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Do Patterns of Distress Vary in First-Generation College Students
Seeking Psychotherapy?

Candice Gonsalves

A dissertation submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Doctor of Philosophy

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ABSTRACT

Do Patterns of Distress Vary in First-Generation College Students Seeking Psychotherapy?

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Doctor of Philosophy

In this study, we examined distress levels of first-generation college students at intake from an average of 137 university and college counseling centers that participated in data collection with the Center for Collegiate Mental Health (CCMH) between the 2012–2015 academic school years. We gathered descriptive data from the CCMH Standardized Data Set (SDS), and then examined itemized responses from the Counseling Center Assessment of Psychological Symptoms 62 (CCAPS-62). Students completed the SDS and CCAPS-62 at intake, and both measures rely on self-report. We divided student data ($N = 184,334$) into groups based on educational status: first-generation (FG) or non-first generation (NFG), and ethnic minority status: White (W) or minority (M), with several minorities grouped into the M variable. This created four subgroups: first-generation minority (FGM), first-generation White (FGW), non-first-generation minority (NFGM), and non-first-generation White (NFGW). We compared participants according to subgroup across the CCAPS distress index (which utilizes items from the depression, generalized anxiety, social anxiety, academic distress and hostility subscales), and the eight CCAPS distress subscales of: depression, generalized anxiety, social anxiety, academic distress, eating concerns, hostility, family distress and substance/alcohol use. We found significant differences on all subscales across subgroups. We ran statistics to determine between subject effects and estimated marginal means and found statically significant results across the distress index and the eight CCAPS distress subscales. Significant results showed the highest levels of distress in FG students, with FGM students higher on the majority of subscales. Further research is needed to understand the different levels and patters of distress in these populations.

Keywords: first-generation college student, collegiate counseling centers, distress, stress

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TABLE OF CONTENTS

TITLE PAGE	i
ABSTRACT	ii
ACKNOWLEDGMENTS	iii
TABLE OF CONTENTS.....	iv
LIST OF TABLES.....	vii
DESCRIPTION OF DISSERTATION STRUCTURE AND CONTENT	ix
Introduction.....	1
Statement of the Problem.....	4
Statement of Purpose	5
Research Questions.....	5
Method.....	6
Participants.....	6
Initial Identifier (First-Generation Status)	7
Secondary Identifier (Minority Status)	7
Settings.....	8
Instruments.....	8
The Standardized Data Set (SDS).....	8
The Counseling Center Assessment of Psychological Symptoms 62 (CCAPS-62).....	9
Procedure	11
Research Design.....	12
Statistical Analysis.....	12
Results.....	13

Distress Index.....	14
Depression Subscale	15
Generalized Anxiety Subscale	15
Social Anxiety Subscale	16
Academic Distress Subscale	16
Eating Concerns Subscale.....	17
Hostility Subscale	17
Family Distress Subscale	18
Substance/Alcohol Use Subscale.....	18
Discussion.....	19
Participants (FGM, FGW, NFGM, and NFGW).....	19
First-Generation Minority (FGM).....	20
First-Generation White (FGW).....	21
Non-First-Generation Minority (NFGM)	23
Non-First-Generation White (NFGW).....	24
Limitations	25
Implications for Future Research.....	26
Implications for Practice	27
Conclusion	30
References.....	32
Tables.....	40
APPENDIX A: Review of the Literature.....	58
Utilization Trends	58

Increase in Severity of Concerns	59
Expansion of Services.....	60
Attention to Minority Counseling Services	60
First-Generation Student Counseling Center Utilization Trends.....	62
Barriers and Challenges of First-Generation College Students	62
Compounding Factors of Race and Ethnicity	64
Mental Health in College-Aged Students and First-Generation Students	64
Depression.....	65
Generalized Anxiety	66
Social Anxiety.....	66
Academic Distress	67
Eating Concerns	68
Hostility.....	69
Family Distress	69
Substance/Alcohol Use	70
Research Gaps in First-Generation Student Counseling Utilization and Distress Trends.....	71
Definition of Term	71
References.....	72
APPENDIX B: Instruments	86
Collegiate Center for Mental Health (CCMH) Counseling Center Assessment of Psychological Symptoms 62 (CCAPS-62)	86
Collegiate Center for Mental Health (CCMH) Standardized Data Set (SDS).....	93

LIST OF TABLES

Table 1	<i>Pairwise Comparisons of Groups on Distress Index Subscale Scores</i>	40
Table 2	<i>Test Between-Subjects Effects: Distress Index at Intake</i>	40
Table 3	<i>Estimated Marginal Means of Distress Index at Intake (First-Generation)</i>	41
Table 4	<i>Estimated Marginal Means of Distress Index at Intake (Minority)</i>	41
Table 5	<i>First-Generation * Minority: Distress Index at Intake</i>	41
Table 6	<i>Pairwise Comparisons of Groups on Depression Subscale Scores</i>	42
Table 7	<i>Test Between-Subjects Effects: Depression at Intake</i>	42
Table 8	<i>Estimated Marginal Means of Depression at Intake (First-Generation)</i>	43
Table 9	<i>Estimated Marginal Means of Depression at Intake (Minority)</i>	43
Table 10	<i>First-Generation * Minority: Depression at Intake</i>	43
Table 11	<i>Pairwise Comparisons of Groups on Generalized Anxiety Subscale Scores</i>	44
Table 12	<i>Test Between-Subjects Effects: Generalized Anxiety at Intake</i>	44
Table 13	<i>Estimated Marginal Means of Generalized Anxiety at Intake (First-Generation)</i>	45
Table 14	<i>Estimated Marginal Means of Generalized Anxiety at Intake (Minority)</i>	45
Table 15	<i>First-Generation * Minority: Generalized Anxiety at Intake</i>	45
Table 16	<i>Pairwise Comparisons of Groups on Social Anxiety Subscale Scores</i>	46
Table 17	<i>Test Between-Subjects Effects: Social Anxiety at Intake</i>	46
Table 18	<i>Estimated Marginal Means of Social Anxiety at Intake (First-Generation)</i>	47
Table 19	<i>Estimated Marginal Means of Social Anxiety at Intake (Minority)</i>	47
Table 20	<i>First-Generation * Minority: Social Anxiety at Intake</i>	47
Table 21	<i>Pairwise Comparisons of Groups on Academic Distress Subscale Scores</i>	48
Table 22	<i>Test Between-Subjects Effects: Academic Distress at Intake</i>	48

Table 23	<i>Estimated Marginal Means of Academic Distress at Intake (First-Generation)</i>	49
Table 24	<i>Estimated Marginal Means of Academic Distress at Intake (Minority)</i>	49
Table 25	<i>First-Generation * Minority: Academic Distress at Intake</i>	49
Table 26	<i>Pairwise Comparisons of Groups on Eating Concerns Subscale Scores</i>	50
Table 27	<i>Test Between-Subjects Effects: Eating Concerns at Intake</i>	50
Table 28	<i>Estimated Marginal Means of Eating Concerns at Intake (First-Generation)</i>	51
Table 29	<i>Estimated Marginal Means of Eating Concerns at Intake (Minority)</i>	51
Table 30	<i>First-Generation * Minority: Eating Concerns at Intake</i>	51
Table 31	<i>Pairwise Comparisons of Groups on Hostility Subscale Scores</i>	52
Table 32	<i>Test Between-Subjects Effects: Hostility at Intake</i>	52
Table 33	<i>Estimated Marginal Means of Hostility at Intake (First-Generation)</i>	53
Table 34	<i>Estimated Marginal Means of Hostility at Intake (Minority)</i>	53
Table 35	<i>First-Generation * Minority: Hostility at Intake</i>	53
Table 36	<i>Pairwise Comparisons of Groups on Family Distress Subscale Scores</i>	54
Table 37	<i>Test Between-Subjects Effects: Family Distress at Intake</i>	54
Table 38	<i>Estimated Marginal Means of Family Distress at Intake (First-Generation)</i>	55
Table 39	<i>Estimated Marginal Means of Family Distress at Intake (Minority)</i>	55
Table 40	<i>First-Generation * Minority: Family Distress at Intake</i>	55
Table 41	<i>Pairwise Comparisons of Groups on Substance/Alcohol Use Subscale Scores</i>	56
Table 42	<i>Test Between-Subjects Effects: Substance/Alcohol Use at Intake</i>	56
Table 43	<i>Estimated Marginal Means of Substance/Alcohol Use at Intake (First-Generation)</i> ..	57
Table 44	<i>Estimated Marginal Means of Substance/Alcohol Use at Intake (Minority)</i>	57
Table 45	<i>First-Generation * Minority: Substance/Alcohol Use at Intake</i>	57

DESCRIPTION OF DISSERTATION STRUCTURE AND CONTENT

This dissertation, *Do Patterns of Distress Vary in First-Generation College Students Seeking Psychotherapy?*, is written in a journal-ready format. This format combines traditional dissertation requirements and requirements of professional journal publications.

The preliminary pages of this dissertation meet the requirements for submission to the university. The remainder of the document meets requirements for professional journal submissions. This journal-ready format contains sections for references. The first is included within the journal-ready article. The second includes the citations used in the full review of literature.

The full literature review is found in Appendix A. A full discussion on the instrument and data set used in this study is found in Appendix B.

Introduction

The United States Department of Education reported 16.6 million students enrolled in degree-granting postsecondary institutions during the 2018–2019 school year in their report, *The Condition of Education 2020* (Hussar et al., 2020). This is a 29 percent increase from the 13.2 million students enrolled in 2000, and the authors of the report anticipate that the number of students enrolled in higher education will increase to 17.0 million students by 2029 (Hussar et al., 2020). As attendance at postsecondary institutions is anticipated to continue to grow, it is important to learn more about these student populations. It is perhaps particularly timely as students who identify as first-generation (FG) are enrolling in postsecondary institutions at significant rates. Estimates of attendance for FG students include 34% of universities' freshmen population (House et al., 2020), and 14.5% of college students (McFarland et al., 2017).

Individuals who identify as first-generation students (FG) often face additional challenges and barriers in succeeding at an institution of higher learning than many of their fellow students, including delayed entry into college (Fallon, 1997), lower academic achievement as evidenced by SAT scores (Riehl, 1994), longer time to complete their degree (Ishitani, 2003), lower grade achievements, and higher propensity to drop out of school (Brooks-Terry, 1988). Impacts of the difficulties FG students face may be seen not just in academic settings, but in social and cultural settings as well (Hsiao, 1992). These additional challenges may translate into higher levels of overall distress. Students who identify as FG may struggle to achieve a sense of belonging or identity (Stebbleton et al., 2014; Wang & Castañeda-Sound, 2008), and may experience lower self-efficacy (Wang & Castañeda-Sound, 2008). They may face significant financial difficulties while enrolled in school, as they are more likely to come from lower socio-economic families

(Jenkins et al., 2013), attend for-profit institutions (Inman & Mayes, 1999; McFarland et al., 2017), and often take longer to complete their degree (Ishitani, 2003).

Students from ethnic minority backgrounds face additional burdens and challenges related to obtaining post-secondary education. In reviewing the literature, the term minority is often used to refer to individuals from diverse backgrounds. This is particularly true in the practice of grouping racial and ethnic minorities together. We reviewed research of students from racial and ethnic minority backgrounds which were lumped together into the same variable and research which highlighted or differentiated specific racial or ethnic groups. The term “minority” as used below refers to those from ethnic minority backgrounds who have been lumped together unless otherwise noted. Persons who identify as ethnic minority international students should be assumed to be included in this minority group unless otherwise specified.

Those from ethnic minority groups “tend to experience disproportionate amounts of psychological distress and disorders in comparison to the general population” (Hayes et al., 2011, p. 117; see also Mays & Cochran, 2001; Szymanski & Stewart, 2010; U.S. Surgeon General, 2001, as cited in Hayes et al., 2011). First-generation students from ethnic minority backgrounds are also at higher risk of leaving postsecondary education prior to completion than non-first-generation ethnic majority students (Carter, 2006), and may question their “legitimacy as students” (Smedley et al., 1993, p. 447). These same researchers found that students from minority backgrounds “evidenced considerable psychological sensitivity and vulnerability to the campus social climate” (Smedley et al., 1993, p. 447). Motivational factors related to overcoming family histories (Blackwell & Pinder, 2014) and other reasons to attend have also been studied (Phinney et al., 2006).

One difficulty researching the FG population is researchers and policy makers have utilized a variety of ways to define them (Toutkoushian et al., 2018). As previously discussed, the term minority also does not have a standardized definition. For the purpose of not repeating the same terminology, we have chosen to define our terms as follows. We have chosen to utilize the term first-generation (FG) as self-defined by students at intake through the use of the Center for Collegiate Mental Health (CCMH) Standardized Data Set (SDS), a demographic assessment. We have chosen to lump students who responded to the question: “What is your race/ethnicity?” on the SDS as anything other than “White” as minority (M). This was done to begin to explore the differences between students who identify as FG and non-first-generation (NFG), and ethnic majority/White (W) and ethnic minority (M) students. We chose to not further explore the impact of specific ethnic minority status for this study to instead focus on broader implications of the data.

To our knowledge, one study has examined levels of distress at collegiate counseling centers among FG students compared to their NFG peers (House et al., 2020), and no research has been conducted comparing FGM, FGW, NFGM and NFGW in terms of levels of distress at collegiate counseling centers. Additional research in this domain can help determine whether there are compounding stressors of being an FG and M student, and which stressors are most reported by each group (FGM, FGW, NFGM, NFGW).

In this study, we examined a convenience sample of first-generation college students who completed the CCMH Counseling Center Assessment of Psychological Symptoms 62 (CCAPS-62) at collegiate centers of mental health prior to receiving treatment. Itemized responses on the CCAPS-62 were reported across the distress index and eight subscales: depression, eating concerns, substance abuse, general anxiety, hostility, social anxiety, family distress and academic

distress. We compared distress levels comparatively between four categories of students: FGM, FGW, NFGM, and NFGW. These subcategories were generated to explore whether FG report similar rates of distress regardless of M status than NFG, and whether M status played a further compounding role on distress levels reported at intake.

Statement of the Problem

Enrollment of FG students is increasing across the United States. Research reveals that many of these students begin higher education with fewer resources and additional stressors than their counterparts (Riehl, 1994). Though diverse, many complicating factors have been shown to lead to increased dropout rates amongst FG students (Brooks-Terry, 1988). Additionally, trends reported by de Brey et al. in their 2018 report for the U.S. Department of Education show that White individuals are more likely to receive a bachelor's degree (57%) and an associate's degree (65%) when compared to students from racial/ethnic minority backgrounds (43% and 36% respectively).

Counseling utilization in collegiate counseling centers has been shown to be associated with decreased levels of dropout, whether early or later in their college experience (Wilson et al., 1997). However, to date, to our knowledge no research has been published examining distress levels in collegiate counseling centers at intake for FG students as differentiated by ethnic minority and majority status and as compared to their NFG ethnic minority and majority status peers. Furthermore, as far as we can tell, there is a lack of information regarding differences in these distress levels exists. Without such research, it is difficult to determine whether FG status is a significant contributing factor to higher levels of distress among the college student population seeking treatment at the time of intake regardless of M status.

The goal of this research is to provide a clearer understanding of levels of distress for FG students in regard to overall distress and across several measured subscales (depression, eating concerns, substance abuse, general anxiety, hostility, social anxiety, family distress and academic distress) as compared to their peers within the same setting. We hope to help identify students that may be at increased risk of distress based on their FG and/or M status. These findings can be used to help identify key areas of distress among each identified group (FGM, FGW, NFGM, NFGW) which may be useful for clinicians to be aware of at the time of intake. Additionally, these findings may be helpful in identifying appropriate resources and referrals for collegiate counseling centers in working with this population.

Statement of Purpose

The purpose of this research is to examine whether FG status amongst W and M college students presenting at collegiate counseling centers have different distress levels at intake as compared to NFGW and NFGM students. We anticipated that there would be differences in distress levels among the identified variables of FGW, FGW, NFGM, and NFGW. Attention to identifying populations of greatest risk for distress prior to their engagement in collegiate counseling centers and creating targeted interventions and awareness of resources to support this population could be prioritized based upon the significance of the results in this study.

Research Questions

This study addressed the following research questions:

1. Are there significant differences among FGM, FGW, NFGM, and NFGW in terms of the distress index at intake?

2. Are there significant differences among FGM, FGW, NFGM, and NFGW in terms of the subscales of depression, eating concerns, substance/alcohol use, generalized anxiety, hostility, social anxiety, family distress, and academic distress?

Method

We obtained data for this study through the Center for Collegiate Mental Health (CCMH), which is an international Practice-Research-Network (PRN) of college and university counseling centers and is located in the Counseling and Psychological Services (CAPS) at the Pennsylvania State University (Penn State University or PSU). Since the data obtained is de-identified by college and/or institution upon submission to CCMH, there is no way of knowing what specific release forms were utilized in the collecting of this data. CCMH reports that their secure data is held within confidential treatment records at participating universities, and once pooled it is de-identified, anonymous, and unable to be linked to its originating institution (CCMH, n.d.)

Participants

Participants for this study came from 132 institutions for the 2012–2013 school year, 140 for the 2013–2014 school year, and 139 for the 2014–2015 school year for an average of 137 institutions which collected and provided data to CCMH's data set (CCMH, n.d.; CCMH, 2016). The total number of unique students for the previously identified academic years from whom all relevant data for this study was obtained was 184,334 (CCMH, 2016). Data from students who sought collegiate mental health services through their college/university were gathered at intake. Data were reviewed for appropriateness, with individuals who did not answer one or both of the questions regarding relevant demographics (FG or race/ethnic status) were removed from the official analysis. Demographic information gathered at the time of intake included race/ethnic

status, and first-generation status. Year in school was also identified, solely for the purpose of excluding individuals seeking graduate education from this study.

Initial Identifier (First-Generation Status)

Initial groups were created from gathered data based upon FG status. Students were identified as either FG, or NFG by their response to the question: “Are you the first-generation in your family to attend college?” with FG providing a positive endorsement, and NFG providing a negative endorsement. After individuals who did not answer all relevant identifying questions were removed from the data, FG represented 22.9% of the respondents, with NFG representing 77.1% of sample.

Secondary Identifier (Minority Status)

Students were identified as M or W status based on their response to the drop-down formatted question on the SDS: “What is your race/ethnicity?” Individuals endorsing the option “White” were identified in this study as “White” (W). Students endorsing the options of “African American/Black,” “American Indian or Alaskan Native,” “Asian American/Asian,” “Hispanic/Latino/a,” “Native Hawaiian or Pacific Islander,” “Multi-racial” or “Self-Identify” were included in the minority status group (M). International students were not controlled for, and their responses are assumed to be found within both the W and M groups. Race/ethnicity represents the following valid percentages after individuals who did not answer all relevant identifying questions were removed: “African American/Black,” 8.8%; “American Indian or Alaskan Native,” 0.4%; “Asian American/Asian,” 6.7%; “Hispanic/Latino/a,” 7.7%; “Native Hawaiian or Pacific Islander,” 0.2%; “Multi-racial,” 4.6%; and “Self-Identify,” 1.7%. The total M group percentage was 30.1%, with W representing 69.9% of the overall sample.

Initial identifier and secondary identifier classification subdivisions placed all respondents within four distinct groups: first-generation minority (FGM), first-generation White (FW), non-first-generation minority (NFGM), and non-first-generation White (NW).

Settings

The data utilized in this study were collected over the 2012–2015 academic years, from an average of 137 university and college counseling centers that take part in Penn State’s Center for Collegiate Mental Health (CCMH, 2016). CCMH is a “multidisciplinary, member-driven, Practice-Research-Network (PRN) focused on providing accurate and up-to-date information on the mental health of today’s college students” (CCMH, n.d.). Both private and public educational settings are represented in this data set. Given that sizes of universities and colleges vary, as do the intake procedures of each counseling center, it is impossible to know what services individual counseling centers provide to their students, or how difficult it is to obtain an appointment with a mental health provider through these counseling centers. It is acknowledged that these factors may impact distress levels at intake.

Instruments

Two instruments were used in this study: The Standardized Data Set (SDS), and The Counseling Center Assessment of Psychological Symptoms 62 (CCAPS-62). Both instruments were created by the Center for Collegiate Mental Health (CCMH) as a way of allowing college and university centers to share and utilize common data (CCMH, n.d.).

The Standardized Data Set (SDS)

The SDS is a set of demographic questions that include both required and optional items (CCMH, n.d.). It has been in use since 2006, with the SDS utilized in this study released on July 1, 2012 (CCMH, n.d.). Information gathered from the SDS for this study include race/ethnic

status, first-generation status, and year in school. International students were not accounted for in this study as it was assumed they would be represented in all four groups. The question regarding gender within the SDS is limited in response to: “Woman,” “Man,” “Transgender” and “Self-identify,” with “Self-identify” allowing for an additional free response. Ethnic status within the SDS is by self-report, with the following options: “White,” “African America/Black,” “American Indian or Alaskan Native,” “Asian American/Asian,” “Hispanic/Latino/a,” “Native Hawaiian or Pacific Islander,” “Multi-racial” or “Self-Identify,” with “Self-Identify” allowing for an additional free response. No demographic groups were excluded from this study. For the question regarding first-generation status, responses are limited to: “Yes” or “No.” The SDS question regarding academic status is limited in response to: “Freshman/First Year,” “Sophomore,” “Junior,” “Senior,” “Graduate/professional degree student,” “Non-student,” “High-school student taking college classes,” “Non-degree student,” “Faculty or staff,” or “other academic status,” with a free response additionally given for individuals who endorse this category. For the purposes of this study, only individuals endorsing undergraduate years of “Freshman/First Year,” “Sophomore,” “Junior” or “Senior” were included, with all other responses excluded from further analysis.

The Counseling Center Assessment of Psychological Symptoms 62 (CCAPS-62)

The CCAPS-62 is a “multi-dimensional assessment/monitoring instrument that [is] used at counseling centers to assess for psychological symptoms of distress within college students” which takes approximately seven to ten minutes to complete (CCMH, n.d.). It is a 62-item measure that contains eight subscales (depression, generalized anxiety, social anxiety, academic distress, eating concerns, family distress, hostility, and substance use). Each item from the instrument is classified under only one subscale, with a low of five items per scale, and a high of

13 items per scale. The mean number of items per scale is eight (CCMH, n.d.). A distress index is also reported, which utilizes specific items from the depression, generalized anxiety, social anxiety, academic distress, and hostility subscales. It does not include any items from the eating concerns, family distress, and substance/alcohol use subscales.

The CCAPS-62 items are measured on a 4-point Likert scale, with 0 being “not at all like me,” and 4 being “extremely like me.” Several items are reverse scored, and items related to safety are included in the depression and hostility subscales. Although the CCAPS-62 can be used to monitor ongoing treatment, it may be most helpful as an initial and post-treatment assessment (Locke et al., 2011).

According to the Center for Collegiate Mental Health CCAPS User Manual published in June 2015, the cutoff points for each subscale: depression (low cut point score of 1.09 or 36th percentile, elevated cut point score of 1.70 or 57th percentile); generalized anxiety (low cut point score of 1.25 or 39th percentile, elevated cut point score of 1.70 or 55th percentile and internal consistency $\alpha = 0.92$); social anxiety (low cut point score of 1.72 or 49th percentile, elevated cut point score of 2.50 or 78th percentile); academic distress (low cut point score of 1.42 or 40th percentile, elevated cut point score of 2.40 or 71st percentile); eating concerns (low cut point score of 1.09 or 67th percentile, elevated cut point score of 1.80 or 83rd percentile); family distress (low cut point score of 0.98 or 48th percentile, elevated cut point score of 1.83 or 73rd percentile*); hostility (low cut point score of 0.82 or 50th percentile, elevated cut point score of 1.43 or 74th percentile*); and substance use (low cut point score of 0.70 or 62nd percentile, elevated cut point score of 1.40 or 80th percentile). The asterisks (*) indicate “elevated cut points that were initially set at the 70th (or next closest possible) percentile for the 2012 CCAPS due to the lack of a related DSM-IV diagnosis. Raw-scores for these cut points were not changed in

2015, but percentiles have shifted slightly as a result of the updated 2015 Normative Sample” (Center for Collegiate Mental Health CCAPS User Manual, 2015, p. 23).

The mean score of the CCMH subscales appear destabilized, with the following means reported in the Center for Collegiate Mental Health CCAPS 2015 Manual: depression ($M = 1.6$, $SD = 0.9$; internal consistency $\alpha = 0.92$); generalized anxiety ($M = 1.6$, $SD = 0.9$; internal consistency $\alpha = 0.85$), social anxiety ($M = 18.4$, $SD = 1.0$; internal consistency $\alpha = 0.84$), academic distress ($M = 1.8$, $SD = 1.0$; internal consistency $\alpha = 0.82$), eating concerns ($M = 1.0$, $SD = 0.9$; internal consistency $\alpha = 0.89$), family distress ($M = 1.3$, $SD = 1.0$; internal consistency $\alpha = 0.83$), hostility ($M = 1.0$, $SD = 0.9$; internal consistency $\alpha = 0.86$), and substance use ($M = 0.7$, $SD = 0.9$; internal consistency $\alpha = 0.85$).

The CCAPS-62 has previously shown adequate reliability, with subscale internal consistency estimates ranging from 0.8 to 0.9 (CCMH Manual, 2015).

Procedure

Clients of university and college counseling centers participating in the CCMH completed intake paperwork prior to/at the time of their first appointment per assumed standard guidelines set by each individual participating institution. Included in this paperwork were the SDS, which provides demographic information, and the CCAPS-62, which provides output of categorized levels of distress to counselors assigned to work with these students. The information obtained for this study was de-identified at an individual as well as an educational institution level. An Institutional Review Board (IRB) review for CCHM data was determined to be unnecessary by Brigham Young University IRB reviewers given the extent of the masking of personal information in gathered data. Data received were divided into groups by first-generation and minority status for a total of four subgroups: FGM, FGW, NFGM and NFGW. Students who

provided information that did not meet inclusion criteria or left key identifying information out of their responses were not included in the study.

Pursuant to the research questions, data gathered was used in a series of statistical analyses. Results of these analyses were interpreted to determine trends within levels of distress at intake between all groups.

Research Design

A quantitative research design was chosen in order to examine similarities and differences among the groups being studied. This is an appropriate method for this study as it allows for a descriptive approach to inter- and intragroup themes. This process helps to provide a knowledge base for identifying areas for future research. Identification of distress level trends between subgroups provides information regarding areas of needed services, or areas in which certain groups may benefit the most from additional, targeted information and/or interventions amongst students presenting for services at university and college counseling centers.

Statistical Analysis

Several different statistical analyses were employed in order to answer the research questions that examine differences in levels of distress at intake amongst FGM, FGW, NFGM, and NFGW students. A non-parametric approach was chosen as the data collected on the CCAPS is collected through a 4-point Likert scale, and reported as ordinal data in the form of percentile ranks.

The mean score of the CCMH subscales appear destabilized. As the median score is not destabilized, the reference point becomes the lowest score in the distribution, which is 0. Given this information, and as the data gathered through the CCAPS-62 is obtained through the use of a

Likert scale, a non-parametric Kruskal-Wallis H was chosen as the primary means of statistical analysis.

Each group (FGM, FGW, NFGM, NFGW) was run against the distress index and all eight subscales. As the high number of tests per group were assumed likely to skew the data, a Bonferroni Adjustment was calculated, and set the alpha for significance. This was done by dividing $.05/9 = .006$, where .05 represents a traditional level of significance, and 9 represents the number of tests being run on the same group. The new alpha, or statistical significance, for all data was established at .006, and reported with the adjusted significance of $p < 0.005$. With a large number of participants for the academic years 2012–2015, it was not anticipated that the alpha would create any difficulties. Additional Kruskal-Wallis H post hoc analyses were run as determined by the presence of statistically significant results to further clarify areas of significance.

To provide additional descriptive information, an ANOVA was run on each group (FGM, FGW, NFGM, NFGW) against the distress index and all eight subscales. This identified between subject effects including whether the interaction terms (FG and M status) and main effects were significant. The estimated marginal means were reported for the main effects of first-generation status and minority status. The interaction term of first-generation status and minority status was also reported.

Results

A Kruskal-Wallis H was conducted across the distress index and eight subscales of the CCAPS-62 to assess for any significant differences between FGM, FGW, NFGM, and NFGW. Significant differences were found for each Kruskal-Wallis H test across the nine outcome variables (distress index, depression, generalized anxiety, social anxiety, academic distress,

eating concerns, family distress, hostility, and substance/alcohol use). Post-hoc pairwise comparisons were subsequently run to identify specific significant differences between groups. Post-hoc analyses revealed significant differences between groups across all outcome variables. The Kruskal Wallis H and post-hoc analyses were conducted with a Bonferroni adjustment due to multiple comparisons. ANOVA tests were also run for each group on all nine outcome variables. Main effects and interaction terms which were statistically significant at the 0.05 level are reported below. All mean scores are reported as informed by the Publication Manual of the American Psychological Association 7th Edition unless doing so would create unclear results. The lowest mean number of decimal places were reported when was determined to be the case.

Distress Index

The results of the Kruskal Wallis H test for the distress index were significant, $H(3) = 494.683, p < 0.001$. Post-hoc analyses revealed statistically significant differences for all groups (Table 1).

The results of the ANOVA showed statistically significant main effects for both FG status ($F(1) = 283.769, p < 0.001$) and M status ($F(1) = 8.293, p = 0.004$). The interaction effect was also statistically significant ($F(1) = 38.714, p < 0.001$; See Table 2). We found that higher distress index percentile scores at intake were reported by FG (Table 3), and W students (Table 4). The highest distress index percentile scores were reported by FGW ($M = 1.820$), with FGM ($M = 1.797$) reporting the second highest, NFGM ($M = 1.749$) reporting the third highest, and NFGW ($M = 1.696$) reporting the lowest (Table 5).

Depression Subscale

The results of the Kruskal Wallis H test for depression were significant; $H(3) = 597.039$, $p < 0.001$. Post-hoc analyses revealed statistically significant differences for all groups except FGW–NFGM ($p = 0.139$; See Table 6).

The results of the ANOVA showed statistically significant main effects for both FG status ($F(1) = 126.063$, $p < 0.001$) and M status ($F(1) = 225.262$, $p < 0.001$). The interaction effect was also statistically significant ($F(1) = 18.192$, $p < 0.001$; See Table 7). Higher depression percentile scores were reported by FG (Table 8), and M students (Table 9). The highest percentile scores were reported by FGM ($M = 1.785$), with NFGM ($M = 1.742$) and FGW ($M = 1.719$) reporting statistically similar percentile scores ($p = 0.791$), and NFGW ($M = 1.623$) reporting the lowest (Table 10).

Generalized Anxiety Subscale

The results of the Kruskal Wallis H test for generalized anxiety were significant, $H(3) = 355.776$, $p < 0.001$. Post-hoc analyses revealed statistically significant differences for all groups (Table 11).

The results of the ANOVA showed statistically significant main effects for both FG ($F(1) = 253.295$, $p < 0.001$) and M status ($F(1) = 99.697$, $p < 0.001$). The interaction effect was also statistically significant ($F(1) = 45.515$, $p < 0.001$). See Table 12. We discovered higher generalized anxiety percentile scores were reported by FG (Table 13), and W students (Table 14). The highest percentile scores were reported by FGW ($M = 1.836$), with FGM ($M = 1.732$) reporting the second highest, NFGW ($M = 1.696$) reporting the third highest, and NFGM ($M = 1.676$) reporting the lowest (Table 15).

Social Anxiety Subscale

The results of the Kruskal Wallis H test for social anxiety were significant, $H(3) = 48.401, p < 0.001$. Post-hoc analyses revealed statistically significant differences for all groups except FGM–NFGM ($p = 0.720$) and NFGM–NFGW ($p = 0.791$) (Table 16).

The results of the ANOVA showed statistically significant main effect for FG status ($F(1) = 32.461, p < 0.001$), and not for M status ($F(1) = 3.134, p = 0.077$). The interaction effect was statistically significant ($F(1) = 9.36, p = < 0.002$). See Table 17. Higher social anxiety percentile scores were reported by FG (Table 18), and M students (Table 19). The highest percentile scores were reported by FGW ($M = 1.995$), with FGM ($M = 1.924$) and NFGM ($M = 1.907$) reporting statistically similar percentile scores ($p = 0.720$), and NFGM ($M = 1.907$) and NFGW ($M = 1.899$) reporting statistically similar percentile scores ($p = 0.791$). FGM and NFGW remained statistically significant ($p < 0.019$), indicating higher social anxiety percentile scores in FGM over NFGW (Table 20).

Academic Distress Subscale

The results of the Kruskal Wallis H test for academic distress were significant, $H(3) = 634.740, p < 0.001$. Post-hoc analyses revealed statistically significant differences for all groups (Table 21).

The results of the ANOVA showed statistically significant main effects for both FG status ($F(1) = 112.769, p < 0.001$) and M status ($F(1) = 255.182, p < 0.001$). The interaction effect was also statistically significant ($F(1) = 11.631, p = 0.001$). See Table 22. Higher academic distress percentile scores were reported by FG (Table 23), and M students (Table 24). The highest percentile scores were reported by FGM ($M = 1.998$), with NFGM ($M = 1.950$)

reporting the second highest, FGW ($M = 1.914$) reporting the third highest, and NFGW ($M = 1.821$) reporting the lowest (Table 25).

Eating Concerns Subscale

The results of the Kruskal Wallis H test for eating concerns were significant, $H(3) = 266.004$, $p < 0.001$. Post-hoc analyses revealed statistically significant differences for all groups except FGM–NFGW ($p = 0.181$) and FGW–NFGM ($p = 0.051$) (Table 26).

The results of the ANOVA showed statistically significant main effect for both FG ($F(1) = 78.851$, $p < 0.001$), and M status ($F(1) = 15.067$, $p < 0.001$). The interaction effect was statistically significant ($F(1) = 9.37$, $p = 0.003$). See Table 27. Higher eating concerns percentile scores were reported by FG (Table 28), and M students (Table 29). The highest percentile scores were statistically similar as reported by FGM ($M = 1.061$) and FGW ($M = 1.056$), where ($p = 0.181$). FGW ($M = 1.056$) and NFGM ($M = 1.027$) also reported statistically similar percentile scores ($p = 0.051$). FGM ($M = 1.056$) and NFGM ($M = 1.027$) remained statistically significant ($p < 0.00$), indicating higher eating concerns percentile scores in FGM over NFGM. The lowest percentile scores were reported by NFGW ($M = 0.987$) (Table 30).

Hostility Subscale

The results of the Kruskal Wallis H test for hostility were significant, $H(3) = 1330.365$, $p < 0.001$. Post-hoc analyses revealed statistically significant differences for all groups (Table 31).

The results of the ANOVA showed statistically significant main effect for both FG ($F(1) = 327.274$, $p < 0.001$), and M status ($F(1) = 600.242$, $p < 0.001$). The interaction effect was statistically significant ($F(1) = 32.745$, $p < 0.001$). See Table 32. Higher hostility percentile scores were reported by FG (Table 33), and M students (Table 34). The highest percentile scores were reported by NFGM ($M = 1.749$), with FGM ($M = 1.202$) reporting the second highest,

FGW ($M = 1.095$) reporting the third highest, and NFGW ($M = 0.960$) reporting the lowest (Table 35).

Family Distress Subscale

The results of the Kruskal Wallis H test for family distress were significant, $H(3) = 4256.00$, $p < 0.001$. Post-hoc analyses revealed statistically significant differences for all groups (Table 36).

The results of the ANOVA showed statistically significant main effect for both FG ($F(1) = 2407.049$, $p < 0.001$), and M status ($F(1) = 533.206$, $p < 0.001$). The interaction effect was statistically significant ($F(1) = 119.709$, $p < 0.001$). See Table 37. Higher family distress percentile scores were reported by FG (Table 38), and M students (Table 39). The highest family distress percentile scores were reported by FGM ($M = 1.623$), with FGW ($M = 1.547$) reporting the second highest, NFGM ($M = 1.384$) reporting the third highest, and NFGW ($M = 1.172$) reporting the lowest (Table 40).

Substance/Alcohol Use Subscale

The results of the Kruskal Wallis H test for substance/alcohol use were significant, $H(3) = 1793.068$, $p < 0.001$. Post-hoc analyses revealed statistically significant differences for all groups (Table 41).

The results of the ANOVA showed statistically significant main effect for both FG ($F(1) = 63.974$, $p < 0.001$), and M status ($F(1) = 716.56$, $p < 0.001$). The interaction effect was statistically significant ($F(1) = 16.294$, $p < 0.001$). See Table 42. Higher substance/alcohol use percentile scores were reported by NFG (Table 43), W students (Table 44). The highest percentile scores were reported by NFGW ($M = 0.809$), with FGW ($M = 0.741$) reporting the

second highest, NFGM ($M = 0.635$) reporting the third highest, and FGM ($M = 0.809$) reporting the lowest (Table 45).

Discussion

Robust literature exists which explores the unique experiences of FG vs NFG students in regard to advanced educational opportunities and academic success (Engle, 2007), social support and life satisfaction (Jenkins et al., 2013), challenges and persistence (Lightweis, 2014), preparation and aspirations (Balemian & Feng, 2013; Riehl, 1994), self-esteem and self-efficacy (Wang & Castañeda-Sound, 2008), unique characteristics (Inman & Mayes, 1999), and mental health needs (House et al., 2020). There is also a vast body of research in regard to students from racial/ethnic backgrounds including studies addressing academic attainment (Richardson, 2008), social capital (Birani & Lehmann, 2013), intention to remain in school (Zea et al., 1997), racism and sexism (Szymanski & Stewart, 2010), social and academic integration (Severiens & Wolff, 2008), learning environment and sense of belonging (Meeuwisse et al., 2010), minority student stresses (Smedley et al., 1993), and minority stress and college persistence attitudes (Wei et al., 2011). To our knowledge this study represents the first-time data from first-generation students has been separated by race/ethnicity and minority status exploring similarities and differences related to levels of distress when presenting at collegiate centers of mental health.

Participants (FGM, FGW, NFGM, and NFGW)

Participants for this study were broken into previously identified subcategories (FGM, FGW, NFGM, and NFGW). The highest subscales per group are discussed below, with some consideration given to other significant subscale scores.

First-Generation Minority (FGM)

Students who self-identified as FGM reported the highest percentile rankings of academic distress, family distress, depression, and shared statistical significance with FGW in regard to eating concerns. They also had elevated percentile rankings on the distress index (but below that of FGW), generalized anxiety, social anxiety, hostility subscales. The only subscale they did not report high percentile rankings of distress on was substance/alcohol use, with FGM endorsing the least distress of all groups. It is unsurprising that students who identified as FGM experienced significant levels of distress on nearly every subscale given their double-minority status. We wonder if their low endorsement of substance/alcohol abuse is because they find different ways to cope with their stress as compared to NFGW who scored highest on this subscale. Could it be that they don't have the resources (money to spend on these items) or something in their cultural background leads them to rely on other coping strategies?

The combination of high academic and family distress suggests FGM students may not feel comfortable in either setting, experience tensions between family and academic pursuits, and struggle to balance their identities. Research on FG and M students demonstrates some of the unique challenges and stressors placed on each group (Balemian & Feng, 2013; Birani & Lehmann, 2013; Engle, 2007; Jenkins et al., 2013; Lightweis, 2014; Riehl, 1994; Richardson, 2008; Riehl, 1994; Severiens & Wolff, 2008; Zea et al., 1997). Difficulty adjusting to an institution of higher learning, particularly for this group who are representative of an array of racial and ethnic identities may be especially challenging. Individuals from various ethnic/racial minority backgrounds attend college at different rates (Snyder et al., 2019). While M status may be unifying in research conducted, it may be less representative of a cohesive, supportive group to which a FGM student can find similarities, strength, or a sense of community.

Disconnection, difficulty concentrating and discouragement may be particularly relevant descriptors for students of FGM status who are often underrepresented on campuses of higher education. It is likely these and similar symptoms may be reflected in high percentile scores on the depression subscale. Research on depressive symptoms in ethnic minority students, including first-generation ethnic minority students has shown the presence of depression among these groups (e.g., Nguyen & Peterson, 1993; Potochnick & Perreira, 2010; Reed et al., 1996).

The literature on students of FGM status has sparse research. To our knowledge hostility and eating concerns have not been studied in a FGM population. We speculate that with heightened distress across every distress scale measured, those of FGM status may become upset with difficulties in navigating the academic system and endorse higher levels of hostility. They may also find it difficult to find support and resources. Similarly, feelings of lack of control in their environment and lives may lead to higher endorsement of disordered eating. It is possible this may be due at least in part to financial difficulties or lack of time given many students of FG status work more hours than their peers.

First-Generation White (FGW)

We found the FGW group to have the highest percentile rankings on the distress index, general anxiety and social anxiety subscales. The family distress, substance/alcohol use, depression, and eating concerns subscale percentile rankings were also elevated for FGW.

The FGW group provided some of the most interesting findings within this study. We speculate FGW students may struggle the most with adjusting to and fitting in with their peers in institutions of higher education given their scores on the distress index and in regard to both generalized and social anxiety. It is possible FGW feel the most uncomfortable and disconnected within intuitions of higher education. Perhaps there is more focus on social comparison that can

elevate general and social anxiety. This may be due in part to FGW students not having built up as strong of a sense of self as their M peers when they begin higher education, instead finding themselves in an environment in which they do not feel readily welcomed or included for the first time. As opposed to those who identify as students of M status who may be easily identified by racial or cultural identifiers, FGW students may not find the support or community from which other students from M status benefit. They may also experience a lack of efficacy when it comes to educational pursuits. Many American institutions of higher education support cultural outreach programs including ethnic clubs and celebrations, multicultural student centers, and other institutional-level programs which target students who identify as M. We suggest these resources may moderate some of this lack of connection for FGM students and leave FGW students without such support. In their 2020 study, Phillips et al. found that first-generation students endorsed more interdependent cultural norms than their continuing-generation peers who endorsed more independence, which predicts a reduced subjective sense of fit in college which lasts several years. Stephens et al. (2012) found that the focus on independence within many American universities negatively impacts FGW performance.

We found FGW and FGM students report similar high percentile rankings on family distress, depression and eating concerns. However, FGW students endorse high percentile rankings of substance/alcohol use whereas their FGM peers do not. Substance/alcohol use was the only subscale in which NFGW students rated the highest levels of percentile rankings. It is possible that in an effort to fit in with their peers who also self-identify as W, students of FGW status mirror the behaviors of NFGW students. Substance/alcohol use may also be a cultural form of coping for individuals who identify as W, or it may be a cultural expectation that college is meant to be a time for experimentation, and “partying.”

Non-First-Generation Minority (NFGM)

The NFGM students had the highest percentile scores on the hostility subscale. Their percentile scores on the remaining eight subscales appear to be the most moderate results of all of the four groups, with percentile scores almost evenly split between second and third out of the four identified groups across subscales.

To our knowledge, only one study has examined hostility in those of M status (Hayes et al., 2011). This study was also conducted using the CCAPS-62 and found elevated levels of hostility in this group. This elevated hostility score may be demonstrative of acculturation issues. It may also be due in part to feeling misunderstood or misrepresented on both personal and institutional levels. Students who identify as NFGM may not be focused as much on surviving academically as they are on how they are on the way they experience acceptance on campus.

The benefits NFGM students receive from having parents who completed a college-level education may mitigate some of the stress their FGM peers face, for example, they may be in higher SES group. Significant research has examined students of low socioeconomic status (SES), however it is possible NFGM students are not fully captured in these studies. A college degree is associated with increased income (Abel & Deitz, 2014; Carnevale et al., 2011), with one study finding over a lifetime a bachelor's degree was worth an average of \$2.8 million (Carnevale et al., 2011). It is also generally accepted higher SES is associated with greater measurable and unmeasurable opportunities and benefits from which NFGM students are likely to benefit.

We chose to examine M status as an aggregate variable for descriptive and comparative purposes. In doing so, we acknowledge we may not have accounted for the complexities and

multiple identities represented by this subgroup. It is likely that subdividing the various minority groups we would have found more nuanced results.

Non-First-Generation White (NFGW)

The NFGW students reported the highest percentile scores on the substance/alcohol use subscale, meaning they reported the most substance/alcohol related concerns of the four groups. They reported the lowest percentile scores across seven of the other nine variables (distress index, depression, social anxiety, academic distress, eating concerns, hostility, and family distress), and second lowest on one variable (generalized anxiety).

It was not surprising to see that NFGW students experience the lowest percentile rankings of distress on nearly every variable. These students likely have the most support from families, may experience the highest SES, and do not experience discrimination at the same levels as minority students. Research presented in this study identified the increased stressors and concerns for both students of FG and M status independently as well for FGM when possible. It was similarly unsurprising to note that NFGW students rank the highest on substance/alcohol use, indicating when they seek counseling services they also report higher percentile scores related to substance/alcohol concerns than their peers. Siebert et al. (2003) found that in comparison to African American students, students who identified as White scored higher on drinking measures, and reported greater consequences related to their drinking behavior. Another study found white male college aged students were more likely to have Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) diagnosed alcohol-use disorders, and nonmedical use of prescription drugs (McCabe et al., 2007). Other studies have also found students who identified as White (often male) were more likely to engage in problematic substance use (Arria et al., 2008) and intended to drink more in college than their minority peers

(English et al., 2009). These difference in substance use consumption were true even when the use of alcohol and other drugs was specifically studied amongst students at historically black colleges and universities (Wagner et al., 2006).

We speculate there may be several factors which could explain the higher rates of substance/alcohol use in students who identify as NFGW. First, NFGW may have grown up with the media glamorizing college as a time to drink, use illicit substances, and saw themselves in the students portrayed in these manners. They may have even heard stories from their parents or other relatives of when they engaged in similar behaviors while in college and feel it is a rite of passage or what is expected of them as college students. There may also be a financial reason why more NFGW students are able to afford engaging in these behaviors than their peers. Alternatively, NFGW students may resort to drug and alcohol use as a more sanctioned way of coping with the stresses they feel.

Limitations

This study did not differentiate between ethnic minority identities, instead choosing to group all ethnic minority students into one variable (M). Of the seven minority groups, the group with highest representation was “African American/Black” (8.8%), while the group with lowest representation was “Native Hawaiian or Pacific Islander” (0.2%). Although the intent of this study was to differentiate between ethnic majority and minority students, it is likely that not all minority populations are similar and that by separating them into self-reported M groups, we may have found differences even between minority groups.

Similarly, this study did not assess or control for gender. It is possible that students of FG and M status may experience and report different levels of distress based on their identified gender. This may be particularly relevant in some subscales more than others. As this was a first

examination of differences in distress between FGW and FGM students and NFGW and NFGM students we did not focus on the gender question.

Finally, participants in this study were all seeking mental health services as a prerequisite for inclusion and provided self-report data. It is possible that this sample includes students who are more mental health savvy than their peers who were unaware of counseling services, or less inclined to seek services. Thus, it is possible that the M sample who present at collegiate centers of mental health are less representative of this group as a whole. Future research could focus on obtaining a convenience sample of students seeking services and a comparison group of peers who are not. Richer data may also be gathered through the inclusion of additional points of reference rather than relying on student report.

Implications for Future Research

This study has demonstrated differences in levels of distress at intake for FGM, FGW, NFGM, and NFGW students across the distress index and eight subscales on the CCAPS-62. Since this is the first study to examine distress levels for students of FGM, FGW, NFGM and NFGW students presenting for counseling that we are aware of, it shows there are different levels and patterns of distress in these populations and is an area which would benefit from further exploration. Every variable demonstrated differences by FG and M status from NFGW and NFGM. Additional research is needed to examine how the interaction between first-generation and minority status impacts distress levels, and how collegiate centers for mental health can understand how to better work with these populations. This may include separating minority groups and examining them independently, since we assume that there are likely some differences between minority groups.

This research is exploratory in nature and given the variety of high statistical significance found, it highlights the need for additional research. We have confidence in our findings given the large N for this study (N = 184,334). Yet, further parsing out of M status seems important, as almost all of the variables were moderately significant for NFGM students, with hostility significantly higher than their peers. Without further research, it is impossible to determine whether one or several ethnic groups may be moderating and/or skewing the results of this heterogeneously diverse lumped group. This could occur based on representation among the highest or lowest of M groups, or due to specific M groups presenting with very unique concerns in comparison to their peers. Identifying other variables which may impact distress including gender, year in school, financial stressors, acculturation (particularly for FGM and FGW students), and identifying variables impacting treatment utilization including subgroups' perceptions of therapy, the barriers they face to receiving treatment, and the potentially mitigating role of continued therapy are a few areas where more information is needed. Understanding the unique distresses of first-generation students will help institutions of higher education gain greater insight into the needs of first-generation student populations and help to effectively serve these students on an institutional level. Additionally, counseling center clinicians will have greater insight into working with the needs of first-generation majority and minority students.

Implications for Practice

First, this research has shown that not only are the main effects of first-generation status and minority status significant in regard to the CCAPS-62 variables, but the interaction of first-generation and minority status are significant across nearly every variable as well. Several findings were unexpected, including the high percentile scores of distress among the FGW

cohort. This group may be overlooked in regard to relevant services once they matriculate onto campus. Our findings suggest that counseling centers should seek and attend to FG status. FGM students also reported high percentile scores of distress, with first-generation status being a statistically significant interaction term for all nine variables studied.

This study reinforces the importance of adopting a multicultural perspective when counseling FG students. This is particularly relevant not just in regard to ethnic minority status, as often rightly highlighted in M discussions, but in regard to FG status as significant main and moderating effects on distress levels have been found. This study highlights the unique patterns of distress identified among FGW and FGM students. It suggests that attention needs to be given to identifying FG students when they present for therapy and be sensitive to the various patterns of distress that may be common in FGW and FGM students.

A multicultural approach to treating first-generation students is advocated based on the patterns of distress we discovered. In this regard, clinicians seeking to improve their multicultural competence are encouraged to work to understand and support the complex multicultural identities of the students with whom they work and how that is influenced if they are first-generation students. We also advocate for clinicians becoming familiar with and being able to provide additional resources on an institutional or community level when meeting with FGM and FGW students as appropriate.

This study found that FGM and FGW students had the highest overall levels of distress when compared to their NFG peers. FGM students experienced the most diverse levels of heightened distress, with all of their responses yielding high percentile rankings on eight of the nine subscales. They appeared to be particularly prone to struggle with the balance between academic distress and family distress. Clinicians may want to focus on self-identity and the ways

in which these students are managing their roles. As a part of counseling, clinicians might be ready to provide referrals to resources from which FG students may benefit. On an institutional level, schools may consider establishing mentorship programs for FG students.

We found students who self-identify as FGW also experience significantly high percentile scores on several subscales, including the distress index, generalized anxiety and social anxiety. Those within this cohort may benefit from focusing on self-identity, self-efficacy issues, and developing a supportive community while in school. Potentially FGW students may be less likely to be identified and provided relevant services given their ethnic majority status, but they would also likely benefit from access to resources and mentorship to build confidence.

It appears that NFGM students experience hostility to a greater degree than any of the other groups studied. This may be demonstrative of a frustration of not feeling understood or represented on campuses. It may be especially important for clinicians working with these students to look for potential issues that may trigger that hostility. Although our study aggregated all M students into one group, we recommend that future research examine whether there are differences in M subgroups. Institutions are reminded that M students who seek services from minority student centers have diverse backgrounds and could experience “otherness” even within this setting if assumed to be similar to other M students. It is important that underrepresented M subgroups (such as American Indian or Alaska Natives, or Native Hawaiian or Pacific Islander), immigrants and/or international students not be assumed experience similar concerns as differences have been noted in these populations (Kirchhoefer, 2019; Tseng, 2004). Institutions are encouraged to learn more about their unique student bodies when providing services.

We found NFGW students endorsed higher percentile scores of substance/alcohol use, indicating they engage in potentially problematic substance use at greater rates than their peers.

This is important for providers to be aware of when meeting with this group as it may be a subject area in which clinicians may want to spend more time assessing. We speculate there may be multiple reasons this group is highest in this area, as provided above. We encourage clinicians to explore reasons for use in order to provide clients with helpful psychoeducation, interventions and resources.

Conclusion

Students of FG status at institutions of higher education have been studied in regard to a host of variables, and programs and policies have been established to better serve this population. Similarly, there is a great deal of research examining minority students at intuitions of higher education, with many programs and policies established to better serve these populations as well. Better understanding why FG students pursue higher education (Cabrera, 2014) and whether However, to the best of our knowledge there has been no research which has explored the interaction of first-generation and ethnic minority status in regard to distress in students as they present for services at collegiate centers of mental health.

Results from this study demonstrate that FG and M status are associated with unique patterns of distress. Those patterns of distress are somewhat different for FGM and FGW students. FGM and FGW students experienced the highest percentile scores on all nine variables (distress index, depression, generalized anxiety, social anxiety, academic distress, eating concerns, hostility, family distress, and substance/alcohol use), with FGW students reporting the highest percentile scores on the distress index. Unsurprisingly, NFGW students reported the lowest percentile scores in regard to eight variables, and the highest percentile score on substance/alcohol use. NFGM students were typically in the middle of the percentile scores except for hostility, where they reported the highest percentile scores.

This study has identified patterns of distress for FG students who present for counseling services by examining them by majority and minority student status. Although we have examined M status in FG students, it is possible NFGM and FGM students have not been accurately represented since we grouped them together rather than examining separate minority groups individually.

This study also highlights significant levels of distress as reported by FGW students. It demonstrates that FG status is an important factor in regard to reported distress levels for M students seeking therapy. This information should encourage clinicians to inquire about FG status, and recognize this as an important multicultural factor when working with these students. These findings demonstrate significant patterns of distress for both FG whether W or M. Additional research is needed to better understand the experiences of each of these student groups (FGM, FGW, NFGM, NFGW), and in order to inform future best practice guidelines for clinicians in centers of collegiate mental health.

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Tables

Table 1

Pairwise Comparisons of Groups on Distress Index Subscale Scores

Sample 1–Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
FGM–FGW	1,442.579	491.950	2.932*	0.003	0.020
FGM–NFGM	2,701.988	446.213	6.055*	$p < 0.001$	$p < 0.001$
FGM–NFGW	5,534.471	391.212	14.147*	$p < 0.001$	$p < 0.001$
FGW–NFGM	4,144.567	427.242	9.701*	$p < 0.001$	$p < 0.001$
FGW–NFGW	6,977.050	369.428	18.886*	$p < 0.001$	$p < 0.001$
NFGM - NFGW	2,832.483	305.889	9.260*	$p < 0.001$	$p < 0.001$

Note. FGM = first-generation minority; FGW = first-generation White; NFGM = non-first-generation minority; NFGW = non-first-generation White.

* $p < .05$. Significance values were adjusted by the Bonferroni correction for multiple tests.

Table 2

Test Between-Subjects Effects: Distress Index at Intake

	Type III Sum of Squares	df	M Square	F	Sig.
First-Generation	200.444	1	200.4	283.77*	$p < 0.001$
Minority	5.858	1	5.9	8.29*	0.004
First Gen * Minority	38.648	1	38.7	54.71*	$p < 0.001$
Error	116276.833	164613	0.7		
Total	116638.55	164617			

Note. * $p < .05$.

Table 3*Estimated Marginal Means of Distress Index at Intake (First-Generation)*

First-Generation Status	M	Std. Error
Non-First-Generation	1.7	0.003
First-Generation	1.8	0.004

Note. First-Generation status as a main effect was significant at the $*p < 0.05$ level.

Table 4*Estimated Marginal Means of Distress Index at Intake (Minority)*

Minority Status	M	Std. Error
White	1.8	0.003
Minority	1.7	0.004

Note. Minority status as a main effect was significant at the $*p < 0.05$ level.

Table 5*First-Generation * Minority: Distress Index at Intake*

First-Generation Status	Minority Status	M	Std. Error
Non-First-Generation	White	1.70	0.003
	Minority	1.75	0.005
First-Generation	White	1.82	0.006
	Minority	1.80	0.006

Note. First-generation status and minority status as an interaction term was significant at the

$*p < 0.05$ level.

Table 6*Pairwise Comparisons of Groups on Depression Subscale Scores*

Sample 1–Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
FGM–FGW	2,641.447	452.205	5.841*	$p < 0.001$	$p < 0.001$
FGM–NFGM	1,745.955	407.395	4.286*	$p < 0.001$	$p < 0.001$
FGM–NFGW	6,722.685	357.481	18.806*	$p < 0.001$	$p < 0.001$
FGW–NFGM	895.492	394.304	2.271	0.023	0.139
FGW–NFGW	4,081.238	342.487	11.916*	$p < 0.001$	$p < 0.001$
NFGM–NFGW	4,976.730	280.676	17.731*	$p < 0.001$	$p < 0.001$

Note. FGM = first-generation minority; FGW = first-generation White; NFGM = non-first-generation minority; NFGW = non-first-generation White.

* $p < .05$. Significance values were adjusted by the Bonferroni correction for multiple tests.

Table 7*Test Between-Subjects Effects: Depression at Intake*

	Type III Sum of Squares	df	M Square	F	Sig.
First-Generation	110.926	1	110.926	126.06*	$p < 0.001$
Minority	198.213	1	198.213	225.26*	$p < 0.001$
First Gen * Minority	16.008	1	16.008	18.19*	$p < 0.001$
Error	123696.926	140574	0.880		
Total	519131.52	140578			

Note. First-generation status and minority status as an interaction term was significant at the * $p < 0.05$ level.

Table 8*Estimated Marginal Means of Depression at Intake (First Generation)*

First-Generation Status	M	Std. Error
Non-First-Generation	1.7	0.003
First-Generation	1.8	0.005

Note. First-generation status as a main effect was significant at the $*p < 0.05$ level.

Table 9*Estimated Marginal Means of Depression at Intake (Minority)*

Minority Status	M	Std. Error
White	1.7	0.004
Minority	1.8	0.005

Note. Minority status as a main effect was significant at the $*p < 0.05$ level.

Table 10*First-Generation * Minority: Depression at Intake*

First-Generation Status	Minority Status	M	Std. Error
Non-First-Generation	White	1.62	0.003
	Minority	1.74	0.006
First-Generation	White	1.72	0.007
	Minority	1.79	0.008

Note. First-generation status and minority status as an interaction term was significant at the $*p < 0.05$ level.

Table 11*Pairwise Comparisons of Groups on Generalized Anxiety Subscale Scores*

Sample 1–Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
FGM–FGW	4,403.076	452.075	9.740*	$p < 0.001$	$p < 0.001$
FGM–NFGM	2,366.464	407.279	5.810*	$p < 0.001$	$p < 0.001$
FGM–NFGW	1,563.055	357.378	4.374*	$p < 0.001$	$p < 0.001$
FGW–NFGM	6,769.541	394.192	17.173*	$p < 0.001$	$p < 0.001$
FGW–NFGW	5,966.131	342.389	17.425*	$p < 0.001$	$p < 0.001$
NFGM–NFGW	803.409	280.596	2.863*	0.004	0.025

Note. FGM = first-generation minority; FGW = first-generation White; NFGM = non-first-generation minority; NFGW = non-first-generation White.

* $p < .05$. Significance values were adjusted by the Bonferroni correction for multiple tests.

Table 12*Test Between-Subjects Effects: Generalized Anxiety at Intake*

	Type III Sum of Squares	df	M Square	F	Sig.
First-Generation	222.96	1	223.0	253.295*	$p < 0.001$
Minority	87.757	1	87.8	99.697*	$p < 0.001$
First Gen * Minority	40.064	1	40.1	45.515*	$p < 0.001$
Error	13738.267	140574	0.9		
Total	124061.434	140577			

Note. * $p < .05$.

Table 13*Estimated Marginal Means of Generalized Anxiety at Intake (First-Generation)*

First-Generation Status	M	Std. Error
Non-First-Generation	1.7	0.003
First-Generation	1.8	0.005

Note. First-generation status as a main effect was significant at the $*p < 0.05$ level.

Table 14*Estimated Marginal Means of Generalized Anxiety at Intake (Minority)*

Minority Status	M	Std. Error
White	1.8	0.004
Minority	1.7	0.005

Note. Minority status as a main effect was significant at the $*p < 0.05$ level.

Table 15*First-Generation * Minority: Generalized Anxiety at Intake*

First-Generation Status	Minority Status	M	Std. Error
Non-First-Generation	White	1.696	0.003
	Minority	1.676	0.006
First-Generation	White	1.836	0.007
	Minority	1.732	0.008

Note. First-generation status and minority status as an interaction term was significant at the $*p < 0.05$ level.

Table 16*Pairwise Comparisons of Groups on Social Anxiety Subscale Scores*

Sample 1–Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
FGM–FGW	1,236.281	451.938	2.736*	0.006	0.037
FGM–NFGM	633.146	407.155	1.555	0.120	0.720
FGM–NFGW	1,055.897	357.270	2.955*	0.003	0.019
FGW–NFGM	1,869.427	394.072	4.744*	$p < 0.001$	$p < 0.001$
FGW–NFGW	2,292.179	342.285	6.697*	$p < 0.001$	$p < 0.001$
NFGM–NFGW	422.751	280.511	1.507	0.132	0.791

Note. FGM = first-generation minority; FGW = first-generation White; NFGM = non-first-generation minority; NFGW = non-first-generation White.

* $p < .05$. Significance values were adjusted by the Bonferroni correction for multiple tests.

Table 17*Test Between-Subjects Effects: Social Anxiety at Intake*

	Type III Sum of Squares	df	M Square	F	Sig.
First-Generation	30.245	1	30.2	32.461*	$p < 0.001$
Minority	2.92	1	2.9	3.134	0.077
First Gen * Minority	8.721	1	8.7	9.36*	0.002
Error	130978.637	140574	0.9		
Total	644031.709	140578			

Note. * $p < .05$.

Table 18*Estimated Marginal Means of Social Anxiety at Intake (First-Generation)*

First-Generation Status	M	Std. Error
Non-First-Generation	1.90	0.003
First-Generation	1.94	0.004

Note. First-generation status as a main effect was significant at the $*p < 0.05$ level.

Table 19*Estimated Marginal Means of Social Anxiety at Intake (Minority)*

Minority Status	M	Std. Error
White	1.92	0.003
Minority	1.94	0.005

Note. Minority status as a main effect was not significant at the $*p < 0.05$ level.

Table 20*First-Generation * Minority: Social Anxiety at Intake*

First-Generation Status	Minority Status	M	Std. Error
Non-First-Generation	White	1.90	0.003
	Minority	1.91	0.006
First-Generation	White	2.00	0.007
	Minority	1.92	0.008

Note. First-generation status and minority status as an interaction term was significant at the $*p < 0.05$ level.

Table 21*Pairwise Comparisons of Groups on Academic Distress Subscale Scores*

Sample 1–Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
FGM–FGW	3,341.314	451.654	7.398*	$p < 0.001$	$p < 0.001$
FGM–NFGM	1,915.137	406.899	4.707*	$p < 0.001$	$p < 0.001$
FGM–NFGW	7,073.899	357.045	19.812*	$p < 0.001$	$p < 0.001$
FGW–NFGM	1,426.177	393.824	3.621*	$p < 0.001$	0.002
FGW–NFGW	3,732.585	342.070	10.912*	$p < 0.001$	$p < 0.001$
NFGM–NFGW	5,185.762	280.335	18.402*	$p < 0.001$	$p < 0.001$

Note. FGM = first-generation minority; FGW = first-generation White; NFGM = non-first-generation minority; NFGW = non-first-generation White.

* $p < .05$. Significance values were adjusted by the Bonferroni correction for multiple tests.

Table 22*Test Between-Subjects Effects: Academic Distress at Intake*

	Type III Sum of Squares	df	M Square	F	Sig.
First-Generation	115.974	1	115.974	112.80*	$p < 0.001$
Minority	262.436	1	262.436	255.18*	$p < 0.001$
First Gen * Minority	11.961	1	11.961	11.63*	0.001
Error	144570.142	140574	1.028		
Total	640347.07	140577			

Note. * $p < .05$.

Table 23*Estimated Marginal Means of Academic Distress at Intake (First-Generation)*

First-Generation Status	M	Std. Error
Non-First-Generation	1.9	0.004
First-Generation	2.0	0.006

Note. First-generation status as a main effect was significant at the $*p < 0.05$ level.

Table 24*Estimated Marginal Means of Academic Distress at Intake (Minority)*

Minority Status	M	Std. Error
White	1.9	0.004
Minority	2.0	0.005

Note. Minority status as a main effect was significant at the $*p < 0.05$ level.

Table 25*First-Generation * Minority: Academic Distress at Intake*

First-Generation Status	Minority Status	M	Std. Error
Non-First-Generation	White	1.82	0.004
	Minority	1.95	0.006
First-Generation	White	1.91	0.008
	Minority	1.99	0.008

Note. First-generation status and minority status as an interaction term was significant at the $*p < 0.05$ level.

Table 26*Pairwise Comparisons of Groups on Eating Concerns Subscale Scores*

Sample 1–Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
FGM–FGW	979.588	451.675	2.169	0.030	0.181
FGM–NFGM	2,016.487	406.919	4.956*	$p < 0.001$	$p < 0.001$
FGM–NFGW	4,592.747	357.062	12.863*	$p < 0.001$	$p < 0.001$
FGW–NFGM	1,036.900	393.843	2.633	0.008	0.051
FGW–NFGW	3,613.159	342.086	10.562*	$p < 0.001$	$p < 0.001$
NFGM–NFGW	2,576.260	280.348	9.190*	$p < 0.001$	$p < 0.001$

Note. FGM = first-generation minority; FGW = first-generation White; NFGM = non-first-generation minority; NFGW = non-first-generation White.

* $p < .05$. Significance values were adjusted by the Bonferroni correction for multiple tests.

Table 27*Test Between-Subjects Effects: Eating Concerns at Intake*

	Type III Sum of Squares	df	M Square	F	Sig.
First-Generation	61.508	1	61.508	78.85*	$p < 0.001$
Minority	11.753	1	11.753	15.07*	$p < 0.001$
First Gen * Minority	7.05	1	7.05	9.04*	0.003
Error	109656.116	140574	0.780		
Total	253561.854	140578			

Note. * $p < .05$.

Table 28*Estimated Marginal Means of Eating Concerns at Intake (First-Generation)*

First-Generation Status	M	Std. Error
Non-First-Generation	1.0	0.003
First-Generation	1.1	0.005

Note. First-generation status as a main effect was significant at the $*p < 0.05$ level.

Table 29*Estimated Marginal Means of Eating Concerns at Intake (Minority)*

Minority Status	M	Std. Error
White	1.02	0.004
Minority	1.04	0.004

Note. Minority status as a main effect was significant at the $*p < 0.05$ level.

Table 30*First-Generation * Minority: Eating Concerns at Intake*

First-Generation Status	Minority Status	M	Std. Error
Non-First-Generation	White	0.987	0.003
	Minority	1.027	0.005
First-Generation	White	1.056	0.007
	Minority	1.061	0.007

Note. First-generation status and minority status as an interaction term was significant at the $*p < 0.05$ level.

Table 31*Pairwise Comparisons of Groups on Hostility Subscale Scores*

Sample 1–Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
FGM–FGW	3,786.539	451.312	8.390*	$p < 0.001$	$p < 0.001$
FGM–NFGM	2,744.602	406.591	6.750*	$p < 0.001$	$p < 0.001$
FGM–NFGW	10,049.775	356.775	28.168*	$p < 0.001$	$p < 0.001$
FGW–NFGM	1,041.937	393.526	2.648*	0.008	0.049
FGW–NFGW	6,263.236	341.811	18.234*	$p < 0.001$	$p < 0.001$
NFGM–NFGW	7,305.173	280.122	26.079*	$p < 0.001$	$p < 0.001$

Note. FGM = first-generation minority; FGW = first-generation White; NFGM = non-first-generation minority; NFGW = non-first-generation White.

* $p < .05$. Significance values were adjusted by the Bonferroni correction for multiple tests.

Table 32*Test Between-Subjects Effects: Hostility at Intake*

	Type III Sum of Squares	df	M Square	F	Sig.
First-Generation	243.256	1	243.256	327.27*	$p < 0.001$
Minority	446.147	1	446.147	600.24*	$p < 0.001$
First Gen * Minority	24.338	1	24.338	32.75*	$p < 0.001$
Error	104485.627	140574	0.743		
Total	256764.28	140578			

Note. * $p < .05$.

Table 33*Estimated Marginal Means of Hostility at Intake (First-Generation)*

First-Generation to Status	M	Std. Error
Non-First-Generation	1.0	0.003
First-Generation	1.1	0.005

Note. First-generation status as a main effect was significant at the $*p < 0.05$ level.

Table 34*Estimated Marginal Means of Hostility at Intake (Minority)*

Minority Status	M	Std. Error
White	1.0	0.004
Minority	1.1	0.004

Note. Minority status as a main effect was significant at the $*p < 0.05$ level.

Table 35*First-Generation * Minority: Hostility at Intake*

First-Generation Status	Minority Status	M	Std. Error
Non-First-Generation	White	1.0	0.003
	Minority	1.8	0.005
First-Generation	White	1.1	0.007
	Minority	1.2	0.007

Note. First-generation status and minority status as an interaction term was significant at the $*p < 0.05$ level.

Table 36*Pairwise Comparisons of Groups on Family Distress Subscale Scores*

Sample 1–Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
FGM–FGW	3,501.797	451.594	7.754*	$p < 0.001$	$p < 0.001$
FGM–NFGM	9,361.448	406.845	23.010*	$p < 0.001$	$p < 0.001$
FGM–NFGW	18,549.803	356.998	51.961*	$p < 0.001$	$p < 0.001$
FGW–NFGM	5,859.651	393.772	14.881*	$p < 0.001$	$p < 0.001$
FGW–NFGW	15,048.006	342.025	43.997*	$p < 0.001$	$p < 0.001$
NFGM–NFGW	9,188.355	280.298	32.781*	$p < 0.001$	$p < 0.001$

Note. FGM = first-generation minority; FGW = first-generation White; NFGM = non-first-generation minority; NFGW = non-first-generation White.

* $p < .05$. Significance values were adjusted by the Bonferroni correction for multiple tests.

Table 37*Test Between-Subjects Effects: Family Distress at Intake*

	Type III Sum of Squares	df	M Square	F	Sig.
First-Generation	2172.531	1	2172.5	2407.05*	$p < 0.001$
Minority	481.256	1	481.3	533.21*	$p < 0.001$
First Gen * Minority	108.046	1	108.1	119.71*	$p < 0.001$
Error	126877.917	140574	0.9		
Total	371428.834	140578			

Note. * $p < .05$.

Table 38*Estimated Marginal Means of Family Distress at Intake (First-Generation)*

First-Generation to Status	M	Std. Error
Non-First-Generation	1.3	0.003
First-Generation	1.6	0.005

Note. First-generation status as a main effect was significant at the $*p < 0.05$ level.

Table 39*Estimated Marginal Means of Family Distress at Intake (Minority)*

Minority Status	M	Std. Error
White	1.4	0.004
Minority	1.5	0.005

Note. Minority status as a main effect was significant at the $*p < 0.05$ level.

Table 40*First-Generation * Minority: Family Distress at Intake*

First-Generation Status	Minority Status	M	Std. Error
Non-First-Generation	White	1.17	0.003
	Minority	1.38	0.006
First-Generation	White	1.55	0.007
	Minority	1.62	0.008

Note. First-generation status and minority status as an interaction term was significant at the $*p < 0.05$ level.

Table 41*Pairwise Comparisons of Groups on Substance/Alcohol Use Subscale Scores*

Sample 1–Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
FGM–FGW	7,629.082	443.535	17.201*	$p < 0.001$	$p < 0.001$
FGM–NFGM	1,383.805	399.585	3.463*	0.001	0.003
FGM–NFGW	10,878.688	350.627	31.026*	$p < 0.001$	$p < 0.001$
FGW–NFGM	6,245.277	386.745	16.148*	$p < 0.001$	$p < 0.001$
FGW–NFGW	3,249.606	355.921	9.674*	$p < 0.001$	$p < 0.001$
NFGM–NFGW	9,494.883	275.295	34.490*	$p < 0.001$	$p < 0.001$

Note. FGM = first-generation minority; FGW = first-generation White; NFGM = non-first-generation minority; NFGW = non-first-generation White.

* $p < .05$. Significance values were adjusted by the Bonferroni correction for multiple tests.

Table 42*Test Between-Subjects Effects: Substance/Alcohol Use at Intake*

	Type III Sum of Squares	df	M Square	F	Sig.
First-Generation	46.831	1	46.831	63.97*	$p < 0.001$
Minority	524.543	1	524.543	716.56*	$p < 0.001$
First Gen * Minority	11.928	1	11.928	16.29*	$p < 0.001$
Error	102904.292	140574	0.880		
Total	181871.021	140578			

Note. * $p < .05$.

Table 43*Estimated Marginal Means of Substance/Alcohol Use at Intake (First-Generation)*

First-Generation to Status	M	Std. Error
Non-First-Generation	0.72	0.003
First-Generation	0.67	0.005

Note. First-generation status as a main effect was significant at the $*p < 0.05$ level.

Table 44*Estimated Marginal Means of Substance/Alcohol Use at Intake (Minority)*

Minority Status	M	Std. Error
White	0.78	0.004
Minority	0.62	0.004

Note. Minority status as a main effect was significant at the $*p < 0.05$ level.

Table 45*First-Generation * Minority: Substance/Alcohol Use at Intake*

First-Generation Status	Minority Status	M	Std. Error
Non-First-Generation	White	0.81	0.003
	Minority	0.64	0.005
First-Generation	White	0.74	0.007
	Minority	0.61	0.007

Note. First-generation status and minority status as an interaction term was significant at the $*p < 0.05$ level.

APPENDIX A

Review of the Literature

Utilization Trends

Since the first counseling centers opened their doors, demand for collegiate mental health services has only risen. In their 2015 annual report, Penn State's Center for Collegiate Mental Health (CCMH) found that of the 93 responding member college and university counseling centers, there was an average of 29.6% growth in demand for counseling services between the 2009–2010 and 2014–2015 academic years, while the rate of institutional enrollment grew by 5.6% in the same time period (Center for Collegiate Mental Health, 2016).

This demand for services is demonstrated through other data sets as well. The National College Health Association (NCHA) compiles an annual report on several health care related topics as reported by students at participating institutions (American College Health Association (ACHA), n.d.). In their Spring 2017 Reference Group Executive Summary, the NCHA found that from institutions that provided all student or random sampling data (which yielded 63,497 students from 97 institutions), 70.8% of students had been “diagnosed or treated by a professional” within the past 12 months for mental health related concerns (ACHA, 2017). Given that there has been an increased emphasis on pharmacological interventions amongst children and adolescents between the ages of 0–20 in recent years (Correll et al., 2011; Olfson et al., 2014), it is possible that an unknown number of these students sought and/or received strictly medical interventions. It is also likely that some students may have chosen to seek other community clinical services. These potential mediating factors may also help make sense of the fairly consistent nine percent utilization rate of students seeking services at college counseling centers since 2004 (Kim et al., 2015; Gallagher, 2005). Regardless, the number of students

seeking mental health services may soon overwhelm the ability for college counseling centers to serve all the students who desire services.

Increase in Severity of Concerns

In addition to an increase in demand, collegiate counseling centers have also seen an increase in severity of concerns. The 2015 CCMH report shows that self-reported distress in the areas of depression, anxiety, and social anxiety have consistently increased over the past five years (CCMH, 2016). During this same time, the lifetime prevalence rate for non-suicidal self-injury (NSSI) rose from 21.8% to 25.0%, and the lifetime prevalence rate for serious suicidal ideation (i.e., “I have seriously considered suicide”) rose from 23.8% to 32.9% (CCMH, 2016). This same report found that 27% more resources, as measured by appointment usage, were utilized by students that met criteria for “mental health histories involving ‘threat to self’ thoughts and behaviors (NSSI, serious suicidal ideation, or suicidal attempts)” (CCMH, 2016, p. 2). Thus, they have increasing demand, increasing severity, and less time to manage student demand.

In their 2014 National Survey of College Counseling Centers, Gallagher & Taylor found that 94% of college mental health directors reported: “recent trends toward greater number of students with severe psychological problems” (p. 5), with 89% indicating an increase in the past five years of students reporting anxiety disorders, a 69% increase in crises requiring immediate response, and 60% increase in psychiatric medication issues. Pérez-Rojas et al. (2017) found that when surveying clinicians after initial consultation using the Clinician Index of Client Concerns (CLICC), the most prevalent concerns were anxiety, depression, stress, family, and academic performance, and that often students had multiple presenting concerns. Consistent with this research, Krumrei et al. (2010) found that at nine institutions surveyed, 42% of students

presented at a college counseling center “with concerns across multiple problem areas” (p. 269). Lastly, Twenge et al. (2010) found that when looking at MMPI and MMPI-2 scores between 1938 and 2007, American college students scores rose steadily, and “assuming a normal distribution, 85% of recent college students score above the 1930s-1940s average measures of psychopathology” (p. 149).

Expansion of Services

The increasing demand for mental health services in college counseling centers is difficult to manage. In their annual survey with a reporting period from September 1, 2015, through August 31, 2016, Reetz et al. found in the Association for University and College Counseling Center Directors (AUCCCD) 2015- 2016 survey that the ratio of students to professional staff was 1,737 to one (2016). This number decreased only slightly to 1,530 to one when professional staff and trainees were counted (Reetz et al., 2016). Of these 529 centers reporting, 220 reported having gained additional full-time employees during the same academic year, with over 361 new full-time employees brought on to fill clinical roles (Reetz et al., 2016). It should be noted that the AUCCCD represents an international data set.

Research in recent years has shown that collegiate counseling centers seem to be effective in alleviating mental health problems (Nordberg et al., 2013) increasing retention (Lee et al., 2009), and aiding with recruitment and risk-management activities (Bishop, 2010). College counseling centers have also learned to adapt services with resources such as biofeedback being utilized with positive results (Ratanasiripong et al., 2012).

Attention to Minority Counseling Services

One of the challenges that collegiate counseling centers face in expanding their services is ensuring that they are able to meet the needs of minority students. In their 2017 critique of

multicultural research at collegiate counseling centers, Pérez-Rojas et al. found that the majority of research on presenting concerns of diverse groups at counseling centers relied on studies that were “mostly comprised of studies that are unrelated to one another, use data from a single institution, and/or offer mixed results” (p. 418). They provide reference to studies completed by Constantine et al. (1997) reporting that at one counseling center, racial/ethnic minorities’ top stressors included difficulties with family members and romantic partners, depression, academic concerns, and stress management. Hayes, Youn, et al. (2011) found that utilization of counseling services was correlated with higher levels of psychological distress, less family support and a past history of psychological problems in students of color (2011). Krumrei et al. (2010) reported ethnic minority students seeking counseling assessed using the K-State Problem Identifying Rating Scale (K-PIRS) at intake scored “slightly higher for mood difficulties, interpersonal conflicts, self-harm indicators, learning problems, and career uncertainties than ethnic majority students” (p. 270) while having no significant differences in terms of food concerns or substance/addiction concerns. Krumrei et al. also point out that differences in demographic groups recognizing or admitting concerns or struggling with stigma or cultural biases may impact counseling center usage with some demographic groups (an idea echoed by Cheng et al., 2013), and may be an area where counseling centers could provide additional information and outreach.

Compounding challenges and barriers may exist for international minority students. Yakushko et al. (2008) found that at one counseling center, international students presented with high levels of relationship issues and depression. Nilsson et al. (2004) found that international students at one counseling center presented with high levels of depression, academic stress, and anxiety.

First-Generation Student Counseling Center Utilization Trends

According to their 2016 publication, the Center for Collegiate Mental Health found that 22.5% of students seen at participating collegiate mental health centers within the past year were first-generation college students (2016). Yet around this same time, the United States Department of Education reported that first-generation college students represent approximately 30% of total students seeking higher education (Kena et al., 2014). First-generation students appear to have higher frequencies of feeling “stressed, depressed, or upset compared to non-first-generation students” (Steblelton et al., 2014, p. 14). This same study found that first-generation students were less likely to seek out services despite an awareness of their need. Some of the reasons given for not seeking mental health services included an inconvenience in location and hours, a lack of awareness of available services, and a perceived lack of time to seek services (Steblelton et al., 2014).

Barriers and Challenges of First-Generation College Students

First-generation college students often face additional challenges and barriers to success at institutions of higher learning. Understanding these challenges and barriers are important given that between one third to one-half of US students will be the first in their family to attend or graduate from college (Snyder & Dillow, 2015). Some of the potential challenges faced by first-generation students have been documented for decades. Terenzini et al. (1996) explain that past research on first-generation students tends to fall into three categories: comparison with non-first-generation students in terms of demographics, the college choice process and college expectations; descriptions of the transition between high school and postsecondary education, and persistence in college, degree attainment, and early career outcomes (as cited by Pascarella et al., 2004). Historically, first-generation students faced lower SAT scores (Riehl, 1994),

delayed entry into college (Fallon, 1997), may have less support at home (York-Anderson & Bowman, 1991), tend to not socialize with other students or faculty (Billson & Terry, 1982), have lower grades, are more likely to drop out (Brooks-Terry, 1988), and tend to spend “twice as much time working part-time or full-time jobs” (Orbe, 2004). One study found that after controlling for factors such as race, gender, high school grade point average (GPA), and family income, “the risk of attrition in the first year among first-generation students was 71% higher” than peers with two college-educated parents (Ishitani, 2003, p. 433).

Other barriers include transitions in academic, social, and cultural settings (Hsiao, 1992). Many first-generation students are older than their peers, may struggle in achieving a sense of belonging or identity, may have additional financial burdens, and may be less likely than their peers to complete their degree (Kena et al., 2014). Inman and Mayes (1999) show that first-generation students were found to have more somatic symptoms and lower levels of self-efficacy than their peers (Wang & Castañeda-Sound, 2008). In their study, Stebleton et al. (2014) found that first-generation students tend to have a lower sense of belonging and satisfaction than their peers. This may be due in part to an “unseen academic disadvantage” (p. 1192) for first-generation students as “American universities are in fact organized according to middle- and upper-class cultural norms” (Stephens et al., 2012, p. 1192).

Financial challenges may also be an important barrier to consider for first-generation students, as they are more likely to come from low socio-economic-status families (Jenkins et al., 2013). Finances may contribute to first-generation students from low income families being less likely to enroll in postsecondary education, and less likely to persist through graduation (Thayer, 2000). Ishitani found that in a longitudinal study between 1988 and 2000, students whose family income was between \$20,000 to \$34,999 were 72% more likely to not complete their

postsecondary education than students with family incomes of \$50,000 or higher (2003). Many university and college aged students take out loans each year to be able to afford continuing their education. In their 2014 report, the U.S. Department of Education estimated that over the course of a four-year degree, the average student will take out \$50,000 in loans in order to pay for their education (Kena et al., 2014). First-generation college students are more likely to attend for-profit institutions (Inman & Mayes, 1999) and less likely to complete their degree in a timely manner (Ishitani, 2003), further adding to the weight of financial stressors while in school.

Compounding Factors of Race and Ethnicity

First-generation students are more likely than their non-first-generation peers to be a member of a racial or ethnic minority group (Hutchens et al., 2011). This is an important factor to note as cultural minority groups “tend to experience disproportionate amounts of psychological distress and disorders in comparison to the general population” (Hayes, Chun-Kennedy, et al., 2011, p. 117; Mays & Cochran, 2001; Szymanski & Stewart, 2010; U.S. Surgeon General, 2001, as cited in Hayes, Chun-Kennedy. et al., 2011). FGM students are also at higher risk of leaving postsecondary education prior to completion than ethnic majority students (Carter, 2006). Mitigating factors for minority student persistence may include “academic preparation, adequate financial aid, and strong support networks” (Carter, 2006, p. 42). A 1993 study by Smedley et al. found that minority students “evidenced considerable psychological sensitivity and vulnerability to the campus social climate” and additionally questioned their “legitimacy as students” (p. 447).

Mental Health in College-Aged Students and First-Generation Students

Mental health is an important factor in the well-being and success of college students. For this reason, many college and university campuses have on-site counseling centers. These centers

often offer individual and group therapy services which seek to provide broad services for a wide range mental health concerns. In establishing a consortium, the Collegiate Center for Mental Health created several scales with which to measure distress, in order to standardize the data that they were collecting across campus centers for mental health (CCMH, n.d.). Eight distinct subscales of distress were created, which address individualized areas of mental health that have been the focus of research in varying degrees. In a study where researchers looked at the CCAPS distress subscales in regard to minority status where racial/ethnic minority and students who identified as White were compared, the subscales of depression, hostility, family distress, and academic distress were statistically significantly higher for racial/ethnic minority students (Hayes, Chun-Kennedy, et al., 2011). While this study is important, it did not focus on first-generational student status, and thus highlights the need for this additional research. The eight CCAPS distress subscales are discussed briefly below in regard to first-generation, minority, and non-first-generation ethnic majority university/college students.

Depression

In a study completed by Jenkins et al. (2013), first-generation students did not report significantly higher depression symptoms than non-first-generation students, however they did report significantly less life satisfaction. Depression continues to be one of the primary reasons students seek out counseling services (CCMH, 2016), and this appears to be at least somewhat historically consistent (Constantine et al., 1997). Pérez-Rojas et al. (2017) also found depression among one of the top reasons clinicians utilizing the Clinician Index of Client Concerns (CLICC) reported students sought services. While not addressing depression specifically, a 2012 study by Aspelmeier et al. found that first-generation students with low self-esteem reported lower levels of personal and emotional adjustment than non-first-generation students. Conversely, higher self-

esteem was more predictive of better personal/emotional adjustment for first-generation students than non-first-generation students. It is also important to note that ethnic and racial minority groups tend to experience greater depression and anxiety than their ethnic majority peers (Clark et al., 1999).

Generalized Anxiety

In a 2000 study, Misra and McKean found that among college students, trait anxiety was a significant predictor of academic stress. Anxiety continues to be one of the primary reasons students report seeking counseling mental health services (CCMH, 2016). Additionally, anxiety may be experienced at higher rates amongst some minority students, particularly as it relates to discrimination (Smedley et al., 1993; Woodford et al., 2014) or acculturative stress (Saenz et al., 1999).

Social Anxiety

While Dennis et al. (2005) found that both familial and peer support are related to college outcomes, peer support (or lack thereof) was a stronger predictor of grades and adjustment than familial support. They explain that their results “confirm our hypothesis that first-generation college students would perceive their peers as better able than their family to provide the support they needed” (p. 234). Similarly, Swenson et al. (2008) found that supportive peer relationships are important for students adjusting to college. Torquati and Raffaelli (2004) found that young adult attachment security is positively related to positive affect, and La Guardia et al. (2000) found that adult attachment security is related to well-being. Conversely, Liang et al. (2008) found that life satisfaction for freshmen in terms of adult attachment was negatively correlated with anxiety and avoidance (as cited by Wei et al., 2011). While no published research could be found on social anxiety and first-generation students, research was found describing negative

impacts of racial discrimination on mental health outcomes including psychological distress among Asian American and Hispanic students (Hwang & Goto, 2008) as well as among Black students (Klonoff et al., 1999).

Academic Distress

Research on academic abilities and challenges among first-generation college students has been substantial in recent years (Aspelmeier et al., 2012; Atherton, 2014). Prior to even enrolling in institutions of higher learning, first-generation students tend to have lower ACT/SAT scores, lower GPA's, and have taken more remedial courses and less rigorous high school courses than their peers (Próspero & Vohra-Gupta, 2007). In a qualitative study conducted at a private university in Boston, MA, Banks-Santilli (2014) found that 87% of first-generation respondents applying to higher education “reported doing all of the work on their own with limited knowledge” (p. 11). Indeed, parents of first-generation students are less likely to help with college entrance exams, attend college tours or information sessions, or seek information regarding financial aid (Engle, 2007). These may be contributing factors to why first-generation students tend to only apply to one institution (Engle, 2007).

Once enrolled and attending institutions of higher learning, many first-generation college students struggle to navigate their first semester (Morales, 2012), and perform worse academically than non-first-generation students (Bui, 2002; Ramos-Sanchez & Nichols, 2007). Many first-generation students do not complete their degree (National Center for Education Statistics, 2013). Unfortunately, these deficits, perceived or measured, do not extend only to academic ability. First-generation students seem to have significantly less self-efficacy than their peers, which may be due in part to less guidance (Ramos-Sanchez & Nichols, 2007). In addition, Saenz et al. (2007) report that first-generation students “rank themselves lower than non-first-

generation peers in ratings of math and writing ability, self-confidence, and leadership” (p. 3; as cited in Banks-Santilli, 2014). This is not new research. In 1996, Terenzini et al. reported that first-generation students took fewer credits overall, took fewer humanities courses, studied fewer hours, worked more hours, had less support from their families, and were less likely to participate in honors programs than their non-first-generation peers.

Eating Concerns

The CCAPS-62 includes several questions which ask about eating concerns and habits, including dissatisfaction in weight and shape. A plethora of research can be found on the topic of eating concerns amongst college-aged students (see Eisenberg et al., 2011; Pyle et al., 1991), and this topic has been studied in both female and male populations (see Olivardia et al., 1995; Nelson et al., 1999), and amongst minority students (see Abrams et al., 1993; Arriaza & Mann, 2001; DeBate et al., 2001; Gordon et al., 2010). Nordberg et al. (2013) found that the eating concerns subscale of the CCAPS-62 did not seem to be informative of treatment seeking behavior as a univariate predictor. This further supports the idea that many college students seeking treatment may be presenting with multiple concerns (Pérez-Rojas et al., 2017). Potentially adding to the complexity for treatment of first-generation students presenting with eating concerns, Cavallini et al. (2018) found that “life and family events may be important elements of prevention, assessment, and treatment of eating and body image disturbances” amongst students seeking treatment for eating concerns (p. 124). This is not to imply that first-generation students do not experience stable life or family events, however, is intended to highlight disparities between traditional and first-generation students in regard to family distress (see also *Family Distress* below). One study was located which found a lower risk of objective

binge eating in first-generation female students (Lipson & Sonnevile, 2017). To our knowledge, no other studies have examined first-generation status in regard to eating disorder risk.

Hostility

A literature review regarding hostility in college students, minority students, or in first-generation students was completed that yielded few results. One related study utilizing the CCAPS found that racial/ethnic minority students reported more distress related to several factors, including hostility when compared to European American students (Hayes, Chun-Kennedy, et al., 2011). Unfortunately, most other slightly related research was related to sexism and hostility toward women (Forbes et al., 2004), hostility on ambulatory blood pressure (Shapiro et al., 1996), or otherwise similarly not closely related. This could be due to the terminology used in researching this topic, or lack of a research base. In order to obtain some information on this subscale, key words were identified from the hostility subscale such as “anger” and “irritability.” Unfortunately, these searches yielded equally unrelated studies.

Family Distress

In a 2013 study, Jenkins et al. found that first-generation students reported less social support from family and friends. Familial support for first-generation college students can vary greatly for several reasons; however, such support for first-generation students has been shown to be less than for non-first-generation students (Jenkins et al., 2013). Cultural factors including guilt may be at play (Covarrubias & Fryberg, 2015), and first-generation students with higher levels of family achievement guilt have been shown to have significantly higher levels of depressive symptoms and lower self-esteem than their peers (Covarrubias et al., 2015). First-generation students may also be under stress to “negotiate multiple layers of identity” (Orbe, 2004, p. 133). Stephens et al. (2012) suggest that students from middle-class backgrounds (more

likely to be non-first-generation students) are likely to be exposed to and endorse independence, while students from working-class backgrounds (more likely to be first-generation students) are more likely to be exposed to and endorse interdependence. They also report that as motivation to attend college, 69% of first-generation students indicated a desire to help their families, and 49% wanted to bring honor to their families. This is contrast to 39% of non-first-generation students reporting a desire to help their families, and 27% reporting a desire to bring honor to their families as motivators to attend college (Stephens et al., 2012).

Overall parental involvement has been shown to have a positive effect on student academic achievement (Fan & Chen, 2001). For first-generation students, parental educational expectations of continued academic study were a positive predictor of who would attend college in a longitudinal study completed by Bui and Rush (2016). Several studies have also attempted to examine the connection between first-generation students and their support in conjunction with success levels (as measured by graduation rates) in academic settings (Allan et al., 2016; Garriott et al., 2015; Jenkins et al., 2013). Additional research has shown that as sense of belonging in academic and social settings increases, first-generation students are more likely to continue to graduation (Hoffman et al., 2002).

Substance/Alcohol Use

In a study using the CCAPS-62 of predictive and non-predictive items for students seeking counseling services, Nordberg et al. (2013) found that substance use was not associated with treatment seeking behavior. This seems in alignment with other past research (Blanco et al., 2008). Although much research has been completed on college students' alcohol and illicit drug use (see Johnston et al., 2016; Johnston et al., 2010; Prendergast, 1994), including research on minorities and substance use (Woodford et al., 2012) and research touching on differences

between majority and minority alcohol and drug use (O'Malley & Johnson, 2002), no research could be found on first-generation college students alcohol or substance use trends.

Research Gaps in First-Generation Student Counseling Utilization and Distress Trends

In their 2017 study, Pérez-Rojas et al. highlighted a lack of research with first-generation students at collegiate counseling centers, stating “we are unaware of research that has specifically examined variations in presenting concerns according to . . . first-generation status” (p. 418). This statement highlights the need for additional research among the first-generation population. Additionally, to date there has been no published research that has looked at first-generation student status in terms of minority/majority status. This proposed study will help to fill this research gap and provide additional descriptive information regarding distress levels at intake for FGM, FGW, NFGM, and NFGW.

Definition of Term

First-generation student: for the purposes of this study, this is a self-defined term by students participating in the Center for Collegiate Mental Health (CCMH) Standardized Data Set (SDS), which is a demographic assessment given at intake at participating collegiate centers for mental health. Although different definitions of the term “first-generation” exist, it is assumed that the most commonly used definition (that neither student’s parents had completed a degree from a postsecondary educational institution) was used by students when responding to the question “Are you the first-generation in your family to attend college?” This is a limitation however, as no definition to this term is found within the CCMH SDS, and therefore would not have been available to students completing intake paperwork.

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APPENDIX B

Instruments

Collegiate Center for Mental Health (CCMH) Counseling Center Assessment of Psychological Symptoms 62 (CCAPS-62)

The CCAPS-62 is comprised of 8 subscales (depression, generalized anxiety, social anxiety, academic distress, eating concerns, hostility, family distress, and substance/alcohol use). It also includes the distress index, which utilizes specific items from the depression, generalized anxiety, social anxiety, academic distress, and hostility subscales. It does not include items from the eating concerns, family distress, and substance/alcohol use subscales. It was created to provide a consolidated measure of overall distress and was developed utilizing a bifactorial model. Each scale has its own unique items, and several items are reverse scored, as noted with an ** after the item. The following list of distress index items and subscale items are given with their question number listed in parenthesis prior to the item. Questions that are italicized on this list are also italicized on the CCAPS-62 report as items related to safety concerns. Two of these four italicized items related to personal safety are factored into the depression subscale, and two related to interpersonal safety are factored into the hostility subscale.

The distress index is comprised of the following items: (9) I don't enjoy being around people as much as I used to; (10) I feel isolated and alone; (20) I feel worthless; (23) I feel helpless; (40) I feel sad all the time; (46) I have thoughts of ending my life; (4) My heart races for no good reason; (14) I am anxious that I might have a panic attack while in public; (17) I have sleep difficulties; (18) My thoughts are racing; (27) I have spells of terror or panic; (30) I feel tense; (2) I am shy around others; (35) I make friends easily**; (41) I am concerned that other people do not like me; (44) I feel uncomfortable around people I don't know; (47) I feel

self-conscious around others. The academic distress subscale is comprised of the following items: (15) I feel confident that I can succeed academically**; (51) I am not able to concentrate as well as usual; (53) It's hard to stay motivated for my classes; (59) I am unable to keep up with my schoolwork; (32) I have difficulty controlling my temper; (36) I sometimes feel like breaking or smashing things; (43) I get angry easily; (52) *I am afraid I may lose control and act violently*; (57) I frequently get into arguments; (60) *I have thoughts of hurting others*.

The depression subscale is comprised of the following items: (8) I feel disconnected from myself; (9) I don't enjoy being around people as much as I used to; (10) I feel isolated and alone; (12) *I lose touch with reality*; (20) I feel worthless; (23) I feel helpless; (28) I am enthusiastic about life** (37) I have unwanted thoughts I can't control; (40) I feel sad all the time; (46) *I have thoughts of ending my life*; (55) I like myself**; (58) I find that I cry frequently; (62) I feel that I have no one who understands me. The generalized anxiety subscale is comprised of the following items: (3) There are many things that I am afraid of; (4) My heart races for no good reason; (14) I am anxious that I might have a panic attack while in public; (17) I have sleep difficulties; (18) My thoughts are racing; (27) I have spells of terror or panic; (30) I feel tense; (33) I am easily frightened or startled; (39) I experience nightmares or flashbacks. The social anxiety subscale is comprised of the following items: (2) I am shy around others; (16) I become anxious when I have to speak in front of audiences; (35) I make friends easily**; (41) I am concerned that other people do not like me; (44) I feel uncomfortable around people I don't know; (47) I feel self-conscious around others; (54) I feel comfortable around other people**. The academic distress subscale is comprised of the following items: (6) I enjoy my classes**;

(15) I feel confident that I can succeed academically**; (51) I am not able to concentrate as well as usual; (53) It's hard to stay motivated for my classes; (59) I am unable to keep up with my

schoolwork. The eating concerns subscale is comprised of the following items: (5) I feel out of control when I eat; (13) I think about food more than I would like to; (19) I am satisfied with my body shape**; (22) I am dissatisfied with my weight; (25) I eat too much; (31) When I start eating I can't stop; (34) I diet frequently; (48) I purge to control my weight; (61) The less I eat, the better I feel about myself. The hostility subscale is comprised of the following items: (32) I have difficulty controlling my temper; (36) I sometimes feel like breaking or smashing things; (43) I get angry easily; (45) I feel irritable; (52) *I am afraid I may lose control and act violently*; (57) I frequently get into arguments; (60) *I have thoughts of hurting others*. The family distress subscale is comprised of the following items: (1) I get sad or angry when I think of my family; (7) I feel that my family loves me**; (11) My family gets on my nerves; (21) My family is basically a happy one**; (38) There is a history of abuse in my family; (42) I wish my family got along better. The substance/alcohol use subscale is comprised of the following items: (24) I use drugs more than I should; (26) I drink alcohol frequently; (29) When I drink alcohol I can't remember what happened; (49) I drink more than I should; (50) I enjoy getting drunk; (56) I have done something I have regretted because of drinking.

Table B1*CCAPS-62 Items Sorted by Subscale*

Scale	Item #	Item	Reverse Scored	Distress Index
Depression	8	I feel disconnected from myself		
	9*	I don't enjoy being around people as much as I used to	Yes	
	10*	I feel isolated and alone		Yes
	12	I lose touch with reality		
	20*	I feel worthless		Yes
	23*	I feel helpless		Yes
	28	I am enthusiastic about life	Yes	
	37	I have unwanted thoughts I can't control		Yes
	40*	I feel sad all the time		Yes
	46*	I have thoughts of ending my life		
	55	I like myself	Yes	
	58	I find that I cry frequently		
62	I feel that I have no one who understands me			
Generalized Anxiety	3	There are many things I am afraid of		
	4*	My heart races for no good reason		Yes
	14*	I am anxious that I might have a panic attack in public		Yes
	17*	I have sleep difficulties		Yes

	18*	My thoughts are racing	Yes
	27*	I have spells of terror or panic	Yes
	30*	I feel tense	Yes
	33	I am easily frightened or startled	
	39	I experience nightmares or flashbacks	
	2*	I am shy around others	
	16	I become anxious when I have to speak in front of audiences	
Social Anxiety	35*	I make friends easily	Yes
	41*	I am concerned that other people do not like me	Yes
	44*	I feel uncomfortable around people I don't know	
	47*	I feel self-conscious around others	Yes
	54	I feel comfortable around other people	Yes
	6	I enjoy my classes	Yes
Academic Distress	15*	I feel confident I can succeed academically	Yes
	51*	I am not able to concentrate as well as usual	Yes
	53*	It's hard to stay motivated for my classes	Yes
	59*	I am unable to keep up with my school work	Yes
Eating Concerns	5	I feel out of control when I eat	
	13	I think about food more than I would like to	
	19	I am satisfied with my body shape	Yes
	22	I am dissatisfied with my weight	

	25	I eat too much	
	31	When I start eating I can't stop	
	34	I diet frequently	
	48	I purge to control my weight	
	61	The less I eat, the better I feel about myself	
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	1	I get sad or angry when I think of my family	
	7	I feel that my family loves me	Yes
Family	11	My family gets on my nerves	
Distress	21	My family is basically a happy one	Yes
	38	There is a history of abuse in my family	
	42	I wish my family got along better	
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	32*	I have difficulty controlling my temper	
	36*	I sometimes feel like breaking or smashing things	Yes
Hostility	43*	I get angry easily	Yes
	45	I feel irritable	
	52*	I am afraid I may lose control and act violently	Yes
	57*	I frequently get into arguments	
	60*	I have thoughts of hurting others	
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Substance/ Alcohol Use	24	I use drugs more than I should	
	26	I drink alcohol frequently	
	29	When I drink alcohol I can't remember what happened	

- 49 I drink more than I should
- 50 I enjoy getting drunk
- 56 I have done something I have regretted because
of drinking

Note. Asterisk (*) indicate items utilized in the distress index.

Collegiate Center for Mental Health (CCMH) Standardized Data Set (SDS)

The CCMH SDS is comprised of over 50 descriptive questions with multiple options for answers, including: Likert scale items, yes/no items, and items that allow for free response. Information gathered from the SDS for this study include gender, age, ethnic status first-generation status, and year in school. The question regarding gender within the SDS is limited in response to: “Woman,” “Man,” “Transgender” and “Self-identify,” with “Self-identify” allowing for an additional free response. The SDS question regarding age is automatically generated from the client record. It should be noted “Titanium” references Titanium Schedule ®, a HIPPA-complaint Electronic Medical Record (EMR) software utilized by The Center for Collegiate Mental Health (CCMH). Ethnic status within the SDS is by self-report, with the following options: “White,” “African America/Black,” “American Indian or Alaskan Native,” “Asian American/Asian,” “Hispanic/Latino/a,” “Native Hawaiian or Pacific Islander,” “Multi-racial” or “Self-Identify,” with “Self-Identify” allowing for an additional free response. All responses were included in this study, with no demographic group excluded. For the question regarding first-generation status, responses are limited to: “Yes” or “No.” The SDS question regarding academic status is limited in response to: “Freshman/First Year,” “Sophomore,” “Junior,” “Senior,” “Graduate/professional degree student,” “Non-student,” “High-school student taking college classes,” “Non-degree student,” “Faculty or staff,” or “other academic status,” with a free response additionally given for individuals who endorse this category. For the purposes of this study, only individuals endorsing undergraduate years of “Freshman/First Year,” “Sophomore,” “Junior” or “Senior” were included, with all other responses excluded from further analysis.