and foster in their students. Meaning in life has also been shown to be protective in a wide range of contexts (Heintzleman & King, 2014), and has consistently been shown to have a negative relationship with distress and suicidality (Kleiman & Beaver, 2013, Wilchek-Aviad, 2015). The current study aims to better understand meaning in life as a key variable that college campuses can strive to enhance, in order to assist college campuses in meeting the challenges they face and reducing unhealthy perfectionism and the risk of suicide among college students.

Currently, college student suicide prevention efforts have largely been focused on identifying individuals with acute levels of suicidal thoughts and providing them with crisis intervention (Mitchell, Kader, Hagerty, & Keating, 2013). As a result, less attention has been given, in research and interventions alike, to individuals who may be predisposed to suicidal thoughts but are experiencing distress and suicidal thoughts to a lesser degree than their more acutely suicidal counterparts. Drum and his colleagues (2009) advocate for conceptualizing distressed and suicidal thoughts on a continuum, thus identifying earlier points for intervention at both the population level and the individual level.

Baumeister's (1990) escape theory of suicide presents an ideal framework through which to study the continuum of distressed and suicidal thoughts. Baumeister proposes a six-stage model of suicide, in which an individual's progression through the six stages is hypothesized to culminate in a suicide attempt. Baumeister conceptualizes suicidal thoughts and behaviors as attempts to escape one's painful self-experience. The first

stage of escape theory is an experience in which outcomes or circumstances far fall below an individual's standards, which is followed by negative attributions to the self, and heightened negative self-awareness. Dean and Range (1996; 1999) have used measures of unhealthy perfectionistic attitudes as a proxy measure that would indicate that an individual has progressed through these first three stages of escape theory, suggesting that perfectionism may a key variable to study in the context of this theory.

Escape theory (Baumeister, 1990) also provides a framework through which to better understand the role of meaning in life in protecting against distress and suicidality. Further stages of escape theory include pervasive negative affect and cognitive deconstruction, in which an individual begins to withdraw from the world around him/her by numbing and distancing. According to Baumeister, the optimal resolution for this experience is for an individual to “cope by constructing and elaborating new, integrative meanings for the relevant circumstances in his or her life” (p.92), indicating that meaning in life may serve as a key protective variable in the relationship between perfectionism and suicidality. Baumeister also describes rejection of meaning as one of the consequences of cognitive deconstruction, suggesting that when presence of meaning is low, an individual may be at heightened risk for suicidal thoughts and behaviors.

Perfectionism is a multi-dimensional trait that is comprised of adaptive and maladaptive elements. Researchers (e.g., Stoeber & Otto, 2006) have identified two overarching dimensions of perfectionism: perfectionistic striving and perfectionistic concerns. Perfectionistic concerns, or the sense that one's best is never good enough, have consistently yielded strong associations with several negative mental health outcomes such as hopelessness (Flett, Hewitt, & Heisel, 2014), perceived burdensomeness (Rasmussen, Slush, Wingate, Davidson, & Grant, 2012), and psychache (Flamenbaum & Holden, 2007). Perfectionistic striving, or the drive to hold oneself to

high standards and strive for goals, has yielded mixed results as a predictor of positive outcomes. In some studies, perfectionistic striving has been linked to greater academic success (Cox, Enns, & Clara, 2002), positive emotional outcomes such as secure attachment and conscientiousness (Rice, Lopez, & Vergara, 2005; Parker & Stumpf, 1995), and lower levels of suicidal ideation (Chang, 2006). In other studies, associations with positive outcomes have been weak or nonexistent, or associations with negative mental health outcomes have been observed (Cox et al., 2002; Enns, Cox, Sareen, & Freeman, 2001; Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Bieling, Israeli, Smith, & Anthony, 2003). Connections between perfectionistic concerns and suicidal thoughts and behaviors are well-established (O'Connor, 2007; Johnson, Wood, Gooding, Taylor & Terrier, 2011), whereas the relationship between perfectionistic striving and suicidality is not widely studied.

Researchers have called for the further examination of positive psychology factors, including meaning in life, as potential mediators and moderators of the relationship between perfectionism and suicide (Flett, Hewitt, & Heisel, 2014). College students are at a developmental age where they are establishing a sense of enduring identity (Arnett, 2000) and experiencing significant changes in their life circumstances, including freedom from pre-existing roles and expectations that may come from being away from home, thus making college students an ideal population in which to study meaning in life. Meaning in life has been found in several studies to be a predictor of a number of positive outcomes, including positive physical health (Steger et al., 2009), adaptive coping strategies (Thompson et al., 2003), and lower incidence of psychopathology (Owens et al., 2009). Along these lines, several researchers have identified meaning in life as a protective factor that works against the development of suicidal thoughts (e.g., Wilchek-Aviad, 2015; Kleiman & Beaver, 2013; Heisel & Flett,

2004; Flett & Heisel, 2008). Meaning in life can also be an important element of recovery for suicide attempt survivors as they struggle to make sense of their experience and find a renewed sense of purpose (Dransart, 2013).

While the presence of meaning in life has consistently been linked to positive mental health outcomes, the search for meaning in life seems to have a more complex relationship with mental health. In many cases, search for meaning as measured by the Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2005) has been identified as a variable that predicts negative mental health outcomes (Steger & Kashdan, 2007; Steger, Kashdan, Sullivan, & Lorentz, 2008). Other studies have shown that the search for meaning in life may be an uncomfortable but necessary antecedent to developing a sense of meaning in life, and that the negative impact of the search for meaning decreases as higher levels of presence of meaning are present (Steger, Oishi, & Kesebir, 2011). In a study of students on several college campuses, it was found that campuses that supported meaning searching provided an environment that was protective against the negative impact of searching for meaning and predictive of a higher sense of meaning in life among the student body (Shin & Steger, 2016).

The current study aims to gain further understanding of how perfectionistic striving and perfectionistic concerns differentially predict college student distress and suicidality. Additionally, the current study examines meaning in life as a potential protective factor which could influence the relationship between perfectionistic striving and distress and suicidality. By gaining an understanding of the protective nature of meaning in life, this study can equip colleges and universities with data to inform population-focused interventions that might help prevent individuals from progressing along the continuum of distress and suicidality.

Chapter Two: Literature Review

CURRENT CHALLENGES FACED BY INSTITUTIONS OF HIGHER EDUCATION

In his book, *College: What it is, was, and should be*, Delbanco (2012) argues that an essential element of the current college experience is its power to transform students, challenge their beliefs, and ultimately instill students with a sense of purpose, meaning, and conviction. Johansson and Felten (2014) examined the experience of transformation through a series of interviews of college students, and determined that transformation takes place in the process of four steps. According to Johansson and Felten, a student first must have a previous way of seeing the world disrupted, followed by a reflective analysis of his/her underlying assumptions, then a process of verifying and acting on these new understandings, and, if they fit for the student, integrating these new ways of being into everyday life. This transformative power of the on-campus learning experience is often used as a counter-argument to those who would say that college education is likely to shift to a primarily online medium (e.g., Carey, 2015).

As colleges and universities are recognizing that the transformative power of college is what makes the on-campus learning experience unique, authors such as former Yale professor Bill Deresiewicz (2013) are arguing that for many students, the experience of attending college has become less transformative, and more focused on conforming to a prescribed set of expectations. According to Deresiewicz, college students are foreclosing on their curiosity and choosing to pursue careers that have high earning potential with little thought to careers that might instill a sense of meaning in life, thus engaging in a process of box-checking and performing that stifles creativity, fosters poor mental health, and produces members of society that are very good at following rules but not very good at creative thought. According to Lythcott-Haims (2015), this process

begins before students set foot on a college campus, with anxiety about presenting as the “ideal” college applicant driving parents and students from a very young age.

Deresiewicz focuses specifically on elite colleges and universities. Along a similar vein, Scelfo (2015) published a New York Times article which highlighted the external demands and pressures students can face at elite universities, which act in concordance with the pressure students feel to appear as though they are effortlessly succeeding, despite increased pressures and at times impossible-to-meet demands. She gives the evocative example of Stanford Duck Syndrome: students at Stanford relate to the image of a duck gliding placidly along the surface of a lake, while its legs frantically churn the water underneath. Scelfo links students’ perfectionism to risk for suicidal thoughts and behaviors. She gives examples of high achieving college students who by all external accounts appear to be doing quite well, whose suicides or disclosure of suicidal ideation came as a complete shock to many who knew them. Much of the media attention that has been given to the detrimental effects of perfectionism in college students has focused on elite colleges and universities, however, anecdotal evidence from many college faculty, staff, and students suggest that this phenomenon occurs across a broad range of college contexts.

When issues impacting college student well-being are brought to the attention of the media, college administrators may feel compelled to work to address these issues on their campus. Navigating the desire to transform students and the desire to keep students from unhealthy perfectionistic attitudes can create a challenge for college administrators. Colleges are expected to create meaningful change in students’ perceptions of themselves and the world around them, and at the same time are expected to keep students from experiencing too much distress, and thus must work to identify variables that will help students grow and change but keep them from negative outcomes like depression,

suicidal thoughts, and anxiety. The following literature review examines perfectionism and college student suicide in more detail, and identifies meaning in life as a potential protective factor that colleges and universities can strive to enhance in their students in an effort to meet the aforementioned challenges.

COLLEGE STUDENT SUICIDALITY

Suicide is the second leading cause of death among college students, and is the primary cause of death in college women (Anderson & Smith, 2003). Multi-site descriptive studies have revealed an estimated rate of college student suicide of 6.5 per 100,000 (Schwartz, 2006). These statistics on college student suicide completion do not reflect the wide range of suicidal thoughts and experience with which an individual might struggle, including serious suicidal ideations and behaviors (Joiner, Conwell, Fitzpatrick, Witte, Schmidt, Berlim et al., 2005). Over half of all undergraduate and graduate students report having suicidal thoughts at some point in their life (Drum et al., 2009), and previous suicidal thoughts and behaviors can often serve as a precursor to, and predictor of, future suicide attempts (Joiner et al., 2005).

Suicidality, which refers to the broad range of experiences a student can have involving suicidal wishes, thoughts, plans, or behaviors, is surprisingly common among college students. The American College Health Association's National College Health Assessment (ACHA-NCHA; 2014) indicates that 5.2% of college students have seriously considered suicide within the past twelve months, with 0.9% reporting at least one suicide attempt during this time. Other studies have indicated a much higher rate, with one study finding that 43.7% of students reported suicidal ideation and 5.4% reported a suicide attempt in the past year (Rudd, 1989). Drum et al. (2009) found that over half of college undergraduate and graduate students reported experiencing some form suicidal thoughts throughout their lifetime, indicating that suicidal ideation is an experience that is

common to many college students. The majority of students surveyed indicated they experienced suicidal ideation as brief and intense, and often experienced suicidal ideation in recurrent episodes (Drum et al., 2009).

The Need for College Suicide Prevention Efforts

Generally, college administrators and stakeholders feel as though it is a college's responsibility to shape their students into healthy and productive adults, adopting a stance of *in loco parentis*, continuing to raise students once they leave their homes to attend college (Lamis & Lester, 2011). Because of this, colleges have to reckon with the double-edged sword of having the power to transform their students for the better, but being held responsible for negative mental health outcomes. This responsibility is further reinforced by litigation in which it has been ruled that colleges have a responsibility to protect a student if the institution has knowledge of that student's suicidality (Lake & Tribbensee, 2002). In the case of *Shin v. MIT* (2005), the parents of Elizabeth Shin, a student who completed suicide on the MIT campus in 2000, brought a 27.65 million dollar wrongful death against MIT, which was settled out of court for an undisclosed amount (Capriccioso, 2006).

Efforts of colleges and universities to address this responsibility have in some cases resulted in an institution implementing forced leave policies, in which students who endorse suicidal thoughts or behaviors are required to take a leave of absence. These policies do not, however, protect colleges from litigation. In the case of *Nott v. George Washington University* (2006), a student sued the university for threatening expulsion unless he voluntarily withdrew after he hospitalized himself for depression. These policies also run the risk of violating the Americans with Disabilities Act (1990), which protects individuals with emotional disabilities from discrimination. In addition (and perhaps more importantly), such policies discourage help-seeking behaviors (Rawe &

Kingsbury, 2006) and promote a culture of silence and institutional mistrust on campuses, thus placing students further at risk of acting on their suicidal thoughts.

This presents a difficult dilemma to colleges and universities, with institutions facing litigation when they neglect to intervene, as well as when they do take certain measures to address a student's suicidality. Fortunately, another solution presents itself in the form of population-focused and preventive interventions, which aim to address the problem of college student suicide by increasing the mental health of an entire college student population. According to Silverman and Felner (1995), there is not one single population-focused solution to the problem of suicidality. Interventions must acknowledge that high-risk behaviors are interrelated, and effective prevention of suicidality is dependent upon the integration of several services and programs on a college campus. Drum et al. (2009) recommend that effective population interventions should focus on change at the institutional level, rather than the individual level, should be implemented continuously, and should target the entire college student population.

Researchers and policy-makers alike are coming to understand suicide as a complex public health issue that requires multifaceted prevention efforts (Anderson & Jenkins, 2005; Mann, Apter, & Berlote, 2005). The World Health Organization has identified suicide as a key phenomenon for study within the realm of worldwide public health (Taylor, Kingdon, & Jenkins, 1997). Colleges and universities have continued to shift their focus towards prevention, with their goals being supported by the passing of the Garret Lee Smith Memorial Act in 2004, which as of 2010 had provided 74 college campuses with suicide prevention grants. However, because there is no single cause that can be implicated in the development of suicidal thoughts (Silverman & Felner, 1995; Drum & Burton Denmark, 2011), this creates a challenge to those who strive to create targets for public health intervention.

Historically, suicide prevention efforts on college campuses have focused on the very acute end of the suicidal spectrum, providing individual intervention to suicidal students only just before, or immediately following, a planned suicide attempt (Haas, Hendin, & Mann, 2003). However, suicidal crises do not always occur in the relative safety of a therapist's office. Periods of suicidal ideation are often brief and intense, with more than half of all suicidal crises lasting less than a day, and recurring intermittently throughout the year (Drum et al., 2009). When the majority of prevention efforts are focused on the acute end of an individual's suicidal crisis, it is possible for that individual to slip through the cracks. Additionally, population-focused prevention efforts on college campuses have been primarily educational in nature, the aims of which have been to inform students of available resources and educate members of the college community on ways to identify warning signs in students (Mitchell, Kader, Hagerty, & Keating, 2013). These are typically consciousness-raising efforts, the goal of which is to educate students to recognize symptoms and refer individuals who may be at risk to counseling services or other appropriate crisis treatment. However, there is also a need to identify positive, protective factors that can be strengthened in a college student population that may help serve individuals who may be at risk of progressing along the distress and suicidality continuum.

The Distress and Suicidality Continuum

Drum et al. (2009) contend that the individual-focused paradigm of suicidal intervention "binds and blinds" college mental health practitioners, in that practitioners normally interact with an individual with suicidal thoughts and behaviors on the very acute end of the spectrum, when hospitalization or other resource-intensive resources may be necessary. This binding of mental health practitioners to acute suicide

intervention has the potential to blind practitioners to the broad spectrum of suicidal thoughts, emotions, and behaviors that can be experienced by a student.

Individuals who begin with low-acuity thoughts of distress or suicidality are likely to progress along the continuum of distressed and suicidal thinking, with prior endorsement of suicidal thoughts or experience with suicide attempts increasing one's risk of eventually completing suicide (Joiner et al., 2005). Gaining an understanding of the distressed and suicidal thoughts a student can experience at the less acute end of the continuum can enable college campuses to implement interventions that help individuals with low levels of distressed thinking return to a sense of well-being. To this end, Drum and his colleagues (2009) proposed a measure of distress and suicidality that allows an individual to endorse a variety of thoughts along a progressive continuum, ranging from "this is all just too much" to "I will kill myself." These items reflect the range of suicidal thinking an individual might experience, and provide a useful lens through which one might identify earlier points of intervention.

By conceptualizing suicidal thoughts as lying on a continuum of distress and suicidality, Drum and his colleagues (2009) provide a useful framework through which one can begin to identify population-focused interventions which decrease the likelihood that a student may progress along the continuum of suicidal thoughts. Many advocate for approaching college student mental health from a public health perspective (Davidson & Locke, 2010; Drum & Denmark, 2011), in which interventions are implemented that improve the mental health of the population as a whole. For interventions such as this, the distress and suicidality continuum (DSC) developed by Drum and his colleagues (2009) is ideal for helping to identify interventions that may help students at the low-acuity end of the continuum (e.g. "this is all just too much") return to a place of well-being and positive mental health.

The Escape Theory of Suicide

Baumeister's (1990) escape theory of suicide provides a theoretical framework that links perfectionistic concerns to the development of suicidal thoughts. According to escape theory, suicidality is the result of a causal chain of events in which suicidal thoughts progress through six stages. The six stages of escape theory are as follows: (1) falling short of standards, (2) negative attributions to the self, (3) heightened self-awareness, (4) negative affect, (5) cognitive deconstruction, and finally (6) negative consequences of cognitive deconstruction such as disinhibition, passivity, lack of emotion, and irrational thought, all of which can ultimately culminate in a suicide attempt (Baumesiter, 1990; Chatard & Selimbegovic, 2011). Escape theory is rooted in the assumption that people attempt suicide because they are motivated to escape from the painful internal experience of the self, not because they desire death (Chatard & Selimbegovic, 2011). If one cannot find an alternative means of escape from the six-stage cycle, a suicide attempt is to be expected (Baumeister, 1990).

Baumeister (1990) describes the first stage of suicidality, falling short of standards, as “a severe experience that current outcomes (or circumstances) fall far below standards [which] is produced either by unrealistically high expectations or by recent problems or setbacks, or by both” (p. 91). The unrealistically high expectations can be self-generated or can be societally or culturally generated (Dean & Range, 1996). Recent, acute disappointments are thought to be more important in their role in causing progression through the six stages than more chronic disappointments, because of the acuity of the emotions involved with that experience. Above all else, the magnitude of the failure to meet standards is thought to be the most important factor in predicting whether someone will eventually become suicidal (Baumeister, 1990).

There is a considerable amount of evidence to suggest that the experience of falling short of standards plays an important role in the development of suicidal thinking. Suicide rates are higher in nations with greater economic development and higher quality of life (Lester, 1986), indicating that high quality of life may produce a higher standard for living against which people compare themselves. Chatard and Selimbegovic (2011) found that participants, when asked to imagine an incident in which they failed to attain an important standard, experienced an increase in suicide-related thought accessibility, as well as an increase in accessibility of thoughts generally related to escape, indicating that an individual's thought process after a failure to attain standards may be a key point of intervention. In addition to high standards and expectations, recent acute stressors and setbacks can play an important role in generating a sense that one has failed to meet an important standard (Baumeister, 1990). Past research has linked suicide attempts to a number of failure-related stressors including a recent substantial deterioration of intimate relationships, health, and circumstances at work (e.g., Bourque, Kraus, & Cosand, 1983). Additionally, a drop in grades, particularly in students who have previously attained above average grades, has been linked to suicidality (Hendin, 1995).

In the stage two of escape theory, the disappointing outcomes from the falling short of standards experience are blamed on the self. A key component to the development of negative self-attributions is the individual's perception that the cause of the failure to meet standards is internal, rather than external. Additionally, the individual is likely to apply these negative self-attributions to future events, and to develop constructs through which he or she interprets the world, at which point attributions will progress beyond the individual event to encompass enduring, stable dispositions (Baumeister, 1990). In the third stage of escape theory, a state of heightened self-awareness ensues, in which the individual becomes acutely aware of him or herself as

incompetent, unworthy, or deserving of blame. In several studies, measures of perfectionism have been used to assess stages one through three of escape theory (e.g., Beevers & Miller, 2004; Dean & Range, 1996).

This state of negative self-awareness then results in a pervasive state of negative affect, which characterizes stage four of escape theory (Baumeister, 1990). Higgins (1987) proposed two states of negative affect that can arise from a failure to meet standards: one is dejection, which results from a falling short of one's ideals, and the other is agitation (e.g., guilt and anxiety), which results from a falling short of societal standards, duties, or obligations. In stage five, the individual then attempts to escape the painful mental state he/she is experiencing through cognitive deconstruction, or numbing/distancing oneself from the painful internal experience. This then results in one of several consequences of cognitive deconstruction (stage six), including a reduction of inhibitions, which serves to reduce barriers to a suicide attempt.

Baumeister (1990) describes one of the consequences of cognitive deconstruction as a rejection of meaning, particularly meaning related to negative self-attributions. He states that "the optimal resolution is for the individual to cope by constructing and elaborating new, integrative meanings for the relevant circumstances in his or her life" (p. 92), however, when this does not occur, several consequences result from the individual's attempts to sustain this state of cognitive deconstruction, including a sense of passivity, flattened affect, and, most importantly to suicide, reduced inhibition. As Baumeister puts it, "deconstruction removes meanings from awareness and thereby reduces actions to mere movements; as a result, the internal objections [to suicide] vanish" (p. 93). Baumeister (1991) has given special attention to the process of developing a sense of meaning from one's life experiences, and the protective effect that sense of meaning can

provide. The protective nature of meaning in life will be further discussed later in this chapter.

PERFECTIONISM

Early Definitions and Understandings of Perfectionism

Perfectionism is a complex construct, in that it can be adaptive or maladaptive, and can at times serve both an adaptive and a maladaptive role in the same individual. Hamachek (1978) was one of the first psychologists to write about perfectionism, and conceptualized two types of perfectionism: normal and neurotic perfectionism. According to Hamachek, normal perfectionists draw “pleasure from the labors of a painstaking effort” and interpret the approval of others as “an additional good feeling on top of their own and use it as encouragement to continue on and even improve their work” (p. 27). Neurotic perfectionists, on the other hand, “never seem good enough, at least in their own eyes,” are “unable to feel satisfaction because in their own eyes they never seem to do things good enough to warrant that feeling” (p.27), and tend to demand a higher level of performance than is possible to obtain.

Individuals who tend towards neurotic perfectionism, according to Weisinger and Lobsenz (1981), feel as though they have failed if they do not meet the unrealistic expectations they set up for themselves. If they do meet their extremely high standards, these individuals rarely feel a sense of joy and pleasure, since in their mind they are simply doing what is expected of them. Burns (1980) distinguishes between individuals who take “genuine pleasure in striving to meet high standards,” which he claims contributes to a sense of depth and accomplishment in life, and individuals who “strain compulsively and unremittingly toward impossible goals and who measure their own worth entirely in terms of productivity and accomplishment,” stating that “for these

people, the drive to excel can only be self-defeating.” He describes a tendency in these individuals toward black and white, all-or-nothing thinking, a deep sense of self-criticism, and a feeling of never being good enough.

Most early perfectionism research focused on the maladaptive side of perfectionism and the negative effects that can result. In 1995, Blatt published an article titled “The Destructiveness of Perfectionism,” in which he discussed the many negative mental health consequences that can result from a perfectionistic attitude, which according to Blatt is characterized by “the need to avoid possible public criticism and the appearance of defect,” stating that “the sense of profound personal failure and the belief that one has failed to meet the high standards and expectations of the people who matter most . . . can create a marked vulnerability to experiences of failure and the sense that one has nowhere to turn” (p. 1008). Blatt (1995) links maladaptive perfectionism to self-critical depression, in which individuals engage in constant and harsh self-scrutiny and evaluation and have a chronic fear of disapproval, criticism, and rejection. He states that this type of depression is linked to high risk for serious and lethal suicide attempts. Self-critical depression is less responsive to short-term therapy, but according to Blatt can be treated with long-term therapy with moderate success.

Measurement of Perfectionism

The evolution of perfectionism scale construction has revealed that perfectionism is a nuanced and multi-dimensional construct, which can have both adaptive and maladaptive elements. Much of the early research on perfectionism was based on the observations of Hamachek (1978), Burns (1980), and Pacht (1984). In early attempts to measure perfectionism, 10 items of the Dysfunctional Attitudes Scale (Weissman & Beck, 1978) were used to assess whether an individual held dysfunctional perfectionistic attitudes. However, researchers recognized a need for measures that would assess

perfectionism as a multi-dimensional construct (Hewitt & Flett, 1991; Frost, Marten, Lahart, & Rosenblate, 1990). In an effort to capture the more nuanced and varied manifestations of perfectionism, two groups of researchers independently developed two different scales, both named the Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991; Frost et al., 1990).

Hewitt and Flett (1991) identified three dimensions of perfectionism, which were measured by their MPS: socially prescribed perfectionism, which is the belief that others hold unrealistic expectations that one must meet in order to gain acceptance, friendship, and respect, self-oriented perfectionism, in which unrealistic and exaggerated expectations are placed on one's self, and other-oriented perfectionism, in which individuals expect others to meet unrealistically high standards. Frost and his colleagues (1990) identified such dimensions as concern over mistakes, perception of high parental expectations, high personal standards, and a preference for order and organization. In a search for commonalities between the two measures, Frost, Heimberg, Holt, Mattia, & Neubauer (1993) found that the total score on their version of the MPS correlated with Hewitt and Flett's (1991) measures of self-oriented and socially-prescribed perfectionism, but not other-oriented perfectionism.

Further analysis of these two measures provided evidence that adaptive and maladaptive aspects of perfectionism were captured in both scales. Frost et al.'s (1993) aforementioned factor analysis of the two scales identified two overarching primary factors, which they labeled maladaptive evaluative concerns and positive achievement striving. In 1992, Slaney and Johnson created the Almost Perfect Scale (APS), but did not publish the measure. Rice, Ashby, and Slaney (1998) conducted a factor analysis of the unpublished APS and Frost et al.'s (1990) MPS, and again found two higher-order factors, which they labeled adaptive and maladaptive perfectionism. Additionally, two

qualitative studies yielded results suggesting that many perfectionists felt ambivalent about their perfectionism, recognizing both the difficulties and the benefits it afforded them (Slaney & Ashby, 1996; Slaney, Chadha, Mobley, & Kennedy (2000). Many perfectionists in these studies attributed their success in some part to their perfectionism, but also reported that their perfectionism brought about a certain degree of distress.

Taking these findings into account, Slaney, Rice, Mobley, Trippi, and Ashby (2001) created the Almost Perfect Scale-Revised, which contained three subscales. The first subscale was labeled high standards, which is associated with the construct of adaptive perfectionistic striving. The second is order, which relates to Frost et al.'s (1991) dimension of preference for order and organization. The third subscale is labeled discrepancy, and encompasses the neurotic/maladaptive aspect of depression by capturing the sense that one's best is never good enough. Similar to previous findings, the high standards and order subscales are commonly associated with the benefits of perfectionism (e.g., self esteem, GPA), while the discrepancy subscale correlates strongly with the negative outcomes associated with perfectionism (e.g., depression, worry; Slaney et al, 2001). The APS was further revised in 2014 (Rice, Richardson, & Tueller) to generate an 8-item short form of the scale, which eliminated the order subscale to yield two subscales: high standards and discrepancy.

Factor analyses conducted in the process of perfectionism scale construction provide strong evidence for a two-factor structure (Rice, Richardson, & Tueller, 2014; Rice, Ashby, & Slaney, 1998), which provides further support for the conceptualization of perfectionism as a construct that has both adaptive and maladaptive elements. Early perfectionism researchers (e.g., Blatt, 1995; Hamachek, 1978) acknowledge that without a sense of striving to achieve goals, life might seem purposeless and dull. Similarly, in nearly every profession one might pursue demands a certain level of attention to detail

and striving for perfection. Some perfectionistic attributes are necessary in order to do good work, and some elements of perfectionism can contribute to a sense of reward and accomplishment. Recognizing this complexity, recent perfectionism research has focused on parsing out the adaptive and maladaptive aspects of perfectionism and identifying the mental health correlates associated with both constructs.

According to Stoeber and Otto (2006), researchers who aim to distinguish between adaptive and maladaptive perfectionism take one of two approaches. The first is a dimensional approach, in which researchers differentiate between two dimensions of perfectionism: perfectionistic striving and perfectionistic concerns. The second is a group-based approach, which divides perfectionistic individuals into groups of “healthy” and “unhealthy” perfectionists. In this group-based approach, perfectionists who score highly on measures of perfectionistic striving but do not score highly on measures of perfectionistic concerns are categorized as “healthy perfectionists,” whereas participants who score highly on both measures of perfectionistic striving and perfectionistic concerns are labeled “unhealthy perfectionists.” The current study will use the dimensional approach, and will examine the mental health outcomes that are connected with both constructs: perfectionistic striving, which is thought to be the more adaptive dimension of perfectionism, and perfectionistic concerns, which captures the more maladaptive elements of perfectionistic attitudes.

Perfectionistic Striving and Mental Health Correlates

Studies that give special attention to perfectionistic striving have found mixed results with respect to the adaptive elements of this construct (Stoeber & Otto, 2006). In studies that have examined perfectionistic striving as a dimension (i.e., they did not exclude those high on perfectionistic concerns from the construct), relationships were found between perfectionistic striving and several positive achievement factors, such as

higher perceived ability, higher exam performance, and plans to study (e.g., Cox, Enns, & Clara, 2002). In some studies, positive affective correlates were observed, including, lower levels of suicidality (Chang, Watkins, & Banks, 2004), lower levels of attachment avoidance and attachment anxiety (Rice, Lopez, & Vergara, 2005), and higher extraversion and conscientiousness scores on the Big 5 Inventory (Parker & Stumpf, 1995). However, other studies have found that perfectionistic striving correlates with neuroticism (Cox et al., 2002; Enns, Cox, Sareen, & Freeman, 2001), higher perceived daily hassles (Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000), and higher levels of negative affect (Bieling, Israeli, Smith, & Anthony, 2003).

Studies that have used a group-based approach, examining individuals who are high in perfectionistic striving and excluding those with perfectionistic concerns from the “healthy perfectionists” category, have found results that are less mixed. In several studies (e.g., Ashby & Bruner, 2005; Gilman et al., 2005; Mobley, Slaney, & Rice, 2005), “healthy perfectionists” (i.e., those participants who scored high on measures of perfectionistic striving and low on measures of perfectionistic concerns) showed higher levels of positive personality traits, greater social adjustment, and more adaptive coping styles than both unhealthy perfectionist and non-perfectionist samples.

Perfectionistic Concerns and Mental Health Correlates

In the case of perfectionistic concerns, years of research have provided strong and consistent evidence of negative mental health associations. Rice, Ashby, and Slaney (2007) found in a study of university students that the APS-R Discrepancy subscale, which is a common measure of perfectionistic concerns, correlated negatively with extraversion, openness to experience, and conscientiousness, and correlated strongly and positively with neuroticism. The Discrepancy subscale predicted these outcomes over and above the predictive power of a measure of self-esteem. In a sample of college

undergraduate women, Ashby, Noble, and Gnilka (2012) found that individuals who reported high levels of perfectionistic concerns had lower satisfaction in life scores and higher stress and depression scores.

In a review of the literature, Flett, Hewitt, and Heisel (2014) found that of 29 studies reviewed that included a measure of perfectionistic concerns and a measure of hopelessness, 27 of those studies found a positive correlation between perfectionistic concerns and hopelessness. This is particularly important because hopelessness has been identified as a strong risk factor for suicide (Brown, Bongar, & Cleary, 2004). Another risk factor for suicide is psychache, or unbearable psychological pain (Shneidman, 1998), which has been shown to predict suicidality over and above other psychological variables like depression and hopelessness. Flamenbaum and Holden (2007) found that perfectionistic concerns were associated with psychache, and that perfectionistic individuals who had unfulfilled needs in areas such as achievement and affiliation were at a greater risk of psychache.

Perfectionistic Concerns and Suicidality

Evidence for the relationship between perfectionistic concerns and suicidality is robust. Johnson, Wood, Gooding, Taylor and Terrier (2011) conducted an analysis of 77 studies of moderators of suicidal risk, and concluded that perfectionism was strongly implicated as an amplifier of other risk factors and their relationship with suicidality. Similarly, O'Connor (2007) identified perfectionistic concerns as a strong predictor of suicide in a systematic review of 27 studies. These findings are corroborated by case studies that highlight the link between perfectionism and suicidality (Hyatt, 2010) as well as psychological autopsies of suicide completers (Kiamanesh, Dyregrov, Haavind, & Dieserud, 2014). Dean and Range (1999) tested the mechanisms proposed by escape theory and found a significant positive relationship between perfectionistic concerns and

suicidal ideation, and also found that perfectionism positively correlated with predictors of suicidality such as hopelessness and depression (Dean & Range, 1999).

Several researchers have examined the interpersonal aspects of the relationship between perfectionism and suicidality. Joiner (2005; Van Orden et al., 2010) developed the interpersonal theory of suicide, which implicates a thwarted sense of belongingness as well as the perception that one is a burden to others in the development of suicidal thoughts. Rasmussen, Slis, Wingate, Davidson, and Grant (2012) examined the relationship of perfectionism to suicide in the context of the interpersonal theory of suicide, and found that perceived burdensomeness mediated the relationship between socially prescribed perfectionism and suicidality. Hewitt, Flett, Sherry, and Caelian (2006) proposed the Perfectionism Social Disconnection Model, which theorizes that perfectionism, particularly the perception that others demand perfection from oneself, can foster a sense of isolation, loneliness, and alienation that augments risk for suicide.

Those with perfectionistic concerns can be prone to self-concealment (DiBartolo, Li, & Frost, 2008; Kawamura & Frost, 2004), which is known to play an important role in the sustaining of suicidal thoughts and behaviors (Friedlander, Nazem, Fiske, Nadorff, & Smith, 2012). Flett, Hewitt, and Heisel (2014) listed four key factors that can lead to enhanced risk for suicide among individuals with perfectionistic concerns. First, they describe the investment perfectionists can hold in maintaining an appearance of perfection, this prompting them to self-conceal any thoughts of distress and suicide (DiBartolo et al., 2008, Kawamura & Frost, 2004, Besser, Flett, & Hewitt, 2010). Second, they state that individuals with perfectionistic concerns can be more predisposed to deliberate, planful suicide attempts, rather than impulsive ones, which can be a predictor of a high degree of lethality (Hewitt & Flett, 1993). Third, they present the idea that individuals with perfectionistic concerns who have attempted suicide in the past may

be more likely to experience shame, particularly if the attempt is known to others. These non-lethal suicide attempts could be viewed as failures, this augmenting the shame the perfectionist may have already felt. Fourth, Flett, Hewitt, and Heisel (2014) connect perfectionistic concerns to the aforementioned relationship of perfectionism to psychache, which is a strong predictor of suicide (Troister & Holden, 2012).

MEANING IN LIFE

Meaning in life is a construct that has long been discussed as a protective factor in the field of psychology. Victor Frankl, in his 1964 work “Man’s Search for Meaning: an Introduction to Logotherapy,” argued that the will to meaning was an innate drive in all humans, and that a lack of a sense of meaning in life was the cause of psychological pain. In more recent years, the field of positive psychology has placed an emphasis on identifying positive traits and psychological strengths, such as meaning in life, that can be bolstered in individuals and populations (Seligman & Csikszentmihalyi, 2000; Strümpfer, 2006).

Strümpfer (2006) put forth a theory of fortigenesis (etymologically “origin of strength”), which is defined by the following assumptions: 1) mental illness and mental health both exist on continua, 2) struggling, exertion, and suffering are inherent to the human condition, 3) sources of strength exist within individuals that enable them to endure, bounce back from, and grow from life’s obstacles, and 4) purely positive experiences that bring joy, provide meaning, and stimulate growth are also part of the human experience. Strümpfer identifies questing for meaning as an essential response to challenge from which individuals move toward growth and positive mental health.

Similarly, Antonovsky’s (1979, 1987) theory of salutogenesis (etymologically “origin of health”) identifies the central role of a sense of meaning in adaptive coping. Antonovsky (1987) describes a person who is high in a sense of meaning as “likely to

show a profound spirit, deeply engaged in the search for understanding and resources” (p.21), and theorizes that a sense of meaning was more adaptive than other elements of coping he identifies, such as the sense that the world is manageable and comprehensible. According to Antonovsky (1987), a sense of manageability and comprehensibility may be lacking in an individual, but as long as a sense of meaning is present, that individual can still experience positive mental health, and even has the potential to thrive.

Meaning in life, much like perfectionism, is a construct that many people intuitively feel they understand, but it has proven difficult to define from a research perspective. Individuals may derive meaning from a number of different sources. This presents a challenge for those attempting to measure meaning in life, since measures of meaning in life are dependent upon the values of the individual defining and measuring the construct, as well as the individual taking the self-report measure that assesses the construct (Steger, 2006). In an attempt to find some commonalities among definitions of meaning in life, Heintzelman and King (2014) conducted a thorough literature review and identified three common themes in most definitions of meaning in life: a meaningful life is one with a sense of purpose, a life that matters or possesses significance, and a life that makes sense to the person living it.

Steger, Frazier, Oishi, and Kaler (2006), creators of the Meaning in Life Questionnaire (MLQ), identify meaning in life as “the sense made of, and significance felt regarding, the nature of one’s being and existence.” Their work to develop the MLQ came as a response to Battista and Almond’s (1973) call for a “relativistic” theory of meaning in life, or one that was not value-laden in such a way that it would place constraints on individual’s definitions and sources of meaning. This was in part a response to criticisms of the Purpose in Life Test (PIL; Crumbaigh & Maholick, 1964), which, according to Steger and his colleagues (2006), placed an overemphasis on

excitement and responsibility and assumed these values were a universal source of meaning for individuals. Steger and his colleagues (2006) also include five items in their measure that assess for the search for meaning, in addition to the presence of meaning, in order to encompass search for meaning as a fundamental human motivation, along the lines of Frankl's theory (1963).

According to Frankl (1963), one of the central drives that motivates an individual is their "will to meaning," or their desire to find a source of meaning in their life. This would suggest that in order to find a sense of meaning in life, every individual must go through some form of searching for that meaning. Developmental psychologists such as Erikson (1968) consider the search for meaning in life to be a universal part of a young adult's development. However, many researchers (e.g., Baumeister, 1991; Steger & Kashdan, 2008) view an individual's searching for meaning as a sign that one's needs have been frustrated, or that one has a sense that they lack a source of meaning in life. Further sections will explore mental health correlates with both dimensions of meaning in life: presence of meaning and search for meaning.

Presence of Meaning in Life and Mental Health Outcomes

Presence of meaning in life has multiple positive associations with coping, health, and well-being. Self-reported presence of meaning in life is correlated with higher quality of life, particularly as an individual's age increases (Krause, 2007). Presence of meaning in life is also related to better self-reported health and decreased mortality (Steger, Mann, Michels, & Cooper, 2009; Krause, 2009), lower incidence of psychological disorders (Owens, Steger, Whitesell, & Herrerra, 2009) and adaptive coping strategies (Thompson, Coker, Krause, & Henry, 2003). With respect to other positive psychology variables, the belief that one lives a meaningful life is associated

with higher life satisfaction (Chamberlain & Zika, 1988), happiness (Debats, van der Lunne, & Wezeman, 1993), and hope (Mascaro & Rosen, 2005).

Several researchers have identified presence of meaning in life as a protective factor against suicidality (Wilchek-Aviad, 2015; Kleiman & Beaver, 2013; Heisel & Flett, 2004; Flett & Heisel, 2008). Kleiman and Beaver (2013) found that presence of meaning in life predicted decreased suicidal ideation over an eight-week time period, as well as a lower likelihood of lifetime suicide attempts. Wilchek-Aviad (2015) observed similar relationships in a study of immigrant youth. Heisel and Flett (2004) found that purpose in life and satisfaction in life both accounted for a significant amount of variance in suicidal ideation of a clinical sample, even when other negative psychological factors (e.g, neuroticism, depression, hopelessness) were taken into account. These findings were replicated in a sample of older adults, with meaning in life negatively predicting suicidal ideation over and above risk factors, as well as other protective factors (Flett & Heisel, 2008). Dransart (2013) conducted a qualitative study that identified presence of meaning in life as a powerful factor in recovery from a previous suicide attempt. For many suicide survivors in this study, meaning making played an important role in helping to make sense of their experiences and in some cases inspired individuals to dedicate themselves to suicide prevention efforts.

Search for Meaning in Life and Mental Health Outcomes

Studies examining the relationship between search for meaning and mental health outcomes have found that in general, searching for meaning appears to put individuals at risk for negative mental health outcomes (Steger & Kashdan, 2007; Steger, Kashdan, Sullivan, & Lorentz, 2008). Steger and Kashdan (2007) theorize that search for meaning may spring out of a sense of discrepancy between the level of meaning in life an individual desires and that which is currently possessed. Steger and Kashdan state that

those searching for meaning may be operating in a state of ambiguity that could generate tension and stress. They state that a perceived absence of life meaning will likely drive people to seek it out, indicating that high levels of search for meaning may indicate a perceived absence of meaning in life. Another study found that individuals who endorsed high levels of searching for meaning tended to feel dissatisfied with their relationships, lack self-acceptance, and feel a lack of control over their environment (Steger et al., 2008). The same study found that individuals who search for meaning are those who are inclined to question the status quo and who are considering new avenues toward fulfillment in their lives. However, individuals who search for meaning were also more likely to have a negative view on the past and present and endorse high levels of helplessness (Steger et al., 2008).

Other studies have found results that suggest a more complex and nuanced relationship between search for meaning and mental health outcomes. Results from one study suggest that for those actively searching for meaning, the positive relationship between meaning in life and life satisfaction was stronger than for those who did not report searching for meaning (Steger, Oishi, & Kesebir, 2011). Additionally, studies have found that the search for meaning is positively associated with mental health and well-being in those individuals who already feel they have a strong presence of meaning in their life (Park, Park, & Peterson, 2010). These results suggest that searching for meaning, particularly when examined in connection to presence of meaning, has the potential to contribute to positive mental health outcomes.

Meaning in Life and College Students

College students are an ideal population in which to examine meaning in life. Emerging adulthood (age 18-25) is a time where many individuals establish a sense of enduring identity (Arnett, 2000). College students in particular, and emerging adults in

general, tend to experience significant changes in life circumstances, including freedom from former roles and expectations, but the process of adapting to the duties of adulthood can also present challenges and frustrations. A student's undergraduate years are ones where many students grapple with a sense of meaning. Research has shown that college students are high in cynicism, nihilism, and lack clear life plans (Damon, 2008), while at the same time they possess a strong sense of expectation and interest in living a fulfilling life, finding meaningful work, and having meaningful experiences (DeBard, 2004).

Similarly, colleges and college students stand to benefit from interventions that enhance a student's sense of meaning in life. Meaning in life and purpose in life have been linked to constructs that are known to predict academic performance and degree persistence, such as goal pursuit (McKnight & Kashdan, 2009) and social connectedness (Baumeister & Leary, 1995). Sense of meaning in life has also been linked to more positive work-related outcome expectations and intrinsic motivation to work, academic satisfaction, and use of adaptive coping strategies (Dik, Sargent, & Steger, 2008; Steger, Pickering, Shin, & Dik, 2010).

Interventions to Enhance Meaning in Life

Studies identifying precursors to a sense of meaning in life provide information regarding potential targets for intervention on college campuses. Baumeister (1991) theorized that antecedents to developing a sense of meaning in life include meeting needs for value, purpose, efficacy, and self-worth. Social exclusion has been found to result in lower ratings of meaningful existence (Stillman et al., 2009). When life appears to be more coherent and provides individuals with a reliable environmental pattern, individuals are more likely to endorse higher levels of meaning in life (Heintzelman, Trent, & King, 2013). Mood induction techniques have shown that positive affect can lead to higher ratings of meaning in life (Hicks & King, 2009), in addition to the inverse being true.

Interventions that are specifically designed to enhance meaning in life have typically involved individuals who may be coming to terms with end of life issues, such as patients with cancer diagnoses (Henry et al., 2010, Mok, Lau, Lai, & Ching, 2012). Mok et al. (2012) tested a two-session intervention that was based on Frankl's (1963) theory in a sample of advanced stage cancer patients and found that their intervention resulted in improvements on the Quality of Life Concerns in the End of Life questionnaire. Henry et al. (2010) tested the effects of the Meaning-Making intervention (MMi), which is a manualized, brief, existential intervention that focuses on situational, global, and existential meaning, in advanced stage ovarian cancer patients. The researchers found that the group receiving treatment reported higher meaning in life scores overall than the control group.

On college campuses, few researchers have tested interventions aimed at enhancing meaning in life. Dik & Steger (2008) designed and tested an intervention to enhance an individual's sense of calling in a career counseling setting. These researchers did not find a difference in MLQ scores between the intervention and control group; however, this could be attributed to the fact that the intervention focused on "calling," which is a construct that is somewhat distinct from meaning in life as measured by the MLQ (Steger et al., 2010). Evidence of successful interventions in other populations suggest that it is possible to enhance an individual's sense of meaning in life, and interventions that enhance meaning in life should be investigated further in college students. If meaning in life is identified as an important variable that influences the relationship between perfectionism and distress and suicidality, this could have implications for colleges and universities at both the individual level, in that meaning-focused interventions could inform individual therapy sessions at counseling centers, and

at the population level, providing a target for administrators and professors to enhance through coursework and policy changes on campus.

Meaning in Life as a Moderator Variable

Flett, Hewitt, and Heisel (2014) have called for the examination of resiliency factors and processes from the field of positive psychology that could serve a protective role in the relationship between perfectionism and suicidality, and have pointed to a dearth of research in that domain. Presence of meaning in life is one such positive psychology factor. While no researchers have examined presence of meaning in life as a moderator of the relationship between perfectionism and suicidality, the interplay between meaning-making, perfectionism, and depressive symptoms has been investigated by Graham et al. (2010), who developed the Existential Model of Perfectionism and Depressive Symptoms (EMPDS). According to the EMPDS, perfectionistic concerns are linked to distorted and catastrophic interpretations of the past. Graham et al. (2010) identify “difficulty accepting the past” as an explanatory factor in the relationship between perfectionism and suicide. Researchers who have examined the EMPDS (Graham et al., 2010; Sherry, Sherry, Hewitt, Mushquash, & Flett, 2015) have concluded that individuals who have difficulty accepting the past also have difficulty viewing life experiences as coherent, satisfying, and meaningful.

From a population-focused standpoint, researchers have advocated for identifying protective qualities that may buffer the influence of risks on negative mental health outcomes in college students (Davidson & Locke, 2010). Meaning in life has been examined as a moderator from a risk and protective factors framework in studies of health risks and adolescents, and has been found to be a protective factor in that regard (Brassai, Piko, & Steger, 2011). In a study of the relationship between bullying victimization and suicidal ideation in adolescents, Henry and her colleagues (2014) found

early evidence of a moderating role of meaning in life. For adolescent boys who had experienced bullying, meaning in life served as an important protective factor against the development of suicidal thoughts. Other studies have identified meaning in life as a moderator of the relationship between stress and positive outcomes such as coping and well-being (Halama & Bakošova, 2009; Hong, 2008)

Examining the role of meaning in life as a potential moderator of the relationship between perfectionism and distress and suicidality can provide valuable information to those seeking to design suicide prevention interventions. In the current study, both dimensions of meaning in life (i.e., presence of meaning and search for meaning) will be examined along with both dimensions of perfectionism (i.e., perfectionistic striving and perfectionistic concerns).

PURPOSE OF THE PROPOSED STUDY

While the relationship between perfectionistic concerns and distress and suicidality is well-established (O'Connor, 2007; Johnson et al., 2011), the relationship between perfectionistic striving and distress and suicidality is unclear, with studies yielding mixed results regarding the relationship between perfectionistic striving and various mental health outcomes (Chang et al., 2004; Dunkley et al., 2000; Cox et al., 2002). Researchers (e.g., Flett, Hewitt, & Heisel, 2014) have identified a need to examine positive psychology constructs, such as meaning in life, as potential moderators of the relationship between perfectionism and suicide. An examination of both dimensions of meaning in life as moderators of the relationship between perfectionistic striving and distress and suicidality could lend additional insight into the conditions under which perfectionistic striving is a predictor of positive mental health, and the conditions under which perfectionistic striving may be detrimental. Additionally, the examination of search for meaning as a moderator of the relationship between perfectionistic striving

and distress and suicidality may lend further insight into the role of searching for meaning, which has also yielded mixed and complex results with respect to mental health correlates (Steger et al., 2008).

Additionally, the current study aims to gain further understanding of the relationship between perfectionistic concerns and suicidal thoughts, by examining presence of meaning in life as a protective factor in that relationship. If this is found to be the case, this would lend support to Baumeister's (1990) assertion that rejection of meaning is characteristic of someone who has progressed through all six stages of escape theory, which begins with a falling short of standards experience, negative self-attributions, and heightened negative self awareness, all of which have been tied to perfectionistic concerns (Dean & Range, 1999; 1996). If presence of meaning in life is identified as a key protective variable in the relationship between perfectionistic concerns and suicidality, this could identify an important intervention point at which the progression towards suicidal thinking could be stopped. This would in turn inform population-focused and individual-focused interventions on college campuses.

The current study also aims to further understand the role of searching for meaning in the relationship between perfectionistic concerns and distress/suicidality. Given that college is a time when many students are questioning the status quo and searching for new avenues of creating meaning in one's life, search for meaning should also be examined as a moderator of the relationship between perfectionistic concerns and distress and suicidality, in order to understand whether searching for meaning might put someone with perfectionistic tendencies at higher risk for distress and suicidality.

RESEARCH QUESTIONS

Research Question 1: What is the relationship between perfectionism and distress and suicidality in a college student population?

Hypothesis 1a: Perfectionistic striving, as measured by the Standards scale on the SAPS, will have no relationship, or a weak negative relationship, with distress and suicidality.

Rationale: Few studies have examined the relationship between perfectionistic striving and suicidality, and findings examining the relationship between perfectionistic striving and distress have been mixed. One study found a negative correlation between perfectionism and suicidality among college students (Chang, Watkins, & Banks, 2004). Other studies, however, have found connections between perfectionistic striving and negative predictors of mental health such as perceived daily hassles (Dunkley et al., 2000), neuroticism (Cox et al., 2002; Enns et al., 2001). Based on these findings, it is not expected that perfectionistic striving as measured by the Standards subscale on the SAPS will have a strong relationship with students' reports of distress and suicidality. If a relationship does exist, it may resemble the relationship found by Chang et al. (2004), where a negative relationship between perfectionistic striving and suicidality was observed.

Hypothesis 1b: Perfectionistic concerns, as measured by students' Discrepancy subscale scores on the SAPS, will correlate positively with students' self-reported distress and suicidality over the past 12 months.

Rationale: O'Connor (2007) conducted a systematic review of 27 peer-reviewed studies and found strong support for the relationship between perfectionistic concerns and suicidality. In an analysis of 77 studies of moderators of suicidal risk, Johnson et al. (2011) found strong evidence that perfectionistic concerns act as an amplifier of risk in the relationship between risk factors for suicidal ideation and suicidal thoughts and behaviors. Quantitative studies linking perfectionism and suicide are further supported by evidence from case reviews (Hyatt, 2010) and psychological autopsies of suicide

completers (Kiamanesh et al., 2014). The link between perfectionistic concerns and suicidality is further supported by the relationships between perfectionism and predictors of suicidality, including perceived burdensomeness (Rasmussen et al., 2012), hopelessness (Flett, Hewitt, & Heisel, 2014), and psychache (Flamenbaum & Holden, 2007). Given the abundance of strong evidence linking perfectionism to distress and suicidality, a positive correlation between the Discrepancy subscale of the SAPS and student responses on the Distress and Suicidality Continuum is expected.

Research Question 2: How does meaning in life influence the relationship between perfectionism and distress and suicidality?

Hypothesis 2a: Students' scores on the presence of meaning scale of the MLQ will moderate the relationship between perfectionistic striving (scores on the standards subscale of the SAPS) and distress and suicidality. When participants report a high presence of meaning in life, the relationship between perfectionistic striving and distress and suicidality will be negative or non-significant. When participants report a low presence of meaning in life, the relationship between perfectionistic striving and distress and suicidality will be positive.

Rationale: Presence of meaning in life is well-established as a predictor of a number of positive outcomes, including physical health (Steger et al, 2009; Krause, 2009), lower incidence of psychological disorders (Owens et al., 2009), adaptive coping strategies (Thompson et al., 2003), life satisfaction (Chamberlain & Zika, 1988), happiness (Debats et al., 1993), and hope (Mascaro & Rosen, 2005). Several researchers have identified a negative relationship between presence of meaning and suicidal ideation (e.g., Wilchek-Aviad, 2015; Kleiman & Beaver, 2013; Heisel & Flett, 2004; Flett & Heisel, 2008).

The relationship between perfectionism and presence of meaning in life has not been widely researched. Chang (2006) found that a negative relationship existed between perfectionism and purpose in life, and that the relationship was mediated by stress. However, this study did not examine perfectionistic striving, which has been linked to several positive mental health factors including satisfaction with life (Gilman et al., 2005). Presence of meaning in life has been found to be a moderator of the relationship between bullying experiences and suicidal ideation in adolescent boys (Henry et al., 2014). It is expected that presence of meaning in life will also moderate the relationship between perfectionistic striving and distress and suicidality. Individuals who report perfectionistic striving but also report a high level of presence of meaning in life are not expected to be predisposed towards distress and suicidality, whereas individuals who are high on perfectionistic striving but low on meaning in life may be more likely to report distressed and suicidal thoughts.

Hypothesis 2b: Students' scores on the presence of meaning scale of the MLQ will moderate the relationship between perfectionistic concerns (scores on the discrepancy subscale of the SAPS) and distress and suicidality. It is hypothesized that when participants report a high level of presence of meaning, the relationship between perfectionistic concerns and distress/suicidality will be weak or nonexistent, whereas when participants report a low level of presence of meaning, the relationship between perfectionistic concerns and distress/suicidality will be positive.

Rationale: Baumeister (1990) advocated for examining the absence of meaning in one's life as a marker of cognitive deconstruction, one of the final stages in the progression of suicidal thoughts according to the escape theory of suicide. Researchers (Dean & Range, 1996; Dean & Range, 1998; Baumeister, 1990) have identified perfectionistic concerns as an approximation for stages one through three of escape

theory (falling short of standards, negative attributions to the self, and heightened negative self awareness). It is hypothesized that the protective power of meaning in life will be such that if meaning is present, the relationship between perfectionistic concerns and suicidality will not be as strong as it is for participants that feel an absence of meaning.

Hypothesis 2c: Students' scores on the search for meaning scale of the MLQ will moderate the relationship between perfectionistic striving (scores on the standards subscale of the SAPS) and distress and suicidality. It is hypothesized that when participants report a high level of search for meaning, the relationship between perfectionistic striving and distress/suicidality will be positive, whereas when participants report a low level of search for meaning, the relationship between perfectionistic striving and distress/suicidality will be weak or nonexistent.

Rationale: Based on previous findings that position the search for meaning as a predictor of negative health outcomes (Steger & Kashdan, 2007; Steger et al., 2008), it is possible that the search for meaning may be one factor that differentiates those who exhibit perfectionistic striving and experience negative mental health effects and those who exhibit perfectionistic striving and have more positive outcomes. Based on previous research (Steger & Kashdan, 2007; Steger et al., 2008), if one is searching for meaning in their life, they may also not have identified a source of meaning behind their striving, which could put those who are inclined towards perfectionistic striving at risk for the development of distressed and suicidal thoughts.

Hypothesis 2d: Students' scores on the search for meaning scale of the MLQ will moderate the relationship between perfectionistic concerns (scores on the standards subscale of the SAPS) and distress and suicidality. It is hypothesized that when participants report a high level of search for meaning, the relationship between

perfectionistic concerns and distress/suicidality will be positive and stronger than when participants report a low level of search for meaning.

Rationale: Search for meaning often appears to indicate the perceived lack of meaning in one's life, particularly in western populations (Steger et al., 2008). Drawing again from Baumeister's escape theory of suicide (1990), it is likely that individuals who are experiencing a strong degree of perfectionistic concerns and perceive a lack of meaning in their life may be at greater risk for suicidal thoughts because of having progressed further through the stages of suicidal thinking.

Chapter Three: Methodology

The current study is an analysis of cross-sectional data, which was collected in Spring 2016 as part of a 135 item web-based survey entitled “Understanding Student Distress and Academic Success.” The survey was sponsored by the National Research Consortium of Counseling Centers in Higher Education (NRCCCHE). This organization was founded in 1991 and is housed at the University of Texas at Austin Counseling and Mental Health Center. The organization’s mission is to conduct large-scale national research studies on college student mental health.

PARTICIPANTS

A stratified random sample of 39,720 students across 18 participating United States colleges and universities were invited to participate in the current study. First year students, undergraduates in their second year and beyond, and graduate students defined the strata. This sampling strategy allowed each participating campus to yield a sufficient number of students from its population to allow for campus-level analyses. At each institution, 1,000 first-year students were sampled. At schools where there were fewer than 1,000 first-year students, the entire first-year student body was sampled. To sample undergraduate students in their second year and beyond, the study followed the following guidelines: from the institutions with 5,000 or more undergraduate students enrolled, 1,000 undergraduate students in their second year and beyond were randomly selected to receive a survey invitation. From the institutions with 500 to 4,999 undergraduate students, 500 undergraduate students in their second year and beyond were randomly selected. Finally, from the institutions with fewer than 500 undergraduate students, all undergraduate students in their second year and beyond were selected. The same guidelines were followed to randomly select graduate students.

The survey yielded a response rate of 31.72%, resulting in 13,591 responses. The data were then cleaned to remove string responders as well as those participants who omitted responses to more than 10% of non-demographic survey questions, resulting in a full survey sample size of 12,034 students. Table 1 shows the number of participants by student type.

Table 1: Student Classification of Survey Participants

Student Classification	Full Survey		Study Sample	
	<i>n</i>	%	<i>n</i>	%
First Year Undergraduate	4394	36.5	1321	24.7
Second Year Undergraduate	1321	11.0	1312	24.6
Third Year Undergraduate	1319	11.0	1318	24.7
Fourth Year Undergraduate	1103	9.2	1100	20.6
Fifth Year and Beyond Undergraduate	287	2.4	287	5.4
Graduate/Professional Student	3273	27.2	0	0
Non-degree Seeking/Other	95	0.8	0	0

Analyses for the current study included undergraduate students. To avoid overrepresentation of first-year students, 1,321 first year undergraduate students were randomly selected from the survey participants to comprise the first year student sample for the current study. No graduate/professional or non-degree seeking students, and no students who endorsed “other student status,” were included in the current analysis. After creating the undergraduate-only sample used for this study, an additional 13 participants were removed after the researchers learned that those 13 participants had submitted duplicate responses. The current sample included 5,338 participants, all of whom identified as undergraduate students.

Participating four-year colleges and universities were recruited to be representative of all United States higher education institutions relative to enrollment

size, private or public qualification, and geographic location. Table 2 shows demographics for the full survey and the current study sample. Ages of participants in the current study ranged from 18 to 93 years. The modal response was 19 years, and the mean age reported was 20.77 years. Table 3 shows frequencies of participants by age in the current study. Based on those participants who did report their age, participants aged 18-22 accounted for 89.6% of the sample.

Table 2: Full Survey and Study Sample Demographics

	Full Survey		Study Sample	
	<i>n</i>	<i>M (SD)</i>	<i>n</i>	<i>M (SD)</i>
Age	9995	22.82 (6.5)	4407	20.77 (3.6)
	<i>n</i>	%	<i>n</i>	%
Gender				
Male	4418	36.4	1910	35.8
Female	7426	61.7	3343	62.6
Transgender	73	0.6	36	.7
Other	113	0.9	46	.9
Declined to report	4	0.0	3	0.1
Race/Ethnicity				
Asian/Asian American	1318	11.0	492	9.2
Black/African American	722	6.0	312	5.8
Hispanic/Latino/a	1050	8.7	508	9.5
Middle Eastern/East Indian	353	2.9	115	2.2
Multiracial	1131	9.4	528	9.9
Native American/Alaska Native	34	0.3	15	.3
Native Hawaiian/Pacific Islander	18	0.1	8	.1
White/European American	7247	60.2	3307	62.0
Other	146	1.2	46	.9
Declined to report	15	0.1	7	.1
Sexual Orientation				
Heterosexual	10552	87.7	4661	87.3
Gay/Lesbian	330	2.7	121	2.3
Bisexual	651	5.4	325	6.1

Table 2 (continued)

	Full Survey		Study Sample	
	<i>n</i>	%	<i>n</i>	%
Questioning	184	1.5	84	1.6
Other	304	2.5	144	2.7
Declined to report	13	0.1	3	0.1
Parental Income				
Less than \$30,000	940	7.8	622	11.7
\$30,000-39,000	541	4.5	345	6.5
\$40,000-59,000	898	7.5	578	10.8
\$60,000-79,000	789	6.6	488	9.1
\$80,000-99,000	717	6.0	438	8.2
\$100,000-149,000	1090	9.1	685	12.8
\$150,000-199,000	432	2.2	269	5.0
\$200,000 or more	618	5.1	398	7.5
Don't know/prefer not to answer	6009	49.9	1515	28.4
Religious/Spiritual Preference				
None	1780	14.8	754	14.1
Agnostic	1054	14.8	471	8.8
Atheist	761	8.8	317	5.9
Buddhist	154	1.3	64	1.2
Christian	6013	50.0	2897	54.3
Hindu	248	2.1	49	0.9
Jewish	239	2.0	79	1.5
Muslim	299	2.5	96	1.8
Native American Spirituality/Religion	16	0.1	3	0.1
Unitarian Universalist	61	0.5	16	0.3
Other	297	2.5	120	2.2
Multiple Religious Preferences	1094	9.1	467	8.7
Declined to report	18	0.1	5	0.1

Table 3: Frequencies of age and age range in study sample

	<i>n</i>	<i>%</i>
Age		
18	519	9.7
19	1052	19.7
20	963	18.0
21	905	17.0
22	500	9.4
23-25	261	4.9
26-30	94	1.8
31-40	61	1.1
41-50	33	0.6
50+	6	0.1
Declined to report	944	17.7

PROCEDURES

The current study survey and research proposal, including informed consent, procedures for contacting and recruiting participants, and procedures for providing resources to students who may be at risk for distress, were submitted to the Institutional Review Board of the University of Texas at Austin. After the study was approved, an email was sent to students, who were randomly selected by their campus study representatives, explaining the purpose of the study and inviting them to participate by clicking a link that was embedded in the email. Email recipients were informed that by participating in the survey, they would be eligible for a drawing to win one of 10 gift cards for \$500 each to Amazon.com. Up to four email reminders were sent to students who did not complete the survey after the initial email. These reminder emails included an “opt out” button for students who did not wish to receive further emails. Students were provided with the contact information for their local study representative, the

principal investigator of the study, and the coordinator of the NRCCCHE, should they have questions or feedback about the survey.

After consenting to participate, students were asked a variety of questions about their demographics, attitudes, and life experiences. Based on trial runs conducted with student volunteers prior to the national survey launch, the survey was predicted to take approximately 15 minutes to complete. Participants were permitted to skip survey questions and were able to withdraw from the survey at any point. Data were collected using Qualtrics survey software. Upon closure of the survey, data were then stored in two separate and unlinked data tables: an identification table, which contained respondent identification numbers, student e-mail addresses, and information about whether the student accessed and completed the survey, and a de-identified survey response table, which stored the anonymous student responses.

All participants, including those who declined to take the survey, were provided with referral resources specific to their campus. This list of resources contained information such as local and national suicide hotlines, local and national abuse hotlines and reporting options, and information about campus counseling services. This information was provided as a link at the bottom of every page. If students endorsed thoughts of suicide, they were directed to the resource page. All students also were directed to the resource page upon completion of the survey. The resource page was intended to be a source of information for students, as well as a potential intervention to encourage students who may be experiencing distress or suicidal thoughts at the time of taking the survey to seek help.

MEASURES

Full Survey

The full survey, titled “Understanding Student Distress and Academic Success” included a 135-item survey containing forced-choice items/sub-items, Likert-type scale items/sub-items, items for which multiple response options can be selected, and open text response items/sub-items. The survey included questions regarding demographics, presence of pre-existing vulnerabilities to distress and negative mental health outcomes, measures of participants’ sense of self, or their orientation towards themselves, the world, and others (e.g, the Meaning in Life Questionnaire (MLQ; Steger et al., 2006), the Mental Health Continuum (MHC; Keyes, 2002), the Short Form of the Almost Perfect Scale (SAPS; Rice, Richardson, & Tueller, 2014), and the Distress and Suicidality Continuum (Drum et al., 2009). As part of the larger study, additional information on academic outcome variables (e.g., GPA, degree persistence) will be gathered from each campus’s registrar on a yearly basis for six years.

The length of the survey and sequence of sections were designed to induce thorough contemplation by the participants of their sense of self, thus increasing the accuracy of their self-report. The directors and research associates of The National Research Consortium identified areas of empirical interest, generated survey items per theories in the literature, and solicited feedback from directors of participating counseling centers. The final survey codebook is available in Appendix D.

Demographic Information

Participants responded to questions aimed at gathering demographic information, including age, gender, and race/ethnicity. Age was determined by a forced choice response with two digit integer options ranging from 18 to 95. Gender was determined by a forced-choice item with four response options: female, male, transgender, and other

(please specify). Sexual orientation was determined by a forced-choice item with five response items: heterosexual, gay/lesbian, bisexual, questioning, and other (please specify). Race/ethnicity was evaluated by a question asking participants to choose all applicable categories from the following list: African American, of African descent, African, of Caribbean descent, or Black; Asian or Asian American (e.g., Chinese, Japanese, Korean); Caucasian, White, of European descent, or European (including Spanish); Hispanic, Latino or Latina (e.g., Cuban American, Mexican American, Puerto Rican); Middle Eastern or East Indian (e.g., Pakistani, Iranian, or Egyptian); Native American (e.g., Dakota, Cherokee) or Alaska Native; Native Hawaiian or other Pacific Islander (Samoan, Papuan, Tahitian); Other (please specify). Participants who selected more than one category were classified subsequently as Multiracial. Participants were asked to report their parent/caregiver income in a forced choice item that contained ranges of income from “less than \$30,000” to “\$200,000 or more.” Students were also provided with the option of selecting “don’t know/prefer not to answer” in response to this question. For a list of all demographic questions in this survey, see the full survey codebook in Appendix D.

Distress and Suicidality Continuum

The presence of distressed and suicidal thoughts were assessed using a measure designed by Drum and his colleagues (2009) in an effort to capture the continuum of distressed and suicidal thoughts an individual might endorse. Participants were asked the question, “In the past year, have you had any thoughts similar to the following? Please select “yes” for all thoughts that apply.” Response options included, in order:

- 1) "This is all just too much"
- 2) "I wish this would all end"
- 3) "I have to escape"

- 4) "I wish I was dead"
- 5) "I want to kill myself"
- 6) "I might kill myself"
- 7) "I will kill myself"

Participants who did not select any of the above items were coded as “0 = I did not have any thoughts like these.”

Brownson and his colleagues (2016) provided evidence for the continuous nature of the data in Distress and Suicidality Continuum responses by following a procedure in which they used summative (i.e., total items endorsed) and maximal (i.e., maximum item endorsed) values of all endorsed items. A Pearson correlation of 0.95 was found between the summative and maximal values, indicating a significant and strong relationship between the summative and maximal values. Brownson et al. advocate for use of the maximal value when analyzing student responses, as the greatest clinical value lies in understanding the maximal thought endorsed by a student.

Analyses of the continuous nature of the data were conducted in the current sample, and a similarly high correlation between maximal and summative values was found ($r = .95$, $n = 11,878$, $p < .001$, two-tailed). The Distress and Suicidality Continuum can be found in Appendix A.

Short Almost Perfect Scale

To measure adaptive and maladaptive perfectionism, the Short Almost Perfect Scale (SAPS; Rice, Richardson, & Tueller, 2013) was used. The SAPS is an eight-item measure with two subscales. The four-item Standards subscale reflects the construct of perfectionistic striving, or the tenacious pursuit of high standards and goals (e.g., “I expect the best from myself”), whereas the four-item Discrepancy subscale measures the construct of perfectionistic concerns, in which one’s best efforts never seem good enough

(e.g., “I am hardly ever satisfied with my performance”). Participants respond to items using a seven-point Likert scale, ranging from 1 = strongly disagree to 7 = strongly agree.

To develop the SAPS, Richardson et al. (2013) performed a confirmatory factor analysis on the 23 items in the Almost Perfect Scale-Revised (Slaney et al., 2001). The researchers identified items that loaded strongly on to the “standards” and “discrepancy” and eliminated items that were redundant, did not load strongly onto either factor, or were interpreted as confusing or vague. In the same study, the SAPS was found to have strong measurement invariance between women and men, indicating no strong differences in responses between the sexes. Internal consistency for the SAPS has been found to be within an acceptable range, with initial study data from two distinct samples yielding Cronbach’s alphas of .87 and .85 for the Standards subscale, and .84 and .94 for the Discrepancy subscale.

A confirmatory factor analysis was conducted on the SAPS in the current sample, and confirmed the two-factor structure found by Rice, Richardson, and Tueller (2013) (CFI = 0.98). In the current sample, internal consistency was good for the SAPS Discrepancy ($\alpha = .88$) and SAPS Standards ($\alpha = .88$) subscales. The SAPS can be found in Appendix B.

Meaning in Life Questionnaire

The Meaning in Life Questionnaire (MLQ; Steger et al., 2006) is a 10-item measure with two five-item subscales (Presence of Meaning and Search for Meaning), which is supported by a factor analysis conducted by Steger et al. (2006). Items in the MLQ use a 7-point Likert scale (1 = absolutely untrue, 2 = mostly untrue, 3 = somewhat untrue, 4 = cannot say true or false, 5 = somewhat true, 6 = mostly true, 7 = absolutely true). The Presence of Meaning subscale (MLQ-P) contains items that assess the extent to

which individuals have a sense of meaning in their life (e.g., “I understand my life’s meaning,” “My life has a clear sense of purpose.”). The Search for Meaning subscale (MLQ-S) includes items that assess the extent to which individuals are searching for meaning in their life (e.g., “I am always searching for something that makes my life feel significant,” “I am seeking a purpose or mission for my life.”).

Previous research has found evidence to support that MLQ scores are reliable and stable, with two studies of college students yielding chronbach’s alpha scores of 0.90 and 0.86 for the Presence of Meaning subscale and 0.84 and 0.87 for the Search for Meaning subscale (Steger et al., 2006; Steger, Kashdan, Sullivan, & Lorentz, 2008). Evidence of convergent, discriminant, and structural validity of the MLQ has been established (Steger et al., 2006). Presence of Meaning subscale scores correlated in predicted directions with other measures of meaning, and previous analyses show predicted associations with other related constructs such as life satisfaction ($r = 0.46$), joy ($r = 0.49$), and depression ($r = -0.48$; Steger et al., 2006).

A confirmatory factor analysis was conducted on MLQ scores in the current sample, and confirmed the two-factor structure that was found by Steger and his colleagues (2006; 2008; CFI = 0.96). In the current sample, internal consistency was excellent for the MLQ-P ($\alpha = .91$) and MLQ-S ($\alpha = .90$). The MLQ can be found in Appendix C.

Chapter Four: Results

DATA SCREENING AND MISSING DATA

Prior to conducting primary analyses, data were screened for missing data and string responders. Of the full data set, containing 13,591 responses, 1,557 participants' responses were removed from the data set because they either elected not to respond to over 10% of the non-demographic survey questions, or because their responses indicated string responding (i.e., participants that selected the midpoint on each item in a scale for more than four scales were removed from the data set). Presence of outliers, particularly with respect to the distress and suicidality continuum, was to be expected, and no outliers were removed from the data set. Table 4 shows the percentage of missing data per variable after the aforementioned participants were removed from the data set. Because the percentage of data missing was low for each variable, no data imputations were done. Prior to analysis, all continuous predictor variables were grand-mean centered and all categorical predictors were dummy coded.

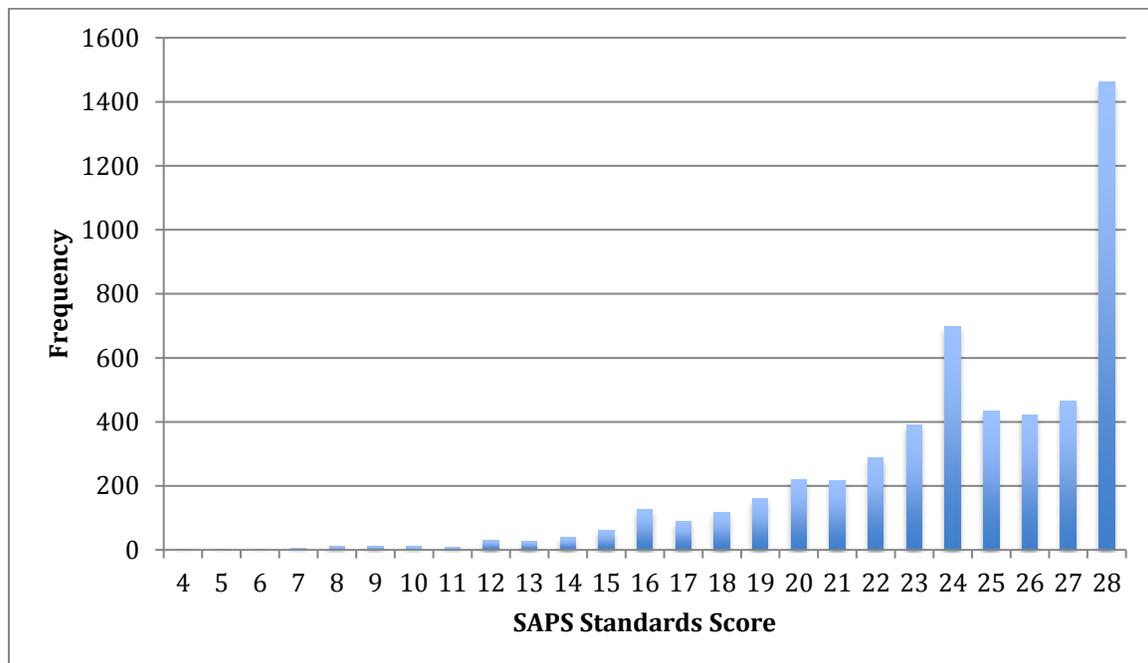
Table 4: Percentage of Missing Data per Variable

Variable	<i>n</i>	Missing data (%)
SAPS Standards	5299	0.92
SAPS Discrepancy	5299	0.92
MLQ Presence	5316	0.60
MLQ Search	5311	0.69
Distress and Suicidality Continuum	5287	1.14

The data were then examined to assure that statistical assumptions of normality, linearity, and homoscedasticity were met. The normal distributions of criterion and

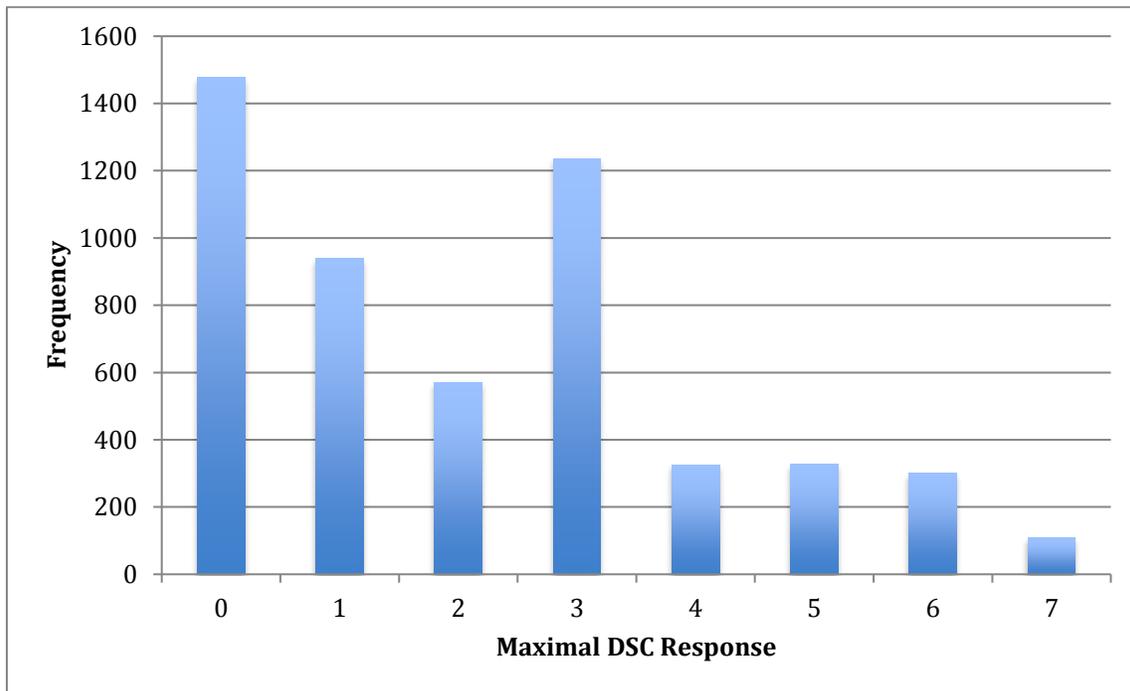
predictor variables were determined by examination of frequency tables and the observed skew values for each variable. The Standards subscale of the SAPS contained a skew statistic of -1.30, indicating that it is strongly negatively skewed. Upon examination of a frequency table, it was revealed that of 5299 respondents, 1462 endorsed the maximum possible value (28) on this scale. Moreover, greater than 50% of respondents endorsed a value of 24 or higher. See Figure 1, which shows frequencies of SAPS Standards scores.

Figure 1: Frequencies of SAPS Standards Subscale Scores



While the distress and suicidality continuum had a skewness statistic of 0.645, indicating an acceptable level of skewness, an examination of the frequency tables revealed a bimodal distribution, with 1478 and 1236 participants endorsing 0 and 3 items on the scale, respectively. See figure 2 for a graph of frequencies of students' maximal responses on the distress and suicidality continuum. A natural logarithmic transformation and an inverse transformation of SAPS Standards data were performed, however, it was not found that either transformation positively impacted the skewed nature of the data.

Figure 2: Frequencies of Maximal Distress and Suicidality Continuum Responses



In exploratory analyses, students' maximal DSC scores were transformed by taking the natural logarithm of each score plus one. While the skewness statistic of this scale was positively impacted (-0.171 for transformed data compared to 0.645 for the untransformed data), the bimodal nature of the data remained, and it was determined to proceed with the untransformed data since the large sample size of the study provided robustness to the possibility of Type II error. The determination was made to proceed with the untransformed data for both scales, since this allowed for greater interpretability of regression coefficients.

The linear relationships among variables were assessed by examination of scatterplots of relationships between each predictor variable and the outcome variable. Furthermore, several previous studies have established linear relationships between each of the predictor variables in the study and other measures of distress and suicidality, and

there is no evidence for a curvilinear or non-linear relationship existing in any of the relationships examined in this study.

To assess for homoscedasticity of variance, the data were plotted and examined and no evidence was found to indicate heteroscedasticity. To further assess whether the assumption of homoscedasticity was met, residual errors were plotted and examined. Residual errors appeared to be normally distributed based on an examination of plots of those residuals. Skewness and kurtosis statistics for the residual errors were both less than 0.5, which further supported that the assumption of normal distribution of errors was met.

To determine whether multi-level modeling of the data was necessary, intra-class correlation coefficients were computed for each item on each of the scales used in the current study. All intra-class correlation coefficients were found to be lower than 0.05, which suggests that the data were not clustered by school. This provides evidence to support statistical analyses that do not account for issues of independence of observations and errors (Snijders and Bosker, 1999). As such, it was determined that multi-level approaches such as Hierarchical Linear Modeling were not necessary to examine the hypotheses in the current study.

DESCRIPTIVE STATISTICS

Descriptive statistics for each study variable are provided in Table 5. Data ranges were checked for each variable to ensure that all data were within the prescribed ranges.

Table 5: Descriptive Statistics for Continuous Study Variables

	<i>n</i>	<i>M</i>	<i>SD</i>	Score Range
Presence of Meaning	50	24.50	6.916	5-35
Search for Meaning	50	25.03	6.795	5-35
Perfectionistic Striving	50	24.08	4.062	4-28
Perfectionistic Concerns	50	17.52	6.242	4-28
Distress/Suicidality	50	2.13	1.934	0-7

Note. Presence of Meaning = Meaning in Life Questionnaire (MLQ) Presence Subscale; Search for Meaning = Meaning in Life Questionnaire (MLQ) Search Subscale; Perfectionistic Striving = Short Almost Perfect Scale (SAPS) Standards subscale; Perfectionistic Concerns = Short Almost Perfect Scale (SAPS) Discrepancy subscale; Distress/Suicidality = Distress and Suicidality Continuum (DSC) maximal value

DEMOGRAPHIC VARIABLES

In order to determine whether any significant relationships existed between demographic variables and the outcome variable (DSC scores), all demographic variables, with the exception of parental income, were dummy coded such that “0” represented the majority group and “1” represented all other groups. Parental income was used as a proxy for a measure of socioeconomic status. For information on coding of parental income, see Table 6. Demographic variables were then regressed on DSC scores. After examination of the data, it was determined that relationships with a beta value greater than 0.10 would be controlled for in the analysis. This determination was based on what the researcher deemed was a reasonable cutoff. Relationships with a beta value greater than 0.10 were observed on the variables of sexual orientation and gender identity. Table 6 shows the results of those regression analyses.

Table 6: Initial Regression Analyses of Demographic Variables on Distress and Suicidality Continuum Scores

	<i>B</i>	<i>SE</i>	β
Sexual Orientation	1.379	0.78	.236***
Age	-0.016	0.008	-.029
Gender Identity	1.806	0.217	.114***
Parental Income	-0.071	0.014	-.082***
Race/Ethnicity	0.146	0.055	.037**

Coding for variables: Sexual orientation (Heterosexual = 0; Gay/Lesbian, Bisexual, Questioning, and Other = 1); Gender Identity (Male, Female = 0; Transgender, Other = 1); Parental Income (Less than \$30,000 = 1; \$30,000-\$39,000 = 2; \$40,000-\$59,000 = 3; \$60,000-\$79,000 = 4; \$80,000-\$99,000 = 5; \$100,000-\$149,000 = 6; \$150,000-\$199,000 = 7; \$200,000 or more = 8); Race/Ethnicity (White/European American = 0; All other race/ethnicities = 1)

*** $p < 0.001$ ** $p < 0.01$

Regressions with beta coefficients greater than 0.10 (i.e., sexual orientation, gender identity) were further probed to determine the nature of the relationship to the outcome variable (DSC scores). Three one-way ANOVAs were conducted for each of these three demographic variables. Results from these analyses are reflected in Table 7.

Table 7: F-Statistics and Means of Demographic Variables of Interest

	<i>DSC Mean</i>	<i>SD</i>	<i>F</i>	<i>Adj.R²</i>
Sexual Orientation			81.796	0.058
Heterosexual	1.96	1.84		
Gay/Lesbian	2.76	2.13		
Bisexual	3.43	2.20		
Questioning	3.27	1.86		
Other	3.67	2.17		
Gender Identity			52.941	0.029
Male	1.78	1.90		
Female	2.29	1.90		
Transgender	4.17	2.17		
Other	3.70	2.48		

The determination was made not to control for religion in the current analysis. This is due to several difficulties with interpretation of the relationship between religion and the distress and suicidality continuum. Differences in DSC scores between religious groups existed, however the number of participants who identified as a member of each group varied widely (e.g., 2,910 students endorsed Christian compared to 3 students who endorsed Native American spirituality or religion). The data did not follow any trend which would have allowed for broader categorization of the variable, and it was determined that controlling for religion would not add valuable insight to, or greatly impact the results of, the analysis. See Table 8 for mean DSC scores across religion.

Table 8: Mean Distress and Suicidality Continuum Scores Across Religion

	<i>DSC Mean</i>	<i>SD</i>	<i>F</i>	<i>Adj.R²</i>
Religion			16.13	0.031
Agnostic	2.54	1.96		
Atheist	2.62	2.13		
Buddhist	2.21	1.99		
Christian	1.90	1.80		
Hindu	1.65	2.05		
Jewish	1.67	1.75		
Muslim	1.32	1.41		
Native American spirituality	3.00	2.65		
Multiple religions	2.75	2.11		
Other	2.82	2.08		

CORRELATIONAL ANALYSES

Results from a series of bivariate correlations showed no evidence of multicollinearity among study variables, in that each correlation combination was less than 0.80. Table 9 shows the correlations between all study variables.

Table 9: Bivariate Correlations for All Study Variables

Variables	1	2	3	4	5
1. Perfectionistic Striving	-	-	-	-	-
2. Perfectionistic Concerns	.11**	-	-	-	-
3. Presence of Meaning	.27**	-.37**	-	-	-
4. Search for Meaning	.14**	.27**	-.14**	-	-
5. Distress and Suidicality	-.05**	.39**	-.38**	.17**	-

** $p < 0.01$

Significant relationships were observed between all independent variables. Notably, perfectionistic striving and perfectionistic concerns appeared to have a weak positive correlation, whereas presence of meaning and search for meaning appeared to have a negative relationship. Perfectionistic striving was positively correlated with both presence of meaning and search for meaning, and perfectionistic concerns were negatively correlated with presence of meaning and positively correlated with search for meaning.

PRIMARY ANALYSES

Hypothesis 1a

To investigate Hypothesis 1a (student responses on measures of perfectionistic striving will have a weak negative relationship with responses on the Distress and Suicidality Continuum), a hierarchical multiple regression model was used to evaluate whether perfectionistic striving, as measured by the Standards subscale of the SAPS, correlates with individuals' scores on the continuum of suicidal thinking. Participants' Distress and Suicidality Continuum scores were regressed on the Standards subscale of

the SAPS, while controlling for any demographic variables on which a significant relationship with DSC scores were observed. Standardized and unstandardized regression coefficients and R^2 values are reported in Table 10.

Table 10: Hierarchical Multiple Regression Analyses Predicting Distress and Suicidality Continuum Scores from Demographic Variables and Perfectionistic Striving

Predictor	<i>B</i>	<i>SE B</i>	β	r_{sp}^2	R^2	<i>Adj.R</i> ²	ΔR^2
Step 1							
Gender Identity	1.11	.218	.070***				
Sexual Orientation	1.29	.080	.220***				
Model 1						.060	.060***
Step 2							
Gender Identity	1.106	.218	.070***				
Sexual Orientation	1.277	.080	.219***				
Perfectionistic Striving	-.016	.006	-.034*				
Model 2						.061	.001*

Note: r_{sp}^2 denotes squared semi-partial correlation

* $p < .05$; ** $p < .01$; *** $p < .005$.

Results from the regression analysis did not support the hypothesis that scores on the SAPS Standards subscale would negatively predict DSC scores. The addition of perfectionistic striving to the regression analysis in Step 2 accounted for 0.1% of additional variance in DSC scores. ($\Delta R^2 = .001$, $F(5217) = 6.433$, $p = .011$). A very weak negative correlation was observed that approached significance ($B = -.016$, $\beta = -.034$, $t(5217) = -2.536$, $p = 0.011$), in which higher scores on perfectionistic striving predicted lower scores on the distress and suicidality continuum. Examination of squared semipartial correlations shows that the addition of perfectionistic striving only contributed to an additional 0.1% of variance in the model.

Hypothesis 1b

To investigate Hypothesis 1b (student responses on measures of perfectionistic concerns will positively predict responses on the Distress and Suicidality Continuum), a hierarchical multiple regression model was used to evaluate whether self-critical perfectionism, as measured by the Discrepancy subscale of the SAPS, had a positive relationship with individuals' scores on the continuum of suicidal thinking. Participants' Distress and Suicidality Continuum scores were regressed on the Discrepancy subscale of the SAPS, while controlling for any demographic variables on which significant relationships with Distress and Suicidality Continuum scores were observed (see Tables 5 and 6). Standardized and unstandardized regression coefficients and R^2 values are reported in Table 11.

Table 11: Hierarchical Multiple Regression Analyses Predicting Distress and Suicidality Continuum Scores From Demographic Variables and Perfectionistic Concerns.

Predictor	<i>B</i>	<i>SE B</i>	β	r_{sp}^2	R^2	<i>Adj.R</i> ²	ΔR^2
Step 1							
Gender Identity	1.067	.217	.068***				
Sexual Orientation	1.286	.080	.220***				
Model 1						.059	.059***
Step 2							
Gender Identity	.785	.201	.050***				
Sexual Orientation	1.020	.075	.174***				
Perfectionistic Concerns	.112	.004	.363***				
Model 2						.188	.129***

Note: r_{sp}^2 denotes squared semi-partial correlation

* $p < .05$; ** $p < .01$; *** $p < .005$.

Results from the regression analysis supported the hypothesis that SAPS Discrepancy scores would positively predict DSC scores. Examination of squared semi-partial correlations indicates that the addition of perfectionistic concerns to the regression analysis in Step 2 accounted for an additional 12.9% of the variance in DSC scores (ΔR^2

= .129, $F(5217) = 826.499$ $p < .001$). Analyses showed a significant positive relationship between perfectionistic concerns and distress/suicidality ($B = 0.112$, $\beta = .363$, $t(5217) = 28.749$, $p < .001$). Unstandardized regression coefficients suggest that for every additional point on the SAPS Discrepancy subscale, an individual was likely to increase in their DSC score by 0.112 points, indicating that individuals who were higher on the SAPS Discrepancy subscale were likely to endorse higher items on the DSC.

Hypothesis 2a

To investigate hypothesis 2a (students' scores on the Presence of Meaning subscale of the MLQ will moderate the relationship between perfectionistic striving and distress and suicidality), a moderation analysis was conducted to determine whether presence of meaning scores on the MLQ moderate the relationship between Standards subscale scores on the SAPS (i.e., perfectionistic striving) and Distress and Suicidality Continuum scores. In Step 1 of the regression, all demographic variables on which a significant relationship with DSC scores were observed were regressed on DSC scores. In Step 2 of the regression, Presence of Meaning subscale and Standards subscale scores were regressed on DSC scores to determine whether there was a main effect of either variable of interest. In Step 3 of the regression, an interaction term PresenceXStandards was created by multiplying mean-centered SAPS Standards subscale scores and mean-centered MLQ Presence of Meaning subscale scores. Results from the regression analyses are reported in Table 12.

Table 12: Hierarchical Multiple Regression Analyses Predicting Distress and Suicidality Continuum Scores From Demographic Variables, Perfectionistic Striving, Presence of Meaning, and a Presence of MeaningXPerfectionistic Striving Interaction Term.

Predictor	<i>B</i>	<i>SE B</i>	β	r_{sp}^2	R^2	<i>Adj.R</i> ²	ΔR^2
Step 1							
Gender Identity	1.117	.218	.071***				
Sexual Orientation	1.273	.081	.218***				
Model 1						.059	.059***
Step 2							
Gender Identity	.998	.203	.063***				
Sexual Orientation	.910	.076	.156***				
Perfectionistic Striving	-.102	.004	-.364***				
Presence of Meaning	.028	.006	.058***				
Model 2						.179	.120***
Step 3							
Gender Identity	.999	.203	.063***				
Sexual Orientation	.912	.076	.156***				
Perfectionistic Striving	-.102	.004	-.364***				
Presence of Meaning	.031	.007	.066***				
PresenceXStriving	.001	.001	.023				
Model 3						.179	.000

Note: r_{sp}^2 denotes squared semi-partial correlation

* $p < .05$; ** $p < .01$; *** $p < .005$.

Results from the regression analysis did not support the hypothesis that presence of meaning moderates the relationship between perfectionistic striving and distress/suicidality. When the PresenceXStriving interaction was added to the regression model, this explained an additional 0.1% of the variance ($\Delta R^2 = .000$, $F(5178) = 3.061$, $p = .080$).

An analysis of main effects showed that presence of meaning was a negative predictor of distress and suicidality scores ($B = -0.102$, $\beta = -0.364$, $t(5179) = -27.424$, $p < 0.001$). Additionally, Step 2 analyses in this model demonstrated that perfectionistic striving was a weak positive predictor of distress/suicidality ($B = .028$, $\beta = .058$, $t(5179)$

= -4.461, $p < 0.001$), suggesting that in this model, higher levels of perfectionistic striving predicted higher levels of distress/suicidality.

Hypothesis 2b

To investigate hypothesis 2b (students' scores on the Search for Meaning subscale of the MLQ will moderate the relationship between perfectionistic striving and distress and suicidality), a moderation analysis was conducted to determine whether Search for Meaning subscale scores on the MLQ moderate the relationship between Standards subscale scores on the SAPS (i.e., perfectionistic striving) and Distress and Suicidality Continuum scores. In Step 1 of the regression, all demographic variables on which a significant relationship with DSC scores was observed were regressed on DSC scores. In Step 2 of the regression, Search for Meaning subscale and Standards subscale scores were regressed on DSC scores to determine whether there was a main effect of either variable of interest. In Step 3 of the regression, an interaction term SearchXStriving was created by multiplying mean-centered SAPS Standards subscale scores and mean-centered MLQ Search for Meaning subscale scores. Results from the regression analyses are reported in Table 13.

Table 13: Hierarchical Multiple Regression Analyses Predicting Distress and Suicidality Continuum Scores From Demographic Variables, Perfectionistic Striving, Search for Meaning, and a Search for MeaningXPerfectionistic Striving Interaction Term.

Predictor	<i>B</i>	<i>SE B</i>	β	r_{sp}^2	R^2	<i>Adj.R</i> ²	ΔR^2
Step 1							
Gender Identity	1.162	.219	.073***				
Sexual Orientation	1.286	.080	.221***				
Model 1						.060	.061***
Step 2							
Gender Identity	1.214	.215	.076***				
Sexual Orientation	1.233	.079	.212***				
Perfectionistic Striving	-.027	.006	-.057***				
Search for Meaning	.049	.004	.171***				
Model 2						.090	.030***
Step 3							
Gender Identity	1.213	.215	.076***				
Sexual Orientation	1.233	.079	.212***				
Perfectionistic Striving	-.029	.007	-.060***				
Search for Meaning	.049	.004	.173***				
SearchXStriving	-.001	.001	-.014				
Model 3						.090	.000

Note: r_{sp}^2 denotes squared semi-partial correlation

* $p < .05$; ** $p < .01$; *** $p < .005$.

Results from the regression analysis did not support the hypothesis that search for meaning would moderate the relationship between perfectionistic striving and distress/suicidality ($\Delta R^2 = .000$, $F(5178) = 1.122$, $p = .290$). Examination of squared semi-partial correlations indicates that addition of the interaction term to the model did not account for any additional variance.

In step 2 of the regression, an analysis of main effects showed that search for meaning was a positive predictor of distress and suicidality scores ($B = .049$, $\beta = .171$, $t(5179) = 12.799$, $p < 0.001$), suggesting that higher search meaning scores predict higher distress/suicidality scores. Additionally, Step 2 analyses demonstrated that perfectionistic

striving was a negative predictor of distress/suicidality ($B = -.027$, $\beta = -.057$, $t(5179) = -4.292$, $p < 0.001$), suggesting that in this model, higher levels of perfectionistic striving predicted lower levels of distress/suicidality.

Hypothesis 2c

To investigate hypothesis 2c (students' scores on the Presence of Meaning subscale of the MLQ will moderate the relationship between perfectionistic concerns and distress and suicidality), a moderation analysis was conducted to determine whether presence of meaning scores on the MLQ moderate the relationship between Discrepancy subscale scores on the SAPS (i.e., perfectionistic concerns) and Distress and Suicidality Continuum scores. In Step 1 of the regression, all demographic variables on which a significant relationship with DSC scores were observed were regressed on DSC scores. In Step 2 of the regression, MLQ Presence of Meaning subscale and SAPS Discrepancy subscale scores were regressed on DSC scores to determine whether there was a main effect of either variable of interest. In Step 3 of the regression, an interaction term PresenceXDiscrepancy was created by multiplying mean-centered SAPS Discrepancy subscale scores and mean-centered MLQ Presence of Meaning subscale scores. Results from the regression analyses are reported in Table 14.

Table 14: Hierarchical Multiple Regression Analyses Predicting Distress and Suicidality Continuum Scores From Demographic Variables, Perfectionistic Concerns, Presence of Meaning, and a Presence of MeaningXPerfectionistic Concerns Interaction Term.

Predictor	<i>B</i>	<i>SE B</i>	β	r_{sp}^2	R^2	<i>Adj.R²</i>	ΔR^2
Step 1							
Gender Identity	1.075	.217	.069***				
Sexual Orientation	1.271	.081	.217***				
Model 1						.058	.058***
Step 2							
Gender Identity	.779	.195	.050***				
Sexual Orientation	.805	.074	.138***				
Perfectionistic Concerns	.085	.004	.273***				
Presence of Meaning	-.072	.004	-.257***				
Model 2						.241	.184***
Step 3							
Gender Identity	.765	.195	.049***				
Sexual Orientation	.794	.074	.136***				
Perfectionistic Concerns	.086	.004	.279***				
Presence of Meaning	-.070	.004	-.249***				
PresenceXConcerns	-.002	.001	-.036**				
Model 3						.242	.001**

Note: r_{sp}^2 denotes squared semi-partial correlation

* $p < .05$; ** $p < .01$; *** $p < .005$.

Results from the regression analysis did not support the hypothesis that presence of meaning moderates the relationship between perfectionistic concerns and distress/suicidality ($\Delta R^2 = .001$, $F(5177) = 8.448$, $p = .004$). Examination of squared semi-partial correlations indicates that when the PresenceXConcerns interaction was added to the regression model, this explained an additional 0.1% of the variance. While results were statistically significant, the amount of additional variance explained by the addition of the interaction term was negligible. It was determined that the finding of significance was an artifact of the study being overpowered due to the large sample size,

as evidenced by the a change of less than 1% in the total variance explained by step 3 of the model.

In step 2 of the regression, an analysis of main effects showed that presence of meaning was a negative predictor of distress and suicidality scores ($B = -0.072$, $\beta = -0.257$, $t(5178) = -19.548$, $p < 0.001$), suggesting that higher presence of meaning scores predict lower distress and suicidality scores. Additionally, Step 2 analyses demonstrated that perfectionistic concerns were a positive predictor of distress/suicidality ($B = 0.085$, $\beta = 0.273$, $t(5178) = 20.931$, $p < 0.001$), suggesting that higher levels of perfectionistic concerns predicted higher levels of distress/suicidality.

Hypothesis 2d

To investigate hypothesis 2d (students' scores on the Search for Meaning subscale of the MLQ will moderate the relationship between perfectionistic concerns and distress and suicidality), a moderation analysis was conducted to determine whether Search for Meaning subscale scores on the MLQ moderate the relationship between SAPS Discrepancy subscale scores on the SAPS (i.e., perfectionistic concerns) and Distress and Suicidality Continuum scores. In Step 1 of the regression, all demographic variables on which a significant relationship with DSC scores was observed were regressed on DSC scores. In Step 2 of the regression, Search for Meaning subscale and SAPS Discrepancy subscale scores were regressed on DSC scores to determine whether there was a main effect of either variable of interest. In Step 3 of the regression, an interaction term SearchXConcerns was created by multiplying mean-centered SAPS Discrepancy subscale scores and mean-centered MLQ Search for Meaning subscale scores. Results from the regression analyses are reported in Table 15.

Table 15: Hierarchical Multiple Regression Analyses Predicting Distress and Suicidality Continuum Scores From Demographic Variables, Perfectionistic Concerns, Search for Meaning, and a Search for MeaningXPerfectionistic Concerns Interaction Term.

Predictor	<i>B</i>	<i>SE B</i>	β	r_{sp}^2	R^2	<i>Adj.R</i> ²	ΔR^2
Step 1							
Gender Identity	1.119	.218	.071***				
Sexual Orientation	1.285	.080	.220***				
Model 1						.060	.060***
Step 2							
Gender Identity	.865	.202	.055***				
Sexual Orientation	1.018	.075	.174***				
Perfectionistic Concerns	.106	.004	.342***				
Search for Meaning	.021	.004	.075***				
Model 2						.193	.134***
Step 3							
Gender Identity	.864	.202	.055***				
Sexual Orientation	1.018	.075	.174***				
Perfectionistic Concerns	.106	.004	.342***				
Search for Meaning	.021	.004	.075***				
SearchXConcerns	.000	.001	-.003				
Model 3						.193	.000

Note: r_{sp}^2 denotes squared semi-partial correlation

* $p < .05$; ** $p < .01$; *** $p < .005$.

Results from the regression analysis did not support the hypothesis that search for meaning would moderate the relationship between perfectionistic concerns and distress/suicidality ($\Delta R^2 = .000$, $F(5191) = 0.088$, $p = .767$). Examination of squared semi-partial correlations indicates that addition of the interaction term to the model did not account for any additional variance in the model.

In step 2 of the regression, an analysis of main effects showed that search for meaning was a positive predictor of distress and suicidality scores ($B = .021$, $\beta = .075$, $t(5191) = 5.799$, $p < 0.001$), suggesting that higher search meaning scores predict higher distress/suicidality scores. Additionally, Step 2 analyses demonstrated that perfectionistic

concerns were a positive predictor of distress/suicidality ($B = 0.106$, $\beta = 0.343$, $t(5191) = 26.270$, $p < 0.001$), suggesting that in this model, higher levels of perfectionistic concerns predicted higher levels of distress/suicidality.

Chapter Five: Discussion

The central aim of the current study was to explore the relationship between perfectionism and distress/suicidality, and to examine meaning in life as a potential influencing factor in that relationship. The main effects of both perfectionistic striving and perfectionistic concerns were examined in relation to distress and suicidality continuum scores. Results from the current study suggest that students endorsing higher levels of perfectionistic concerns are more likely to endorse more severe items on the distress and suicidality continuum. A statistically significant, but very weak, negative association was found between perfectionistic striving and distress/suicidality, however, this association was negligible and indicates a lack of a relationship between the two constructs.

Overall, students who endorsed higher levels of presence of meaning were less likely to endorse more severe items on the distress and suicidality continuum. Students who endorsed higher levels of search for meaning were more likely to endorse more severe items on the distress and suicidality continuum. Search for meaning and presence of meaning were examined as moderators of the relationship between both constructs of perfectionism (striving and concerns) and distress/suicidality. It was hypothesized that both presence and search for meaning in life would moderate the relationship between perfectionism and distress/suicidality, however this hypothesis was not supported. While the analysis of presence of meaning as a moderator of the relationship between perfectionistic concerns and distress/suicidality yielded statistically significant results, the amount of additional variance explained by the interaction term was negligible (0.1%). No other interaction effect was found to support meaning in life as a moderator of the relationship between perfectionism and distress/suicidality.

DISCUSSION OF DEMOGRAPHIC PREDICTORS

Though not included in the research questions of the current study, some demographic factors already believed to predict distress and suicidality were examined as predictors in this study. While the intent was to control for these variables in the subsequent steps of the regression analyses, findings associated with these demographic variables are worthy of note and may inform potential interventions to reduce suicidality on college campuses. It was found that participants who identified as a sexual minority were more likely than other participants to experience a more severe form of distressed/suicidal thoughts. This is consistent with findings from previous research (Haas et al., 2011, Marshal et al., 2011). Also consistent with previous research is the finding that participants who identify as bisexual or questioning were at greater risk than their lesbian and gay-identified counterparts.

Participants who identified as transgender or “other” gender were also found to be more likely than their cisgender counterparts to experience more severe distressed and suicidal thoughts. This connection between gender identity and suicidal thoughts and behaviors has also been established in previous research (Clements-Nolle, Marx, & Katz, 2006, Perez-Brumer, Hatzenbuehler, Oldenburg, & Bockting, 2015). Research has found that structural stigma against sexual minorities (i.e., policies related to gender identity and sexual orientation discrimination, representation of sexual minorities in the population, aggregated public opinion towards sexual minorities) predicted higher levels of suicidal ideation in LGBTQ populations (Perez-Brumer et al., 2015). Given that these populations are at increased risk for suicidal thoughts and behaviors, colleges and universities may want to consider interventions that can be implemented at the population level (i.e., campus policies, awareness campaigns) to decrease structural stigma and therefore provide an environment that is protective towards suicidal risk.

CORRELATIONS BETWEEN PREDICTOR AND MODERATOR VARIABLES

Similarly, relationships between the dimensions of perfectionism and meaning in life, though not part of the central analyses of this study, can lend insight into the current study's findings and provide information for further research. Currently, very few studies exist that examine the relationship between existential variables and dimensions of perfectionism. Studies examining the existential model of depressive symptoms (EMPDS; Graham et al., 2010, Sherry et al, 2015) do investigate this relationship to some extent, but researchers of the EMPDS operationalize the existential component as "difficulty accepting the past." Park and Jeong (2016) advocate for broadening the understanding of existential theory and examining the relationship between perfectionism and meaning in life.

In the current study, perfectionistic concerns were predictive of lower presence of meaning and higher search for meaning scores, whereas perfectionistic striving was predictive of both higher presence of meaning and search for meaning scores. This is consistent with findings in Park and Jeong's (2016) study. The finding of a positive relationship between perfectionistic striving and both presence of meaning and search for meaning is potentially of interest, and further speaks to the dual nature of both the constructs of perfectionistic striving, which can serve both an adaptive and a maladaptive role (Stoeber and Otto, 2006) and search for meaning, which though commonly associated with negative mental health outcomes, has been found to have some adaptive elements (Steger et al., 2008, Park et al, 2010).

Though the current study did not find that either dimension of meaning in life moderated the relationship between perfectionism and suicidality, findings of the current study do provide evidence that support a relationship between both dimensions of meaning in life with both dimensions of perfectionism. When considering interventions

that target perfectionism or meaning in life among college students, colleges and universities may want to be mindful of this relationship. For example, the finding that presence of meaning has a positive relationship with perfectionistic striving and is negatively linked to perfectionistic concerns could add depth to interventions that address perfectionism among a college student population. Results from this study suggest that presence of meaning may be a variable that can help differentiate between “healthy” and “unhealthy” perfectionistic attitudes (Stoeber & Otto, 2006).

PERFECTIONISM AND SUICIDALITY

The results of this study suggest that perfectionistic concerns are predictive of distressed and suicidal thoughts. This is consistent with previous research, which has presented strong evidence for a link between perfectionistic concerns and suicidality (Johnson et al., 2011; O’Connor, 2007, Hyatt, 2010; Flett, Hewitt, & Heisel, 2014), as well as perfectionistic concerns and distress (Ashby, Noble, & Gnilka, 2012; Flamenbaum & Holden, 2007). One unique contribution of the current study is its examination of the relationship between perfectionistic concerns and distressed and suicidal thoughts as they exist on a continuum. The majority of studies that have connected perfectionism to suicide in the past have examined distress and suicidality as two separate constructs. The current findings suggest that as an individual increases in their degree of perfectionistic concerns, they will also increase incrementally in the level of severity of their distress, and that those thoughts of distress may progress towards suicidal thinking.

In the current study, perfectionistic striving did not appear to have a strong relationship with distressed/suicidal thoughts. Previous research has found mixed results when examining perfectionistic striving. Perfectionistic striving has been found to be both predictive of negative mental health outcomes (Cox et al., 2002; Bieling et al., 2003,

Enns et al., 2001), and protective against negative mental health outcomes (Chang, Watkins, & Banks, 2004; Rice, Lopez, & Vergara, 2005). One finding of interest regards the skewness of student responses on the perfectionistic strivings subscale of the SAPS. Out of 5,299 students who completed the measure, 1,462 scored the maximum possible score on this subscale (28). An additional 2,019 students scored a 24 or higher, indicating that 3,481 of 5,299, or 66% of students self-reported a very high level of perfectionistic striving. Furthermore, 4,958 of 5,299, or 94% of students, scored above the midpoint on this scale.

The high number of self-reported “perfectionistic strivers” in this study creates a problem with respect to statistical analysis. There exists a lack of variability that limits the interpretability of regression analyses of this scale. It is difficult to determine from this sample how varying levels of perfectionistic striving might impact distress/suicidality, because of a lack of information on students who do not endorse attitudes of perfectionistic striving. On the other hand, this finding provides interesting information regarding the way undergraduate college students perceive themselves. Current study results suggest that the majority of college students (perhaps as many as 94%) view themselves as holding themselves to high standards and striving to meet goals.

Given that striving for excellence is very much a part of the culture of college-aged students at this time, it may be that there was a social desirability bias in participants’ responses, who felt compelled to portray themselves as consistently striving for their best and setting high standards for themselves. It is also possible that this result could be genuinely reflective of the current values of college students, potentially supporting Deresiewicz’s (2013) claims that students are highly focused on achievement and external markers of success. One might also argue that college students are a group

that may not be representative of the broader population as a whole, and that some degree of high standards and striving is required in order for a student to survive the college admissions process and become a college student in the first place. This phenomenon bears further investigation, potentially through qualitative measures, or through quantitative measures that have greater sensitivity to the spectrum of attitudes students can endorse regarding their perfectionistic striving. Further research could also examine the source of these attitudes among college students, again through qualitative studies, or potentially through longitudinal studies that examine students' attitudes toward perfectionistic striving through the course of their college career.

It may be a worthwhile goal of colleges and universities to work to ensure that the tendency to set high standards for oneself does not result in a “falling short of standards” experience as defined by Baumeister (1990). According to Baumeister, this experience can serve as an antecedent to suicidal thinking, which may represent a point of entry onto the continuum of distressed and suicidal thoughts. Relatedly, colleges and universities may benefit from working to ensure that the attitudes of perfectionistic striving among college students do not also contribute to perfectionistic concerns. While it may be an adaptive trait of many college students that they feel driven to strive for a high level of achievement, colleges should be mindful of interventions that can ensure that attitudes of perfectionistic striving function in an adaptive way for students and do not pave the way for the sense that one's best is never good enough, which is the hallmark of perfectionistic concerns.

MEANING IN LIFE AND SUICIDALITY

Results from the current study suggest that presence of meaning is protective against the development of distressed/suicidal thoughts, regardless of whether perfectionistic attitudes are present in an individual. This finding is consistent with

previous research, which has identified presence of meaning as a protective factor against the development of suicidal thoughts (Kleiman & Beaver, 2013; Wilchek-Aviad, 2015; Flett & Heisel, 2008). Even when examined alongside perfectionistic concerns, another powerful predictor of suicidality, presence of meaning appeared to predict a large proportion of the variance in the current study's regression analysis.

Search for meaning appeared to be predictive of higher levels of distress and suicidality. This finding is also consistent with previous research, which has found associations with search for meaning and a number of negative mental health outcomes (Steger & Kashdan, 2007; Steger et al., 2008). Viktor Frankl (1963) identified the distress and tension that can arise from the search for meaning, and researchers have concluded that those who feel they lack meaning in their life tend to search for it (Steger et al., 2008). Search for meaning is a construct that inherently contains within it some dissonance, and potentially distress, and the cognitive and emotional challenge of that search can also put strain on individuals (Shin and Steger, 2016).

Despite these findings connecting search for meaning to negative mental health outcomes, it should not be concluded that the search for meaning is something to be prevented in college students. Researchers have found that search for meaning may be less predictive of distress when it coexists with presence of meaning (Steger, Oishi, & Kesebir, 2011; Park, Park, & Peterson, 2010), and many researchers and theorists argue that the search for meaning is an inevitability, and is particularly likely to impact college-aged individuals (e.g., Erikson, 1968; Frankl, 1963). Additionally, recent research has shown that colleges that support the search for meaning in their students are protective environments that foster positive outcomes as a result of meaning searching. Shin and Steger (2016) found that the relationship between presence of meaning and search for meaning was influenced by the degree to which students felt that searching for meaning

was supported by their college environment. For students who perceived a high degree of support of meaning searching, presence of meaning increased as search for meaning increased, whereas for students who did not perceive a high degree of support in meaning searching, higher search for meaning predicted lower presence of meaning. These findings suggest that institutions that provide more support for meaning searching, and more opportunities to do that searching, may find that they are promoting the presence of meaning in students' lives as they are encouraging the search for meaning.

MODERATION ANALYSES

In all cases, the moderating effect of meaning in life on the relationship between perfectionism and distress/suicidality was negligible. It can be concluded that in the current study, neither presence of meaning nor search for meaning exerted influence on the relationship between either dimension of perfectionism and distress/suicidality. Similar findings were observed in a recent study published by Park and Jeong (2016), who examined both search for meaning and presence of meaning as moderators of the relationship between perfectionism and distress/depressive symptoms. Park and Jeong found that presence of meaning was not a moderator of the relationship between perfectionistic concerns and distress, and the results of this study replicated that result. However, Park and Jeong found that search for meaning predicted a stronger positive relationship between perfectionistic concerns and distress and depressive symptoms, and the null results of this study run contrary to those findings.

Meaning in life has been examined as a moderator and has been found to be protective in some well-established relationships between risk factors and mental health outcomes (Halama & Bakošova, 2009; Hong, 2008). An additional aim of the current study was to further understand the dual nature of perfectionistic striving (i.e., its tendency to predict both positive and negative mental health outcomes), potentially

through identifying search for, or presence of, meaning in life as a moderator that could potentially amplify either the positive or negative relationship between perfectionistic striving and distress/suicidality. While it would be useful to identify moderators that mitigate the relationship between suicidal thoughts and perfectionistic concerns, current study results do not support meaning in life as a moderator of that relationship.

These findings indicate that while both meaning and perfectionism are important predictors of distress and suicidality, meaning in life does not influence the relationship between perfectionism and distress/suicidality. Put differently, if one is high in presence of meaning in life, this will be protective against distressed and suicidal thoughts, but this high level of presence of meaning will not change the magnitude by which perfectionistic concerns can predict distressed and suicidal thoughts. The same can be inferred for all other moderation effects examined in this study.

Escape theory (Baumeister, 1990) may provide a useful framework through which to interpret these null findings. It may be that perfectionistic thinking influences the pathogenic process by which one develops suicidal thoughts at an earlier stage than one's ability to identify and integrate sources of meaning. If an individual progresses through these stages over time, perfectionistic thinking may *initiate* the pathogenic process (i.e., through an experience that one falls short of standards and resulting negative self-awareness) while a rejection of meaning may be a *consequence* of that pathogenic process. Thus, even though these two variables both influence one's degree of distressed/suicidal thoughts, they may not interact with one another.

Perfectionistic concerns reflect a mindset that is characterized by pervasive negative self-beliefs and a sense that no matter how hard one strives, one's best will never be good enough (Flett, Hewitt, & Heisel, 2014). It may be that regardless of one's sense of meaning in life, these maladaptive perfectionistic self-beliefs are strong enough

to influence one's likelihood to develop distressed and suicidal thoughts. With respect to perfectionistic striving, again, neither presence of meaning nor search for meaning appeared to influence the relationship between perfectionistic striving and distressed and suicidal thoughts.

The null findings of this study generate possibilities that can be further explored in future research. First, the existential model of depressive symptoms (Graham et al., 2010; Sherry et al., 2015) poses certain existential constructs (i.e., willingness to accept the past) as mediators of the relationship between perfectionism and suicidality, rather than as moderators. It may be that perfectionistic attitudes are linked to meaning in life in such a way that mediation analyses are more appropriate to study this relationship. Both constructs reflect attitudinal perspectives on the self, others, and the world, and it is possible that the relationship between perfectionism and suicidality can be explained by the presence or search for meaning in life, rather than mitigated by it.

Second, the constructs of meaning in life and perfectionism are both broad constructs that reflect an individual's attitudes across a range of contexts. It may be that a more context-specific examination of meaning and perfectionism would have yielded different results. For example, measures of meaning such as those that measure calling in a profession (Steger et al., 2010) may moderate the relationship between an individual's perfectionistic attitudes about their work in classes that relate to their chosen major and that individual's level of distressed and suicidal thinking. Further directions in research could explore the relationship between perfectionism and meaning in life as it relates to context-bound attitudes.

The findings of this study may also be specific to the college student demographic. Research shows that meaning in life becomes a more salient construct as individuals age (Erikson, 1968), and it may be that the way college students connect to

and relate to meaning in life may be very different than older adults, and meaning in life and perfectionism may interact to influence distressed and suicidal thoughts in older adults in a way that they do not for college students. This could be a potential future direction of research.

IMPLICATIONS FOR INTERVENTIONS ON COLLEGE CAMPUSES

Results from the current study provide further support for the well-established findings that perfectionistic concerns are predictive of distressed and suicidal thoughts, whereas perfectionistic striving did not appear to be predictive of distress and suicidality in either direction. Current results also support previous research that has identified presence of meaning in life as a construct that is protective against distress and suicidality. Contrastingly, search for meaning in life was related to increased endorsement of distressed and suicidal thoughts. Given that college is a time when many students are exploring sources of meaning (Arnett, 2002; Erikson, 1968), it follows that colleges could serve as shepherds through the process of searching for meaning, in the hopes that a sense of presence of meaning will emerge. The following section will discuss these findings in the context of interventions on college campuses.

Davidson and Locke (2010) argue for the importance of taking a public health approach to student mental health concerns. They advocate for viewing mental health through the “social ecological model,” which takes into account the environment in which students attend college, including the social, legal, economic and physical environment. They cite research indicating that the majority of students suffering from depression are not in treatment, and that the majority of suicides completed on a college campus are not completed by clients of the campus counseling center. Additionally, they point to research that shows the strong influence of social connectedness on student mental health, and argue that this presents a case for treating communities of students

rather than solely treating individuals. These findings, when coupled with an acknowledgement of the financial and staff capacity limitations faced by college counseling centers, present a compelling argument for mental health interventions which focus on prevention and aim to reach students beyond those who come in for services at their campus counseling center.

Davidson and Locke (2010) define “intervention” as: “an activity, policy, practice, or service that is designed to result in some change in people or in the environment” (p. 268). Drum and Denmark (2011) identify several types of interventions to address college student mental health, and specifically college student suicide, on college campuses. These intervention types range from prevention to treatment to recovery. The types of intervention identified by Drum and Denmark (2011) are ecological prevention, proactive prevention, early intervention, treatment and crisis intervention, and relapse prevention. Each of these intervention types will be further explicated in the remaining paragraphs in this section.

Ecological interventions are defined by Drum and Denmark (2011) as interventions that alter or enhance environmental qualities to promote health in an entire population. Ecological interventions may also be interventions that reduce or remove environmental qualities that could degrade mental health. Drum and Denmark (2011) state that in order for effective ecological interventions to be implemented, changes must occur at the level of organizational policy and environmental structuring. Though these interventions require the investment and buy-in of policy makers and higher-level administrators, they hold the potential for powerful impact. These interventions are self-renewing, in that they reach each new class of college students as they arrive at an institution, and can have a far-reaching impact on the entire college student population, since students generally do not need to take action in order to benefit from ecological

interventions. As an example of ecological interventions on college campuses, Drum and Denmark (2011) cite the example of First Year Experience initiatives that exist at many schools in order to foster connectedness among students. According to Drum and Denmark, in order for an ecological intervention to have maximal effect, it must be institutionalized, recurring, and embedded in the curriculum and school culture.

Colleges and universities might consider ecological interventions that could reduce the degree of perfectionistic concerns among students, such as implementing policy or curriculum changes that reduce competitiveness among students. Baumeister's (1990) escape theory of suicide proves theoretical support for the idea that intervening early to address perfectionistic concerns may positively impact college student mental health. Given that an experience of a failure to meet standards is conceptualized as the first stage in an individual's progression towards suicidal thinking, this seems an ideal point at which to intervene with an entire student population, thus potentially preventing students' entrance onto the continuum of distress and suicidality.

Similarly, ecological interventions that bolster a student's presence of meaning may also bolster that student against developing suicidal thoughts. Interventions that encourage the search for meaning among students may also have a positive impact on the mental health of a student population. Recent research has provided evidence for the benefit of ecological interventions that support meaning searching. Shin and Steger (2016) found that students' perceived support of meaning searching on their college campuses was a positive predictor of presence of meaning in life. Additionally, campus support around meaning searching acted as a moderator that predicted a more positive relationship between meaning searching and presence of meaning (Shin & Steger, 2016). Ecological interventions that foster meaning making or meaning searching could include changes to class curricula that orient students toward identifying a sense of purpose and

meaning in their studies. Additionally, schools can provide opportunities for students to engage in activities that may imbue their lives with a sense of meaning. Individuals derive meaning in a myriad of ways (Heintzleman and King, 2014), so by lending support to student organizations centered around activism, religion, creativity, etc., universities can also be supporting the development of a sense of meaning in life in their students.

Ecological interventions function to influence the culture of a campus, and can set the stage for proactive prevention activities. Proactive prevention is the second type of prevention intervention identified by Drum and Denmark (2011). This type of intervention can be designed to target an entire student population, or it may be designed to target specific groups within a population. Proactive prevention is designed to address vulnerabilities to developing mental illness through the strengths-focused bolstering of positive coping strategies. Drum and Denmark (2011) differentiate the two by explicating that the goal of proactive prevention is to foster healthier and safer behavior in college students, rather than creating a safer environment, which is the goal of ecological interventions. Proactive prevention interventions can take the form of psychoeducational interventions such as awareness-raising campaigns, academic and social programming, and campus activism. Unlike policy changes at the ecological level, these interventions are not automatically self-renewing, and so facilitators of these interventions must plan for the recurrence of these interventions over time.

Several proactive prevention interventions exist to address college student suicidality. Programs raising awareness about suicidality and promoting help-seeking are common on college campuses, as are campaigns that raise awareness about mental health and advertise the availability of counseling services. Results from the current study suggest that proactive prevention interventions that work to bolster a student's sense of meaning in life and reduce perfectionistic concerns may provide valuable points of

intervention to prevent students from entering onto, and progressing further along, the continuum of distress and suicidality. Awareness campaigns that foster healthy attitudes towards achievement or normalize the experience of failure may help reduce perfectionistic concerns among college students. Similarly, awareness campaigns and programming that encourage students to identify sources of meaning in their life could be useful in bolstering healthy coping and protective factors in the college student population.

Technology provides an additional medium for proactive prevention interventions on a college campus. Several colleges and universities have made use of social media campaigns to foster healthy behaviors and attitudes among college students. One study found that a social media campaign providing information about a suicide hotline resulted in an increased number of calls to that hotline (Jenner, Jenner, Matthews-Sterling, Butts, & Williams, 2010). Other schools have engaged in efforts to create applications for smartphones that foster awareness and healthy behaviors, such as the Thrive application at the University of Texas at Austin (K. Redd, personal communication, March 2015), or YOU@CSU at Colorado State University (N. Demers, personal communication, August 10, 2016). Both of these are examples of online resources to students that are designed to foster healthy coping attitudes, self-awareness, and resilience among college students. Websites, applications, and social media campaigns could also be used to foster presence of meaning or healthy attitudes toward achievement, which could in turn reduce the number of students who struggle with suicidal thoughts.

Moving beyond the realm of interventions that target college student populations, Drum and Denmark (2011) describe interventions that fall within the realm of clinical interventions. Early interventions, as described by Drum and Denmark, are those interventions that target students who may not currently be in distress, but who may be at

risk for distress and suicidality, or who may be exhibiting warning signs. These are interventions that target specific groups of students or individuals, with the goal of creating readiness for change and bolstering coping strategies and positive resources. Such interventions could include a healthy achievement attitudes group offered by a campus counseling center or a meaning-making group.

Early clinical interventions that target meaning in life could include interventions that foster self-authorship among students. Self-authorship, which refers to one's ability to internally define one's values, beliefs, identity, and ways of relating (Baxter Magolda & King, 2007), is linked to one's presence of meaning in life. Researchers have identified interview structures which can assess for, and foster, a student's sense of self-authorship, and have explicated how advisers and other college administrators can intervene with students to encourage a higher sense of self-authorship (Baxter Magolda & King, 2008). Other interventions, such as the Purpose Interview Protocol (Yeager & Bundick, 2009), can be implemented by counselors, advisers, faculty, and other college and university stakeholders in order to facilitate a sense of purpose and self-knowledge among students. Studies have also identified several interventions that can be useful to address perfectionistic concerns (for review, see Lloyd, Schmidt, Khondoker, & Tchanturia, 2015; Flett & Hewitt, 2008). Cognitive-behavioral approaches to therapy offer several interventions which can positively impact an individual's tendency to endorse maladaptive perfectionistic attitudes (Flett & Hewitt, 2008), and those interventions can be implemented in both individual and group contexts to intervene early when individuals begin to endorse maladaptive perfectionistic attitudes.

According to Drum and Denmark (2011), the phase of treatment and crisis intervention is focused on students who have entered an acute stage of suicidal crisis. Treatment and crisis intervention involves clinical treatment, such as therapy and

psychopharmacology, which is designed at keeping students safe from a suicide attempt in the immediate future. Strategies such as safety planning and connecting students with resources are useful at this stage. Students who endorse more severe items on the distress and suicidality continuum, such as “I might kill myself,” are the population that should be targeted by these interventions. While efforts to bolster meaning and reduce perfectionism may be helpful at this stage, the majority of the focus of treatment should be spent on keeping students safe from harm.

Escape theory (Baumeister, 1990) can inform interventions related to both perfectionism and meaning in life at this more acute point of intervention. According to Baumeister’s escape theory of suicide, by this point an individual likely will have progressed through several of the stages of escape theory and may be considering suicide as a means of escape from their painful self-experience. Rejection of meaning is one of the consequences that can occur as a result of the cognitive deconstruction that marks the fifth stage of escape theory, and assessing for a sense of meaning in life may provide valuable information to clinicians who are striving to assess for suicidal risk and keep their students safe. Baumeister (1990) identifies one’s ability to construct new meanings out of an experience as essential to an individual’s resolution of a suicidal crisis, and this may be a particularly important point of intervention for suicidal students. Similarly, while a falling short of standards experience characterizes the first stage of escape theory, clinicians working with students who are exhibiting suicidal risk may want to be mindful of the ways those students make sense of their experience, and attend to whether the consequences of this “falling short of standards” experience, such as negative self-awareness and negative affect, are present.

The final form of intervention explicated by Drum and Denmark (2011) is lapse and relapse prevention, which focuses on preventing individuals who may be recovering

from a suicidal crisis from developing acute suicidal thoughts again. At this stage, meaning-making interventions may be especially important, since finding meaning in a traumatic event or struggle can be protective (Kashdan & Kane, 2011). In lapse and relapse intervention, Drum and Denmark (2011) recommend paying close attention to the environment of the recovering individual. If a clinician finds that a student recovering from a suicidal crisis is inclined towards perfectionistic concerns, that clinician may want to advocate for a monitoring of that individual's environment to reduce any externally imposed exacting standards to which the student might feel compelled to hold him or herself.

Interventions that positively influence the level of presence of meaning and reduce perfectionistic concerns in college students are valuable in that they may prevent someone who is at risk for the development of suicidal thoughts from progressing along the continuum of distress and suicidality. In addition, they may bolster the overall mental health of a college student population, and may help with the recovery of individuals who are emerging from a suicidal crisis. In order to generate buy-in for these types of interventions, it is important to impress upon campus stakeholders that suicidal thoughts exist on a continuum in a variety of forms and expressions, and that by preventing students from entering and progressing along the continuum of distress and suicidality, fewer students will enter into suicidal crisis and require treatment and crisis intervention.

STRENGTHS, LIMITATIONS, AND FUTURE DIRECTIONS

The current study is the only study (to the author's knowledge) to examine perfectionism, meaning in life, and suicidality. While some studies have examined these variables as they relate to antecedents to suicidality, such as depression (Sherry et al., 2010; 2015; Park and Jeong, 2016), this is the first study of its kind to extend the research of meaning in life, perfectionism, and distress to include the continuum of suicidal

thoughts that can exist for an individual. By studying suicidal thoughts on a continuum, researchers can better understand the incremental changes in a student's development of suicidal thoughts that can be brought about by changes in meaning in life or changes in perfectionistic attitudes.

Additionally, this study addressed a need articulated by researchers (e.g., Flett et al., 2014) to examine positive psychology factors as playing a potential buffering role in the relationship between perfectionism and suicidality. While the current study did not find that meaning in life as measured by the MLQ (Steger et al, 2006) acted as a moderator of the relationship between either dimension of perfectionism and distress/suicidality, further research should continue to explore the potential role of meaning in life in the relationship between perfectionism and distress/suicidality, potentially through mediation analyses. Further research might also consider as moderators the related constructs of calling and purpose in life.

The current study also provides additional support for many of the conclusions of a similar study conducted by Park and Jeong (2016). While these researchers examined distress and depression, rather than distress and suicidality, as their outcome variables, they found similar results with respect to the moderating role of meaning in life. In both studies, meaning in life as measured by the MLQ was not supported as a moderator of the relationship between perfectionism and depression/suicidality in the majority of analyses. In one notable exception, Park and Jeong identified search for meaning as a moderating variable that increased the strength of the relationship between perfectionistic concerns and depression. Search for meaning was not found to be a moderator of the relationship between perfectionism and distress/suicidality in the current study.

The current study adds to the existing body of research in that it examines the relationships between perfectionism, meaning in life, and distress/suicidality in a large

college student population that is comprised of participants at a wide variety of schools across the country. The large sample size and variety of schools surveyed increases the ability to generalize these findings to the college student population as a whole, though limits to generalizability of the findings still exist.

Additionally, by examining distressed and suicidal thoughts on a continuum, the current study provides researchers and college stakeholders with valuable information about population-based interventions that can address the well-being of a college student population. By conceptualizing suicidal thoughts as the culmination of a progressive thought process that begins with less severe thoughts of distress, earlier points of intervention can be made available as targets for college campuses. College counseling center staff and administrators can use the findings of this study to inform interventions that reach students before they enter the continuum of distressed and suicidal thinking, or before they progress further along the continuum towards suicidal thoughts. Early interventions, particularly those that aim to improve the mental health of an entire college student population, are likely to serve a dual function of increasing the well-being of the student population as a whole while decreasing the number of students who seek counseling services for crisis intervention and lapse and relapse prevention interventions (Frolich & Potvin, 1999).

Several important limitations to the current study exist and should be considered when interpreting the study's findings. As with most studies of college student populations, the findings of this study may not generalize to individuals not enrolled in college. Results also may not generalize to individuals attending non-traditional institutions or community colleges, or to online learners, as those populations were not included in the current study. These findings should be interpreted with care when drawing conclusions about individuals not enrolled in traditional four-year universities

and colleges. Additionally, with a voluntary online survey, there exists the possibility for self-selection bias, in which participants who volunteer to take the survey may be different from the student population at large.

The purpose of the current study was to draw conclusions about interventions that could increase student well-being on college campuses, however, it should be noted that participants' responses in the current study may not reflect the views and needs of the entire college student population. While the demographics of the sample used were comparable to other national and large-scale surveys of colleges and universities (ACHA-NCHA, 2014; Drum et al., 2009; Brownson et al., 2016), White/European American students may have been overrepresented compared to other racial and ethnic minority students. Similarly, while participants of other marginalized identities, such as membership in the LGBTQ community, were included in this analysis, they may also have been underrepresented in the sample as a whole. Further research should be done to understand the unique ways the constructs of perfectionism, meaning in life, and distress/suicidality can manifest in specific populations.

A further limitation to the current study lies in the self-report nature of the survey questions. Self-report studies are dependent upon the respondent's ability to answer honestly and accurately, and may be subject to response bias. Studies have found that numerous factors can influence self-report survey responses, such as reference group effects (Heine, Lehman, Peng, & Greenholtz, 2002), question wording and context (Schuman & Presser, 1981), and language abilities (Schwarz, 1999). However, the inherent benefit in understanding the ways students see themselves in relation to the constructs examined provides support for using self-report measures in this study.

With respect to specific measures in the study, it may be that participants, when asked to recall their distressed or suicidal thoughts over the past year, could have

difficulty remembering their thoughts with accuracy. While the distress and suicidality continuum lends a great deal to research of suicidal thoughts by posing distressed and suicidal thoughts on a continuum, there are some limitations with respect to measurement and analysis that are inherent in the measure. While evidence exists to support that the measure does reflect a continuum of suicidal thoughts (Brownson et al., 2016), it is possible for a student to endorse an item on the continuum, and not endorse the items that came before it. In the current study, several participants endorsed the item “I have to escape” without endorsing all the items that are thought to reflect a lesser degree of distressed/suicidal thinking, such as “This is all just too much” and “I wish this would end.” This resulted in a bimodal distribution of responses, which may have created some issues in detecting statistical significance in the analyses. Further research into this continuum, such as item response theory analysis, could help to refine the measure for use in analyses that treat the data as continuous.

Some limitations exist with respect to the Short Almost Perfect Scale (SAPS) Standards subscale that was used to assess perfectionistic striving. A large majority of participants rated themselves at the very high end of this scale, which created difficulty with respect to regression analyses because of a limited amount of variance in participant responses. This response trend may reflect a demand characteristic inherent in the measure, in that students may be able to infer what is being assessed and may feel a desire to describe themselves as more inclined to perfectionistic striving than they actually are. Use of other measures of perfectionistic striving, such as the longer Standards subscale in the Almost Perfect Scale-Revised (Slaney et al., 2001), may have more sensitivity and could capture a greater variety of student attitudes. Further research directions could include studies which examine college students’ attitudes of perfectionistic striving via qualitative research methods, which could lend additional

information to the finding that the majority of students surveyed in the current study seemed to endorse a high level of perfectionistic striving. Relatedly, further directions in research could further investigate the phenomenon observed in the current study, and seek to understand why so many students appear to identify with attitudes of perfectionistic striving.

The correlational nature of the study contains inherent limitations, in that relationships identified in this study cannot be interpreted as implying causation. Further research, such as longitudinal research and qualitative research, could lend additional insight into how the constructs examined in this study relate to one another. Additional further research should be done to understand the relationships between perfectionism and meaning in life, as there is currently a dearth of research examining these connections (Park & Jeong, 2016). The finding that the search for meaning is positively related to both perfectionistic striving and perfectionistic concerns could be further investigated in order to better understand the dual nature of the constructs of search for meaning and perfectionistic striving, and to gain further information about the ways these constructs interact.

Results from this study should be considered exploratory in nature, in that while the investigation of the associations in this study was based on established theory, these associations have never been examined with the distress and suicidality continuum as the outcome variable. Further investigation of the interactions between perfectionism, meaning in life, and distress and suicidality could add deeper understanding to the body of research. With respect to the findings of the current study, college administrators, faculty, and staff could benefit from extrapolating these findings to design interventions that improve the sense of meaning in life and discourage unhealthy perfectionistic attitudes in their students. College campuses are ideal environments in which to

intervene with a population (Davidson & Locke, 2010; Drum & Denmark, 2011), and provide an opportunity to implement and evaluate efforts to increase support around identifying sources of meaning and decrease unhealthy perfectionistic attitudes, in the hopes that these interventions may prevent a student from entering onto or progressing along the continuum of distressed and suicidal thoughts.

Appendices

APPENDIX A: THE DISTRESS AND SUICIDALITY CONTINUUM DISTRESS AND SUICIDALITY CONTINUUM

In the past 12 months, did you have any thoughts similar to the following? Please select “yes” for all thoughts that apply.

YES NO 1) "This is all just too much"

YES NO 2) "I wish this would all end"

YES NO 3) "I have to escape"

YES NO 4) "I wish I was dead"

YES NO 5) "I want to kill myself"

YES NO 6) "I might kill myself"

YES NO 7) "I will kill myself"

(Drum et al., 2009)

APPENDIX B: THE SHORT ALMOST PERFECT SCALE
SHORT ALMOST PERFECT SCALE

Instructions

The following items are designed to measure attitudes people have toward themselves, their performance, and toward others. There are no right or wrong answers. Please respond to all of the items. Use your first impression and do not spend too much time on individual items in responding.

Respond to each of the items using the scale below to describe your degree of agreement with each item. Fill in the appropriate number circle on the computer answer sheet that is provided.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree

1. I have high expectations of myself.
2. Doing my best never seems to be enough.
3. I set very high standards for myself.
4. My performance rarely measures up to my standards.
5. I expect the best from myself.
6. I am hardly ever satisfied with my performance.
7. I have a strong need to strive for excellence.
8. I often feel disappointment after completing a task because I know I could have done better.

(Rice, Richardson, & Tueller, 2014)

APPENDIX C: THE MEANING IN LIFE QUESTIONNAIRE
MEANING IN LIFE QUESTIONNAIRE

Please take a moment to think about what makes your life and existence feel important and significant to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below:

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

1. I understand my life's meaning.
2. I am looking for something that makes my life feel meaningful.
3. I am always looking to find my life's purpose.
4. My life has a clear sense of purpose.
5. I have a good sense of what makes my life meaningful.
6. I have discovered a satisfying life purpose.
7. I am always searching for something that makes my life feel significant.
8. I am seeking a purpose or mission for my life.
9. My life has no clear purpose.
10. I am searching for meaning in my life.

(Steger et al., 2006)

APPENDIX D: FULL SURVEY CODEBOOK
Understanding Student Distress & Academic Success – Spring 2016
Survey Codebook

Final Version
 January 2016

Conventions	
Question Numbering Q2, Q3_1, Q3_2...	Each distinct question is numbered sequentially in presentation order. Some questions invite responses on several points; these various points share the same question number, but have a sequential letter appended to differentiate them.
Open Text Numbering	Items with free text will follow a numbering convention in which the letter ‘u’ follows each open text item (e.g., Q03_8u)
Survey Content “Please provide your age in years:”	The text of each question as well as all potential responses are included in this codebook. Anything marked with quotes is taken verbatim from the survey.
Response Options 1 = “Yes”	The response options for each question are indicated on the right side of each row. In the case of questions with multiple data points, the response options presented apply to each point. When there are response options nested within categories within an item (e.g., Q41), the numbering convention will reflect this nesting characteristic (e.g., Q41_1_1 indicates that participant endorsed turning to an adviser about academic problems).
Missing Values	For the majority of questions, a missing value is indicated by a blank; this may be due to either the respondent skipping the question or a skip pattern. The one exception is multiple-choice questions, in which a ‘0’ indicates a particular option has not been selected.

Q01	“Please provide your age in years:”	(dropdown menu [18 to 95]; blank = no response)
Q02	“With the understanding that these categories might be limiting, how do you typically describe your gender identity?”	blank = no response or skipped 1 = “Female” 2 = “Male” 3 = “Transgender” 4 = “Other, please specify:”
Q02_4u	(no prompt; provided for “Other, please specify:” response to Q02_4) [Q02_4 = 1]	(text; blank = no response or skipped)
Q03	“How would you describe your sexual orientation?”	blank = no response or skipped 1 = “Heterosexual” 2 = “Gay or Lesbian” 3 = “Bisexual” 4 = “Questioning” 5 = “Other, please specify:”
Q03_5u	(no prompt; provided for “Other, please specify:” response to Q03_5) [Q03_5 = 1]	(text; blank = no response or skipped)
Q04	“With the understanding that coming out is a process, if you consider yourself to have come out about your <i>sexual orientation</i> , how long ago did you do so?” [Q03 = 2, 3, 4, or 5]	blank = no response or skipped 1 = <6 months ago 2 = 6–12 months ago 3 = 1–3 years ago 4 = 3–5 years ago 5 = 5 or more years ago 6 = I have not come out 7 = I am likely to come out within the next year 8 = “Other, please specify”
Q04_8u	(no prompt; provided for “Other, please specify:” response to Q04_8) [Q04_8 = 1]	(text; blank = no response or skipped)
Q05	“With the understanding that these categories might be limiting, how do you typically describe yourself? (Select all that apply.)” Q05_1= “African American, of African descent, African, of Caribbean descent, or Black”	blank = no response or skipped 1 = TRUE; 2 = FALSE

	<p>Q05_2 = “Asian or Asian American (e.g., Chinese, Japanese, Korean)”</p> <p>Q05_3 = “Caucasian, White, of European descent, or European (including Spanish)”</p> <p>Q05_4 = “Hispanic, Latino or Latina (e.g., Cuban American, Mexican American, Puerto Rican)”</p> <p>Q05_5 = “Middle Eastern or East Indian (e.g., Pakistani, Iranian, Egyptian)”</p> <p>Q05_6 = “Native American (e.g., Dakota, Cherokee) or Alaska Native”</p> <p>Q05_7 = “Native Hawaiian or other Pacific Islander (e.g., Samoan, Papuan, Tahitian)”</p> <p>Q05_8 = Other, please specify:”</p>	
Q05_8u	<p>(no prompt; provided for “Other, please specify:” response to Q05_8)</p> <p>[Q05_8 = 1]</p>	(text; blank = no response or skipped)
Q06	<p>“What is your religious or spiritual preference? (Select all that apply.)”</p> <p>Q06_1 = “None”</p> <p>Q06_2 = “Agnostic”</p> <p>Q06_3 = “Atheist”</p> <p>Q06_4 = “Buddhist”</p> <p>Q06_5 = “Christian (Catholic, Evangelical, LDS, Protestant, etc.)”</p> <p>Q06_6 = “Hindu”</p> <p>Q06_7 = “Jewish”</p> <p>Q06_8 = “Muslim”</p> <p>Q06_9 = “Native American spirituality/religion”</p> <p>Q06_10 = “Unitarian or Universalist”</p> <p>Q06_11 = “Other, please specify:”</p>	<p>blank = no response or skipped</p> <p>1 = TRUE; 2 = FALSE</p>
Q06_11u	<p>(no prompt; provided for “Other, please specify:” response to Q06_11)</p> <p>[Q05_11 = 1]</p>	(text; blank = no response or skipped)
Q07	<p>“From which of the following have you ever received counseling or mental health services? (Select all that apply.)”</p> <p>Q07_1 = “Counselor, therapist, psychologist, and/or social worker”</p> <p>Q07_2 = “Psychiatrist”</p> <p>Q07_3 = “Clergy”</p> <p>Q07_4 = “Other medical provider (e.g., physician, nurse practitioner)”</p>	<p>blank = no response or skipped</p> <p>1 = TRUE; 2 = FALSE</p>

	<p>Q07_5 = “Alternative medical provider (e.g., acupuncturist, naturopathic doctor, massage therapist)”</p> <p>Q07_6 = “Other, please specify:”</p> <p>Q07_7 = “I have never received counseling or mental health services”</p>	
Q07_6u	<p>(no prompt; provided for “Other, please specify:” response to Q07_6)</p> <p>[Q07_6 = 1]</p>	(text; blank = no response or skipped)
Q08	<p>“Have you ever sought services from your college’s or university’s counseling center?”</p>	<p>blank = no response or skipped</p> <p>1 = “Yes”</p> <p>2 = “No”</p>
Q09	<p>“Have you served in the military?”</p>	<p>blank = no response or skipped</p> <p>1 = “No”</p> <p>2 = “Yes, and I have been deployed to an area of hazardous duty.”</p> <p>3 = “Yes, and I have not been deployed to an area of hazardous duty.”</p>
Q10	<p>“Are you an international student?”</p>	<p>blank = no response or skipped</p> <p>1 = “Yes”</p> <p>2 = “No”</p>
Q11u	<p>“What is your country of origin?”</p> <p>[Q10 = 1]</p>	(text; blank = no response or skipped)

Q12	<p>“Which of the following best describes you?”</p> <p>1 = “first-year undergraduate” 2 = “second-year undergraduate” 3 = “third-year undergraduate” 4 = “fourth-year undergraduate” 5 = “5+-year undergraduate student” 6 = “medical student” 7 = “law student” 8 = “graduate student or other professional student” 9 = “non-degree-seeking student” 10 = “other, please specify:”</p>	<p>blank = no response or skipped 1 = TRUE; 2 = FALSE</p>
Q12_10u	<p>(no prompt; provided for “Other, please specify:” response to Q12_11)</p> <p>[Q12_10 = 1]</p>	<p>(text; blank = no response or skipped)</p>
Q13	<p>“What is your current grade classification, based on the number of hours/credits you have <u>completed</u>?”</p> <p>[Q12_1 =1 or Q12_2 = 1 or Q12_3 =1 or Q12_4 = 1 or Q12_5 = 1]</p> <p>1 = freshman 2 = sophomore 3 = junior 4 = senior</p>	<p>blank = no response or skipped 1 = TRUE; 2 = FALSE</p>
Q14	<p>“How many academic years have you attended a college or university (including the current year)?”</p> <p>[Q12_1 =1 or Q12_2 = 1 or Q12_3 =1 or Q12_4 = 1 or Q12_5 = 1]</p>	<p>(dropdown menu [1, 2, 3, 4, 5, 6+]; blank = no response)</p>
Q15	<p>“Have you taken off one or more regular academic terms (e.g., not summer) since starting at your college or university?”</p> <p>[Q12_1 =1 or Q12_2 = 1 or Q12_3 =1 or Q12_4 = 1 or Q12_5 = 1]</p>	<p>blank = no response or skipped 1 = “No” 2 = “Yes, I chose to take time off” 3 = “Yes, my college/university required it for academic reasons” 4 = “Yes, my college/university required it for non-academic reasons”</p>
Q16	<p>“What is your field of study?”</p> <p>1 = “Natural Sciences (e.g. biology, chemistry, mathematics, physics)” 2 = “Humanities and Arts (e.g. English, literature, music, philosophy, theater studies)”</p>	<p>blank = no response or skipped 1 = TRUE; 2 = FALSE</p>

	<p>3 = "Engineering (e.g. computer science, biomedical engineering, civil engineering)"</p> <p>4 = "Social Sciences (e.g. psychology, history, linguistics, women's studies)"</p> <p>5 = "Economics"</p> <p>6 = "Policy (e.g. environmental science, political science, public policy studies)"</p> <p>7 = "Law"</p> <p>8 = "Medicine"</p> <p>9 = "Other, please specify:"</p>	
Q16_9u	<p>(no prompt; provided for "Other, please specify:" response to Q16_9)</p> <p>[Q16_9 = 1]</p>	(text; blank = no response or skipped)
Q17	<p>"Did you transfer to this college or university from another institution?"</p> <p>[Q12_1 = 1 or Q12_2 = 1 or Q12_3 = 1 or Q12_4 = 1 or Q12_5 = 1]</p>	<p>blank = no response or skipped</p> <p>1 = "Yes"</p> <p>2 = "No"</p>
Q18	<p>"What is the highest level of education completed by either of your parents or significant caregivers?"</p>	<p>blank = no response or skipped</p> <p>1 = "did not complete high school"</p> <p>2 = "high school or high-school equivalent"</p> <p>3 = "some college"</p> <p>4 = "associate's degree or technical training certificate"</p> <p>5 = "bachelor's degree"</p> <p>6 = "some graduate or professional school after college"</p> <p>7 = "Finished graduate or professional school (e.g., master's degree, MD, PhD, law school)"</p> <p>8 = "not sure"</p>
Q19	<p>"Do you consider yourself a first-generation college or university student?"</p>	<p>blank = no response or skipped</p> <p>1 = "Yes"</p> <p>2 = "No"</p>
Q20	<p>"Do you expect to graduate on schedule?"</p> <p>[Q12_1 = 1 or Q12_2 = 1 or Q12_3 = 1 or Q12_4 = 1 or Q12_5 = 1]</p>	<p>blank = no response or skipped</p> <p>1 = "Yes, I plan to finish my degree in the typical amount of time (e.g. bachelor's degree in four years)"</p> <p>2 = "No, I plan to finish my degree a year or more early"</p> <p>3 = "No, I plan to take an extra year or more to finish my degree"</p>
Q21_u	<p>"As best you remember, what was your highest composite score on the SAT?"</p>	(text; blank = no response or skipped)

	[Q12_1 = 1]	
Q21b	“This SAT score is out of a total of”	blank = no response or skipped 1 = “1600 points” 2 = “2400 points” 3 = “I did not take this test”
Q22	“As best you remember, what was your highest composite score on the ACT (out of 36)” [Q12_1 = 1] 1 = “Score” 2 = “I did not take this test”	blank = no response or skipped 1 = TRUE; 2 = FALSE
Q22_1u	(no prompt; provided for “Score” response to Q22_1) [Q22_1 = 1]	(text; blank = no response or skipped)
Q23	“Which of the following categories represents your average grades in high school?” [Q12_1 = 1 or Q12_2 = 1 or Q12_3 = 1 or Q12_4 = 1 or Q12_5 = 1]	(dropdown menu [Mostly As; Mostly As and Bs; Mostly Bs; Mostly Bs and Cs; Mostly Cs; Mostly Cs and Ds; Mostly Ds; Mostly Fs]; blank = no response)
Q24	“What was your approximate high school rank?” [Q12_1 = 1 or Q12_2 = 1 or Q12_3 = 1 or Q12_4 = 1 or Q12_5 = 1]	(dropdown menu [top 1%; top 5%; top 10%; top 25%; 25-75%; bottom quartile (75-100%)]; blank = no response)

Q25	<p>“Are you receiving need-based financial aid?”</p> <p>[Q12_1=1 or Q12_2 = 1 or Q12_3 =1 or Q12_4 = 1 or Q12_5 = 1]</p>	<p>blank = no response or skipped</p> <p>1 = “Yes”</p> <p>2 = “No”</p>
Q26	<p>“What was your parents’ (or guardians’) approximate income before taxes last year?”</p> <p>[Q12_1 =1 or Q12_2 = 1 or Q12_3 =1 or Q12_4 = 1 or Q12_5 = 1]</p>	<p>(dropdown menu [less than \$30,000; \$30,000-\$39,000; \$40,000-\$59,000; \$60,000-\$79,000; \$80,000-\$99,000; \$100,000-\$149,000; \$150,000-\$199,000; \$200,000 or more; don’t know/prefer not to answer]; blank = no response)</p>
Q27	<p>“How would you rate your confidence about your (or your family’s) ability to pay for your education?”</p> <p>[Q12_1 =1 or Q12_2 = 1 or Q12_3 =1 or Q12_4 = 1 or Q12_5 = 1]</p>	<p>blank = no response or skipped</p> <p>1 = “I have no worries about meeting the costs of my education.”</p> <p>2 = “I have some worries about meeting the costs of my education, but I do not believe finances will keep me from graduating.”</p> <p>3 = “I have some worries about meeting the costs of my education, and I am concerned finances might keep me from graduating.”</p> <p>4 = “I have significant worries about meeting the costs of my education, and I am fairly sure finances will keep me from graduating.”</p>

<p>Q28</p>	<p>“For the following scale, please select the option that indicates how much you disagree or agree with each of the statements.”</p> <p>Q28_1 = “I tend to bounce back quickly after hard times.”</p> <p>Q28_2 = “I have a hard time making it through stressful events.”</p> <p>Q28_3 = “It does not take me long to recover from a stressful event.”</p> <p>Q28_4 = “It is hard for me to snap back when something bad happens.”</p> <p>Q28_5 = “I usually come through difficult times with little trouble.”</p> <p>Q28_6 = “I tend to take a long time to get over set-backs in my life.”</p>	<p>blank = no response or skipped</p> <p>1 = “Strongly Disagree”</p> <p>2 = “Disagree”</p> <p>3 = “Neutral”</p> <p>4 = “Agree”</p> <p>5 = “Strongly Agree”</p>
<p>Q29</p>	<p>“Please respond to the following items. Be honest—there are no right or wrong answers!”</p> <p>Q29_1 = “New ideas and projects sometimes distract me from previous ones.”</p> <p>Q29_2 = “Setbacks don’t discourage me.”</p> <p>Q29_3 = “I have been obsessed with a certain idea or project for a short time but later lost interest.”</p> <p>Q29_4 = “I am a hard worker.”</p> <p>Q29_5 = “I often set a goal but later choose to pursue a different one.”</p> <p>Q29_6 = “I have difficulty maintaining my focus on projects that take more than a few months to complete.”</p> <p>Q29_7 = “I finish whatever I begin.”</p> <p>Q29_8 = “I am diligent.”</p>	<p>blank = no response or skipped</p> <p>1 = “Not like me at all”</p> <p>2 = “Not much like me”</p> <p>3 = “Somewhat like me”</p> <p>4 = “Mostly like me”</p> <p>5 = “Very much like me”</p>

<p>Section Intro</p>	<p>“The questions on this page deal with topics that may be difficult to think about. If you feel upset or distressed, you may wish to take a break and come back to the survey later. The link at the bottom of the page will take you to a list of resources you can access if you would like help dealing with any feelings that come up. You may always skip any question you do not want to answer.</p> <p>The following questions ask about difficult emotional experiences you or others you know may have had. This information will allow us to better understand problems students may face and may also help others in the future.”</p>	<p>[Item column will be blank]</p>
<p>Q30</p>	<p>“During the past 12 months, did you have any thoughts similar to the following? (Select all that apply.)”</p> <p>Q30_1 = “This is all just too much.” Q30_2 = “I wish this would all end.” Q30_3 = “I have to escape.” Q30_4 = “I wish I were dead.” Q30_5 = “I want to kill myself.” Q30_6 = “I might kill myself.” Q30_7 = “I will kill myself.”</p>	<p>blank = no response or skipped 1 = “Yes” 2 = “No”</p>
<p>Q31</p>	<p>“During the past 12 months, have you seriously considered attempting suicide?”</p>	<p>blank = no response or skipped 1 = “Yes” 2 = “No”</p>
<p>Q32</p>	<p>“During the past 12 months, did you attempt suicide?”</p>	<p>blank = no response or skipped 1 = “Yes” 2 = “No”</p>
<p>Q33</p>	<p>“How many suicide attempts did you make in the last 12 months?”</p> <p>[Q32 = 1]</p>	<p>blank = no response or skipped 1 = “1” 2 = “2” 3 = “3” 4 = “4” 5 = “5 or more”</p>

<p>Section Intro</p>	<p>“The questions on this page deal with topics that may be difficult to think about. If you feel upset or distressed, you may wish to take a break and come back to the survey later. The link at the bottom of the page will take you to a list of resources you can access if you would like help dealing with any feelings that come up.</p> <p>If you have reason to believe a minor is currently experiencing abuse of any kind, we encourage you to report this abuse; the link at the bottom of the page includes resources that can help you do this.</p> <p>Keep in mind you may always skip any question you do not want to answer.</p> <p>Following are some questions about events that happened during your childhood. This information will allow us to better understand problems that may occur early in life, and it may help others in the future.</p> <p>All questions refer to the time period before you were 18 years of age. Now, looking back before you were 18 years of age—”</p>	<p>[Item column will be blank]</p>
<p>Q34</p>	<p>“Did you live with anyone who was depressed, mentally ill, or suicidal?”</p>	<p>blank = no response or skipped 1 = “Yes” 2 = “No” 3 = “Don’t know/Not sure”</p>
<p>Q35</p>	<p>“Did you live with anyone who was a problem drinker or alcoholic?”</p>	<p>blank = no response or skipped 1 = “Yes” 2 = “No” 3 = “Don’t know/Not sure”</p>
<p>Q36</p>	<p>“Did you live with anyone who used illegal street drugs or who abused prescription medications?”</p>	<p>blank = no response or skipped 1 = “Yes” 2 = “No” 3 = “Don’t know/Not sure”</p>
<p>Q37</p>	<p>“Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?”</p>	<p>blank = no response or skipped 1 = “Yes” 2 = “No” 3 = “Don’t know/Not sure”</p>

Q38	“Were your parents divorced or separated?”	blank = no response or skipped 1 = “Yes” 2 = “No” 3 = “Parents never married” 4 = “Don’t know/Not sure”
Q39	“How often did your parents or adults in your home ever slap, hit, kick, punch, or beat each other up?”	blank = no response or skipped 1 = “Never” 2 = “Once” 3 = “More than once”
Q40	“Before age 18, how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way? Do not include spanking. Would you say—”	blank = no response or skipped 1 = “Never” 2 = “Once” 3 = “More than once”
Q41	“How often did a parent or adult in your home ever swear at you, insult you, or put you down?”	blank = no response or skipped 1 = “Never” 2 = “Once” 3 = “More than once”
Q42	“How often did anyone at least 5 years older than you, or an adult, ever touch you sexually?”	blank = no response or skipped 1 = “Never” 2 = “Once” 3 = “More than once”
Q43	“How often did anyone at least 5 years older than you, or an adult, try to make you touch them sexually?”	blank = no response or skipped 1 = “Never” 2 = “Once” 3 = “More than once”
Q44	“How often did anyone at least 5 years older than you, or an adult, force you to have sex?”	blank = no response or skipped 1 = “Never” 2 = “Once” 3 = “More than once”

<p>Q45</p>	<p>“Please take a moment to think about what makes your life and existence feel important and significant to you. Then respond to the following statements as truthfully and accurately as you can, remembering that these are very subjective questions and that there are no right or wrong answers. Please answer according to the scale below.”</p> <p>Q45_1 = “I understand my life’s meaning.” Q45_2 = “I am looking for something that makes my life feel meaningful.” Q45_3 = “I am always looking to find my life’s purpose.” Q45_4 = “My life has a clear sense of purpose.” Q45_5 = “I have a good sense of what makes my life meaningful.” Q45_6 = “I have discovered a satisfying life purpose.” Q45_7 = “I am always searching for something that makes my life feel significant.” Q45_8 = “I am seeking a purpose or mission for my life.” Q45_9 = “My life has no clear purpose.” Q45_10 = “I am searching for meaning in my life.”</p>	<p>blank = no response or skipped 1 = “Absolutely Untrue” 2 = “Mostly Untrue” 3 = “Somewhat Untrue” 4 = “Can’t Say True or False” 5 = “Somewhat True” 6 = “Mostly True” 7 = “Absolutely True”</p>
<p>Q46</p>	<p>“The following items are designed to measure attitudes people have toward themselves, their performance, and toward others. There are no right or wrong answers. Please respond to all of the items. Use your first impression and do not spend too much time on individual items.</p> <p>Respond to each of the items using the scale below to describe your degree of agreement with each item.”</p> <p>Q46_1 = “I have high expectations of myself.” Q46_2 = “Doing my best never seems to be enough.” Q46_3 = “I set very high standards for myself.” Q46_4 = “My performance rarely measures up to my standards.”</p>	<p>blank = no response or skipped 1 = “Strongly Disagree” 2 = “Disagree” 3 = “Somewhat Disagree” 4 = “Neutral” 5 = “Somewhat Agree” 6 = “Agree” 7 = “Strongly Agree”</p>

	<p>Q46_5 = "I expect the best from myself."</p> <p>Q46_6 = "I am hardly ever satisfied with my performance."</p> <p>Q46_7 = "I have a strong need to strive for excellence."</p> <p>Q46_8 = "I often feel disappointment after completing a task because I know I could have done better."</p>	
Section Intro	<p>"Below is a series of questions relating to various aspects of your life. Each question has seven possible answers. Please mark the number that expresses your answer, with numbers 1 and 7 being the extreme answers. If the words under 1 are right for you, select 1; if the words under 7 are right for you, select 7. If you feel differently, select the number which best expresses your feeling. Please give only one answer to each question."</p>	[Item column will be blank]
Q47	<p>"Do you have the feeling that you don't really care about what goes on around you?"</p>	<p>blank = no response or skipped</p> <p>1 = "Very seldom or never"</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7 = "Very often"</p>
Q48	<p>"Has it happened in the past that you were surprised by the behavior of people whom you thought you knew well?"</p>	<p>blank = no response or skipped</p> <p>1 = "Never Happened"</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7 = "Always Happened"</p>
Q49	<p>"Has it happened that people whom you counted on disappointed you?"</p>	<p>blank = no response or skipped</p> <p>1 = "Never Happened"</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7 = "Always Happened"</p>

Q50	“Until now your life has had”	blank = no response or skipped 1 = “No clear goals or purpose at all” 2 3 4 5 6 7 = “Very clear goals and purpose”
Q51	“Do you have the feeling that you’re being treated unfairly?”	blank = no response or skipped 1 = “Very seldom or never” 2 3 4 5 6 7 = “Very often”
Q52	“Do you have the feeling that you are in an unfamiliar situation and don’t know what to do?”	blank = no response or skipped 1 = “Very seldom or never” 2 3 4 5 6 7 = “Very often”
Q53	“Doing the things you do every day is”	blank = no response or skipped 1 = “A source of pain and boredom” 2 3 4 5 6 7 = “A source of deep pleasure and satisfaction”
Q54	“Do you have very mixed-up feelings and ideas?”	blank = no response or skipped 1 = “Very seldom or never” 2 3 4 5 6 7 = “Very often”
Q55	“Does it happen that you have feelings inside you would rather not feel?”	blank = no response or skipped 1 = “Very seldom or never” 2 3 4

		5 6 7 = "Very often"
Q56	"Many people--even those with a strong character--sometimes feel unlucky in certain situations. How often have you felt this way in the past?"	blank = no response or skipped 1 = "Never" 2 3 4 5 6 7 = "Very often"
Q57	"When something happened, have you generally found that"	blank = no response or skipped 1 = "You overestimated or underestimated its importance" 2 3 4 5 6 7 = "You saw things in the right proportion"
Q58	"How often do you have the feeling that there's little meaning in the things you do in your daily life?"	blank = no response or skipped 1 = "Very seldom or never" 2 3 4 5 6 7 = "Very often"
Q59	"How often do you have feelings that you're not sure you can keep under control?"	blank = no response or skipped 1 = "Very seldom or never" 2 3 4 5 6 7 = "Very often"

<p>Q60</p>	<p>“Please answer the following questions are about how you have been feeling during the past month. Select the option that best represents how often you have experienced or felt the following.</p> <p>During the past month, how often did you feel...”</p> <p>Q60_1 = “happy?” Q60_2 = “interested in life?” Q60_3 = “satisfied with life?” Q60_4 = “that you had something important to contribute to society?” Q60_5 = “that you belonged to a community (like a social group, or your neighborhood)?” Q60_6 = “that our society is a good place, or is becoming a better place, for all people?” Q60_7 = “that people are basically good?” Q60_8 = “that the way our society works makes sense to you?” Q60_9 = “that you liked most parts of your personality?” Q60_10 = “good at managing the responsibilities of your daily life?” Q60_11 = “that you had warm and trusting relationships with others?” Q60_12 = “that you had experiences that challenged you to grow and become a better person?” Q60_13 = “confident to think or express your own ideas and opinions?” Q60_14 = “that your life has a sense of direction or meaning to it?”</p>	<p>blank = no response or skipped 1 = “Never” 2 = “Once or Twice” 3 = “About Once a Week” 4 = “About 2 or 3 Times a Week” 5 = “Almost Everyday” 6 = “Everyday”</p>
-------------------	---	--

<p>Q61</p>	<p>“The questions on this page deal with topics that may be difficult to think about. If you feel upset or distressed, you may wish to take a break and come back to the survey later. The link at the bottom of the page will take you to a list of resources you can access if you would like help dealing with any feelings that come up. You may always skip any question you do not want to answer.</p> <p>The following questions ask you to think about yourself and other people. Please respond to each question by using your own current beliefs and experiences, NOT what you think is true in general, or what might be true for other people. Please base your responses on how you've been feeling recently. Use the rating scale to find the number that best matches how you feel and select that number. There are no right or wrong answers: we are interested in what <i>you</i> think and feel.”</p> <p>Q61_1 = “These days the people in my life would be better off if I were gone.” Q61_2 = “These days the people in my life would be happier without me.” Q61_3 = “These days I think I am a burden on society.” Q61_4 = “These days I think my death would be a relief to the people in my life.” Q61_5 = “These days I think the people in my life wish they could be rid of me.” Q61_6 = “These days I think I make things worse for the people in my life.”</p>	<p>blank = no response or skipped 1 = “Not at all true for me” 2 3 4 = “Somewhat true for me” 5 6 7 = “Very true for me”</p>
-------------------	--	---

<p>Q62</p>	<p>“Choose the answer that matches how much you agree or disagree with each of the following statements.”</p> <p>Q62_1 = “I feel disconnected from the world around me.”</p> <p>Q62_2 = “Even around people I know, I don't feel that I really belong.”</p> <p>Q62_3 = “I feel so distant from people.”</p> <p>Q62_4 = “I have no sense of togetherness with my peers.”</p> <p>Q62_5 = “I don't feel related to anyone.”</p> <p>Q62_6 = “I catch myself losing all sense of connectedness with society.”</p> <p>Q62_7 = “Even among my friends, there is no sense of brother/sisterhood.”</p> <p>Q62_8 = “I don't feel I participate with anyone or any group.”</p>	<p>blank = no response or skipped</p> <p>1 = “Strongly Disagree”</p> <p>2 = “Disagree”</p> <p>3 = “Somewhat Disagree”</p> <p>4 = “Somewhat Agree”</p> <p>5 = “Agree”</p> <p>6 = “Strongly Agree”</p>
<p>Q63</p>	<p>“When things aren't going well for you, or when you're having problems, how certain are you that you can do the following?”</p> <p>Q63_1 = “Break an upsetting problem down into smaller parts.”</p> <p>Q63_2 = “Sort out what can be changed and what cannot be changed.”</p> <p>Q63_3 = “Make a plan of action and follow it when confronted with a problem.”</p> <p>Q63_4 = “Leave options open when things get stressful.”</p> <p>Q63_5 = “Think about one part of the problem at a time.”</p> <p>Q63_6 = “Find solutions to your most difficult problems.”</p> <p>Q63_7 = “Make unpleasant thoughts go away.”</p> <p>Q63_8 = “Take your mind off unpleasant thoughts.”</p> <p>Q63_9 = “Stop yourself from being upset by unpleasant thoughts.”</p> <p>Q63_10 = “Keep from feeling sad.”</p> <p>Q63_11 = “Get friends to help you with the things you need.”</p> <p>Q63_12 = “Get emotional support from friends and family.”</p> <p>Q63_13 = “Make new friends.”</p>	<p>blank = no response or skipped</p> <p>1 = “cannot do at all”</p> <p>2</p> <p>3</p> <p>4 = “moderately certain can do”</p> <p>5</p> <p>6</p> <p>7 = “certain can do”</p>

References

- American College Health Association-National College Health Assessment [ACHA-NCHA]: Reference Group Data Report Spring 2014. Baltimore: American College Health Association; 2014
- Americans With Disabilities Act of 1990, 42 U.S.C.A. §12101 *et seq.*
- Anderson, M., & Jenkins, R. (2005). The challenge of suicide prevention: an overview of national strategies. *Disease Management & Health Outcomes*, 13(4), 245-253.
- Anderson R. N. & Smith B. L. (2003). Deaths: leading causes for 2001. *National Vital Statistics Report*, 52(9), 1-86.
- Antonovsky, A. (1979). *Health, Stress and Coping*. San Francisco, CA: Jossey-Bass.
- Antonovsky, A. (1987). *Unraveling the Mystery of Health*. San Francisco, CA: Jossey-Bass.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55, 469-480.
- Ashby, J. S., & Bruner, L. P. (2005). Multidimensional perfectionism and obsessive-compulsive behaviors. *Journal of College Counseling*, 8, 31-40.
- Ashby, J. S., Noble, C. L., & Gnilka, P. B. (2012). Multidimensional perfectionism, depression, and satisfaction with life: differences among perfectionists and tests of a stress-mediation model. *Journal of College Counseling*, 15, 130-143.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Battista, J., & Almond, R. (1973). The development of meaning in life. *Psychiatry*, 36, 409–427.
- Baumeister, R. F. (1990). Suicide as escape from self. *Psychological Review*, 97(1), 90-113.
- Baumeister, R. F. (1991). *Meanings of life*. New York: Guilford Press.
- Baumeister, R.F., & Leary, M.R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497-529.
- Baxter Magolda, M. B. & King, P. M. (2007). Interview Strategies for Assessing Self-Authorship: Constructing Conversations to Assess Meaning Making. *Journal of College Student Development* 48(5), 491-508.
- Baxter Magolda, M., & King, P. M. (2008). Toward Reflective Conversations: An Advising Approach that Promotes Self-Authorship. *Peer Review*, 10(1), 8-11.

- Capriccioso, R. (2006, April 4). Settlement in MIT suicide suit. *Inside Higher Ed*. Retrieved from <https://www.insidehighered.com/news/2006/04/04/shin>
- Beevers, C. G. & Miller, I. W. (2004). Perfectionism, cognitive bias, and hopelessness as prospective predictors of suicidal ideation. *Suicide and Life Threatening Behavior, 34*(2), 126-137
- Besser, A., Flett, G. L., & Hewitt, P. L. (2010). Silencing the self and personality vulnerabilities associated with depression. In D. Jack & A. Ali (Eds.), *Silencing the self across cultures: Depression and gender in the social world* (pp. 285–312). London, UK: Oxford University Press.
- Bieling, P. J., Israeli, A. L., Smith, J., & Antony, M. M. (2003). Making the grade: The behavioral consequences of perfectionism in the classroom. *Personality and Individual Differences, 35*, 163-178.
- Blatt, S. J. (1995). The destructiveness of perfectionism: implications for the treatment of depression. *American Psychologist, 50*(12), 1003-1020.
- Bourque, L. B., Kraus, J. F., & Cosand, B. J. (1983). Attributes of suicide in females. *Suicide and Life-Threatening Behavior, 13*(2), 123-138.
- Brassai, L., Piko, B. F., & Steger, M. F. (2011). Meaning in life: is it a protective factor for adolescents' psychological health? *International Journal of Medicine, 18*(1), 44-51.
- Brown, L. M., Bongar, B., & Cleary, K. M. (2004). A profile of psychologists' views of critical risk factors for completed suicide in older adults. *Professional Psychology: Research and Practice, 35*, 90–96.
- Brownson, C., Drum, D. J., Swanbrow Becker, M. A., Saathoff, A., & Hentschel, E. (2016). Distress and suicidality in higher education: implications for population-oriented prevention paradigms. *Journal of College Student Psychotherapy, 30*(2), 98-113.
- Burns, D. D. (1980, November). The perfectionist's script for self- defeat. *Psychology Today*, pp. 34-52.
- Capriccioso R. (2006, March). Counseling crisis. *Inside Higher Ed*. Retrieved from <http://insidehighered.com/news/2006/03/13/counseling>.
- Carey, K. (2015). *The end of college: creating the future of learning and the university of everywhere*. New York : Riverhead Hardcover.
- Clements-Nolle, K., Marx, R., Katz, M. (2006). Attempted suicide among transgender persons: The influence of gender-based discrimination and victimization. *Journal of Homosexuality, 51*(3), 53–69.

- Chamberlain, K., & Zika, S. (1988). Religiosity, life meaning, and well-being: Some relationships in a sample of women. *Journal for the Scientific Study of Religion*, 27, 411–420.
- Chang, E. C., Watkins, A. F., & Banks, K. H. (2004). How adaptive and maladaptive perfectionism relate to positive and negative psychological functioning: Testing a stress-mediation model in black and white female college students. *Journal of Counseling Psychology*, 51, 93-102.
- Chatard, A, & Selimbegovic, L. (2011). When self-destructive thoughts flash through the mind: failure to meet standards affects the accessibility of suicide-related thoughts. *Journal of Personality and Social Psychology*, 100(4), 587-605.
- Cox, B. J., Enns, M. W., & Clara, I. P. (2002). The multidimensional structure of perfectionism in clinically distressed and college student samples. *Psychological Assessment*, 14, 365-373.
- Crumbaugh, J. C., & Maholick, L. T. (1964). An experimental study in existentialism: The psychometric approach to Frankl's concept of noogenic neurosis. *Journal of Clinical Psychology*, 20, 200–207.
- Damon, W. (2008). *The path to purpose: Helping our children find their calling in life*. New York: Simon & Schuster.
- Davidson, L., & Locke, J. H. (2010). Using a public health approach to address student mental health. In J. Kay & V. Schwartz (Eds.), *Mental health care in the college community*. (pp. 267–288). Wiley-Blackwell.
- Dean, P. J., Range, L. M. (1996). The escape theory of suicide and perfectionism in college students. *Death Studies*, 20(4), 415-424.
- Dean, P. J., Range, L. M. (1996). Testing the escape theory of suicide in an outpatient clinical population. *Cognitive Therapy and Research*, 23(6), 561-572.
- DeBard, R. (2004). Millennials coming to college. *New Directions for Student Services*, 106, 33- 45.
- Debats, D. L., van der Lubbe, P. M., & Wezeman, F. R. A. (1993). On the psychometric properties of the Life Regard Index (LRI): A measure of meaningful life. *Personality and Individual Differences*, 14, 337–345.
- Delbanco, A. (2012) *College: what it was, is, and should be*. Princeton.
- Deresiewicz, W. (2014). *Excellent sheep: the miseducation of the American elite*. New York: Free Press.
- DiBartolo, P. M., Li, C. Y., & Frost, R. O. (2008). How do the dimensions of perfectionism relate to mental health? *Cognitive Therapy and Research*, 32, 401–417.

- Dik, B. J., & Steger, M. F. (2008). Randomized trial of a calling-infused career workshop incorporating counselor self-disclosure. *Journal of Vocational Behavior, 73*, 203-211.
- Dransart, D. A. C. (2013). From sense-making to meaning-making: understanding and supporting survivors of suicide. *British Journal of Social Work, 43*(2), 317-335.
- Drum, D. J., Brownson, C., Burton Denmark, A., & Smith, S. E. (2009). New data on the nature of suicidal crises in college students: shifting the paradigm. *Professional Psychology: Research and Practice, 40*(3), 213-222.
- Drum, D. J., & Denmark, A. (2011). College suicide prevention programs and interventions. In Lamis, D. A. & Lester, D. (Eds.), *Understanding and Preventing College Student Suicide* (pp. 255-272). Springfield, IL: Charles C. Thomas.
- Dunkley, D. M., Blankstein, K. R., Halsall, J., Williams, M., & Winkworth, G. (2000). The relation between perfectionism and distress: Hassles, coping, and perceived social support as mediators and moderators. *Journal of Counseling Psychology, 47*, 437-453.
- Enns, M. W., Cox, B. J., Sareen, J., & Freeman, P. (2001). Adaptive and maladaptive perfectionism in medical students: A longitudinal investigation. *Medical Education, 35*, 1034-1042.
- Erikson, E. H. (1968). *Identity: Youth and crisis*. New York, NY: Norton.
- Flamenbaum, R., & Holden, R. R. (2007). Psychache as a mediator in the relationship between perfectionism and suicidality. *Journal of Counseling Psychology, 54*, 51-61.
- Flett, G., & Heisel, M. (2008). Psychological resilience to suicide among older adults. *Clinical Gerontologist, 31*(4), 51-70.
- Flett, G. L., & Hewitt, P. L., (2008). Treatment Interventions for Perfectionism—A Cognitive Perspective: Introduction to the Special Issue. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 26*(3), 127-133.
- Flett, G. L., Hewitt, P. L., & Heisel, M. J. (2014). The destructiveness of perfectionism revisited: implications for the assessment of suicide risk and the prevention of suicide. *Review of General Psychology, 18*(3), 156-172.
- Frankl, V. E. (1963). *Man's search for meaning: An introduction to logotherapy*. New York: Washington Square Press.
- Friedlander, A., Nazem, S., Fiske, A., Nadorff, M. R., & Smith, M. D. (2012). Self-concealment and suicidal behaviors. *Suicide and Life-Threatening Behavior, 42*, 332-340.

- Frost, R. O., Heimberg, R. G., Holt, C. S., Mattia, J. I., & Neubauer, A. L. (1993). A comparison of two measures of perfection. *Personality and Individual Differences, 14*, 199-126.
- Frost, R. O., Marten, P. A., Lahart, C. & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research, 14*, 559-572.
- Gilman, R., Ashby, J. S., Sverko, D., Florell, D., & Varjas, K. (2005). The relationship between perfectionism and multidimensional life satisfaction among Croatian and American youth. *Personality and Individual Differences, 39*, 155.
- Graham, A. R., Sherry, S. B., Stewart, S. H., Sherry, D. L., McGrath, D. S., Fossum, K. M., & Allen, S. L. (2010). The existential model of perfectionism and depressive symptoms: A short-term, four-wave longitudinal study. *Journal of Counseling Psychology, 57*(4), 423-438.
- Haas, A. P., Eliason, M., Mays, V. M., Mathy, R. M., Cochran, S. D., D'Augelli, A. R., ... Clayton, P. J. (2011). Suicide and suicide risk in lesbian, gay, bisexual, and transgender populations: Review and recommendations. *Journal of Homosexuality, 58*(1), 10–51.
- Haas, A. P., Hendin, H., & Mann, J. J. (2003). Suicide in college students. *American Behavioral Scientist, 46*, 1224–1240.
- Halama, P., & Bakošova, K. (2009). Meaning in life as a moderator of the relationship between perceived stress and coping. *Studia Psychologica, 51*(2-3), 143-148.
- Hamachek, D. E. (1978). Psychodynamics of normal and neurotic perfectionism. *Psychology, 15*, 27-33.
- Heine, S.J., Lehman, D.R., Peng, K. & Greenholtz, J. (2002). What's wrong with cross-cultural comparisons of subjective Likert scales?: The reference-group effect. *Journal of Personality and Social Psychology, 82*, 903-918.
- Heintzeman, S. J., & King, L. A. (2014). Life is pretty meaningful. *American Psychologist, 69*(6), 561-574.
- Heintzeman, S. J., Trent, J., & King, L. A. (2013). Encounters with objective coherence and the experience of meaning in life. *Psychological Science, 24*, 991–998.
- Heisel, M. J., & Flett, G. L. (2004). Purpose in life, satisfaction with life, and suicide ideation in a clinical sample. *Journal of Psychopathology and Behavioral Assessment, 26*(2), 127-135.
- Heisel, M. J., & Flett, G. L. (2008). Psychological resilience to suicide among older adults. *Clinical Gerontologist, 31*(4), 51-70.
- Hendin, H. (1995). *Suicide in America*. New York: Norton.
- Henry, A., & Short, J. (1954). *Suicide and Homicide*. New York: Free Press.

- Henry, K. L., Lovegrove, P. J., Steger, M. F., Chen, P. Y., Cigularov, K. P., & Tomazic, R. G. (2014). The potential role of meaning in life in the relationship between bullying victimization and suicidal ideation. *Journal of Youth and Adolescence*, *43*, 221-232.
- Henry, M., Cohen, S. R., Lee, V., Sauthier, P., Provencher, D., Drouin, P., ... Mayo, N. (2010). The Meaning-Making intervention (MMi) appears to increase meaning in life in advanced ovarian cancer: a randomized controlled pilot study. *Psycho-Oncology*, *19*(12), 1340–1347.
- Hewitt, P. L., & Flett, G. L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology*, *60*, 456-470.
- Hewitt, P. L., & Flett, G. L. (1993). Perfectionism and goal orientation in impulsive and suicidal behavior. In W. McCown, M. Shure, & J. Johnson (Eds.), *The impulsive client: Theory, research, and treatment* (pp. 247–263). Arlington, VA: American Psychological Association.
- Hewitt, P. L., Flett, G. L., Sherry, S. B., & Caelian, C. (2006). Trait perfectionism dimensions and suicidal behavior. In T. E. Ellis (Ed.), *Cognition and suicide: Theory, research, and therapy* (pp. 215–235). Washington, DC: American Psychological Association.
- Hicks, J. A., & King, L. A. (2009). Positive mood and social relatedness as information about meaning in life. *Journal of Positive Psychology*, *4*, 471–482.
- Higgins, E. T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review*, *94*(3), 319-340.
- Hong, L. (2008). College stress and psychological well-being: Self-transcendence meaning of life as a moderator. *College Student Journal*, *42*(2,PtB), 531-541.
- Hyatt, L. A. (2010). A case study of the suicide of a gifted female adolescent: Implications for prediction and prevention. *Journal for the Education of the Gifted*, *33*, 514–535.
- Johansson, C., & Felten, P. (2014). *Transforming students: fulfilling the promise of higher education*. Baltimore.
- Johnson, J., Wood, A. M., Gooding, P., Taylor, P. J., & Tarrier, N. (2011). Resilience to suicidality: The buffering hypothesis. *Clinical Psychology Review*, *31*, 563–591.
- Joiner, T. E. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.
- Joiner, T. E., Conwell, Y., Fitzpatrick, K. K., Witte, T. K., Schmidt, N. B., Berlim, M. T., Fleck, M. P. A., & Rudd, M. D. (2005). Four studies on how past and current suicidality relate even when “everything but the kitchen sink” is covaried. *Journal of Abnormal Psychology*, *114*, 291–303.

- Kashdan, T. B., & Kane, J. Q. (2011). Post-traumatic distress and the presence of post-traumatic growth and meaning in life: Experiential avoidance as a moderator. *Personality and Individual Differences, 50*, 84-89.
- Kawamura, K. Y., & Frost, R. O. (2004). Self-concealment as a mediator in the relationship between perfectionism and psychological distress. *Cognitive Therapy and Research, 28*, 183–191.
- Keyes, C. L. M. (2002). The mental health continuum: From languishing to flourishing in life. *Journal of Health and Social Behavior, 43*, 207–222.
- Kiamanesh, P., Dyregrov, K., Haavind, H., & Dieserud, G. (2014). Suicide and perfectionism: a psychological autopsy study of non-clinical suicides. *Omega, 69*(4), 381-399.
- Kleiman, E. M., & Beaver, J. K. (2013). A meaningful life is worth living: Meaning in life as a suicide resiliency factor. *Psychiatry Research, 210*(3), 934-939.
- Krause, N. (2007). Longitudinal study of social support and meaning in life. *Psychology and Aging, 22*, 456–469.
- Krause, N. (2009). Meaning in life and mortality. *Journals of Gerontology: Series B: Psychological Sciences and Social Sciences, 64B*, 517– 527.
- Lake, P. & Tribbensee, N. (2002). The emerging crisis of college student suicide: Law and policy responses to serious forms of self-inflicted injury. *Stetson Law Review, 32*, 125-157.
- Lamis, D. A. & Lester, D. (Eds.), *Understanding and Preventing College Student Suicide*. Springfield, IL: Charles C. Thomas.
- Lester, D. (1986). Suicide, homicide, and the quality of life: An archival study. *Suicide and Life-Threatening Behavior, 16*(3), 389-392.
- Lloyd, S., Schmidt, U., Khondoker, M., & Tchanturia, K. (2015). Can psychological interventions reduce perfectionism? A systematic review and meta-analysis. *Behavioural and Cognitive Psychotherapy, 43*(6), 705-731.
- Long, J. S. (1997). *Regression models for categorical and limited dependent variables*. Thousand Oaks: SAGE Publications.
- Lythcott-Haims, J. (2015). *How to raise an adult: break free of the overparenting trap and prepare your kid for success*. New York : Henry Holt and Company.
- Mann, J., Apter, A., Bertolote, J., et al. (2005). Suicide Prevention Strategies: A Systematic Review. *Journal of the American Medical Association, 294*(16), 2064-2074.
- Marshal, M. P., Dietz, L. J., Friedman, M. S., Stall, R., Smith, H. A., McGinley, J., ... Brent, D. A. (2011). Suicidality and depression disparities between sexual

- minority and heterosexual youth: A meta-analytic review. *Journal of Adolescent Health, 49*(2), 115–123.
- Mascaro, N., & Rosen, D. H. (2005). Existential meaning's role in the enhancement of hope and prevention of depressive symptoms. *Journal of Personality, 73*, 985–1013.
- McKnight, P. E., & Kashdan, T. B. (2009). Purpose in life as a system that creates and sustains health and well-being: An integrative, testable theory. *Review of General Psychology, 13*, 242-251.
- Mitchell, S. L., Kader, M., Darrow, S. A., Haggerty, M. Z., Keating, N. L. (2013). Evaluating question, persuade, refer (QPR) suicide prevention training in a college setting. *Journal of College Student Psychotherapy, 27*(2), 138-148.
- Mobley, M., Slaney, R. B., & Rice, K. G. (2005). Cultural validity of the Almost Perfect Scale-Revised for African American college students. *Journal of Counseling Psychology, 52*, 629-639.
- Mok, E., Lau, K., Lai, T., & Ching, S. (2012). The meaning of life intervention for patients with advanced-stage cancer: development and pilot study. *Oncology Nursing Forum, 39*(6), E480-8.
- O'Connor, R. C. (2007). The relations between perfectionism and suicidality: A systematic review. *Suicide and Life-Threatening Behavior, 37*(6), 698–714.
- Owens, G. P., Steger, M. F., Whitesell, A. A., & Herrera, C. J. (2009). Posttraumatic stress disorder, guilt, depression, and meaning in life among military veterans. *Journal of Traumatic Stress, 22*, 654–657.
- Pacht, A. (1984). Reflections on perfection. *American Psychologist, 39*, 386–390.
- Park, H., & Jeong, D. Y. (2016). Moderation effects of perfectionism and meaning in life on depression. *Personality and Individual Differences, 98*, 25-29.
- Park, N., Park, M., & Peterson, C. (2010). When is the search for meaning related to life satisfaction? *Applied Psychology: Health and Well-Being, 2*(1), 1-13.
- Parker, W. D., & Stumpf, H. (1995). An examination of the Multidimensional Perfectionism Scale with a sample of academically talented children. *Journal of Psychoeducational Assessment, 13*, 372-383.
- Perez-Brumer, A., Hatzenbuehler, M. L., Oldenburg, C. E., & Bockting, W. (2015). Individual- and structural- level risk factors for suicide attempts among transgender adults. *Behavioral Medicine, 41*(3), 164-171.
- Rasmussen, K. A., Slush, M. L., Wingate, L. R., Davidson, C. L., & Grant, D. M. (2012). Can perceived burdensomeness explain the relationship between suicide and perfectionism? *Suicide and Life-Threatening Behavior, 42*, 121–128.

- Rawe, J., & Kingsbury, K. (2006, May). When colleges go on suicide watch. *Time*. Retrieved from <http://www.time.com/time/archive/preview/0,10987,1194020,00.html>
- Rice, K. G., Ashby, J. S., & Gilman, R. (2011). Classifying adolescent perfectionists. *Psychological Assessment, 23*, 563–577.
- Rice, K. G., Ashby, J. S., & Slaney, R. B. (1998). Self-esteem as a mediator between perfectionism and depression: a structural equations analysis. *Journal of Counseling Psychology, 45*, 304-314.
- Rice, K. G., Ashby, J. S., & Slaney, R. B. (2007). Perfectionism and the five-factor model of personality. *Assessment, 14*, 385-398.
- Rice, K. G., Lopez, F. G., & Vergara, D. (2005). Parental/social influences on perfectionism and adult attachment orientations. *Journal of Social and Clinical Psychology, 24*, 580-605.
- Rice, K. G., Richardson, M. E., & Tueller, S. (2014) The Short Form of the Revised Almost Perfect Scale, *Journal of Personality Assessment, 96*(3), 368-379.
- Rudd, M. D. (1989). The prevalence of suicidal ideation among college students. *Suicide and Life-Threatening Behavior 19*(2), 173-183.
- Scelfo, J. (2015, July 27). Suicide on campus and the pressure of perfection. *The New York Times*. Retrieved from <http://www.nytimes.com/2015/08/02/education/edlife/stress-social-media-and-suicide-on-campus.html>
- Schuman, H., & Presser, S. (1981). *Questions and answers in attitude surveys*. New York: Academic Press
- Schwartz, A. J. (2006). College student suicide in the United States: 1990-1991 through 2003-2004. *Journal of American College Health, 54*, 341-352
- Schwartz, A. J. (2011). Rate, relative risk, and method of suicide by students at 4-year colleges and universities in the United States, 2004-2005 through 2008-2009. *Suicide and Life-Threatening Behavior, 41*(4), 353-371.
- Schwarz, N. (1999). Self-reports: how the questions shape the answers. *American Psychologist, 54*(2), 93-105.
- Sherry, D. L., Sherry, S. B., Hewitt, P. L., Mushquash, A., & Flett, G. L. (2015). The existential model of perfectionism and depressive symptoms: Tests of incremental validity, gender differences, and moderated mediation. *Personality and Individual Differences, 76*, 104-110.
- Shin v MIT*, Civil Action 02-0403 1–27 (Superior, Middlesex, MA 2005).

- Shin, J. Y., & Steger, M. F. (2016). Supportive college environment for meaning searching and meaning in life among American college students. *Journal of College Student Development, 57*(1), 18-31.
- Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*, 5–14.
- Shneidman, E. S. (1998). Perspectives on suicidology: Further reflections on suicide and psychache. *Suicide and Life-Threatening Behavior, 28*, 245–250.
- Silverman, M.M. & Felner, R.D. (1995). Suicide prevention programs: Issues of design, implementation, feasibility, and developmental appropriateness. *Suicide and Life-Threatening Behavior 25*(1), 92-104.
- Slaney, R. B., & Ashby, J. S. (1996). Perfectionists: study of a criterion group. *Journal of Counseling and Development, 74*, 393-398.
- Slaney, R. B., Chadha, N., Mobley, M., & Kennedy, S. (2000). Perfectionism in Asian Indians: exploring the meaning of the construct in India. *The Counseling Psychologist, 28*, 10-31.
- Slaney, R. B., & Johnson, D. G. (1992). *The Almost Perfect Scale*. Unpublished manuscript, Pennsylvania State University
- Slaney, R. B., Rice, K. G., Mobley, M., Trippi, J., & Ashby, J. S. (2001). The Almost Perfect Scale–Revised. *Measurement and Evaluation in Counseling and Development, 34*(3), 130-145.
- Snijders, T. A. B., & Bosker, R. J. (Eds.). (2012). *Multilevel analysis: an introduction to basic and advanced multilevel modeling*. Los Angeles; London: SAGE Publishing.
- Steger, M. F., Frazier, P. F., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: assessing the presence of and search for meaning in life. *Journal of Counseling Psychology, 53*(1), 80-93.
- Steger, M. F., & Kashdan, T. B. (2007). Stability and specificity of meaning in life and life satisfaction over one year. *Journal of Happiness Studies, 8*(2), 161-179.
- Steger, M. F., Kashdan, T. B., Sullivan, B. A. and Lorentz, D. (2008), Understanding the search for meaning in life: personality, cognitive style, and the dynamic between seeking and experiencing meaning. *Journal of Personality, 76*(2), 199–228.
- Steger, M. F., Mann, J. R., Michels, P., & Cooper, T. C. (2009). Meaning in life, anxiety, depression, and general health among smoking cessation patients. *Journal of Psychosomatic Research, 67*, 353–358. doi: 10.1016/j.jpsychores.2009.02.006
- Steger, M. F., Oishi, S., & Kesebir, S. (2011). Is a life without meaning satisfying? The moderating role of the search for meaning in satisfaction with life judgments. *The Journal of Positive Psychology, 6*(3), 173-80.

- Steger, M. F., Pickering, N. K., Shin, J. Y., & Dik, B. J. (2010). Calling in work: secular or sacred? *Journal of Career Assessment*, *18*(1), 82-96.
- Stillman, T. F., Baumeister, R. F., Lambert, N. M., Crescioni, A. W., Dewall, C. N., & Fincham, F. D. (2009). Alone and without purpose: Life loses meaning following social exclusion. *Journal of Experimental Social Psychology*, *45*, 686–694.
- Stoeber, J., & Otto, K. (2006). Positive conceptions of perfectionism: Approaches, evidence, challenges. *Personality and Social Psychology Review*, *10*, 295–319.
- Strümpfer, D. J. W., (2006) The strengths perspective: fortigenesis in adult life. *Social Indicators Research*, *77*, 11-36.
- Taylor, S. J., Kingdon, D., & Jenkins, R. How are nations trying to prevent suicide? An analysis of national suicide prevention strategies. *Acta Psychiatrica Scandinavica*, *95*, 457-463.
- Thompson, N. J., Coker, J., Krause, J. S., & Henry, E. (2003). Purpose in life as a mediator of adjustment after spinal cord injury. *Rehabilitation Psychology*, *48*, 100–108.
- Troister, T., & Holden, R. R. (2012). A two-year prospective study of psychache and its relationship to suicidality among high-risk undergraduates. *Journal of Clinical Psychology*, *68*, 1019–1027.
- Van Orden, K. A., Witte, T. K., Cukrowicz, K. C., Braithwaite, S., Selby, E. A., & Joiner, T. E., Jr. (2010). The interpersonal theory of suicide. *Psychological Review*, *117*, 575–600.
- Weisinger, H., & Lobsenz, N. (1981). *Nobody's perfect*. New York: Warner Books.
- Weissman, A. N., & Beck, A. T. (1978, November). *Development and validation of the Dysfunctional Attitude Scale: a preliminary investigation*. Paper presented at the meeting of the Association for Advancement of Behavior Therapy, Chicago.
- Wilchek-Aviad, Y. (2015). Meaning in life and suicidal tendency among immigrant (Ethiopian) youth and native-born Israeli youth. *Journal of Immigrant and Minority Health*, *17*(4), 1041-1048.
- Yeager, D., & Bundick, M. (2009). The role of purposeful workgoals in promoting meaning in life and in schoolwork during adolescence. *Journal of Adolescent Research*, *24*, 423-452.