BEYOND-THE-SELF PURPOSE IN EARLY ADOLESCENTS FROM LOW-INCOME, RACIAL AND ETHNIC MINORITY BACKGROUNDS: THE ROLE OF EMOTIONS

By

SAMUEL JOSEPH NAYMAN

A dissertation submitted to the School of Graduate Studies Rutgers, The State University of New Jersey In partial fulfillment of the requirements For the degree of Doctor of Philosophy Graduate Program in Psychology Written under the direction of Maurice J. Elias And approved by

___________________________
___________________________
___________________________

New Brunswick, New Jersey

October, 2021
ABSTRACT OF THE DISSERTATION

Beyond-the-Self Purpose in Early Adolescents From Low-Income, Racial and Ethnic Minority Backgrounds: The Role of Emotions

By SAMUEL JOSEPH NAYMAN

Dissertation Director:

Maurice J. Elias, Ph.D.

Beyond-the-self (BTS) purpose, defined as "a stable and generalized intention to accomplish something that is at once meaningful to the self and of consequence to the world beyond the self" (Damon et al., 2003, p. 121) is associated with a variety of positive health and academic outcomes (e.g., Bronk & Finch, 2010; Yeager et al., 2014). There is currently a fledgling literature on the environmental and psychological factors that contribute to BTS purpose in youth, and less is known on this topic for students from low-socioeconomic status, racial and ethnic minority backgrounds (Sumner et al., 2018). Theoretical and empirical research suggest that positive emotions, such as gratitude, can serve to broaden attention and build personal resources for long-term survival and flourishing, whereas negative emotions, such as anxiety, narrow attention (Fredrickson, 2001). As such, it is reasonable to imagine that BTS purpose, which is other-oriented and broad in perspective, would be predicted by a combination of high levels of positive emotions and low levels of negative emotions. This study’s sample \( N = 209 \) of middle school students was nearly evenly divided between males (50.2%) and females (49.8%). A majority of students received free lunch (70.3%). Additionally, a majority of students were Latinx (56.0%), with African American (17.7%), Asian (13.9%), and Caucasian
(12.4%) students representing the remainder of the sample. All students were assigned to complete self-report measures of anxiety and gratitude in the fall of the 2015-2016 school year. In the spring of that same school year, students were assigned to complete self-report measures of BTS purpose as well as to write essays about their purpose in life. Hierarchical linear and logistic regressions were performed to determine if students' anxiety and gratitude scores predicted BTS purpose and if there was an interaction between the predictor variables. Results indicated that gratitude was statistically significantly associated with the self-report measures of BTS purpose and accounted for approximately 15% of the variance, whereas anxiety did not explain additional variance. Although this study does not reveal a causal relationship, this study does support the prediction that high levels of positive emotions in the form of gratitude are associated with BTS purpose. Given research that demonstrates the efficacy of gratitude-enhancing interventions (Wood et al., 2010), future experimental studies can help determine whether gratitude plays a causal role in the development of BTS purpose. If gratitude does in fact help build BTS purpose, schools would be wise to adopt such interventions.

*Keywords*: Purpose, gratitude, anxiety, adolescence
ACKNOWLEDGMENTS

This dissertation would not have been possible without my family, friends, and committee. I am grateful for the love, laughter, and learning we have shared. Thank you!

Thank you! Thank you!
# TABLE OF CONTENTS

Abstract of the Dissertation ................................................................. ii
Acknowledgments ........................................................................ iv
List of Tables ................................................................................ vi
List of Illustrations ........................................................................ vii
Introduction .................................................................................... 1
Methods ......................................................................................... 10
Results ........................................................................................... 15
Discussion ....................................................................................... 19
References ...................................................................................... 29
Tables .............................................................................................. 36
Illustrations ..................................................................................... 44
Appendix A. Purpose Essay Prompt .................................................. 45
Appendix B. Brief Gratitude Questionnaire ....................................... 46
Appendix C. Brief Anxiety Questionnaire .......................................... 47
Appendix D. Modified Purpose Scale ............................................... 48
Appendix E. Prosocial Intention Item ............................................... 49
Appendix F. Coding Manual for Purpose Essays .............................. 50
LIST OF TABLES

Table 1. Representative Purpose Essay Excerpts With Modified Purpose Scale (MPS) and Prosocial Intention Scores ................................................................. 36

Table 2. Descriptive Analysis of Independent and Dependent Variables ............... 38

Table 3. Frequencies of Purpose Codes .............................................................. 39

Table 4. Correlations Between Independent and Dependent Variables .............. 40

Table 5. Hierarchical Linear Regression with Modified Purpose Scale Mean Score as Dependent Variable and Gratitude and Continuous Anxiety Variable as Independent Variables .......................................................... 41

Table 6. Hierarchical Linear Regression with Modified Purpose Scale Mean Score as Dependent Variable and Gratitude and Dichotomous Anxiety Variable as Independent Variables .......................................................... 42

Table 7. Hierarchical Linear Regression with Prosocial Intention Item Score as Dependent Variable ............................................................... 43
LIST OF ILLUSTRATIONS

Figure 1. Interaction Plot of Fall 2015 Gratitude and Fall 2015 Anxiety as Predictor of
Spring 2016 Purpose ................................................................. 44
Introduction

Viktor Frankl gave new meaning to what it means to have a purpose in life when he bestowed upon the world, “Man’s Search for Meaning” (1959/2006), a book that both recounts his time as a concentration camp prisoner during the Holocaust and serves as a testament to the strength of the human spirit. Frankl wrote:

A man who becomes conscious of the responsibility he bears toward a human being who affectionately waits for him, or to an unfinished work, will never be able to throw away his life. He knows the “why” for his existence, and will be able to bear almost any “how.” (p. 80)

Frankl’s testimony suggests that a purpose in life may not only help someone survive but to thrive, even when facing horrific circumstances. More so, a purpose that extends beyond oneself benefits both the individual and the larger society. So anecdotally and theoretically, a “beyond-the-self” (BTS) purpose (Malin et al., 2013) is ostensibly beneficial. From an empirical perspective, a BTS purpose is associated with a panoply of positive outcomes, as demonstrated by both correlational (e.g., Bronk & Finch, 2010; Johnson et al., 2018; Malin et al., 2017; Yeager & Bundick, 2009; Yeager et al., 2012) and experimental research (e.g., Dik et al., 2011; Pizzolato et al., 2011; Yeager et al., 2014). Taken together, a BTS purpose is demonstrably advantageous.

Despite the clear advantages of BTS purpose, many of the studies involving this construct are limited in their generalizability and recommendations. That is, studies on BTS purpose contain a dearth of participants from low socioeconomic status (SES), racial and ethnic minority backgrounds (Sumner et al., 2018) and the studies provide minimal insight into the malleable factors that can unlock BTS purpose. The literature specifically
focused on youth is smaller, and equally overrepresented with Caucasian participants. Therefore, a critical question to ask is, what are the factors that allow all youth and particularly youth from marginalized backgrounds, to think and contribute beyond themselves? Barbara Fredrickson’s “broaden-and-build” theory of positive emotions (Fredrickson, 2001, p. 219) may offer some insight into the key ingredients of BTS purpose. But first, it would be helpful to elaborate on the landscape of BTS purpose—how this term is conceptualized and measured, why it is important, how prevalent it is, what factors might allow for it to take root and flourish in an increasing number of youth, and where the gaps in the literature are located.

**Defining and Measuring BTS Purpose**

From a community psychology perspective, Seymour Sarason identified transcendence—which he defined as contributing or connecting to something larger and greater than oneself—as a basic human attribute and as essential to sound mental health (Sarason, 1974). From a more developmental and moral psychology perspective, Damon and colleagues (2003) elaborated on this concept and defined purpose as encompassing “a stable and generalized intention to accomplish something that is at once meaningful to the self and of consequence to the world beyond the self” (Damon et al., 2003, p. 121). Using this definition as an organizing framework, Moran (2009) conceptualized what will be referred to here as BTS purpose as consisting of three dimensions, including intention, engagement, and prosocial reasoning. Intention represents a long-term aim; engagement indicates actions have been taken in accordance with that long-term aim; and prosocial reasoning suggests the aim and actions are beneficial to the world beyond the self. To be considered fully purposeful, students would need to endorse all three aspects of BTS
purpose. This three-pronged convention for conceptualizing BTS purpose has since been used across multiple studies (e.g., Bronk, Finch, & Talib, 2010; Malin et al., 2013; Mariano et al., 2011; Quinn, 2016).

BTS purpose has been assessed with a variety of methods, each of which possesses varying degrees of validity and reliability as well as advantages and disadvantages (Bronk, 2014; Damon et al., 2003; Hill et al., 2010; Malin et al., 2017). Self-report measures have the advantage of being efficient in terms of cost and speed but the disadvantage of insufficiently capturing students’ purpose. Semi-structured interviews have the advantage of more accurately capturing students’ purpose but the disadvantage of being resource intensive. Purpose essays have the advantage of giving students space to elaborate on their purpose without requiring extensive resources to administer but the disadvantage of requiring adequate writing skills and substantial coding resources, without room to ask students clarifying questions.

**Benefits of BTS Purpose**

Correlational and experimental research indicates that a BTS purpose is connected to a variety of positive life outcomes, ranging from mental health to academic achievement. Youth with a BTS purpose appear to have greater life satisfaction and less neuroticism than youth without long-term aims, as demonstrated by a sample of predominantly Caucasian (72.5%) 7th-11th grade students ($N = 144$) from a Midwestern town in the United States (Bronk & Finch, 2010). BTS purpose has also been found to correlate with a variety of character strengths, including compassion, gratitude, and grit, as evidenced in an ethnically and geographically diverse sample of 9th grade students ($N = 1,005$) (Malin et al., 2017). Experimental studies with adolescents from a middle class
suburban high school consisting primarily of Asian and White participants \((N = 338)\) as well as from 17 participating urban public high schools consisting primarily of African American and Latinx participants \((N = 429)\) have also found that BTS purpose interventions can increase students’ self-regulation and grade point averages (Yeager et al., 2014). Collectively, these studies suggest that a BTS purpose can confer desirable advantages to those who possess this asset.

**Prevalence of BTS Purpose**

Adolescence is a period when BTS purpose and identity begin to form (Bronk, 2011; Malin et al., 2017; Moran, 2009). At this stage of life, BTS purpose is not the norm but it also is not an extreme outlier. A geographically and ethnically diverse cross-sectional sample \((N = 270)\) of American adolescents from urban and rural areas of California, Pennsylvania, and Tennessee revealed that approximately one out of every six students in 6th (16%) and 9th (17%) grade had a BTS purpose (Moran, 2009).

**Malleable Factors Contributing to BTS Purpose in Youth**

Broadly speaking, there are at least two categories to consider when thinking about how a BTS purpose develops. These categories include external and internal factors. The extant literature on BTS purpose provides some clues regarding the external factors, such as social and material supports. With some exceptions (cf. Moran et al. 2013), these findings are based on a handful of qualitative studies involving small sample sizes (e.g., Bronk, 2012; Liang et al., 2017). The literature on the internal factors, or in other words, the emotional drivers of a BTS purpose (e.g., Froh et al., 2010; Malin et al., 2017), also is quite scarce. To address this notable gap in the literature and determine the emotional architecture that helps support a BTS purpose, it may be helpful to turn to
Barbara Fredrickson’s “broaden-and-build” theory of positive emotions (Fredrickson, 2001).

The broaden-and-build theory of positive emotions states that while negative emotions, such as fear and anxiety, narrow attention and available responses (e.g., when fearful, fight or flee) for the evolutionary purpose of immediate survival, positive emotions, such as interest and gratitude, broaden attention and available responses (e.g., when interested, engage in exploration) for the purpose of building the physical, intellectual, and social resources for long-term survival and flourishing (Fredrickson, 2001; Fredrickson, 2004; Fredrickson & Joiner, 2002). There is now substantial empirical support for the broaden-and-build theory of positive emotions (Fredrickson, 2013), and the theory can help in making predictions about the emotions that would be critical for advancing or preventing a BTS purpose.

A BTS purpose is characterized by attending to the world beyond oneself, which requires a broadened, as opposed to narrowed, perspective, and should therefore be facilitated by positive emotions. Gratitude, conceptualized as an emotion, mood, or trait, is theoretically and empirically linked to various dimensions of BTS purpose (Ma et al., 2017). Gratitude has been described as an interpersonal emotion that sparks the urge to be prosocial in response to a benefit received (Fredrickson, 2013). Prosocial behavior is inherently other-oriented and beyond-the-self. Numerous studies support the link between gratitude in all its forms (e.g., emotion and trait) and various forms of prosocial behavior (e.g., direct and indirect reciprocity), albeit with varying effect sizes (Ma et al., 2017). There are a limited number of studies that look more directly at the link between gratitude and BTS purpose and these have found them to be correlated and mutually
reinforcing (Froh et al., 2010; Malin et al., 2017). Taken together, gratitude appears to potentially be a key contributor to BTS purpose.

Negative emotions, which narrow attention, should hinder BTS purpose. Theoretically, anxiety and related disorders, which are characterized by excessive fear and avoidance (American Psychiatric Association, 2013), would limit BTS purpose, given the broadened perspective of BTS purpose. Several studies provide some preliminary evidence for an inverse relationship between emotional distress and BTS purpose, albeit in demographically limited samples (Bronk & Finch, 2010; Kiang, 2012). Notably, although high levels of anxiety may hinder BTS purpose, low levels of anxiety will not necessarily promote BTS purpose. According to the two continua model of mental health and illness, for which there is empirical support in adolescent (Keyes, 2006) and adult populations (Keyes, 2007), “The absence of mental illness does not imply the presence of mental health,” with mental health consisting of multiple dimensions, including purpose in life (Keyes, 2007, p. 100). Taken together, gratitude may moderate the relationship between anxiety and BTS purpose.

Importantly, interventions have been developed that can increase gratitude (Wood et al., 2010) and decrease anxiety (James et al., 2020). Therefore, if an increasing number of studies find that gratitude and anxiety directly influence BTS purpose, then the interventions that increase gratitude and decrease anxiety could potentially help pave the way for higher rates of BTS purpose. Emotions for which evidence-based interventions have not been developed would be less compelling as areas of study.

**Gaps in the Literature**

Although there is both theoretical and empirical support for the relationship
between gratitude, anxiety, and purpose, there are several substantial gaps in the literature. First, there are a small number of studies that examine these relationships. Second, studies that examine these relationships have demographically limited samples and do not generally focus on early adolescent students from low-SES, racial and ethnic minority backgrounds. Third, the variables used in these studies can occasionally be better described as approximations rather than direct measures of gratitude, anxiety, and BTS purpose. Finally, neither the gratitude studies nor the anxiety studies incorporated both gratitude and anxiety into their statistical models, and so more work needs to be done to clarify potential interactions between emotions that help predict BTS purpose in youth from marginalized backgrounds.

The limited number of studies examining BTS purpose among youth from low-SES, racial and ethnic minority backgrounds is problematic. Theoretically, there is reason to suspect that adolescents from marginalized backgrounds who face obstacles such as stigmatization and limited access to economic and political resources, would not only differ from their peers in their scope, strength, and awareness of purpose, but may have the most to gain from this psychological resource (Sumner et al., 2018). However, given the scarcity of research examining the relationship between marginalization and BTS purpose, these anticipated differences are largely speculative. For instance, living in a neighborhood with high rates of violence may necessitate a narrowed focus on survival with limited means to affect systemic change, thereby making a BTS purpose unlikely. Conversely, living in that same neighborhood could inspire a strong BTS purpose aimed at advocating for increased safety and social justice. The likelihood of those two trajectories and the malleable internal and external factors that would facilitate those two
paths are unclear given the dearth of studies that explore the developmental trajectory of BTS purpose in youth from low-SES, racial and ethnic minority backgrounds. Therefore, Sumner et al.’s (2018) call for advancing the science of purpose as it pertains to marginalization is well received.

It appears there are only two studies that look specifically at the relationship between gratitude and BTS purpose (Froh et al., 2010; Malin et al., 2017). Although these studies demonstrate that gratitude correlated with BTS purpose in a sample of ninth grade students (N = 1,005) (Malin et al., 2017), and that gratitude and BTS purpose were mutually reinforcing in a sample of predominantly Caucasian (70.8%) 10-14 year-old students (N = 700) from affluent households (Froh et al., 2010), these studies do not address the extent to which gratitude relates to BTS purpose in early adolescents from low-SES, racial and ethnic minority backgrounds. Given the benefits of a BTS purpose and the scarcity of literature examining this asset in youth from marginalized backgrounds (Sumner et al., 2018), research that can help fill this void would be of great value.

Furthermore, although several studies report on inverse relationships between BTS purpose and emotional distress—namely anxiety in Asian American high school students (N = 180) (Kiang, 2012) and neuroticism in primarily Caucasian (72.5%) Midwestern adolescents (N = 144) (Bronk & Finch, 2010)—these studies are demographically constricted, and Kiang’s (2012) study does not distinguish self-oriented purpose from BTS purpose. Additionally, although Kiang (2012) found that greater youth purpose was positively associated with the positive emotion of happiness and negatively associated with anxiety, the study did not examine gratitude specifically.
Present Study

Given that adolescence is a period when BTS purpose and identity begin to form and ultimately steer life trajectories (Bronk, 2011; Malin et al., 2017; Moran, 2009), it is worth understanding the factors that help influence these processes at this critical stage of life. Yet clarity around the emotional habitat that is necessary for a BTS purpose to take root and thrive, particularly in early adolescents from low-SES, racial and ethnic minority backgrounds, is lacking. The broaden-and-build theory of positive emotions would suggest that positive emotions such as gratitude, which broaden perspectives and build social bonds, would facilitate BTS purpose, while negative emotions such as anxiety, which narrow attention and reduce engagement, would inhibit the development of BTS purpose. Several studies provide some preliminary support for these predictions, but major gaps in the literature remain. This study aimed to address several of those gaps, including focusing on a sample of students who are predominantly from low-SES, racial and ethnic minority backgrounds as well as exploring the contributions of and interaction between valid measures of gratitude and anxiety on BTS purpose.

This study asked, might the positive and negative emotions (i.e., gratitude and anxiety) of early adolescent students from predominantly low-SES, racial and ethnic minority backgrounds help predict the extent to which these youth have BTS purpose? In addition, is there an interaction between the anxiety and gratitude scores that predicts the extent of BTS purpose above and beyond the original predictor variables?

- Hypothesis 1: Higher levels of gratitude will be associated with a greater extent of BTS purpose, and higher levels of anxiety will be associated with a lesser extent of BTS purpose.
• Hypothesis 2: High levels of gratitude and low levels of anxiety will be associated with the highest degree of BTS purpose; high levels of gratitude and high levels of anxiety will be associated with the second highest degree of BTS purpose; low levels of gratitude and low levels of anxiety will be associated with the third highest degree of BTS purpose; and low levels of gratitude and high levels of anxiety will be associated with the lowest degree of BTS purpose.

Methods

Setting and Participants

The sample (N = 209) includes 6th through 8th grade students during the 2015-2016 school year. The sample was split between males (50.2%) and females (49.8%). Most students received free lunch (70.3%), an indicator of low SES. A majority of students were Latinx (56.0%), followed by African American (17.7%), Asian (13.9%), and Caucasian (12.4%) students. These students attended one of two pre-K-8th grade urban public schools, each of which had between 300 to 400 middle school students and were located in the Northeastern United States.

Procedures

During the 2015-2016 school year, students received the first year of a three-year social-emotional and character development (SECD) curriculum that also incorporated material on purpose in life. Both quantitative and qualitative measures were used to more fully capture students’ social-emotional functioning and character virtues. In the fall of 2015, students received self-report surveys that assessed gratitude and anxiety. In the spring of 2016, students received survey items assessing purpose as well as an essay assignment that asked them about their purpose in life. The students’ language arts
teachers presented the essay prompt (Appendix A) as a language arts assignment to help reduce associations with the SECD curriculum intervention.

Measures

*Independent Variables*

**Gratitude.**

The Gratitude Questionnaire-6 (GQ-6) is a six-item survey that was originally developed to measure dispositional gratitude in adults (McCullough et al., 2002) and was later adapted to measure gratitude in adolescents (Froh et al., 2011). Froh and colleagues (2011) found that five items from the GQ-6 had acceptable reliability (alphas ranging from .76 to .85 across 10-14 year-olds) and convergent validity. The adapted questionnaire also replaced the term “grateful” with “thankful” in the survey items. Sample items include, “I am thankful to a wide variety of people” and “I have so much in life to be thankful for.” When administered in the fall of 2015, items in this revised version of the GQ-6 were rated on a five-point scale ranging from “Disagree A LOT!” to “Agree A LOT!” Psychometric analyses on this study’s sample indicated that by removing the reverse scored item (“When I look at the world, I don’t see much to be thankful for”), the questionnaire’s Cronbach’s alpha rose from .62 to .71, thereby warranting the removal of the reverse scored item. Principal component analysis demonstrated that the four remaining items, which can be found in Appendix B, loaded onto one factor. Additionally, the mean inter-item Pearson correlation was .38. Taken together, the brief gratitude questionnaire demonstrates strong psychometric properties. Mean scale scores were calculated for subsequent analyses.

**Anxiety.**

The Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997; Goodman
et al., 1998) examines emotional problems, conduct problems, hyperactivity, peer problems, and prosocial behavior. In a large community sample of British youth ($N = 7,984$), the SDQ successfully identified psychiatric disorders with 94.6% specificity and 63.3% sensitivity (Goodman et al., 2000). The items that most closely capture anxiety and were the most psychometrically sound in this study sample include, “I worry a lot,” “I have many fears, I am easily scared,” and “I am nervous in new situations. I easily lose confidence.” Items were rated on a three-point scale of “Not True,” “Somewhat True,” or “Certainly True.” Principal component analysis revealed that these three items, which can be found in Appendix C, loaded onto one factor. Additionally, the brief anxiety questionnaire’s Cronbach’s alpha was .65 and the mean inter-item Pearson correlation was .38. Mean scale scores were calculated for subsequent analyses.

**Dependent Variables: Three Measures of BTS Purpose**

To assess for BTS purpose in this study’s population, three measures were employed. Two of the measures were quantitative and one was qualitative. This mixed-methods approach was used to counteract the limitations inherent in the various methods for measuring purpose and examine whether or not the results would converge. This mixed-methods approach of identifying convergence is known as triangulation (Greene et al., 1989). The two quantitative measures of purpose were separated given their complimentary yet distinct elements, with one of the measures focusing more directly on the prosocial dimension of purpose. More so, a Pearson’s correlation indicated that the two quantitative measures were significantly albeit moderately correlated, suggesting that these two measures of purpose were tapping into similar yet distinct dimensions of purpose. Point biserial correlations between the qualitative and two quantitative measures of purpose did not yield significant results. Nonparametic analyses (i.e., chi-square tests)
helped confirm these nonsignificant results. Subsequent analyses were run separately for each of the three measures of BTS purpose.

**Modified Purpose Scale.**

The Modified Purpose Scale, previously demonstrating a Cronbach’s alpha of .88 (Nayman et al., 2019), was used to provide a quantitative measure of students’ BTS purpose. This scale was developed by combining items from two widely used purpose measures (Bundick et al., 2006; Lippman et al., 2014). The Modified Purpose Scale consists of items that address the intention, engagement, and prosocial dimensions of purpose. There are two items that address intention (“My life has a clear sense of purpose;” “I have a purpose in my life that says a lot about who I am”), two items that address engagement (“I am doing things now that will help me to achieve my purpose in life;” “I am always working toward accomplishing my most important goals in life”), and one item that addresses prosocial reasoning (“My life will make a difference in the world;”). These five items were rated on a five-point scale of “Disagree A LOT!” to “Agree A LOT!” The Modified Purpose Scale, which can be found in Appendix D, was psychometrically robust in this study’s population. Principal component analysis indicated that the five items loaded onto one factor, the scale’s Cronbach’s alpha was .86, and the mean inter-item Pearson correlation was .56. Mean scale scores were calculated for subsequent analyses.

**Prosocial Intention Item.**

As a supplement to the Modified Purpose Scale, an additional item (Appendix E) was included to further tap into the prosocial dimension of purpose. The item reads, “In the future, I will contribute meaningfully to my community. ‘Contribute meaningfully’ means to help out a lot.” This item was rated on a five-point scale of “Disagree A LOT!”
to “Agree A LOT!” The item was adapted from studies on educational attainment and future aspirations in low-SES urban youth (Bell et al., 2019; Ou & Reynolds, 2008) and maintains face validity as a measure of the prosocial dimension of purpose. Furthermore, a Pearson’s correlation between the prosocial intention item and the Modified Purpose Scale demonstrated concurrent validity ($r = .46, p < .01$). This statistically significant albeit moderate correlation with the Modified Purpose Scale suggests that the two quantitative measures of purpose shared meaningful variance while representing distinct dimensions of purpose.

**Purpose Essays.**

The purpose essays were coded along three dimensions. The three dimensions include intention, engagement, and prosocial reasoning (Malin et al., 2013). Students who described engaging (i.e., engagement) with an overarching life goal (i.e., intention) that allows them to contribute to the world (i.e., prosocial reasoning) were coded as being fully purposeful. Students who did not meet all three criteria for a BTS purpose were coded as not fully purposeful. Therefore, “fully purposeful” is a dichotomous variable. A codebook was developed (Appendix F) and modeled after well-established codebooks (viz., Malin et al., 2008). Coders were trained to code the essays with acceptable reliability by achieving 80% agreement with the master coder and one other trained coder. On the 209 purpose essays, coders initially achieved 86% overall agreement on the total codes. Specifically, they coded 96% of those essays consistently on the dimension of intention; 74% on the dimension of engagement; and 87% on the dimension of prosocial reasoning. Any essays that were not initially consistently coded were resolved amongst the two primary coders and the master coder by way of discussion and consensus.
Results

Missing Data

There were 717 total students in the two participating middle schools during the 2015-2016 school year. Students who were missing purpose essays or had completed an insufficient number of survey items, were excluded from the sample by list-wise deletion. The final sample consisted of 209 students. To determine if there were systematic differences in the demographic make-up of the students who were included in the study versus those students who were excluded from the study, chi-square analyses were conducted. There were no statistically significant differences between the excluded and included students in regard to the demographic variables of gender, race, or SES (i.e., free vs. paid lunch). Therefore, the final sample of 209 students is considered to be representative of the entire student population.

Preliminary Analyses

To capture the landscape of this study’s data, descriptive statistics, including means and standard deviations of gratitude, anxiety, and BTS purpose scores as well as frequencies and percentages of purpose codes were calculated and presented in Tables 2 and 3. On average, students scored 4.34 ($SD = .66$) out of 5 on the brief gratitude questionnaire and 1.91 ($SD = .56$) out of 3 on the brief anxiety questionnaire in fall of 2015, as well as 4.19 ($SD = .76$) out of 5 on the Modified Purpose Scale and 4.30 ($SD = .87$) out of 5 on the prosocial intention item in spring of 2016. In general, students endorsed a moderate amount of wellbeing in terms of gratitude and BTS purpose, and minimal amounts of anxiety.

The vast majority of students (96.2%) were coded as having a purpose intention,
whereas a slight majority of students either said they engaged in activities (65.1%) or had prosocial reasoning (63.6%). Slightly over one-third of the students (37.8%) were fully purposeful (i.e., endorsed all three dimensions of purpose).

To help illuminate the strength and direction of the relationship between the variables, Pearson’s correlations were calculated (Table 4). The calculations revealed statistically significant correlations and relationships between variables that were in the expected direction. Specifically, there was a positive relationship between the independent variable of gratitude and the dependent variable of BTS purpose, as measured by the Modified Purpose Scale ($r = .39$, $p < .01$) and the prosocial intention item ($r = .40$, $p < .01$). The two independent variables of gratitude and anxiety were negatively associated ($r = -.14$, $p < .05$).

To determine whether or not to control for demographic variables (i.e., gender, SES, school, race/ethnicity) in the hierarchical linear and logistic regression analyses, a series of statistical tests were conducted. Chi-square analyses were conducted to determine if there were gender, SES (i.e., free vs. paid lunch), school, or race/ethnicity differences on spring 2016 BTS purpose as measured by the dichotomous fully purposeful code. Analysis of variance (ANOVA) was utilized to determine if there were race/ethnicity differences on fall 2015 gratitude and anxiety scores, as well as spring 2016 BTS purpose as measured by the Modified Purpose Scale and prosocial intention item. Several $t$ tests were employed to determine if there were gender, SES, or school differences on these latter four quantitative measures. Given the absence of statistically significant gender, SES, school, or race/ethnicity differences in gratitude, anxiety, and BTS purpose, the demographic variables were not controlled for in later analyses.
Predicting BTS Purpose Using Hierarchical Linear and Logistic Regression

**Modified Purpose Scale Mean Score as Dependent Variable**

To address the question of whether gratitude and anxiety in fall 2015 predicted BTS purpose, as measured by the Modified Purpose Scale in spring 2016, a hierarchical linear regression was performed. This analysis also served to determine if there was an interaction between the emotion variables. To prevent issues of potentially high multicollinearity with the interaction term, the variables were centered and interaction terms between gratitude and anxiety were created. Students’ fall 2015 gratitude scores were entered first (Step 1) and accounted for approximately 15% (14.8%) of the variability in students’ Modified Purpose Scale scores ($\beta = .45, p < .001$) (Table 5). Neither students’ fall 2015 anxiety scores (Step 2) nor the interaction of the fall 2015 gratitude and anxiety scores (Step 3) helped to account for unique variance in students’ BTS purpose. The results stayed the same after reversing Step 1 and Step 2.

A supplemental hierarchical linear regression was run with the anxiety variable transformed into a dichotomous variable in order to capture the participants with a substantial degree of anxiety. Participants who had a mean score of 3 were coded as 1 (i.e., “high anxiety”) and all other participants were coded as 0 (i.e., “low anxiety”). Participants’ fall 2015 gratitude scores were entered first (Step 1) and accounted for approximately 15% (14.8%) of the variability in students’ Modified Purpose Scale scores ($\beta = .45, p < .001$). The dichotomous fall 2015 anxiety variable was entered second (Step 2) and did not explain additional variance. The interaction of the fall 2015 gratitude and dichotomous anxiety variable was entered last (Step 3). The interaction explained a statistically significant 2.7 percent of the variance beyond the main effects ($\beta = .64, p <$
Notably, 12 students were classified as having “high anxiety” whereas 197 students were classified as having “low anxiety.” The interaction is displayed in Figure 1.

**Prosocial Intention Item Score as Dependent Variable**

To address the question of whether gratitude and anxiety in fall 2015 predicted BTS purpose, as measured by the prosocial intention item administered in spring 2016, a hierarchical linear regression was performed. This analysis also served to determine if there was an interaction between the emotion variables. Students’ fall 2015 gratitude scores were entered first (Step 1) and accounted for approximately 16% (15.9%) of the variability in students’ BTS purpose, ($\beta = .52, p < .001$) (Table 7). Neither students’ fall 2015 anxiety scores (Step 2) nor the interaction of the fall 2015 gratitude and anxiety scores (Step 3) helped to account for unique variance in students’ BTS purpose. The results stayed the same after reversing Step 1 and Step 2 as well as when transforming the anxiety variable to a dichotomous variable, split into “high” and “low” anxiety.

**Fully Purposeful Code as Dependent Variable**

To determine whether gratitude and anxiety in fall 2015 predicted the likelihood of BTS purpose, as measured by the fully purposeful code in spring 2016, a hierarchical logistic regression was performed. In the regression, the dichotomous dependent variable was defined as $1 =$ Fully purposeful and $0 =$ Not fully purposeful. This analysis also served to determine if there was an interaction between the emotion variables. Students’ fall 2015 gratitude scores were entered first (Step 1), fall 2015 anxiety scores were entered next (Step 2), and the fall 2015 gratitude and anxiety interaction variable was entered last (Step 3). The tests did not yield statistically significant findings. The results stayed the same after reversing Step 1 and Step 2 as well as when transforming the
anxiety variable to a dichotomous variable, split into “high” and “low” anxiety.

**Mixed Methods Approach to BTS Purpose**

To provide a more textured look at several purpose profiles, a sample of participants’ purpose essay excerpts along with their respective scores on the Modified Purpose Scale and prosocial intention item are included in Table 1. The excerpts are from essays that were considered fully purposeful (i.e., all three dimensions of BTS purpose) and not fully purposeful (i.e., intention and engagement dimensions but not prosocial reasoning). Essays that did not endorse any of the three dimensions of purpose were not included in Table 1, but in general, such essays expressed not having found a purpose (e.g., “My purpose is still unknown to me. I am still deciding what I want to be, what I want to pursue, what my career is going to be and so on.”), defining purpose without describing a personal purpose, and a meandering stream of consciousness.

**Discussion**

The first set of questions this study asked was whether knowing gratitude and anxiety levels among early adolescent students from predominantly low-SES, racial and ethnic minority backgrounds helped predict the extent to which these youth had BTS purpose. This study found that students’ gratitude scores did in fact help predict BTS purpose as measured by the Modified Purpose Scale and prosocial intention item, but not by the fully purposeful code. That is, knowing students’ gratitude scores could help in making a more accurate prediction about the extent of BTS purpose than if their gratitude scores were not known. Directionally, as students’ gratitude scores increased, so too did their Modified Purpose Scale mean scores and prosocial intention item scores. Students’ anxiety scores did not help predict their Modified Purpose Scale mean scores, prosocial
intention item scores, or whether or not students were fully purposeful, as determined by the purpose essays.

This study also explored possible interactions between the anxiety and gratitude scores that could predict the extent of BTS purpose above and beyond the original predictor variables. Results demonstrated that gratitude and anxiety did not initially interact in a way that improved the ability to predict any of the three measures of BTS purpose above and beyond gratitude’s contribution. However, a supplemental analysis that categorized anxiety into high and low groups, demonstrated an interaction between gratitude and anxiety that helped predict BTS purpose, as measured by the Modified Purpose Scale. In this way, gratitude was acting as a moderator of the relationship between anxiety and BTS purpose. Specifically, high anxiety was associated with both the highest and lowest level of BTS purpose, depending on the level of gratitude (i.e., high anxiety and high gratitude was associated with the highest level of BTS purpose, and high anxiety and low gratitude was associated with the lowest level of BTS purpose) whereas low anxiety was associated with more moderate levels of BTS purpose (i.e., low anxiety and high gratitude was associated with the second highest level of BTS purpose, and low anxiety and low gratitude was associated with the third highest level of BTS purpose).

The relationship between gratitude and BTS purpose in this study was consistent with the extant literature. Furthermore, this finding lends support to the broaden-and-build theory of positive emotions, which says that positive emotions like gratitude broaden attention and build personal resources for long-term survival and flourishing. In addition, the lack of a statistically significant main effect between anxiety and BTS
purpose is consistent with the two continua model of mental health and illness that says the absence of mental illness or anxiety, does not imply the presence of mental health (e.g., BTS purpose). Although the interaction finding must be interpreted with caution given the small number of students who endorsed a high degree of anxiety, the results, which demonstrated that high anxiety is behind the highest and lowest levels of BTS purpose, are consistent with the empirically-supported theory of “orchid” and “dandelion” children (Ellis & Boyce, 2008). This theory suggests that children who are minimally reactive to stress tend to adapt well to most circumstances, much like a dandelion that can survive in varied environments. Conversely, children who are highly reactive to stress tend to experience the most extreme outcomes depending on their environment, such that they tend to flourish and experience better outcomes than their “dandelion” peers in supportive environments, or suffer and experience worse health outcomes in adverse environments. These children at the outer edges are like orchids that are radiant when nurtured but quick to wither when neglected. The participants in this study who scored high on anxiety are like orchids, demonstrating that they are capable of the highest and lowest levels of flourishing (i.e., BTS purpose) depending on their level of gratitude. In this way, gratitude may act as the emotional habitat that allows BTS purpose to take root and thrive.

The overall gratitude and BTS purpose scores were relatively high, which may have limited the ability to uncover findings and may be attributable to several factors, including intervention effects and school context. The schools participating in this study accepted an SECD intervention into their buildings, which may speak to a supportive school climate that helped engender gratitude as well as to the positive impact of the
intervention on spring 2016 purpose scores. In addition, the school district participating in this study has a large immigrant population. Although there may be substantial adversity that is associated with being a first or second generation immigrant, this status may also be associated with a mindset of gratitude to be in America and a purpose to succeed and contribute to family and community (Sumner et al., 2018). More so, given that the majority of the students in these schools were from low-SES and ethnic minority backgrounds, the participants in this study were representative of the majority rather than the minority and may have been less likely to be treated in a marginalized way in the context of the school. In other words, the environment may have been conducive to high levels of gratitude and BTS purpose.

A qualitative review of a small sample of purpose essays revealed several insights related to the role of context in shaping purpose, the range of prosocial pursuits, and the uncertain relationship between the quantitative and qualitative measures of BTS purpose. Regarding context, several essays described intentions that grew out of the circumstances of living in a community where violence is not uncommon and church is regularly attended. For instance, one student described a desire to become a police officer to address the violence that plagues his community while another student wrote of realizing her joy of caring for newborns when baby-sitting at her church. These examples, which speak to the role of environmental influences on purpose development, lend support to Sumner et al.’s (2018) case for actively researching BTS purpose development in youth from marginalized backgrounds who experience environments and stressors that are distinct from their peers’ environments.

Prosocial pursuits were described in essays relating to both the arts and more
traditionally service-oriented careers, but sports-related pursuits seemed to be associated with self-oriented reasoning. Fully purposeful essays relating to the arts focused on sharing one’s talents with the world as a way to spread joy. Fully purposeful essays relating to traditionally service-oriented professions, such as a police officer and neonatologist, focused on saving lives. These essays helped highlight that there are multiple avenues to BTS purpose that can leverage students’ unique strengths and interests.

The sample essays also helped illustrate the tenuous relationship between the purpose essays and the quantitative measures of BTS purpose. It was not uncommon for purpose essays coded as not fully purposeful to have similar or even higher scores on the quantitative purpose measures than the fully purposeful essays. Correlational and chi-square analyses had previously revealed this point, demonstrating that the fully purposeful essay code was not associated with the Modified Purpose Scale mean scores or the prosocial intention item.

Limitations

Although the relationship between gratitude and BTS purpose, as measured by the Modified Purpose Scale and prosocial intention item, is consistent with prior research findings and the broaden-and-build theory of positive emotions, the nature and strength of this relationship is not entirely clear. Regarding the nature of the gratitude and BTS purpose relationship, this study did not examine causality—that is, does gratitude lead to BTS purpose, does BTS purpose lead to gratitude, do gratitude and BTS purpose reciprocally influence each other, or is there a third variable that contributes to both gratitude and BTS purpose? A potential confounding variable that was not controlled for
is social desirability bias (Crowne & Marlowe, 1960). Students may feel compelled to endorse gratitude and purpose because those are socially desirable dispositions. Regarding the strength of the gratitude and purpose relationship, it may have been even greater than this study demonstrated with more refined measures of gratitude and BTS purpose. Gratitude, which is viewed as an interpersonal emotion (i.e., gratitude to a benefactor), has been conceptualized as a subset of appreciation. Despite this hierarchical relationship between appreciation and gratitude, the GQ-6 seems to equate the two constructs and includes some items that capture aspects of appreciation beyond the interpersonally-oriented definition of gratitude (e.g., Fagley, 2016; Tudge et al., 2018). Furthermore, gratitude to a benefactor has been shown to be more strongly associated with prosocial behavior than has appreciation (Ma et al., 2017). Given the similarities between prosocial behavior and the prosocial reasoning dimension of BTS purpose, a more focused measure of gratitude might reveal a stronger relation to BTS purpose. Similarly, the Modified Purpose Scale items loaded onto one factor and therefore did not provide clear empirical support for the three dimensions of BTS purpose (Damon et al., 2003; Moran, 2009), suggesting that a measure that more precisely captured the three dimensions, may have resulted in a stronger relationship between gratitude and BTS purpose. The Youth Purpose Interview Protocol (Malin et al., 2013) and the Prosocial Youth Purpose Scale (Malin et al., 2017), which appear to better differentiate the BTS dimension are viable candidates for future purpose-related research.

The absence of a relationship between gratitude and being fully purposeful, as determined by the purpose essays, may be attributable to the validity of the purpose essays as a method for assessing purpose. First, the fully purposeful code lacked
concurrent validity with the other two measures of BTS purpose that were utilized in this study. Additionally, although less than 40% of the students were fully purposeful, 96% of this study’s sample endorsed the intention dimension of purpose, as compared to approximately 50% of a demographically and geographically diverse sample of 6th and 9th graders in a prior study that utilized a semi-structured interview method for assessing BTS purpose (Quinn, 2016). The high rate of intention may have led to an overrepresentation of fully purposeful students. Although the author of this study took steps to phrase the purpose essay prompt in a way that would not lead students to identifying an intention where none previously existed, the nature of an assignment like the purpose essay is such that students may feel compelled to produce a socially desirable response. Given that semi-structured interviews provide space for less direct questioning as well as opportunities for follow-up questions, the interview format may provide a more valid, albeit time-consuming method for capturing BTS purpose.

There could be several factors contributing to the absence of a relationship between anxiety and BTS purpose. The two continua model of mental health and illness described earlier offers one explanation for why there is not a statistically significant inverse relationship between low anxiety and BTS purpose. Relatedly, such a relationship may only be present in the most severe cases of anxiety, for which few participants qualified. Another consideration includes the anxiety measure’s lower than preferred reliability (i.e., Cronbach’s alpha < .70), which might have attenuated correlations and underestimated relationships in this study. In addition, the anxiety and BTS purpose relationship is less well established in the literature. Some of the research (Bronk & Finch, 2010; Kiang, 2012) informing this study was based on populations that differed in
their demographics (i.e., predominantly Asian and Caucasian populations) and included measures that approximated to anxiety but were still distinct from the measure used for anxiety in this study.

**Implications for Future Research**

There are several promising avenues for future research, particularly related to refining BTS purpose measurement; unpacking the relationship between gratitude, anxiety, and BTS purpose; and illuminating the role of purpose in understudied populations. The first avenue of future research includes measure refinement in order to ensure that the measures of BTS purpose are valid. Next steps can involve comparing the purpose essay and semi-structured interview formats to assess for concurrent validity, as well as to allow for a more robust expression of the three dimensions of BTS purpose. In addition, follow-up studies can help determine if the different purpose measures demonstrate predictive validity.

The second avenue of future research would continue to examine the relationship between gratitude, anxiety, and BTS purpose. Considering both the small number of students who endorsed high levels of anxiety and the low base rates of clinical anxiety in the general population (American Psychiatric Association, 2013), future studies with larger sample sizes would increase the number of participants with high levels of anxiety and help add credence to a gratitude and anxiety interaction. Relatedly, administering other validated measures of anxiety, such as the Screen for Child Anxiety Related Emotion Disorders (SCARED, Birmaher et al., 1997), could help bolster future findings.

Given the correlational relationship between gratitude and BTS purpose in early adolescent students from low-SES, racial and ethnic minority backgrounds, a potentially
fruitful avenue of research would be to examine whether or not this relationship is causal. The search for a causal relationship could also help test the applicability of the broaden-and-build theory of positive emotions (Fredrickson, 2013). A series of experimental studies could be designed that focus on manipulating the independent variable of gratitude by way of evidence-based gratitude-enhancing interventions (Wood et al., 2010). Changes in BTS purpose would lend support to gratitude’s causal role in cultivating BTS purpose. Longitudinal mediation analyses that examine how BTS purpose changes as gratitude changes over time could provide additional support for a causal relationship. Controlling for social desirability bias (Crowne & Marlowe, 1960; Reynolds, 1982) in future studies examining gratitude and BTS purpose would also help to improve the case for causality.

The third avenue of research can help illuminate the role of BTS purpose in understudied populations. Future studies can help determine the potential moderating effect of minority status on BTS purpose. These studies might include the use of semi-structured interviews with addenda focusing on students’ ethnic identity and their perceptions of school- and community-level support for BTS purpose.

**Implications for Practice**

Although it is still unclear if gratitude helps pave the way for BTS purpose, these two variables are closely related and given that scalable evidence-based gratitude interventions exist and are associated with positive outcomes (Wood et al., 2010), it might be worth disseminating them to school and community mental health clinics. Given that in the presence of gratitude, high levels of anxiety are associated with higher BTS purpose than low levels of anxiety are, teachers, parents, and clinicians who interact
with anxious adolescents may consider introducing evidence-based gratitude interventions before attempting to reduce anxiety. Not only would a focus on both reducing anxiety and increasing gratitude require more resources than focusing on one of those aims alone, BTS purpose may be more fully realized if anxiety is left alone while gratitude is tended to.

This study also has implications for social-emotional and character development (SECD) programs based in middle schools with students from low-SES, racial and ethnic minority backgrounds. The findings from this study lend support to a theory put forth in the SECD literature that suggests gratitude is one of several virtues that enable BTS purpose in youth who have experienced trauma and marginalization (Hatchimonji et al., 2017). To illustrate, anger and sadness are reasonable reactions to potentially traumatic experiences, but if those emotions persist, they can interfere with healthy development and self-transcendent, future-oriented pursuits (i.e., BTS purpose). Without excusing prior injustices, virtues such as forgiveness and gratitude can help individuals and communities make peace with their past and move forward toward making a positive contribution to the world beyond themselves. This study provides empirical support for a relationship between gratitude and BTS purpose, and moves the SECD field closer to a more complete understanding of the requisite ingredients for cultivating BTS purpose in youth from marginalized backgrounds.
References


Revised youth purpose survey. Unpublished instrument, Stanford Center on Adolescence, Stanford, CA.


Fagley, N. S. (2016). The construct of appreciation: It is so much more than gratitude. In D. Carr (Ed.), *Perspectives on gratitude: An interdisciplinary approach* (pp. 70-84). Routledge.


(Eds.), *Advances in experimental social psychology* (Vol. 47, pp. 1–54).

Academic Press.


Ruchkin, V., Jones, S., Vermeiren, R., & Schwab-Stone, M. (2008). The strengths and


### Table 1

**Representative Purpose Essay Excerpts With Modified Purpose Scale (MPS) and Prosocial Intention Scores**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Intention</th>
<th>Engagement</th>
<th>Prosocial Reasoning</th>
<th>MPS Mean&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Item Score&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fully purposeful</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;The purpose in my life is to grow up and become a police officer.&quot;</td>
<td>&quot;Sometimes my friends fight but I will put my friends on different ends of the table because friends don't always get along!&quot;</td>
<td>&quot;I want to become an officer because [...] places around my neighborhood are really bad. A lot of people get hurt or killed every other day. I am 11 years old but, I know that I need to become a champion to raise money for people who can't pay medical bills, who don't have enough for a funeral or for the poor and needy.&quot;</td>
<td>4.0</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>&quot;Music is a really big part of my life, so I've decided my purpose is to create music for others.&quot;</td>
<td>&quot;I'm always listening to music and music is something I cannot live without. I also play guitar and sing.&quot;</td>
<td>&quot;I love music and making others happy&quot;</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>&quot;My purpose would be to save little, premature babies striving to live their life every day.&quot;</td>
<td>&quot;I would want to do this in the future of my life because ever since I was young I always loved babies. I always carried and baby sat babies from my church.&quot;</td>
<td>&quot;I was given this brain to be able to assist the helpless little ones that I want to help live. If I was given these great things I wouldn't waste it, I would do something meaningful for other people, like being a Neonatologist.&quot;</td>
<td>4.20</td>
<td>4</td>
</tr>
<tr>
<td><strong>Not fully purposeful</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>&quot;My purpose is to be a black belt in Taekwondo.&quot;</td>
<td>&quot;My mom saw me doing Karate every Monday-Thursday. Also, my mom also notices that I have muscles and I am very strong. My dad knows that this is my purpose in life because he notices that I am a hard worker and never give up.&quot;</td>
<td></td>
<td>4.60</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>&quot;I believe my purpose is to become a pool player.&quot;</td>
<td>&quot;I play with my dad and my uncle. My parents know playing pool is my</td>
<td></td>
<td>4.60</td>
<td>5</td>
</tr>
</tbody>
</table>
"My purpose is to be the most famous artist ever."

"Someone would know that being an artist is my purpose in life because all i do is sketch and color. When i'm bored i draw silly cartoons on my paper, free time in class i draw until i improve my drawing skills on portraits. Another way i show my purpose is joining programs like art club for 2 whole hours. I am obsessed although this will become helpful for any applications for art teachers."

4.60 5

^MPS mean is the mean score of a 5-item, 5-point scale ranging from “Disagree A LOT!” to “Agree A LOT!”

^Prosocial Intention item score is the score on a 1-item, 5-point scale ranging from “Disagree A LOT!” to “Agree A LOT!”
### Table 2

**Descriptive Analysis of Independent and Dependent Variables**

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gratitude</td>
<td>4.34</td>
<td>.66</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Anxiety</td>
<td>1.91</td>
<td>.56</td>
<td>1 - 3</td>
</tr>
<tr>
<td>Modified Purpose Scale Mean Score</td>
<td>4.19</td>
<td>.76</td>
<td>1 - 5</td>
</tr>
<tr>
<td>Prosocial Intention Item Score</td>
<td>4.30</td>
<td>.87</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

*Note.* Gratitude is the mean score of a 4-item, 5-point scale ranging from “Disagree A LOT!” to “Agree A LOT!” Anxiety is the mean score of a 3-item, 3-point scale ranging from “Not True” to “Certainly True.” Modified Purpose Scale Mean Score is the mean score of a 5-item, 5-point scale ranging from “Disagree A LOT!” to “Agree A LOT!” Prosocial Intention item score is the score on a 1-item, 5-point scale ranging from “Disagree A LOT!” to “Agree A LOT!”
Table 3

*Frequencies of Purpose Codes*

<table>
<thead>
<tr>
<th>Dimension</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention</td>
<td>201</td>
<td>96.2</td>
</tr>
<tr>
<td>Engagement</td>
<td>136</td>
<td>65.1</td>
</tr>
<tr>
<td>Prosocial Reasoning</td>
<td>133</td>
<td>63.6</td>
</tr>
<tr>
<td>Fully Purposeful(^a)</td>
<td>79</td>
<td>37.8</td>
</tr>
</tbody>
</table>

*Note. N = 209*

\(^a\)Fully Purposeful indicates that all three dimensions of purpose (i.e., intention, engagement, and prosocial reasoning) are endorsed.
Table 4

Correlations between Independent and Dependent Variables

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>.02</td>
<td>.10</td>
<td>.10</td>
<td>.03</td>
</tr>
<tr>
<td>Fully Purposeful Code*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>.46***</td>
<td>-.13</td>
<td>.39***</td>
<td></td>
</tr>
<tr>
<td>Modified Purpose Scale Mean Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>-.04</td>
<td>.40***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prosocial Intention Item Score</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td></td>
<td>-.14*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Gratitude</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Fully purposeful code was dichotomous (1 = Fully purposeful; 0 = Not fully purposeful).

*p < .05, ***p < .001
Table 5

Hierarchical Linear Regression with Modified Purpose Scale Mean Score as Dependent Variable and Gratitude and Continuous Anxiety Variable as Independent Variables

<table>
<thead>
<tr>
<th>Step</th>
<th>β</th>
<th>$R^2$ ($\Delta R^2$)</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td>0.148 (0.148)***</td>
<td>F(1, 207) = 36.08***</td>
</tr>
<tr>
<td>Gratitude</td>
<td>0.45***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td>0.153 (0.005)</td>
<td>F(2, 206) = 18.68***</td>
</tr>
<tr>
<td>Gratitude</td>
<td>0.43***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>-0.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step 3</td>
<td></td>
<td>0.159 (0.005)</td>
<td>F(3, 205) = 12.90***</td>
</tr>
<tr>
<td>Gratitude</td>
<td>0.41***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>-0.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GratitudeXAnxiety</td>
<td>0.17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***p < .001
Table 6

Hierarchical Linear Regression with Modified Purpose Scale Mean Score as Dependent Variable and Gratitude and Dichotomous Anxiety Variable as Independent Variables

<table>
<thead>
<tr>
<th>Step</th>
<th>$\beta$</th>
<th>$R^2 (\Delta R^2)$</th>
<th>$F$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Gratitude</td>
<td>0.45***</td>
<td>0.148 (0.148)***</td>
</tr>
<tr>
<td>Step 2</td>
<td>Gratitude</td>
<td>0.45***</td>
<td>0.150 (0.002)</td>
</tr>
<tr>
<td></td>
<td>Dichotomous Anxiety</td>
<td>-0.14</td>
<td></td>
</tr>
<tr>
<td>Step 3</td>
<td>Gratitude</td>
<td>0.38***</td>
<td>0.178 (0.027)**</td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>-0.13</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GratitudeXDichotomousAnxiety</td>
<td>0.64**</td>
<td></td>
</tr>
</tbody>
</table>

**$p < .01$, ***$p < .001$
Table 7

*Hierarchical Linear Regression with Prosocial Intention Item Score as Dependent*

**Variable**

<table>
<thead>
<tr>
<th></th>
<th>( \beta )</th>
<th>( R^2 (\Delta R^2) )</th>
<th>( F )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gratitude</td>
<td>0.52***</td>
<td>0.159 (0.159)***</td>
<td>( F(1, 207) = 39.19^{***} )</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gratitude</td>
<td>0.53***</td>
<td>0.159 (0.000)</td>
<td>( F(2, 206) = 19.52^{***} )</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gratitude</td>
<td>0.49***</td>
<td>0.168 (0.009)</td>
<td>( F(3, 205) = 13.85^{***} )</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>GratitudeXAnxiety</td>
<td>0.25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***\( p < .001 \)
Figure 1

*Interaction Plot of Fall 2015 Gratitude and Anxiety as Predictor of Spring 2016 Purpose*

Note. High anxiety equated to a mean score of 3 on the 3-item, 3-point brief anxiety questionnaire; low anxiety included all mean scores below 3. High and low gratitude equated to one standard deviation above or below (±.66, respectively) the mean centered gratitude score.
Appendix A

Purpose Essay Prompt

In your classes and in your life you may have learned about and encountered people with a strong sense of purpose. Similarly, you might feel your own sense of purpose. In a five-paragraph essay, that includes an introduction, three body paragraphs, and a conclusion, please respond to the following:

• What is your definition of purpose?
• What might be your purpose? Why?
• How would someone know that is your purpose in life?
Appendix B

Brief Gratitude Questionnaire

Please decide if you *DISAGREE A LOT, DISAGREE A LITTLE, NEITHER AGREE NOR DISAGREE, AGREE A LITTLE*, or AGREE A LOT with each sentence.

To “Disagree” means that you DON’T think the sentence is true for you.

To “Agree” means that you DO think the sentence is true for you.

<table>
<thead>
<tr>
<th></th>
<th>Disagree A LOT!</th>
<th>Disagree A little</th>
<th>Neither Agree Nor Disagree</th>
<th>Agree a little</th>
<th>Agree A LOT!</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have so much in life to be thankful for.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>2. If I had to list everything that I felt thankful for, it would be a very long list.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>3. I am thankful to a wide variety of people.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>4. As I get older I find myself more able to appreciate the people, events, and situations that have been part of my life history.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
</tbody>
</table>
Appendix C

Brief Anxiety Questionnaire

For each item, choose Not True, Somewhat True, or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain.

Please give your answers based on how things have been for you over the last six months.

<table>
<thead>
<tr>
<th></th>
<th>Not True</th>
<th>Somewhat True</th>
<th>Certainly True</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I worry a lot.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>2. I am nervous in new situations. I easily lose confidence.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>3. I have many fears, I am easily scared.</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>
Appendix D

Modified Purpose Scale

Please decide how much you AGREE or DISAGREE with each sentence.

To “Disagree” means that you DON’T think the sentence is true for you.

To “Agree” means that you DO think the sentence is true for you.

<table>
<thead>
<tr>
<th></th>
<th>Disagree A LOT!</th>
<th>Disagree a little</th>
<th>Neither Agree Nor Disagree</th>
<th>Agree a little</th>
<th>Agree A LOT!</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. My life will make a difference in the world.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>2. I am doing things now that will help me to achieve my purpose in life.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>3. My life has a clear sense of purpose.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
<tr>
<td>4. I am always working toward accomplishing my most important goals in life.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I have a purpose in my life that says a lot about who I am.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
</tbody>
</table>
Appendix E

Prosocial Intention Item

<table>
<thead>
<tr>
<th>Please decide how much you AGREE or DISAGREE with each sentence.</th>
</tr>
</thead>
<tbody>
<tr>
<td>To “Disagree” means that you DON'T think the sentence is true for you.</td>
</tr>
<tr>
<td>To “Agree” means that you DO think the sentence is true for you.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>#</th>
<th>Statement</th>
<th>Disagree A LOT!</th>
<th>Disagree a little</th>
<th>Neither Agree Nor Disagree</th>
<th>Agree a little</th>
<th>Agree A LOT!</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>In the future, I will contribute meaningfully to my community. “Contribute meaningfully” means to help out a lot.</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
<td>E</td>
</tr>
</tbody>
</table>
Appendix F

Coding Manual for Purpose Essays
SECD Lab | Adapted from Malin et al. (2008) and Yuan (2020)

Purpose is defined by Damon et al. (2003) as a “stable and generalized intention to accomplish something that is at once meaningful to the self and of consequence to the world beyond the self.” A purpose functions as an ‘ultimate concern’ or overall goal for one’s life, and a complete sense of purpose is marked by beyond-the-self motivations and engagement toward the accomplishment or goal. For this research project, we are interested in understanding the development of purpose for this sample of youth. You will be coding the purpose essays in four passes, or steps:

Pass 1 – Get a sense of the essay
Read through the purpose essay once to get a sense of the person and what is most important to them. Do not code anything, but identify, and make note, of the most important thing or things that are stated for the student to accomplish.

Pass 2 – Identifying purpose intention
In a second pass, code the thing(s) that you identified as the most important to accomplish. An accomplishment is a goal or end state that the student identifies as important (i.e., being a doctor, etc.) – which we will refer to as the purpose intention. According to Malin et al.’s definition (2008), a thing to accomplish should be a goal. Some things that they say are most important to them are not goals, but instead are important aspects of their life, like family and friends. You will need to determine whether or not there is a goal to accomplish related to the important thing(s) identified.

Examples from essays of purpose intention:

- “My purpose is to get an education and to grow up and be a role model that impacts other people's lives.”
- “My purpose in life is to become a computer software engineer. I want to graduate high school, attend college and study in the field of computer programming.”
- “...one of my goals, which is with no doubt, the most important goal, is to become a pharmacist.”
- “My purpose might be helping others, to help them believe in themselves, be who they truly are.”
- “...my dream is to become a soccer player, but one that is admired for his courage.”

Sometimes, students also mention not being sure of, or not knowing what their purpose is. If this is mentioned in the essay, make note of this as well.

Examples of being unsure of, or not knowing one’s purpose:
• “Although I have not yet discovered my purpose in life, I am definitely thinking about it and always learning more about myself on my journey. These thoughts are helping me learn and grow and move me to think and exploring myself even deeper.”
• “Even though I may have not found my full, strong sense of purpose and place on this earth, I am still going on through life awaiting on what will happen next and going on and searching for answers.”
• “To be honest, at twelve years old, I’m not really positive what my purpose is.”
• “My life purpose is not totally clear to me at this time…”
• “What was the reason & was put on this earth? In my opinion that's something that's not totally important to me right now. Besides I'm still in middle school. I don't know I'm going to do or what I'm going to be.”

On the coding spreadsheet:

1. Record any quotes that gives information about the purpose intention (goal or end state that the student identifies as important). If no quotes about a purpose intention exist, record “N/A.”
   a. If there is an intention or goal stated, code 1 under “Purpose Intention” for purpose intention. If the student does not specify a goal, code 0 for no purpose intention.
2. Record any quotes that indicates that the student is not sure about his or her purpose. If no such quotes exist in the essay, record “N/A.”
   a. If the student mentions not being sure about his/her purpose, code 1 under “Being unsure of, or not knowing one’s purpose”. If the student does not mention or indicate this, code 0.

Pass 3 – Identifying current actions (purpose engagement) and accomplishment reasons

After you are able to identify the purpose intention (the goal or end state that the student identifies as the most important thing to accomplish), the next step is to code additional components of the students’ purpose. These components are:

• **Current Action**: Physical, social, and mental things that the student does – either in the past or currently, that are related to the most important thing to accomplish. Note that there must be concrete behaviors stated, that the student does him/herself (not just an idea or understanding of what needs to be done) to count as a current action. Actions are indicators that the student is engaged in realizing the goal.

• **Accomplishment Reason**: Why the student says that they are pursuing the most important thing to accomplish. Accomplishment reasons indicate whether the goal is self-oriented or beyond the self.
Examples of Current Actions:

- “I love technology computer science it’s something I do about every day and not get bored of. I dedicated a lot of time and schedule clearing to do it....”
- “I do extra curricular activities because I love being involved in things I love to do, and it can boost your grade or help you succeed quicker.”
- “I used to play with kids when my sister had to babysit them.”
- “My mother would always get mad at me when I bang on drums like a crazy person. So when came to our church she signed me up for a performing arts program.”  
  (indicates past things and actions that have been done)
- “I started to rap at the age of 12 and I was really good, sooner or later I kept rapping and rapping till I started to think that rapping was my dream”

Examples of Accomplishment reasons:

- “My other reasons why this is my purpose include that my mom is a doctor and my dad is an engineer and when I was little I believed that if they had a kid that kid would have to have an important job like them such as a lawyer.”
- “The reason why I want to own my hair shop is because I love doing hair.”
- “…I want my clothes to make people feel beautiful.”
- “Now being a happy person is part of my purpose because when you're sad all the time, people won't want to bother with you because you make them sad.”
- “…my purpose in life is to serve my country because of what the military did for us. I feel like I owe my life to them because if it wasn't for them and them giving [their] lives’ to save us some of us wouldn't be here. So I feel like going into the military will help me help others.”

On the coding spreadsheet:

1. Record any quotes that gives information about the current (or past) action that individuals take toward the goal. If no quotes about current actions exist, record “N/A.”
   a. Code 1 under “Current actions” for current actions (which also includes past actions) stated, or 0 for no current action stated.

2. Record any quotes that gives information about the accomplishment reason, or the reason that the student is pursuing what they state as the most important thing to accomplish. If no quotes about accomplishment reasons exist, record “N/A.”
   a. Code 1 under “Accomplishment reasons” if the student mentioned a reason for his/her goal or accomplishment, or 0 if no accomplishment reason was stated.

Pass 4 – Identifying if the intention is beyond-the-self

The fourth time you read the essay, you will be using the information you have coded and recorded so far to determine whether the most important thing to accomplish is motivated
primarily for self-oriented reasons or beyond-the-self (BEYOND-THE-SELF) reasons. To do this, consider what you have determined to be the purpose *intention* or the most important thing to accomplish (determined in Pass 2), the accomplishment reasons (determined in Pass 3), and any additional quotes from the essay. It is also possible for a purpose to be motivated by both self-oriented and beyond-the-self reasons.

**BEYOND-THE-SELF Examples:**

- “Another way I plan on helping my family is by working hard and earning money so if they can't pay their bills or need a vacation I can help them out. This shows how I plan to give back to my family.”
- “I may end up helping just making one person’s life better. Or maybe I could create an antidote for a huge worldwide virus. Though both of these changes are amazing feats, I would much rather make a change that effects a big chunk of the world population. To be able to accomplish something that big, I would give anything. After all, I believe that my purpose is to help people.”
- “…let’s say I become a soccer player that helps poor families. I can open up a foundation for poor people to live. I can also travel to poor places and donate clothes, shoes, and etc.”
- “The reason why I want to help others when needed because I feel bad for the people that don't come close to what I have food, clean water, a house. Another thing I don’t think no one deserves to be dehydrated, starving, and homeless. So I want to help in every way possible to people, not even just people animal has well. People helped me out more than one time why can't I help others and hopefully that person helps another and let the chain keep going down the road.”
- “Someone would know this is my purpose because I'm involved with my church and I want to do any great thing to help.”

**On the coding spreadsheet:**

1. Record any quotes that indicate that the most important thing to accomplish that the student mentions is motivated by *beyond-the-self reasons*. This can include quotes that you have already recorded for accomplishment reasons in Pass 3, as well as any additional quotes. If no quotes about beyond-the-self motivations exist, record “N/A.”
   a. Code 1 under **Beyond-the-self Idea of Purpose** if the essay mentions beyond-the-self reasons, or 0 if the essay does not mention beyond-the-self reasons.

**References**


FAQ

1. **Q:** What if the student’s essay mentions more than one goal or accomplishment?

   **A:** You would still code 1, under the column “Purpose Intention (Y = 1, N = 0)”. This is a binary coding scheme, meaning that there are only 2 options for coding – 1 for yes if it is mentioned, or 0 for no if it is not mentioned. As long as a purpose intention is mentioned, (even if there are multiple cases), you would code 1.

2. **Q:** Is it possible for a student to have a code of 1 (Yes) for purpose intention, and also a code of 1 (Yes) for being unsure of, or not knowing one’s purpose?

   **A:** Yes, this is possible. There are some essays where students both state that they are not certain about their purpose and are still looking for it, and yet still offer a goal or accomplishment they would like to achieve. In this case, you would assign a code of 1 for both columns.

3. **Q:** *(In reference to current action)* – what is an example of a mental thing being stated concretely?

   **A:** This is when a student explicitly performs a stated mental act. Examples of this can include thinking, memorizing, or reflecting on something.

4. **Q:** Could any quotes be used twice if they mention multiple things from different passes? Or would we just divide up the quote?

   **A:** You can divide up the quote, adding the part that makes sense to the appropriate section, and adding ellipses “...” between sections of quotes; however, if the same quote is appropriate for more than one section, you can definitely use the same quote twice.

5. **Q:** What distinguishes Accomplishment reasons in Pass 3 with beyond-the-self reasons in Pass 4? Could you use the same quotes for both?

   **A:** You can definitely use accomplishment reasons as evidence for if a student’s purpose is beyond-the-self, but you can also use other quotes in pass 4 to determine this – for example, you can use the quote with the student’s stated purpose itself, or the students’ current actions. If appropriate, you can use the same quotes from other sections to determine the “beyond-the-self” section.