

# **PARENTAL EDUCATION SETS THE EXPECTATION**

An Undergraduate Research Scholars Thesis

by

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# **ABSTRACT**

Parental Education Sets the Expectation

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## **Literature Review**

First-generation students are worse than their non-first generation peers in their ability to recognize and respond to faculty members' expectations (Collier & Morgan, 2008). Further, first-generation students have a lower sense of self-efficacy (Hellman, 1996) and lower self-esteem (McGregor, Mayleben, Buzzanga, Davis, & Becker, 1991) than other students.

## **Thesis Statement**

I expected first generation students to more inaccurately predict how they will perform on their first introduction to psychology exam compared to their non-first generation student peers. I also expected first generation students to place a higher value of importance on their exam and experience higher levels of depression than their non-first generation student peers after the exam.

## **Theoretical Framework**

We use a framework that investigates the relationship between parent's educational attainment and college student's educational expectations. We further this investigation by exploring how first generation status influences exam importance prior to a midterm and levels of depression experienced after the midterm.

## **Project Description**

College students (N = 1435) reported their expectations and reactions before and shortly after, their midterm exam in an introductory course. They reported their expectations about how they would perform on the exam, the importance of the exam, and their depression. We examined how first generation status influenced each of these three variables. We expected first generation students to report more inaccurate expectations on exam performance, higher levels of exam importance, and higher levels of depression. Our hypothesis attempted to bridge the limited research on first generation expectations to the literature on first generation student's well-being.

First generation students and their non-first generation peers differed in their expectations and actual exam performance. First generation students reported lower expectations and performed worse than their non-first generation peers. Whether or not students were the first in their family to attend college did not affect the accuracy of their expectations for their midterm grade. First generation students and their non-first generation peers were similarly inaccurate in predicting their exam performance. Students who were first generation did differ from other students in the importance placed on the exam, and they experienced higher levels of depression after the exam

## **DEDICATION**

I would like to dedicate this project to the emotion science lab, my family, and friends. The three pillars that helped me take this project on, encouraged me to grow, and ultimately guided me along a strenuous, rewarding process. I would like to dedicate all of the hard work, recognition, and growth that has come from this project to all of you. Additionally, I would like to dedicate this project to all first generation college students. A group that is under researched and definitely needs more attention brought to it. I hope that this project can illuminate some of difficulties that come with a first generation status. Lastly, to all non-first generation student peers. I hope that this project not only helps to improve the field of psychology research by highlighting differences in the groups, but by leading to actions that improve education for all students as a whole.

## ACKNOWLEDGEMENTS

I would like to thank my research advisor Dr. Lench for all of the guidance, time, and energy she put into this project. I have grown immensely both academically, personally, and professionally throughout the process of this project because of the tremendous standard she holds me to. For being there for every question I had, and every stressful moment of this project. Thank you so much for being a great person and research advisor to me.

I would like to thank the emotion science lab for being great supporters of my research throughout the project. To Zari Carpenter for always encouraging me to strive to do better, and manage my time effectively throughout this project. For her feedback on my project, and for her time despite having many responsibilities. To Wan and Ken for their help with data analyses and organization of my research project. Of course, to all of the rest of the lab members for their advice, knowledge, and unconditional support. Thank you to NSF funding award number #1451214 for their generous help in funding of this project.

Finally, thank you to my family for their high expectations, unconditional love, and endless encouragement. To my friends for always reminding me that breaks are important for a project this long, and helping me cope with my stress. My family and friends are the foundation to my motivation, aspirations, and efforts. Without them I would not be who I am today, and I want to thank all of you for being there for me and shaping me to who I have become today.

## KEY WORDS

- **First generation college students-** Students whose parents have not earned bachelor's degrees
- **Continuing-generation students-** Students who have at least one parent with a bachelor's degree
- **Non-first generation student peers-** Used interchangeably with “continuing-generation students” term.
- **Postsecondary education-** Education received after high school.
- **Exam performance forecasting-** College student predictions on their exam performance. A way to measure college student expectations in this study.
- **Rumination subscale-** In our study, a four point rumination subscale with twelve depression items was used to measure how depressed participants felt after the exam (1 = Almost never; 4 = Almost always).
- **Importance items** - Five items scored from one to nine were administered to measure how important the exam was for participants. (1 = not at all; 9 = extremely).
- **Exam performance forecasting accuracy-** The formula used to measure how accurate first generation group conditions were in predicting their performance on a midterm.  
Performance forecasting accuracy =  $|\text{Expected grade} - \text{Received grade}|$

# CHAPTER I

## INTRODUCTION

First-generation university students are defined as those whose parents have not earned bachelor's degrees, in contrast with continuing-generation students, who have at least one parent with a bachelor's degree (Stebbleton & Soria, 2013). Past studies have found that students whose parents have no college experience are more likely to have lower educational expectations (Choy, Susan, 2001). First-generation students are worse than their non-first generation peers in their ability to recognize and respond to faculty members' expectations (Collier & Morgan, 2008). Further, first-generation students have a lower sense of self-efficacy (Hellman, 1996) and lower self-esteem (McGregor, Mayleben, Buzzanga, Davis, & Becker, 1991) than other students. The present investigation examined the relationship of parents' educational attainment to their children's expectations about grades in college and how they emotionally respond to grades.

### **The Impact of Parental Education on Achievement**

The influence of parents' educational experiences on their children's expectations appears to begin before college. High school graduates whose parents did not go to college reported lower educational attainment goals as early as the 8<sup>th</sup> grade (Choy, 2001). Students' expectations of earning a bachelor's degree or higher increased as their parents' education rose. Concurrently, findings show that students whose parents have attained no more than a high school diploma are less likely to aspire to a bachelor's degree (Horn & Bobbitt, 2000) and less likely to meet the minimum standardized test requirements for college admission (Berkner & Chavez, 1997). Students whose parents did not attend college are also less likely than their peers to participate in academic programs leading to college enrollment and are less likely to

ultimately apply to college (Horn & Bobbitt, 2000). Parents' education level predicts how likely their children are to enroll in college even when other factors are taken into account, including family income, educational expectations, academic preparation, parental involvement, and peer influence (Choy, 2001).

Parental education also influences the choices their children make regarding what college to attend and what degree to pursue. First generation students often face challenges that limit their actual or perceived choices, including lower family income to pay tuition, and less encouragement from their parents to attend college (Terenzini et al., 1996). Children whose parents have college degrees are more likely to attend selective colleges than first-generation college students (Hudson 1991) even after accounting for factors such as parental income, a measure of academic motivation, and high-school grades (Pascarella, Pierson, Wolniak, & Terenzini 2004).

Once enrolled in college, parents' education has been determined as a powerful predictor of students' educational achievements (Hodgkinson, 1993). Findings have shown that first-generation students have lower grade point averages, (Huerta, Watt, & Reyes 2013; Riehl, 1994, Martinez, Sher, Krull, & Wood, 2009) and weaker cognitive skills in reading, math, and critical thinking (Terenzini et al., 1996). First generation students perform at lower rates than their student peers, including decreased persistence toward college degree attainment (Hoffman, 2003; Inman & Mayes, 1999; Riehl, 1994) lower level of bachelor's degree attainment (Education Resources Institute & Institute for Higher Education Policy, 1997), and decreased possibility of attaining any degree (National Center for Educational Statistics [NCES], 1998). In general, parents' education is positively related to persistence in college and degree attainment (Terenzini, P. T., Springer, L., Yaeger, P. M., Pascarella, E. T., & Nora, A. 1996).

## **The Impact of Parental Education on Social Variables**

Parents' educational experiences also impact the social and mental well-being of their children after they begin college. A particular challenge that first-generation students face in pursuit of a college education is their position on the margin of two cultures -- that of their friends and family and that of their college community (Zwerling, L. S., & London, H. B.1992). Students' assimilation is specific and issue driven (Dees, 2006; Bryan, Simmons, 2009) they often bridge two cultures, not feeling a sense of belonging in either one (Oldfield, 2007; Rendón, 1992). Barriers in belonging relate to issues that deal with family, social, cultural, and academic transitions (London, 1989). Consequently, students report being torn between the culture of family and the culture of the university (Hsiao, 1992; Stephens, Fryberg, Markus, Johnson, & Covarrubias, 2012).

Engle and Tinto (2008) found that first-generation students are less likely to be engaged in the social experiences of a university. First-generation students are less likely to socialize with peers and talk with teachers in high school (Terenzini et al. 1996), and this habit follows them into college, with first generation students exhibiting lower levels of academic and social integration (Nunez, 1998). They seldom interact with faculty (Jenkins et al., 2009) and tend to rely on peers to gather academic advice (Torres, Reiser, LePeau, Davis, & Ruder, 2006). Moreover, first-generation students have difficulty navigating the social environment of university, and tend to be dissatisfied in comparison to other students (Stebbleton, Soria, & Huesman, 2014). First-generation students have fewer options for social support because their family members lack understanding of the university environment. This lack of belonging can lead to feelings of depression and loneliness for first-generation students (Lippincott & German, 2007). It is possible that due to the absence of an emotional connection that first-generation

students report being more depressed, stressed, and upset in comparison to other students (Stebbleton & Soria, 2013). Having the emotional support or absence of it in the form of parents' educational attainment is fundamental to college students' emotional responses to the college environment.

### **The Present Investigation**

Further research is needed to examine the exact processes through which parents' education affects academic attainment and emotional well-being of college students. I expected first generation students to more inaccurately predict their performance on their first introduction to psychology exam compared to their non-first generation student peers. I also expected first generation students to place a higher value of importance on their exam and experience higher levels of depression than their non-first generation student peers after the exam. This prediction is based on the literature that has been presented up to this point. Furthering past research (Choy, 2001; Hodgkinson, 1993; Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996; Havemen & Wolfe, 1995) the intentions of this investigation are to add evidence to the relationship between parents' level of education and educational expectations of college students. Along with student's academic expectations, this investigation also explored how they emotionally respond to academic events. The current literature on the relationship between parents' educational attainment and the emotional implications this has on college students is limited. While many studies (Engle & Tinto, 2008; Terenzini et al. 1996; Stebleton, Soria, & Huesman, 2014; Oldfield, 2007; Rendón, 1992) emphasize the social obstacles that first generation college students experience, these studies do not address how students' academic expectations could be affected by first generation status. The present study also investigates depression symptoms after receiving negative academic feedback.

## CHAPTER II

### METHODS

#### Participants

Our sample consisted of 1435 participants that were (24% men, 75% women, and 1% missing responses) Texas A&M University and University of California Irvine undergraduate college students. Students signed up to participate in the study through an online system. Participants were aware that this was a three part study when they signed up. Students' age ranged from 17 (3 participants) to 58 (1 participant) with the median age being 18. The mean age for our sample was 19 years ( $SD = 2.5$ ). The age statistics for The University of California Irvine was missing in this dataset. Students described themselves as African American (2.5%), East Asian (19.7%), Hispanic/Latino (24.1%), Middle Eastern (2.3%), South Asian (8.1%), White (32.4%), and multiple/other (6.4%). 517 (39.5%) students identified as first generation college students while 792 (65.5%) did not.

#### Procedure

The data for this study was part of a larger investigation investigating decision making, and only methods relevant to the present investigation are reported here. Participants completed two surveys. On the first survey, two weeks before their first midterm in an introductory psychology course, participants reported their expectations about performance on a thirteen point grade scale item that asked, "What grade do you expect to receive on your PSYC107 exam?" (1 = F; 13 = A+). Additionally, participants responded to five items scored from one to nine that measured different types of importance in relation to their exam (1 = not at all; 9 = extremely). On the second survey, two days after participant's course grade was released, they were

contacted again and asked to report the grade they had received on the same thirteen point grade scale (1 = F; 13 = A+). The accuracy of grade predictions was calculated by taking the absolute value of expected grade minus received grade (Performance forecasting accuracy = |Expected grade - Received grade|). Furthermore, a four point rumination subscale with twelve depression items was generated to measure how depressed participants felt after receiving their grade. A sample item from the twelve item subscale scored from one to four asked, “Think about how alone you feel” in measuring participant’s depression related symptoms (1 = Almost never; 4 = Almost always). This twelve item subscale was composed from the original twenty two item Rumination Response Scale using only items that were classified as depression related by Nolen-Hoeksema and Morrow (1991). To measure differences in the tendency to ruminate, Nolen-Hoeksema and Morrow (1991) created the Ruminative Responses Scale of the Response Styles Questionnaire. The Rumination Response Scale is made up of brooding, reflection, and depression related items. Nolen-Hoeksema (2000) found that rumination scores at a first assessment predicted new onsets of major depressive episodes. The rumination response scale has high internal consistency and acceptable convergent validity (Butler & Nolen-Hoeksema, 1994; Nolen-Hoeksema & Morrow, 1991).

## CHAPTER III

### RESULTS

#### Accuracy of Prediction

An independent t-test revealed that students with first generation status differed significantly in the grade they expected to receive on the exam ( $M = 10.3$ ,  $SD = 1.7$ ) from continuing generation students ( $M = 10.8$ ,  $SD = 1.4$ ),  $t(1307) = -5.290$ ,  $p = 0.00$  (Figure 1). Furthermore, an independent t-test showed that students with first generation status also differed significantly in the grade they received on the exam ( $M = 8$ ,  $SD = 3$ ) from continuing generation students ( $M = 8.7$ ,  $SD = 3$ ),  $t(1240) = -3.152$ ,  $p = 0.002$  (Figure 1). Ultimately, an independent t-test revealed that students with first generation status did not differ in their performance forecasting accuracy ( $M = 3$ ,  $SD = 2.5$ ) from continuing generation students ( $M = 2.9$ ,  $SD = 2.4$ ),  $t(1240) = 1.323$ ,  $p = 0.186$  (Figure 2).

#### Importance of Exam

First generation status significantly related to how important students perceived the exam to be. First generation students rated the exam as more important to them ( $M = 7.7$ ,  $SD = 1.3$ ) than continuing generation students ( $M = 7.3$ ,  $SD = 1.4$ )  $t(1307) = 5.213$ ,  $p = 0.00$  (Figure 3).

#### Depression after Exam

First generation status significantly related to depression symptoms after the exam. First generation students experienced higher levels of depression after receiving their exam grade ( $M = 2.2$ ,  $SD = 0.7$ ) than continuing generation students ( $M = 2.1$ ,  $SD = 0.7$ ),  $t(1242) = 2.413$ ,  $p = 0.016$  (Figure 4).

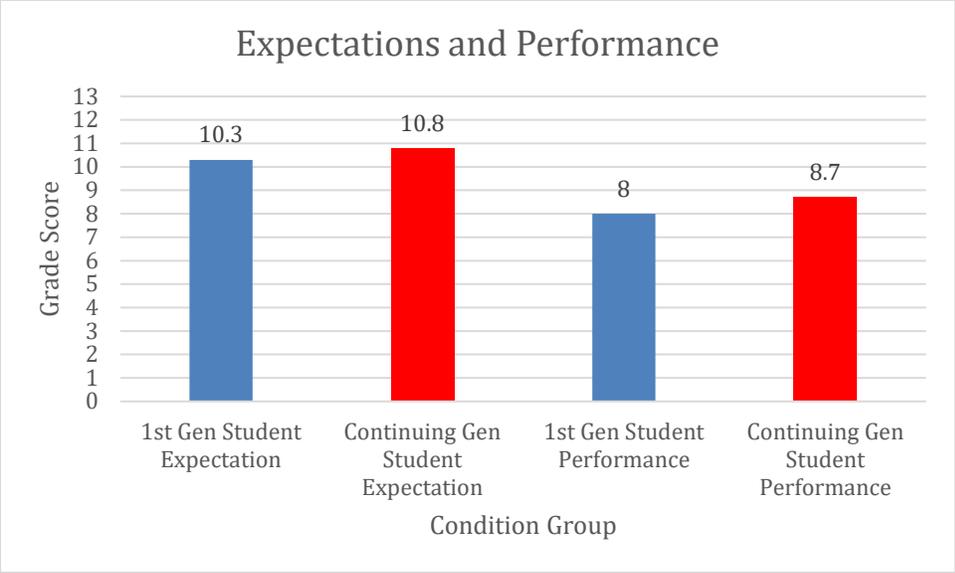


Figure 1: Expectations and Performance

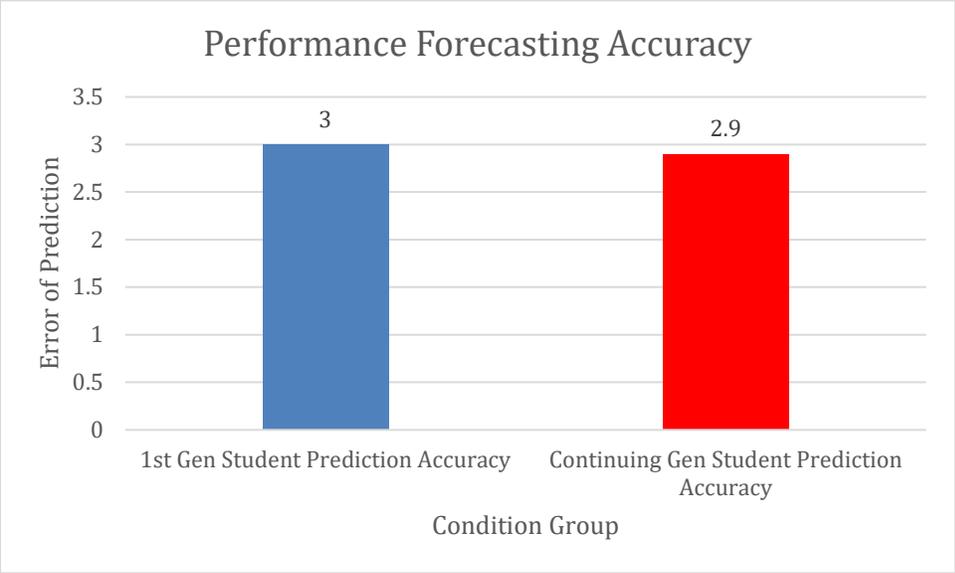


Figure 2: Performance Forecasting Accuracy

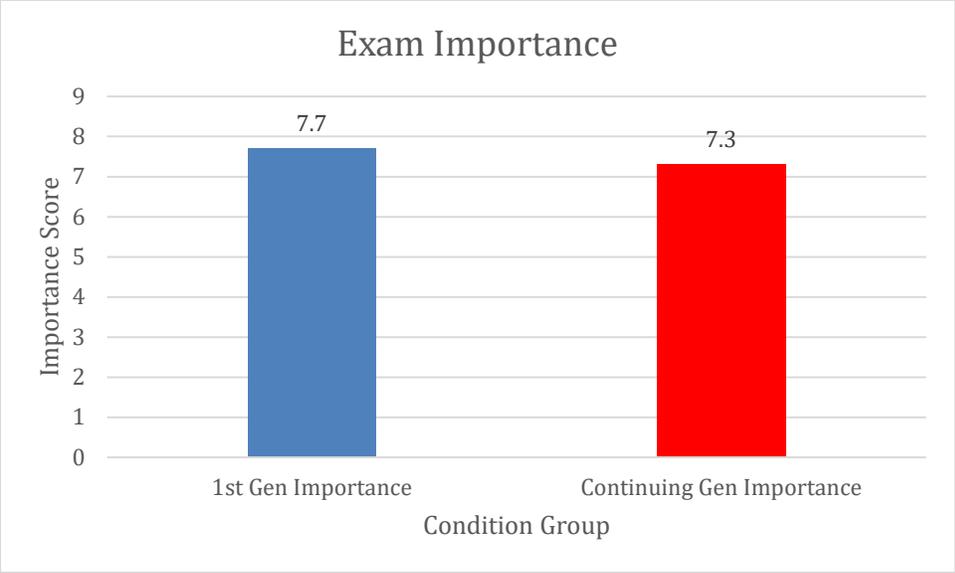


Figure 3: Exam Importance

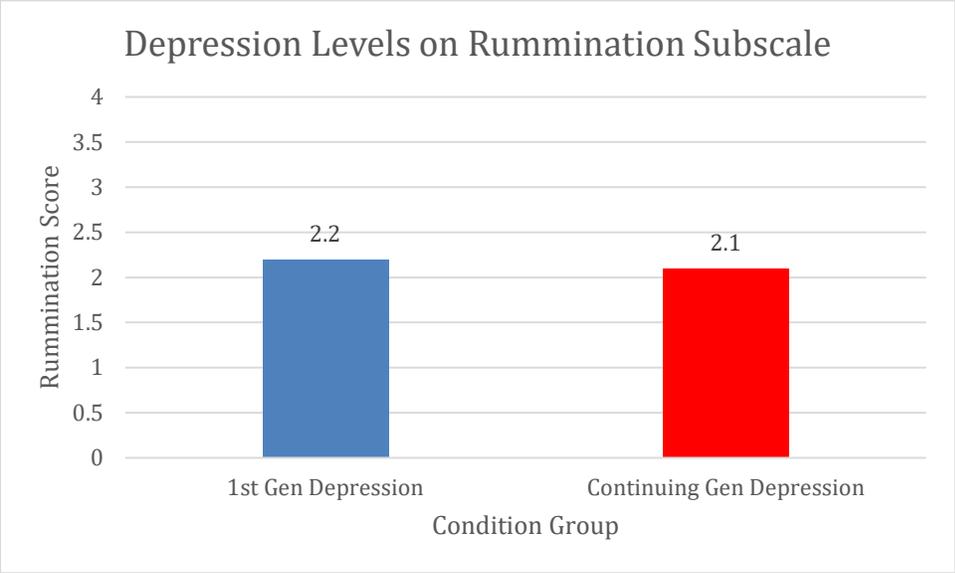


Figure 4: Depression Levels on Rumination Subscale

## CHAPTER VI

### DISCUSSION

Overall, our hypothesis that first generation students will more inaccurately predict how they will perform on their first introduction to psychology exam compared to their non-first generation student peers was not supported. First generation students were worse than their peers in predicting their grade, but the difference was not significant. However, our hypothesis that first generation students will place a higher value of importance on their exam and experience higher levels of depression than their non-first generation student peers after the exam was supported. First generation students reported significantly higher measures of importance for the exam compared to their non-first generation student peers. Furthermore, first generation students reported significantly greater levels of depression after the exam had been taken than their non-first generation student peers. Our findings are consistent with the literature that says that first-generation students are worse than their non-first generation peers in their ability to recognize and respond to faculty members' expectations (Collier & Morgan, 2008). Additionally, our findings that first generation students have lower expectations and perform worse than their continuing education peers align with previously established research (Choy, Susan, 2001). Nevertheless, these findings did not translate to a significant difference in inaccuracy of exam performance forecasting based on first generation status. Moreover our findings did agree with the literature that says that first generation students are generally more depressed than their non-first generation peers (Lippincott & German, 2007). This could be as a result of having a lack of social support for exam preparation prior to the exam, and not having strong coping mechanisms to engage in after the exam. This would make sense given the direction which the literature

points in terms of social barriers for first generation students (London, 1989). First generation students are likely unaware of the expectations of the college environment in their first year (Collier & Morgan, 2008) and don't have the social support to translate these expectations or provide emotional support once expectations are unfulfilled (Engle & Tinto, 2008; Terenzini et al. 1996; Stebleton, Soria, & Huesman, 2014; Oldfield, 2007; Rendón, 1992).

### **Implications/Suggestions for Further Research**

There is little research about the academic expectations that first generation students have when entering the college environment. Future research should examine how students respond to academic feedback that is either positive or negative. Moving forward and studying expectations of first generation students could provide a platform to increase resources, social groups, and highlight awareness that allows for first generation students to come to college more prepared. Moreover, the significant difference in exam importance and levels of depression experienced by first generation students adds more literature that seems fairly consistent across research. This study showed that first generation students held a higher sense of exam importance and depression scores than their peers, but it is also vital to investigate how long the emotional effects last. Future research should also examine effective coping mechanisms across first generation and non-first generation conditions.

### **Limitations**

Limitations in our study are linked to the study design used in our investigation. Using the structure of a study with separate investigative goals led to a limited amount of measures used to analyze our hypothesis. Had this study been solely focused on first generation student status a detailed investigation could have added items measuring for perception of parents, self-efficacy, and college expectations. Measuring for college expectations would have brought an

encompassing measure of the educational aspirations of first generation and continuing generation groups. In our study, we were unable to connect how exam expectations related to larger educational expectations held by each group due to inadequate measures. Studying perception of parents would have added an intriguing variable that could have been connected to the expectations and coping mechanisms formed by each group. A measure for self-efficacy could have been examined to see if it counteracted low college expectations, and worse perception of parents formed by either group. In combination, adding these three measures would have led to stronger generalizability and validity in our findings. However, as a result of limited measures the implications of the expectation and emotional differences in first generation students found in this study are limited.

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