

**TESTING THE EFFECTIVENESS OF A SELF-TRANSCENDENT  
PURPOSE INTERVENTION AMONG COLLEGE STUDENTS**

An Undergraduate Research Scholars Thesis

by

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This project required approval from the Texas A&M University Research Compliance & Biosafety office.

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# TABLE OF CONTENTS

	Page
ABSTRACT .....	1
DEDICATION .....	2
ACKNOWLEDGEMENTS .....	3
NOMENCLATURE .....	4
SECTIONS	
1. INTRODUCTION .....	5
1.1 Perceived Authenticity .....	6
1.2 Self-Alienation .....	7
1.3 Academic Amotivation .....	8
1.4 Self-Transcendence .....	9
1.5 Overview and Hypotheses.....	11
2. METHODS.....	13
2.1 Participants .....	13
2.2 Materials and Procedure.....	13
3. RESULTS.....	18
3.1 Preliminary Analyses .....	18
3.2 Primary Analyses .....	19
4. CONCLUSION .....	23
4.1 Interpretations .....	24
4.2 Limitations .....	25
4.3 Future Directions.....	26
REFERENCES .....	27
APPENDIX A: SELF-TRANSCENDENT PURPOSE INTERVENTION.....	31
APPENDIX B: CONTROL EXERCISE.....	34

## **ABSTRACT**

Testing the Effectiveness of a Self-Transcendent Purpose Intervention among College Students

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The present study explored the effect of self-transcendence on academic amotivation (AA), self-alienation (SA), and other factors relevant to the academic perceptions of first-generation college students; additional factors included academic sense of community, self-concept, and self-efficacy. Undergraduate students were recruited from introductory psychology courses in exchange for course credit. Participants were assigned to complete either a self-transcendent purpose intervention (STPI) or a neutral exercise; regardless of assignment, participants also provided demographic information and completed a series of questionnaires assessing the aforementioned factors. It was hypothesized that (1) the experimental group would report lower levels of AA and SA compared to the control, (2) AA would be positively correlated with SA, and (3) the first-generation students in the experimental group would report the lowest levels of AA and SA, while the first-generation students in the control group would report the highest levels. Limitations and directions for future research are also discussed.

## **DEDICATION**

*To Mimi, for always believing in me.*

*To Parker, for being the best friend I will ever have.*

*To Mom and Dad, for your boundless love and sacrifice.*

*And to all of those who showed me kindness when I did not deserve it.*

*I do not say it enough, so I will immortalize it here: I love you.*

## **ACKNOWLEDGEMENTS**

### **Contributors**

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The survey responses used for “Testing the Effectiveness of a Self-Transcendent Purpose Intervention among College Students” were collected with the help of Sofia Alvarez, Ronin Deemer, Sowmiya Selvaraju, and Paige Simpson. The analyses depicted in “Testing the Effectiveness of a Self-Transcendent Purpose Intervention among College Students” were conducted with the help of Jaren Crist, Alexiss Jeffers, and Noah Reed.

All other work conducted for the thesis was completed by the student independently.

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## **NOMENCLATURE**

SA	Self-Alienation
AA	Academic Amotivation
STPI	Self-Transcendent Purpose Intervention

# 1. INTRODUCTION

Authenticity has long been a central tenet of the Western conception of individual identity (Handler, 1986). To be authentic implies a deep connection with the self and a sense of accordance with one's ideals and values. Choosing to live an "authentic life" is often praised in modern society as a way to find success and purpose, and conceptions of authenticity remain a recurring theme across various books, films, and media (Erickson, 1995). Furthermore, the value of authenticity has enjoyed support from sources as diverse as existential philosophy (Greene, 1952) to company branding strategies (Napoli et al., 2014). Considering the cultural emphasis on authenticity's merits, it has become a prevalent topic within the psychological literature, informing the foundation of the current study.

The present study seeks to replicate and expand the findings of prior research by considering the role of authenticity and other influential factors in the academic experience of college students. Particularly, I am interested in how a motivational intervention might reduce self-alienation and thereby support authenticity. I propose that individuals interpret their motivation levels as an indication that their actions are in alignment with their authentic values; thus, motivation functions as an internal guide that influences self-perceptions of authenticity. In this way, motivation levels may affect whether college students perceive academic pursuits as authentic, ultimately contributing to significant academic outcomes like grades and graduation rates. Therefore, I predict that a lack of motivation, or amotivation, will correlate with a lack of authenticity, or self-alienation. By targeting the more psychologically accessible concept of amotivation, it may be possible to positively influence the comparatively abstract concept of self-alienation, resulting in more desirable outcomes.



To explore this possibility, I will consider how a self-transcendent purpose intervention designed to evoke feelings of meaning potentially affects amotivation, self-alienation, and the relationship between those concepts. Notably, the study places particular emphasis on first-generation college students, as evidence indicates that this group may experience cultural disparities that reduce their sense of connectedness with the academic community; such experiences may ultimately contribute to preventable negative academic outcomes. With this in mind, this study aims to explore how self-transcendence might reduce academic amotivation and self-alienation, thereby improving the way first-generation students identify with their roles in the college environment.

### **1.1 Perceived Authenticity**

Individuals' perceptions of personal authenticity can play an impactful role in their lives. Often defined as "being true to oneself" (Kim et al., 2018), perceived authenticity "serves an important role in healthy human functioning" (Rivera et al., 2019). According to Schlegel et al. (2013), people often use their feelings of perceived authenticity as a helpful guide, utilizing them to form coherent conceptions of what they value in life and the goals they should strive to achieve. Even in adversity, there is evidence that feeling truly authentic to oneself can foster the resilience necessary to persevere (Wickham et al., 2016). Furthermore, there is also evidence that perceived authenticity can mitigate the effects of anxiety, depression, and other obstacles to psychological health (Grijak, 2017). Thus, it is clear that perceived authenticity can be very beneficial to psychological well-being because it can help one make sense of life, maintain psychological health, and effectively navigate difficult situations.

Such adaptive skills are crucial to success in many environments, with college being a prime example. When students leave home for the first time and find themselves in unfamiliar

surroundings, they can experience stressors that challenge them to develop appropriate coping mechanisms without the aid of their support network. For example, they may face social pressures from peers, academic pressures from professors, internal pressures from their own expectations, and the stress of managing their new responsibilities. Research has shown that these stressors can be conceptualized as a four-factor adjustment model for predicting perseverance in college: social adjustment, academic adjustment, personal–emotional adjustment, and institutional attachment (Baker & Siryk, 1999; Pascarella & Terenzini, 2005; Swail et al., 2003).

Remarkably, perceived authenticity has been shown to positively influence a composite of these four factors, while other constructs like empowerment and engagement did not (Lenz et al., 2016). Considering that perceptions of authenticity can influence factors that are critical to persevering in college, it may play a unique role as an efficient target for potentially improving students' outcomes. Students who drop out of college are most likely to do so during their first year, making the window for intervention extremely tight (Pritchard & Wilson, 2003). Focusing on improving students' sense of authenticity to improve their adjustment to college may be a powerful way to prevent undesirable outcomes like attrition.

## **1.2 Self-Alienation**

Unfortunately, it is common for individuals to experience feelings of inauthenticity (Lenton et al., 2014). Research has shown that individuals can feel inauthentic when their actions contradict deeply held values or fail to align with their perceived identity (Wood et al., 2008). This phenomenon is defined as self-alienation (SA), or a sense of internal disconnection from the true self (Wood et al., 2008). The present research is particularly concerned with SA's various negative side effects, including susceptibility to low self-esteem (Wood et al., 2008). Such

detrimental experiences could potentially decrease individuals' well-being and resilience, ultimately influencing their future success.

Certain populations, such as college students, may be at high risk of experiencing SA. As students, individuals who attend college may be most susceptible to SA when they do not feel motivated to pursue academics because such pursuits are often part of their identity and self-conception (Kim et al., 2018). First-generation students are perhaps more vulnerable to SA than their non-first-generation peers because their cultural backgrounds often differ substantially from those represented in typical college environments. These cultural disparities can spark emotional turmoil, leading to decreased academic engagement (Stephens, Townsend, et al., 2012). Research has shown that maintaining an authentically "school-relevant self" is a critical tool for helping students, especially those experiencing cultural disparities, stay resilient and succeed in college (Stephens et al., 2015). Such research further supports the need to protect against SA in college students of all backgrounds, and increasing academic motivation may play a decisive role in protecting it.

### **1.3 Academic Amotivation**

According to research, motivation plays an important role in people's lives, as many people reflect on their current motivational states as a way to evaluate themselves (Schoeneman, 1981). Therefore, a lack of motivation, or amotivation, can be highly problematic for one's self-concept. Ryan and Deci (2000) linked amotivation to feeling incompetent and disorganized; such feelings can diminish the effort one puts forth to accomplish their goals. Thus, amotivation can negatively impact people's well-being and success, making it an important factor for predicting undesirable outcomes.

For college students, feeling motivated to pursue academic coursework is important for their sense of self-worth because academics are often closely tied to their self-concept (Baumeister, 1991). Consequently, feeling academically amotivated can result in feelings of doubt and uncertainty that impair college students' ability to succeed. Academic amotivation (AA) in college students has also been linked to underperformance and attrition (Baker, 2004). Moreover, research has shown that experiencing discrepancies between one's cultural identity and environment can increase AA (Stephens, Fryberg, et al., 2012). As previously discussed, first-generation students often face such discrepancies, placing them at increased risk of feeling amotivated. Therefore, finding a way to reduce AA in college students is critical to protect their academic self-concept and ultimately increase their chances of success.

#### **1.4 Self-Transcendence**

According to Kim et al. (2018), there is evidence that increased AA corresponds with increased SA in college students. Consequently, the researchers called for a motivational “intervention designed to directly boost the perceived meaningfulness of pursuing academic goals” as a potential way to reduce SA. One way to increase a sense of meaningfulness is by focusing on how one's actions impact the lives of others. This shift in mindset to a more selfless, prosocial outlook is widely known as self-transcendence. The term was first coined by Frankl (1959), who explained that humans are social animals who naturally desire a sense of purpose and belonging in life. Self-transcendence is so fundamental to the human condition, Frankl (1966) argued, that “human existence is not authentic unless it is lived in terms of self-transcendence.” In the years that followed, several studies would support these claims, providing evidence that self-transcendent motives could promote changes in behavior that increase one's sense of purpose in life (Ashforth & Kreiner, 1999; Grant, 2008; Grant & Hofmann, 2011). Thus,

self-transcendence offers a powerful opportunity for individuals to find meaning and authenticity by contributing beyond themselves.

Inspired by the apparent benefits of self-transcendence, Yeager et al. (2014) constructed a novel intervention called the Self-Transcendent Purpose Intervention (STPI) to explore how self-transcendence could potentially impact learning. Specifically designed for students, the STPI is a free-response exercise designed to stimulate personal reflections on prosocial reasons for pursuing academic goals. The intervention utilizes various techniques that have been shown to effectively change people's attitudes in a short amount of time. For example, the researchers used open-ended questions that would not threaten the participants' autonomy, allowing them to believe their responses were intrinsically motivated and thus internalize them more readily. Additionally, the researchers included self-transcendent responses from other students to counteract the norm of self-interest, or the assumption that it is typical to act selfishly because others appear to act selfishly (Miller, 1999).

To test the effectiveness of this intervention, the researchers had high school students complete the STPI to encourage them to reflect on how their schoolwork might allow them to help people in the future. They found that the students who completed the exercise performed better in their coursework months into the future, resulting in higher grades in their math, science, technology, and engineering-related classes. Notably, the students who benefitted the most from the intervention had both the lowest grades and the lowest self-reported interest in school prior to completing the study. Thus, those who had the most to gain reaped the greatest reward.

Considering the promising nature of these findings, the STPI may be the ideal candidate "intervention" Kim et al. (2018) proposed to decrease AA and thereby improve SA. Though the

study involved high school students, such an intervention may have similar effects on college students. Moreover, the STPI may be especially helpful for first-generation students, as they are more likely to have lower levels of academic motivation and, therefore, the most room for improvement. Consequently, the current study considers how the STPI might impact college students, including those who identify as first-generation students.

## **1.5 Overview and Hypotheses**

The goal of this study was to (1) determine the effectiveness of the STPI on decreasing AA and SA in college students, (2) examine the relationship between AA and SA, and (3) assess the differences between first-generation and non-first-generation students.

To accomplish these goals, I first sourced participants from introductory psychology classes through the psychology department using the established participant pool managed with SONA software. The participants were then randomly assigned to either the experimental or control condition. The experimental group completed the STPI (Yeager et al., 2014), while the control group completed a neutral exercise that took approximately the same amount of time to complete. Afterward, both groups completed the Authenticity Scale (Wood et al., 2008) and Academic Motivation Scale (AMS; Vallerand et al., 1992). The groups also completed an assortment of scales measuring exploratory dependent variables that might reasonably be impacted by the intervention, first-generation status, or the interaction between the two, given their relevance to the context and population of interest (e.g., belonging, academic self-efficacy). Finally, the participants provided identifying information, such as if they identified as first-generation students.

I hypothesized that the experimental group would report lower levels of AA and SA compared to the control group. I also predicted that AA would be positively correlated with SA;

more specifically, I predicted that AA would reliably predict SA. Finally, I predicted that the first-generation students in the experimental group would report the lowest levels of AA and SA, while the first-generation students in the control group would report the highest levels.

## 2. METHODS

### 2.1 Participants

One hundred thirty-nine students from Texas A&M University participated in exchange for partial course credit for an introductory psychology course. Of those who chose to report their gender, 86 identified as female and 51 as male. One hundred twenty-four participants selected English as their native language. Ages ranged from 18-22 ( $M = 18.9$ ,  $SD = 0.92$ ). Represented races included (74.3%) White/Caucasian, (3.6%) Black/African American, (17.9%) Asian, and (2.1%) American Indian/Alaska Native. Political ideology ( $M = 6.68$ ,  $SD = 2.36$ ) was assessed with a Likert scale ranging from 1 (Very Liberal) to 10 (Very Conservative). Regarding family income, the modal response was over \$120,000 with 41% of participants indicating their family income was in that bracket. Thirty-five participants identified their ethnicity as Hispanic or Latino or Hispanic Origin. Finally, 38 participants identified as first-generation students, defined as students whose parents did not complete a four-year degree.

### 2.2 Materials and Procedure

#### 2.2.1 *Self-Transcendent Purpose Intervention*

Participants were escorted into the lab in groups of 1-5 at their scheduled times. They were led to a room partitioned with privacy screens where they were each provided with a desk and computer. After beginning the Qualtrics survey loaded on their computers, participants were randomly assigned to either the experimental or control condition. Those in the experimental condition completed the Self-Transcendent Purpose Intervention from Yeager et al. (2014), while those in the control condition completed a neutral version of the intervention. The control exercise utilized the same format as the original intervention but asked that participants describe



the differences between their daily routine in high school compared to college. Regardless of assigned condition, participants completed all of the other measures in the study. The intervention began by asking participants to write a brief response to the question: “What are some ways that you think the world could be a better place?” Next, participants were presented with a list of reasons why college students worked hard in school and read three selected responses to the question: “Why do you work hard in school?” Then, participants were invited to reflect on the type of person they wished to become in the future and how they wanted to improve society. Finally, participants were asked to write a few sentences in response to the question: “How will learning in school help you be the kind of person you want to be or help you make the kind of impact you want on the people around you or society in general?” The full text of the Self-Transcendent Purpose Intervention and the control exercise can be found in Appendices A and B, respectively.

### 2.2.2 *Authenticity Scale*

Participants also completed a series of questionnaires intended to assess their academic self-schemas and identities. To assess authenticity, participants completed the 12-item Authenticity Scale developed by Wood et al. (2008). The Authenticity Scale assesses an individual’s perceived authenticity by having them rate items that reflect their perceived self-knowledge. It contains three subscales, including self-alienation, authentic living, and accepting external influence. Examples of items assessing self-alienation include: “I feel as if I don’t know myself very well” and “I don’t know how I really feel inside” ( $M = 2.73$ ,  $SD = 1.52$ ,  $\alpha = 0.92$ ). Examples of items assessing authentic living include: “I always stand by what I believe in” and “I am true to myself in most situations” ( $M = 5.70$ ,  $SD = 0.84$ ,  $\alpha = 0.71$ ). Examples of items assessing the acceptance of external influence include: “I am strongly influenced by the opinions

of others” and “I always feel I need to do what others expect me to do” ( $M = 3.72$ ,  $SD = 1.32$ ,  $\alpha = 0.84$ ). Each item was rated on a Likert scale from 1 (Does not describe me at all) to 7 (Describes me very well).

### 2.2.3 *Academic Motivation Scale*

Additionally, participants completed the 28-item Academic Motivation Scale (AMS; Vallerand et al., 1992). The measure assesses an individual’s degree of academic motivation and identifies their various reasons for attending college by having them rate items that express various sources of motivation. It contains seven subscales designed to measure three kinds of intrinsic motivation (intrinsic motivation to know, to accomplish things, and to experience stimulation), three kinds of extrinsic motivation (external, introjected, and identified regulation), and amotivation. Example items measuring intrinsic motivation include: “Because I experience pleasure and satisfaction while learning new things” (IM-To Know), “For the pleasure I experience while surpassing myself in my studies” (IM-Accomplishment), and “For the high feeling that I experience while reading on various interesting subjects” (IM-Stimulation) ( $M = 4.03$ ,  $SD = 1.20$ ,  $\alpha = 0.92$ ). Example items measuring extrinsic motivation include: “In order to get a more prestigious job later on” (External Regulation), “To prove to myself that I can do better than just a high-school degree” (Introjected Regulation), “Because eventually it will allow me to enter the job market in a field that I like” (Identified Regulation) ( $M = 5.36$ ,  $SD = 0.97$ ,  $\alpha = 0.85$ ). Example items measuring amotivation include: “I don’t know; I can’t understand what I am doing in school” and “Honestly I don’t know; I really feel that I’m wasting my time in college” ( $M = 1.64$ ,  $SD = 1.06$ ,  $\alpha = 0.88$ ). Each item was rated on a Likert scale from 1 (Does not correspond at all) to 7 (Corresponds exactly).

#### 2.2.4 *Psychological Sense of Community Scale*

Next, participants completed the 14-item Psychological Sense of Community Scale (Lounsbury & DeNeui, 1996). The measure assesses the degree to which an individual feels they belong at their institution by having them rate items that express community and connection. Example items include: “I really feel like I belong here,” “There is a strong feeling of togetherness on campus,” and “I wish I had gone to another college instead of this one” (reverse scored) ( $M = 4.22$ ,  $SD = 0.60$ ,  $\alpha = 0.91$ ). Each item was rated on a Likert scale from 1 (Strongly disagree) to 5 (Strongly agree).

#### 2.2.5 *Academic Self-Concept Scale*

Then, participants completed the 40-item Academic Self-Concept Scale (Reynolds, 1988). The measure assesses the strength of an individual’s academic self-concept by having them express their school-related attitudes. Example items include: “All in all, I feel I am a capable student,” “I do well in my courses given the amount of time I dedicate to studying,” and “I sometimes feel like dropping out of school” (reverse scored) ( $M = 2.71$ ,  $SD = 0.42$ ,  $\alpha = 0.94$ ). Each item was rated on a Likert scale from 1 (Strongly disagree) to 4 (Strongly agree).

#### 2.2.6 *College Self-Efficacy Instrument*

Finally, participants completed the 19-item College Self-Efficacy Instrument (Solberg et al., 1993). The measure assesses an individual’s feelings of self-efficacy by having them rate their level of confidence for accomplishing college-related goals. It contains three subscales, including course efficacy, social efficacy, and roommate efficacy. Examples of items assessing course efficacy include: “Research a term paper” and “Do well on your exams” ( $M = 7.70$ ,  $SD = 1.53$ ,  $\alpha = 0.78$ ). Examples of items assessing social efficacy include: “Make new friends at college” and “Ask a professor a question” ( $M = 7.28$ ,  $SD = 2.10$ ,  $\alpha = 0.89$ ). Examples of items

assessing roommate efficacy include: “Socialize with your roommate(s)” and “Divide space in your apartment/room” ( $M = 8.91$ ,  $SD = 1.87$ ,  $\alpha = 0.85$ ). Each item was rated on a Likert scale from 0 (Not at all confident) to 10 (Extremely confident).

### 3. RESULTS

#### 3.1 Preliminary Analyses

A review of the data revealed that one of the responses was blank, so it was excluded from the subsequent analyses. Table 3.1 depicts the zero-order correlations for the variables of interest in the present study. As predicted, AA and SA are significantly and positively correlated.

*Table 3.1: Correlations among measures*

	1	2	3	4	5	6	7	8	9	10
1. Authentic Living	-	-.33**	-.40**	.32**	.07	-.25**	.20*	.31**	.34**	.33**
2. External Influence		-	.38**	-.11	.13	.11	.02	-.31**	-.34**	-.15
3. Self-Alienation			-	-.06	-.04	.41**	.02	-.47**	-.42**	-.40**
4. Intrinsic Motivation				-	.50**	-.15	.89**	.21*	.37**	.23**
5. Extrinsic Motivation					-	-.25**	.81**	.18*	.16	.22*
6. Amotivation						-	-.04	-.41**	-.49**	-.50**
7. Overall Motivation							-	.15	.23**	.17
8. Overall Self-Efficacy								-	.57**	.60**
9. Overall Self-Concept									-	.41**
10. Overall Sense of Community										-

*Note:*  $N = 139$ .

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

### 3.2 Primary Analyses

A series of ANOVAs were performed to determine if either condition, first-generation status, or their interaction influenced the dependent variables. Though the analyses did not reveal the predicted interactions between condition and first-generation status, several main effects were discovered. Findings are discussed below in Table 3.2 and Figures 3.1-3.2.

Table 3.2: ANOVA Results

	Condition		First-Gen. Status		Interaction	
	F	P	F	P	F	P
1. Authentic Living	.556	.457	.075	.784	.185	.668
2. External Influence	.361	.549	.090	.765	.194	.660
3. Self-Alienation	.022	.882	1.88	.173	.035	.852
4. Intrinsic Motivation	.957	.330	3.79	.054	.397	.530
5. Extrinsic Motivation	<b>9.82</b>	<b>.002</b>	.010	.920	.903	.344
6. Amotivation	.232	.631	<b>4.17</b>	<b>.043</b>	.307	.581
7. Overall Motivation	<b>4.79</b>	<b>.030</b>	2.67	.105	.659	.418
8. Overall Self-Efficacy	.830	.364	<b>3.95</b>	<b>.049</b>	.000	.996
9. Overall Self-Concept	.889	.347	2.08	.152	.000	.984
10. Overall Sense of Community	.538	.465	2.39	.125	.246	.621

Note: Significant results italicized and in bold

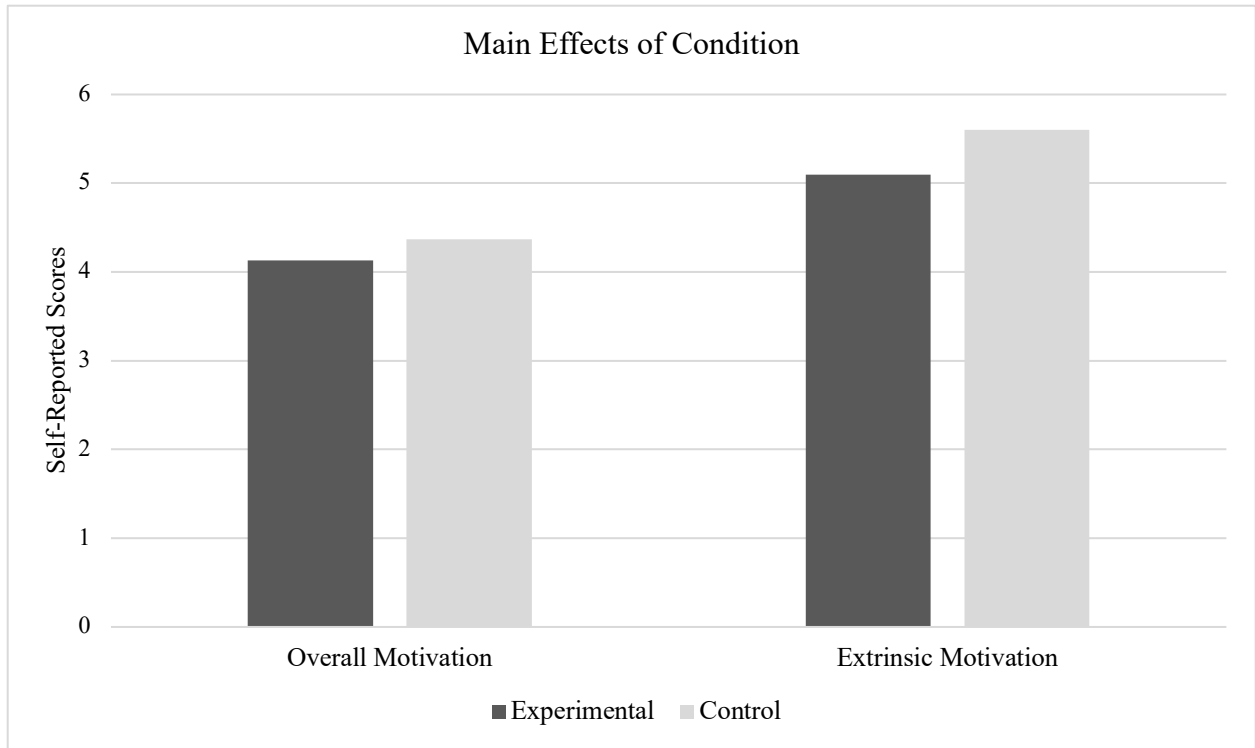


Figure 3.1: Main Effects of Condition

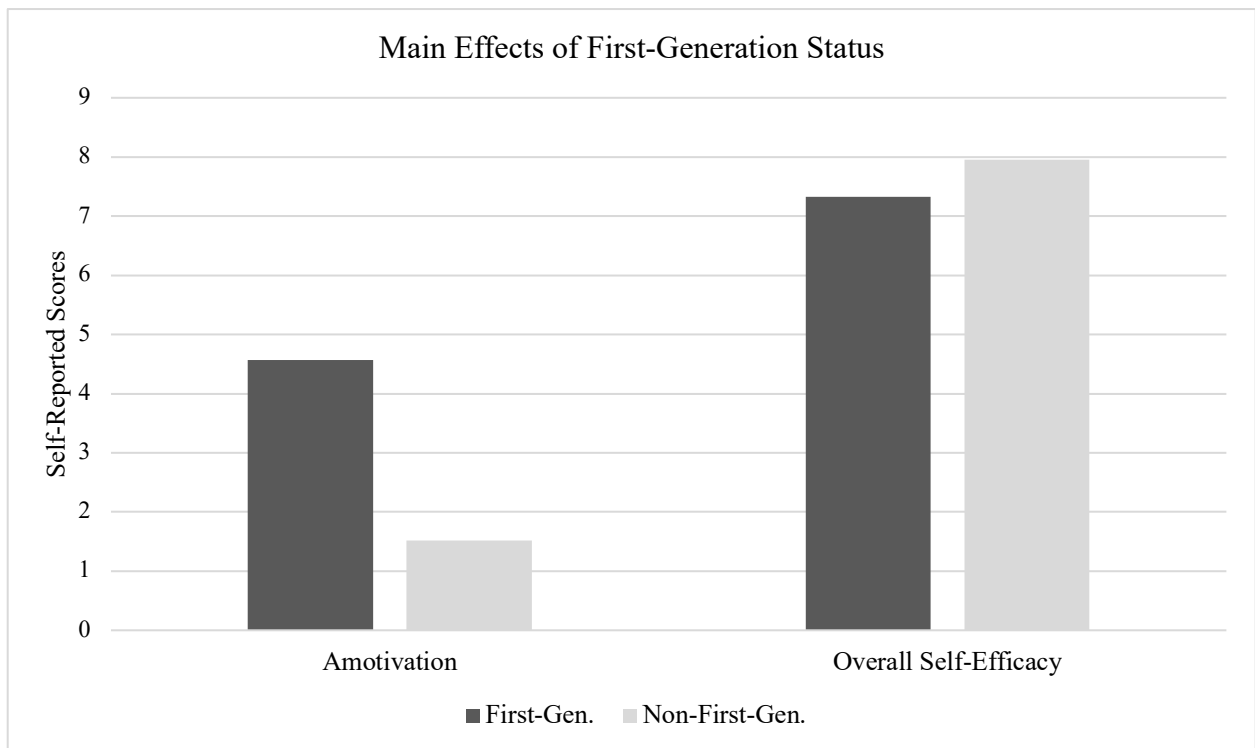


Figure 3.2: Main Effects of First-Generation Status

### 3.2.1 Authenticity

Analyses for the three subscales of authenticity (authentic living, external influence, self-alienation) did not yield any significant results.

### 3.2.2 Academic Motivation

Surprisingly, participants in the experimental condition ( $M = 4.13$ ,  $SD = 0.86$ ) reported significantly lower overall motivation ( $F(1,138) = 4.79$ ,  $p < .05$ ) than participants in the control condition ( $M = 4.37$ ,  $SD = 0.69$ ). This result is counter to predictions.

However, more consistent with predictions, participants in the experimental condition ( $M = 5.10$ ,  $SD = 1.07$ ) reported significantly lower extrinsic motivation ( $F(1,138) = 9.82$ ,  $p < .05$ ) than the control ( $M = 5.60$ ,  $SD = 1.07$ ). This pattern was similar for all three types of extrinsic motivation that make up the scale (i.e., identified, introjected, external regulation). Though no significant results were found for the overall composite of intrinsic motivation, one of its three subscales, intrinsic motivation to experience stimulation, was found to be significant ( $F(1,138) = 4.62$ ,  $p < .05$ ). First-generation students reported higher intrinsic motivation to experience stimulation ( $M = 3.20$ ,  $SD = 1.41$ ) than non-first-generation students ( $M = 2.68$ ,  $SD = 1.29$ ). The remaining subscales for intrinsic motivation did not uncover significant differences.

Finally, as expected, first-generation students ( $M = 1.96$ ,  $SD = 1.27$ ) reported significantly higher academic amotivation ( $F(1,138) = 4.57$ ,  $p < .05$ ) than their non-first-generation peers ( $M = 1.52$ ,  $SD = 0.94$ ).

### 3.2.3 Academic Self-Efficacy

Overall self-efficacy was significant ( $F(1,138) = 3.95$ ,  $p < .05$ ), with first-generation students ( $M = 7.33$ ,  $SD = 1.68$ ) reporting lower overall self-efficacy than non-first-generation



students ( $M = 7.95$ ,  $SD = 1.42$ ). The three subscales of academic self-efficacy (course, social, roommate) did not yield significant results.

#### 3.2.4 *Academic Self-Concept*

Overall academic self-concept did not yield significant results.

#### 3.2.5 *Psychological Sense of Community*

Overall psychological sense of community did not yield significant results.

## 4. CONCLUSION

The positive correlation between AA and SA supported the study's predictions. Importantly, this correlation lends support to the idea that feelings of true self-knowledge can support motivation (and/or motivation is used as an indicator of perceived self-knowledge). In this way, self-knowledge may function as an internal guide, allowing one to discern what is meaningful and how one should allocate their efforts accordingly. Of course, it is also possible that feeling motivated to pursue certain goals may influence one's perceived authenticity, affecting one's commitment to succeeding in those areas. With this in mind, motivating college students to succeed in their academics may have important implications for not only their grades or graduation rates but how they perceive themselves.

Contrary to the original predictions, the results did not yield any interactions between condition and first-generation status. This may have resulted from a lack of power due to the study's small sample size. However, several main effects were discovered. Notably, and unexpectedly, participants in the experimental condition reported significantly lower overall motivation and extrinsic motivation than participants in the control condition. This finding was inconsistent with previous literature, considering that the STPI has been shown to improve academic performance in students (Yeager et al., 2014).

In line with the study's predictions and the findings of previous research, first-generation students reported higher levels of amotivation and lower levels of overall self-efficacy compared to non-first-generation students. These findings suggest that first-generation students face a genuine disadvantage in college, as they feel more amotivated and less confident in their ability

to handle academic demands. Such results emphasize the importance of supporting first-generation students to increase their chances of succeeding.

#### **4.1 Interpretations**

The present study ought to be considered exploratory, and the results should be interpreted with caution because I did not correct for multiple comparisons; this decision was made partly due to the relatively small sample size.

Nonetheless, one may wonder why I did not find any significant differences in the predicted directions for the STPI given that previous work found beneficial effects of the STPI. Informal investigations suggest the first question of the STPI manipulation may have unintentionally elicited negative emotions. The question asked the participants what they thought could make the world a better place, and many of the responses were characterized by disappointment with the world's current state. Hunger, racism, greed, and violence were cited as problems, and the participants expressed frustration that the situation was not better. Some of the responses even expressed hopelessness: "the world in general isn't a good place" and "there is very little one can do to make the world a better place." Given that the wording of the prompt was identical to past research (which found benefits of the intervention), these responses may indicate that young people are more pessimistic about the state of the world than they were in 2014. Such negative appraisals may also have had a detrimental impact on their motivation levels. Thus, this question may have disproportionately affected the participants' emotional states, ultimately resulting in their reports of lower motivation.

However, it is important to recall that the intervention as a whole had limited influence, as most of the variables were non-significant. With this in mind, it is more likely that negative emotions minimized the benefits of the intervention, rather than making it harmful.

Additionally, feelings of stress and pressure may have also influenced the experimental condition, as evidenced by their responses to the intervention's second question. The question asked about what motivated them to learn, and many participants listed family and religion as inspiration to pursue their goals: "I want to make my family proud" and "I want to further God's Kingdom." However, it is possible that reflecting on these influences increased their awareness of expectations in their lives, making them feel pressured or even overwhelmed by these demands. Therefore, the question may have backfired, eliciting anxiety about the future rather than anticipation.

## **4.2 Limitations**

As previously mentioned, one of the primary limitations in the study was the relatively small sample size. With only 139 participants, the power of the study was limited; ANOVA analyses revealed there were several marginally significant results and trends in the data, further suggesting that a lack of power likely affected the study's outcomes. Consequently, it was difficult to make any strong conclusions regarding the data.

Furthermore, the study utilized convenience sampling as its sole means of recruitment. All of the participants were sourced from introductory psychology courses from the same university. Though this sampling method allowed for efficient recruitment, it likely failed to capture the full range of experiences that affect college students.

The sample also lacked diversity. The vast majority of the participants were White (75.9%) and nearly two-thirds identified as female, resulting in uneven race and gender distributions. Of particular importance for the present study, only about a quarter (27.1%) of the participants identified as first-generation students.

### **4.3 Future Directions**

With the present findings in mind, future research ought to utilize larger samples from more diverse populations. To help accomplish this goal, it may be beneficial to utilize recruitment methods other than convenience sampling. Future research studying college students should consider adapting the STPI to avoid using the prompts that appeared to elicit negative responses. Alternatively, it may be prudent to utilize a different motivational intervention altogether. Regardless of the intervention used, it would be beneficial to conduct a formal qualitative analysis of the participants' written responses. This would allow for deeper insight into the factors influencing college students' motivation levels and potentially illuminate critical areas for future interventions to target.

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## APPENDIX A: SELF-TRANSCENDENT PURPOSE INTERVENTION

In this part of the study, we are interested in learning more about your opinions about the world.

How could the world be a better place? Sometimes the world isn't fair, and so everyone thinks it could be better in one way or another. Some people want there to be less hunger, some want less prejudice, and others want less violence or disease. Other people want lots of other changes. What are some ways that you think the world could be a better place? Everything you write will be kept anonymous.

Thank you for sharing your thoughts. Next we would like to learn more about what kind of person you want to become.

### **What do you want to get out of college? What kind of person do you want to be?**

A scientific survey of college students by Stanford University

When you were younger, other people made all your decisions for you. You weren't in charge of your future. But in college, you start to take more responsibility for yourself and for your future – to decide what to do and why to do it. One choice students make is how hard to work and what to work hard on. Almost everyone tries hard in school at least sometimes, and we're trying to learn why students put in that extra effort. So we started surveying college students.

The first thing most students talked about is wanting to make more money by getting a good job. But we also learned that money was hardly ever the only reason—or even the main reason—when they really thought about it.

Most students said they also work hard because of unique and personal reasons, even though they usually don't talk about them to friends. Some students hadn't even put these reasons into words until they took the survey. But when they thought about it, it was these more personal reasons that really helped them get through the hard days when homework piled up and life got crazy. And it was these personal reasons that helped them see that even day—to—day activities had a lot of meaning for their life overall.

This is what students said motivated them to work hard:

- 64% said they wanted to be an educated person who has something to intelligent to say about what's going on in the world.
- 59% said they want to learn so they can make a positive contribution to the world.
- 78% said they want to gain knowledge so that they can have a career that they personally enjoy.

- 72% said they want to have the freedom to pick the life that they want to live.

It's more interesting to hear this in students' own words. We picked three typical responses from normal students on the next few pages. Please read them, then we will ask if you could share your own thoughts.

**Why do you work hard in school? Quote from Student #172**

"For me, getting an education is all about learning things that will help me do something I can feel good about, something that matters for the world. I used to do my schoolwork just to earn a better grade and look smart (or not look dumb). I still think doing well in school is important, but for me it's definitely not just about a grade anymore. I'm growing up, and doing well in school is all about preparing myself to do something that matters, something that I care about."

**Why do you work hard in school? Quote from Student #415**

"Sometimes I see people who have jobs that make money but don't seem very interesting and don't seem to make a difference. I don't want to end up doing something boring with my life, especially if it doesn't even pay well. I want to learn things that will help me have a career I'm proud of and a career where I'll get to do interesting things. Some people in my classes just do the smallest amount of work they can, and they think they'll magically get a good job because they passed. Nobody wants to hire someone who thinks they're too good (or maybe actually too insecure) to take their work seriously. I think I'd regret it if I just coasted through school because I wouldn't be prepared for the more interesting kind of job I want, the kind of job where you get paid well to do work you actually like to do."

**Why do you work hard in school? Quote from Student #108**

"I want to learn as much as I can in school so I can be an educated person. Even aside from the money, educated people get more respect and more freedom to live the way they want to. Why would I choose less respect and less freedom for the rest of my life? It seems like a pretty obvious decision, though sometimes I have to remind myself why the effort is worth it when I get distracted or start procrastinating, or when I get really confused in hard classes."

**Your turn: Why is learning important to your goals?**

Our surveys are still in progress, and we would like students like you to be a part of the conversation.

Take a moment to think about what kind of person you want to be in the future. Also think about what kind of positive impact you want to have on the people around you or society in general. We're not asking about things like money, high status, or power – even though those things can be important. Instead, we want to know what knowledge and abilities you want to have, and why you want to have them.

Please take a few minutes to think about this and write your thoughts so they can be shared with others. Your identity will be kept anonymous.

In the space below, write a few sentences that answer this question: *How will learning in school help you be the kind of person you want to be or help you make the kind of impact you want on the people around you or society in general?* (Don't worry about spelling or grammar. Just focus on getting your ideas across.)

## APPENDIX B: CONTROL EXERCISE

In this part of the study, we are interested in learning more about your opinions about how college is different than high school.

How is college different than high school? Though there are aspects that overlap, there are many simple differences between these two educational environments. Some people notice that the schedules are different, campus is more crowded, or that students use more diverse modes of transportation to navigate campus. Other people notice lots of other small differences. What are some of the general differences that you notice? Everything you write will be kept anonymous.

Thank you for sharing your thoughts. Next, we would like to learn more about your daily routine.

### **What does your daily routine look like?**

A scientific survey of college students by Stanford University

In the past, you attended high school, which differs from college in many ways. Some of the differences are big, but a lot of them are small, everyday differences. We are interested in learning about how college students' daily routine differ from their routines in high school.

The first thing most students talked about is how the academic environment is different. But we also learned that academics were hardly ever the only difference—or even the main difference—when they thought about it.

Most students said college was different because of small changes in logistics and schedules, even though they often did not think about them. Some students hadn't even put these differences into words until they took the survey. But when they thought about it, it was these more subtle differences that really made their daily college experience differ from their daily high school experience. And it was these subtle differences that helped them better understand their day-to-day activities.

These are the main differences students said they noticed between college and high school:

- 64% noticed they had longer gaps between classes
- 59% noticed that they used different modes of transportation to get to class
- 78% noticed that dining halls were more crowded than their high school cafeteria
- 72% noticed that campus took more time to navigate

It's more interesting to hear this in students' own words. We picked three typical responses from normal students on the next few pages. Please read them, then we will ask if you could share your own thoughts.

**How is your college routine different from your high school routine? Quote from Student #172**

"For me, getting to class was a major part of my routine. I needed to think about how to get to campus in the morning so I could get to class on time. I usually just walked to places in high school, but now I needed to get to places much faster since I had many different buildings to go to. I decided to get a bike to navigate campus, and now I ride my bike to all of my classes."

**How is your college routine different from your high school routine? Quote from Student #415**

"College has given me lots of new places to study that I didn't have in high school. I used to study at home in high school, but now I study at the libraries or student learning centers. This has been a change in my routine that has impacted how I plan my day. It's not that big of a change, but it's something that I need to take into consideration."

**How is your college routine different from your high school routine? Quote from Student #108**

"Back in high school, I used to wear a uniform every day. Now, I actually have to plan what to wear and make sure the clothes I want to wear are clean and ready to go. It takes me a bit longer to get ready in the morning because of this, so I have to wake up slightly earlier as a result."

**Your turn: What does your college routine look like?**

Our surveys are still in progress, and we would like students like you to be a part of the conversation.

Take a moment to think about the everyday things that happen in college. Also think about what kind of things make up your daily routine. We're not asking about things like academics— even though those things can be important. Instead, we want to know what subtle lifestyle changes you have experienced since coming to college.

Please take a few minutes to think about this and write your thoughts so they can be shared with others. Your identity will be kept anonymous.

In the space below, write a few sentences that answer this question: *What does your daily routine look like in college and how is that different from your daily routine in high school?* (Don't worry about spelling or grammar. Just focus on getting your ideas across.)