# DEVELOPMENT OF A PREVENTIVE MENTAL HEALTH INTERVENTION PROGRAM TAILORED FOR FIRST-GENERATION COLLEGE STUDENTS

by

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ABSTRACT

CHARLES ALAN BURGESS. Development of a preventive mental health intervention tailored for first-generation college students. (Under the direction of DR. AMY PETERMAN)


To close the achievement gap between first and continuing generation students, several interventions that specifically target first-generation students have been designed and delivered in a variety of settings. These interventions are typically intended to promote wellness and support academic achievement in students' college careers, which in turn leads to better outcomes across a variety of domains, such as academic achievement, psychological well-being, and a sense of belonging in the college community. However, many of these programs may be underutilized for a variety of reasons, including the fact that they are not required for graduation, may be burdensome for students to participate in, or may neglect important aspects of the experiences of first-generation students, thus leading to low investment and buy in. In addition, these interventions neglect many of the sociocultural factors that exert a powerful influence upon first-generation students. This study sought to gather feedback from current first-generation college students in order to modify a preventive mental health intervention intended for use with college students in general. Interviews were conducted in two phases, with Phase 1 participants providing feedback on an existing ACT-based preventive mental health intervention and Phase 2 participants providing feedback on a modified version of this intervention. Study participants provided a wealth of valuable feedback about both programs as well as information about their own experiences as first-generation students. This data was used to develop recommendations for a novel

intervention that may help to support first-generation students' academic achievement while attending to their unique sociocultural backgrounds.

*Keywords*: Acceptance and Commitment Therapy, cultural adaptation, first-generation college students

DEDICATION

For my mother, who taught me to wonder. For my father, who taught me dedication. For my sister, who taught me perseverance. And for my wife, who gave my heart a home.

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CHAPTER 1: INTRODUCTION AND LITERATURE REVIEW

Students who are the first in their families to pursue postsecondary education face several significant hurdles in attempting to achieve their academic goals. The population of first-generation students has significant overlap with other historically marginalized and underrepresented population in higher education settings, including people from racial and ethnic minority backgrounds, women, and people from low-income backgrounds (Chen & Carrol, 2005; Saenz, Hurtado, Barrera, Wolf, & Yeung, 2007; Chen & Soldner, 2013). Many first-generation students face severe disadvantage across a variety of domains, including economic capital (i.e., financial resources), social capital (i.e., networks of supportive relationships), and cultural capital (i.e., education, appearance, and presentation that facilitate social mobility) as compared to their continuing-generation counterparts (Padgett, Johnson, & Pascarella, 2012). In addition, first generation students are more likely to report symptoms of traumatic stress and other psychological conditions, such as depression and anxiety (Jenkins, Belanger, Connally, Boals, & Duron, 2013). Each of these factors likely contributes to greater attrition and lower college completion rates for first-generation students. Preventive intervention might help to bolster strengths and mitigate negative consequences of such disadvantages. The proposed project would represent the first stage in the process of developing a tailored intervention for first-generation college students with the goal of increasing their social mobility and closing the class-based achievement gap.

A number of studies have explored characteristics of first generation college students, have compared them with their continuing generation colleagues, and have

attempted to identify factors that facilitate or impede these students' ability to succeed in college. The remainder of this section will review those studies, then literature on interventions for first generation students will be presented, followed by a recommendation of ways in which future researchers and interventionists can better support first-generation students.

**Comparisons of First and Continuing Generation Students**

The terms *first-generation* and *non-first-generation* (or *continuing generation*) college student have been defined in a variety of ways over the past 20 to 30 years. Two primary definitions have emerged and are most widely used by researchers. One fairly restrictive definition of first-generation students counts only those whose parent never attended college (e.g., Choy, 2001). This restrictive definition is commonly used by the National Center for Education Statistics (e.g., NCES, 2006). A broader definition of first-generation status includes those whose parent may have attended a college or university but did not complete a four-year degree (e.g., Ishitani, 2003). This broader definition is commonly used by the US federal outreach program for students from disadvantaged background (e.g., TRIO, 2016). However, even within these brief definitions, there is variability in terms of what "college" refers to (e.g., only 4-year institutions or any other postsecondary education setting, such as 2-year degree programs, vocational, technical, or schools, professional certification program) and what "parent" means (e.g., biological mother and father, stepparents, guardians, foster parents, grandparents, etc.). It may be the case that contemporary definitions of first-generation student status are overly general and miss important nuances when discussing this population. For example, prior research has provided evidence that involvement of siblings or other relatives in post-secondary

education settings (e.g., Longwell-Grice & Longwell-Grice, 2008) and high school experiences that shape student expectations for college, such as attending preparatory schools and having positive interactions with authority figures (e.g., Jack, 2015), both have significant impact on post-secondary outcomes. For the purposes of this proposed project, the most inclusive definition of first-generation student (i.e., the student has no parent or primary guardian who has completed a 4-year degree) will be used in order to capture a broad sample of students who represent this important and underserved population.

The overall proportion of first-generation students entering full time, four-year education settings in the United States has steadily declined over the course of the last 30 years, from a high of 38.5% in 1971 to only 15.9% in 2005, reflecting an overall increase in average level of education on a national scale (Saenz et al., 2007). However, estimates of the proportion of first generation students are much higher, 43% to 50%, when considering all types of students (e.g. part time students as opposed to full time) and other postsecondary settings, such as 2-year colleges and technical schools (e.g., Choy, 2001; Chen & Carrol, 2005; NCES, 2012). An NCES report examining demographic characteristics of first-generation students found that they were more likely to belong to racial and ethnic minority populations, more likely to be female, and more likely to come from families with income less than $25,000 per year (Chen & Carrol). In addition, these students tended to have less exposure to advanced mathematics classes during high school and to perform more poorly on standardized tests commonly used in college admissions criteria (Chen & Carrol).

There appears to be a persistent and growing gap in academic access and achievement along racial, ethnic, and socioeconomic lines (Shaw & Barbuti, 2010). For example, while 34% of 5 to 17-year-old students in the US would be the first in their families to attend college, that proportion goes up to 41% when examining only African American/Black students and up to 61% for Hispanic and Latino/a students (NCES, 2012). While the overall level of education for people living in the US may be increasing, certain segments of the population are not experiencing this type of growth. Related to level of parental education, expectations that students have for their future postsecondary outcomes form early in academic careers and divergence between first and continuing-generation students are apparent as early as middle school. Gibbons and Borders (2010) surveyed a group of 7th grade students and found that prospective first-generation college students reported lower levels of self-efficacy, more barriers to college enrollment and completion, and higher expectations for negative outcomes.

This gap in post-secondary achievement is especially problematic due to the fact that postsecondary education is a primary driver in upward socioeconomic mobility for low- and middle-income students and contributes to income inequality along racial/ethnic lines (Haveman & Smeeding, 2006; Danziger & Ratner, 2010; Torche, 2011). Thus, the first-generation achievement gap in postsecondary academic success is one critical way in which these forms of disadvantage are perpetuated across generational lines as well as within demographic groups.

First-generation students are more than twice as likely to leave a post-secondary institution before their second year than continuing-generation students (Choy, 2001) and they are less likely to return and finish their degree after their first departure from the

institution (Pascarella et al., 2004). Thus, studies of attrition and degree completion are critical to understanding the experience of first-generation students. The finding that first-generation students more likely to depart than continuing-generation students during their first year persists after controlling for demographic variables of race and gender, high school grade point average, and family level of income. Risk may also change over time spent in an academic institution, with first-generation students at highest risk of leaving during their first year (Ishitani, 2003). Additionally, first-generation students of parents with *no* college education are at a higher risk for leaving institutions before their second year than first-generation students of a parent with *some* college (i.e., parents attended post-secondary education but did not complete a degree; Ishitani, 2006), thus reinforcing the idea of the need for clarity in defining this population and closer consideration for the unique backgrounds that first-generation students possess.

Mediators of the relationship between level of parental education and first-generation student attrition and/or persistence include performance on college entrance exams (i.e., ACT scores), scholarship awards, receipt of loans, presence or absence of full time work, and high school GPA (Martinez, Sher, Krull, & Wood, 2009). Additionally, GPA both moderated and mediated the effect of parental education on college attrition, such that low GPA appeared to be more deleterious for first-generation students than continuing-generation students. Other predictors of first-generation student attrition included drug use, psychological distress, and reporting few academic challenges, which the authors interpret as being indicative of low investment in their educational pursuits (Martinez et al., 2009). It could also be the case that first-generation students were struggling to become engaged with the academic environment. In a national sample of

college students in the United States, first-generation students were less engaged in the educational process, perceived their college environment as being less supportive of them than their continuing-generation counterparts, and reported less progress in their learning and intellectual development (Pike & Kuh, 2005). However, authors also observed that certain first-generation student characteristics (e.g., female students, being a member of a racial or ethnic minority group, having plans to pursue graduate or professional training in the future, and living on campus) were associated with higher levels of academic engagement, which was in turn associated with greater self-reported gains in learning and intellectual development.

Another often studied outcome among first-generation college students is their adjustment to their new role as students. Adjustment to college is conceptualized as the extent to which students feel a sense of belonging in their college environment (Dennis, et al., 2005). This variable can also be conceptualized as containing elements of both fitting in socially as well as fitting in intellectually or seeing oneself as having adequate ability to belong in the academic institution (Lewis & Hodges, 2015). This sense of fit has also been found to be predictive of students' intentions to remain enrolled in an academic setting and may be a contributing factor to inequalities in first-generation completion rates (Lewis & Hodges). Adjustment is traditionally assessed using self-report instruments, such as Baker and Siryk's (1984) Student Adaptation to College Questionnaire, which asks respondent to rate their agreement with statements like "I feel pleased about my decision to attend college" and "I feel I fit well in the college environment." This adjustment process is challenging for anyone, but first-generation students must also confront issues of cultural, social, and academic transition (Pascarella

et al., 2004). Potential stressors associated with transitioning to the college environment include moving away from their home, family of origin, and friends to a new social environment; taking on increased academic demands; increased financial obligations; and development of independence in maintaining a household and managing money (Hey, Calderon, & Seabert, 2003; Ting, 2003). In addition to these stressors, first generation students also tend to be more likely to work while enrolled in school due to financial strain, have responsibilities to their families, and feel a sense of obligation to live up to family expectations (Curtona, Cole, Colangelo, Assouline, & Russel, 1994; Khanh, 2002).

On an institutional level, college and university policy, procedure, and climate can have a profound impact on first-generation students' level of engagement and integration into the college environment. One study examined the effect of "good practices" of post-secondary institutions (e.g., providing academic challenges, having high expectations for students, creating opportunities for interactions with diverse peers, providing high quality education, and allowing for interaction with faculty members) and how these are experienced by first-generation students (Padgett et al., 2012). Exposure to some of these "good practices" did not have the same impact on first-generation students as it did on continuing-generation students. For example, interactions with faculty were associated with unfavorable attitudes toward learning and poorer psychological well-being among first-generation students, but this was not the case for continuing-generation students. The authors interpret this as a result of first-generation students feeling unprepared for these interactions, due to lack of experience in interaction with teachers in high school, and thus being more intimidated. Another possible interpretation of these findings is that

continuing-generation students may have been meeting with faculty members proactively in order to maintain their performance, while first-generation students may have been more likely to postpone meetings with faculty until after a problem or concern had been identified.

While first-generation students may face inequality in college attendance and completion rates, one fortunate finding is that there is no discernable difference in later labor market outcomes (e.g., employability, actual employment, compensation) for first and continuing-generation students who complete their postsecondary education (Choy, 2001). While first-generation students who complete degrees appear to be similarly competitive in the labor force as compared to continuing-generation students, first-generation students appear to be less likely to enroll in graduate or professional degree programs than their continuing generation counterparts (Pascarella et al., 2004). The result of this is a U-shaped relationship between parental level of education and intergenerational socioeconomic mobility. Specifically, the predictive power of parental socioeconomic status is almost non-existent for college graduates but remains a powerful determining factor for students with lower levels of education and as well for those with advanced degrees (Torche, 2011).

**Contributing Factors to the First-generation Achievement Gap**

Several potential causal mechanisms have been posited to help explain the development and maintenance of the first-generation achievement gap. One such explanation focusses on the unequal distribution of resources among the population of incoming college students. In a survey of over 3,000 college students spanning 18 four-year colleges and universities, first-generation students tended to be at a disadvantage as

compared to continuing-generation students due to a lack of knowledge regarding post-secondary education, having fewer financial and social resources available from family, having a lack of clarity in their plans for degree completion, and having less academic preparation in high school (Pascarella, Pierson, Wolniak, & Terenzini, 2004). In addition, first generation students may lack specific informal skills, such as fluency and problem-solving skills related to utilizing technology often used in online classroom settings (Williams & Hellman, 2004). Analysis of the Educational Longitudinal Study (ELS), which followed a nationally representative sample of students in the US from 10th grade for ten years, supports the hypotheses that a) family resources and cultural capital (i.e., the extent to which one is familiar with and conforms to dominant social values, non-financial assets that promote social mobility) influenced high school achievement, which in turn explains inequality in college attendance for first-generation students, and b) inequality in college completion is explained by disparate stressors facing first-generation students (e.g., having to work while in school, more frequently reported stressful events in college) and limited curricular and extracurricular integration with the college environment (Wilbur & Roscigno, 2016). The authors also note that these effects persist even after controlling for socioeconomic status (SES), indicating a unique impact of generational status on college attendance and completion.

Not only do first generation students face these hurdles to college access and achievement, many first-generation students also face severe disadvantage in economic capital (financial resources), social capital (networks of supportive relationships), and cultural capital (education, intellect, appearance, and presentation that facilitate social mobility) as compared to their continuing-generation counterparts (Padgett, et al., 2012).

In a sample of 100 ethnic and racial minority first generation students, lack of peer support (social capital) was predictive of poor adjustment and lower GPA in their second semester of college (Dennis, Phinney, & Chuateco, 2005). Similarly, Barry, Hudley, Kelly, and Cho (2009) found that first generation students reported less disclosure of college stress to family and friends as compared to continuing generation students, which they interpreted as first generation students having fewer opportunities to disclose due to their relative isolation. When interviewed, first generation students often reported several barriers to their academic aspirations, including a lack of understanding of the admissions process, financial strain, academic pressure, lack of professional role models, role conflicts (i.e., difficulty balancing competing demands of work, school, and home), and a lack of parental understanding of their experiences (Fernandez, Trenor, Zerda, & Cortes, 2008). Similar themes emerged in a qualitative study of first-generation doctoral students (Gardner & Holley, 2011), who often reported financial strain, feelings of isolation, and feeling like a "phony" (i.e., imposter syndrome; Clance & Imes, 1978).

Troublingly, researchers have observed that first-generation students tend to report higher rates of having experienced traumatic events, lower scores for ratings of life satisfaction, and more symptoms of depression (Jenkins, et al., 2013). These findings were especially prevalent for women in this study, who reported more severe symptoms and were more likely to have experienced trauma. Psychological factors also appear to have a more significant impact on academic outcomes for first-generation students than for continuing-generation students, with generational status acting as a sensitizing factor for both the positive and negative effects of locus of control, but as a risk factor for the negative effects of low self-esteem (Aspelmeier, Love, McGill, Elliot, & Pierce, 2012).

Taken together, these findings support the need for preventive and ameliorative mental health interventions to support academic success for first-generation students.

Compounding these difficulties, first-generation students may face psychological challenges related to adopting their new role as a college student (Stephens, Brannon, Markus, & Nelson, 2015). For example, the social roles that each person plays in their family and their community are passed down along generational lines and the decision to go to college may be viewed by family members as both a boon to their future financial security as well as a break in this family system. First-generation students may struggle with feelings of abandoning or turning their backs on their families and communities, while also desiring to help those left behind (Khanh, 2002). This can potentially lead to a kind of double life, with first-generation student identity related to home and family on the one side and their identity as students on the other. One potential result of this could be feelings of isolation or being stigmatized in both contexts. In addition to these psychological challenges of shifting identity, first-generation students also face a "cultural mismatch" between the norms of interdependence commonly endorsed by students from working-class or lower socioeconomic backgrounds, and the norms of independence often upheld by academic institutions (Stephens, Markus, & Phillips, 2014). All of these aforementioned challenges contribute to a persistent and widening achievement gap between first and continuing generation students (Stephens, Hamedani & Destin, 2014).

**Sociocultural Factors**

Moving beyond lack of material resources and social support, some researchers are starting to explore the role that sociocultural factors play in the class-based

achievement gap. The concept of social class reflects both the material conditions in people's lives as well as cultural identity. Individuals from high and low-socioeconomic status (SES) backgrounds are acculturated to different sets of practices and behaviors (Kraus, Piff, & Keltner, 2011). These differences in culture seem to play a role in determining the academic outcomes of the first-generation college student. Johnson, Richeson and Fink (2011) have suggested that students from low SES backgrounds may possess a stigmatized identity related to concerns about fitting in the academic environment, leading to a depletion of psychological resources related to self-regulation. This concern about being "on the margin" and not belonging, and accompanying depletion of psychological resources, may lead to poorer outcomes in terms of academic performance, personal relationships, and health behaviors (Johnson et al., 2011). The cultural advantage of students from middle or high SES backgrounds may also manifest in terms of a greater sense of entitlement and willingness to ask for help and greater ease in leveraging institutional resources to proactively meet their needs, while students from low SES background may lack knowledge of the "rules of the game" and may face more frustration in coping with bureaucracies (Lareau, 2015).

Researchers have hypothesized and found support for the idea that first-generation students who come from a background of economic disadvantage are more likely to adhere to cultural norm of interdependence, while continuing-generation students who come from a background of economic advantage may be more attuned to the cultural norm of independence (Stephens, Fryberg, et al., 2012). The various material and social conditions that students experience during their childhood and early adolescence foster and promote these cultural norms and ways of interacting with others (Grossman &

Varnum, 2011). In the case of students who faced economic disadvantage growing up, the lack of a financial "safety net" forces them to rely on important others, such as family members and friends, for support which in turn instills the value of being supportive and responsive to the needs of others (Stephens, Fryberg, & Markus, 2011). Many American universities emphasize the pursuit of a college degree as one of independence, which is a mismatch for the cultural norm of many first-generation students. This mismatch may have a negative impact on the academic performance of many first-generation students, but not continuing-generation students who experience no mismatch in this context. This in turn may reinforce the performance gap between first and continuing-generation students (Stephens, Fryberg, et al., 2012).

Physiological effects of this cultural mismatch have been observed in at least one laboratory experiment. When first-generation students were exposed to an academic stressor (e.g., giving a speech) and norms of independence were emphasized, they showed greater increases in circulating cortisol and reported more negative emotions as compared to continuing-generation students. However, this effect was eliminated when the university norms were reframed as those of interdependence (Stephens, Townsend, Markus, & Phillips, 2012). Issues of *fit* with the university setting ("I belong here as a student," "My values are compatible with the values of the university") are associated with objective and subjective markers of academic performance (e.g., GPA and self-rating of status as compared to other students) (Phillips, Stephens, & Townsend, Under Review). Phillips et al. observed that this cultural mismatch between first-generation students and their academic institutions appears to persist throughout these students' college careers and can have a profound impact on student's likelihood of degree

completion and their view of themselves as students. The role of universities in making selections based on academic performance may be especially threatening to first-generation students who may already feel inadequate. Another experimental study showed a difference between first and continuing-generation students such that when this selection function was made salient, first-generation students performed more poorly on an academic task and seemed to be more concerned about their performance relative to others (Jury, Smeding, & Darnon, 2015). However, reducing the mismatch between first-generation students' potential cultural norms of interdependence and academic institutions norm of independence may be especially beneficial for first-generation students, especially those from low SES backgrounds (Stephens, Fryberg, et al., 2012). This might be accomplished by emphasizing university culture as one of belonging and being part of a community (Stephens et al.).

The effect of institutional match/mismatch may also depend in part on the academic context that first generation students find themselves in. The degree of competitiveness (i.e., the degree to which selection procedures foster between-student competition) may impact the extent to which first-generation students experience this conflict of cultural norms (Sommet, Quiamzade, Jury, & Mugny, 2015). Surveys of first and continuing gen students found that first-generation students in more competitive departments had greater decrease in mastery-goals (i.e., academic goals based on the desire to learn) over the course of their undergraduate education than continuing generation students. The opposite pattern found in less competitive department, where continuing-generation students experienced greater decrease in mastery-goals. The authors interpreted results as evidence for a cultural mismatch in competitive departments

for first-generation students and for continuing generation students in non-competitive departments. Lower report of mastery goals has previously been correlated with a student having low investment in their personal education, and greater risk of attrition (LaCombe, 2007; Fasching, Dresel, Dickhauser, & Nitsche, 2010).

Families play an important supportive role in facilitating the success of their first-generation students through the provision of *family capital*, conceptualized as non-material support that first-generation students receive from their families (e.g., parental attitude toward education, strength and quality of relationships with family, values related to educational achievement and ambition) and is critical to successful transition into college and persistence in college (Gofen, 2009). The form in which this family capital is enacted is influenced by the predominant social and cultural values from which first-generation students' families originate and can vary along racial and ethnic lines. For example, a mixed method study of first-generation students belonging to racial and ethnic minorities indicated that female, Asian first-generation students reported higher levels of parental expectations to go into professional fields, such as engineering and medicine as compared to Hispanic or Latino/a students (Trenor, Yu, Waight, Zerda, & Sha, 2008).

In addition to communicating academic expectations, families play an important role in the provision of social support and encouragement for first-generation students. A qualitative study of Mexican-American first-generation college students found that family and non-family members provided a variety of types of support across a wide array of academic domains, and that the type and domain of support varied by the role of the person providing it (Sanchez, Reyes, & Singh, 2005). Examples of these domains of family support include cognitive guidance (e.g., advice giving, tutoring), emotional

support (e.g., encouragement, listening), informational and experiential support (e.g., specific advice from someone with personal experience), modeling behavior, tangible support (e.g., providing money or actively doing things to support the student). This support is provided across a variety of settings, such as help with classes (e.g., assistance completing coursework and homework), the "go/finish" domain (e.g., help with enrollment process and degree completion), choice of major and career path, and other areas (e.g., motivation toward academic pursuits, help applying for scholarships and financial aid, support in interacting with faculty). The authors found that supportive people in these students' lives provided different kinds of support depending on the role that person played in the student's life. For example, parents were most supportive in the domains of providing help with class work, the "go/finish" domain, and choice of major and career path. Student siblings were most supportive in help with class work and "go/finish," but not major and career choice as parents were. However, student peers and institutional agents (i.e., staff and faculty) were supportive in all areas of school life, thus highlighting the importance of first-generation student involvement with campus resources. More recent studies of support from family, friends, teachers, and important others have upheld these findings in a broader population of first generation students and social support appears to be critical for facilitating the transition to college for first generation students (Coffman, 2011). The important role that social support plays in the experiences of first-generation students has been well documented, which makes the repeated finding that first-generation students often lack these important resources especially troubling (Jenkins et al., 2013).

**Interventions for First-generation Students**

Several treatment models for supporting first-generation students achieve their academic goals have been introduced in an effort to reduce disparities in college attendance and completion rates. Lent (2004) proposed a social-cognitive model of normative well-being, which states that overall life satisfaction is dependent on individual psychological characteristics, environmental factors, and sociocultural factors, as well as goal pursuit and progress toward a desired goal within a given life domain, such as postsecondary education. Garriott, Hudyma, Keene, and Sanitago (2015) found support for the utility of this normative model in samples of both first and continuing-generation college students. The following reviewed interventions sought to influence two exogenous variables in this model, namely Environmental Factors and Psychological Factors, which are conceptualized as directly and indirectly influencing academic outcomes, academic satisfaction, and life satisfaction. See Figure 1 for conceptual model.
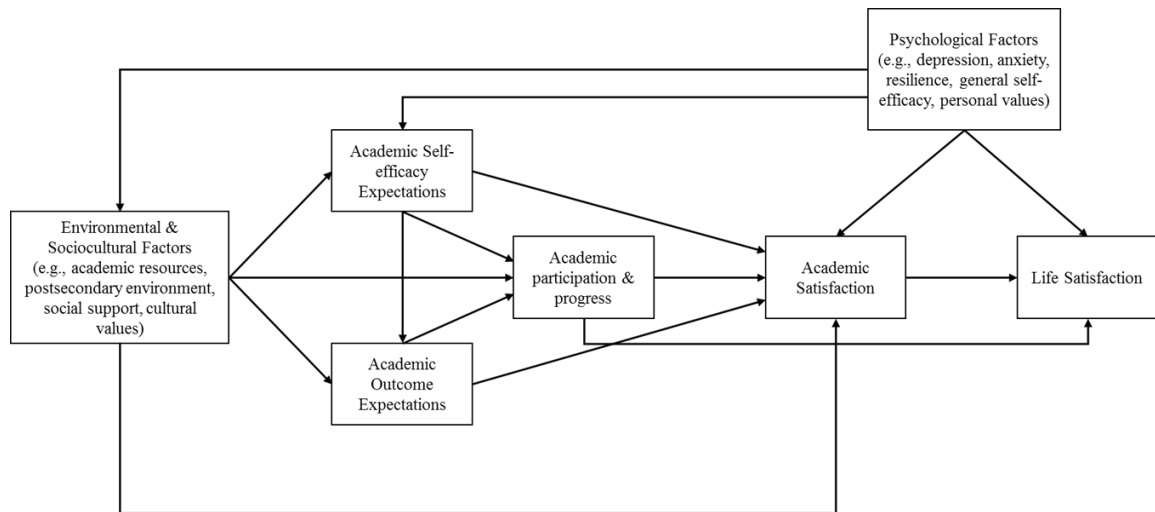


Figure 1: Modified social-cognitive model of normative well-being for first-generation college students. Adapted from Lent (2004).

For the purpose of this brief review of interventions, studies will be presented in two broad categories; interventions addressing environmental factors and interventions addressing individual psychological factors.

**Addressing Environmental Factors**

The number of college access and academic success programs that target students from backgrounds of economic disadvantage, students from underrepresented and minority backgrounds, and first-generation students has been increasing steadily over the last several decades (Engle, 2007). These include institution-based programs, such as the Building Educational Strengths & Talents (BEST) program at UNC Charlotte, which is supported by the federal GEAR UP and TRIO programs for economically and educationally disadvantaged students. This type of program typically includes academic tutoring services (both professional and peer tutors), supplemental instruction programs or study group services, peer mentoring programs, and instructional workshops to support student learning activities. Engle (2007) conducted a review of these intervention programs focusing on academic access and success and identified several general principles that are critical to giving first-generation students access to higher education. These include: improving students' pre-college preparation through rigorous coursework as well as educating students and families about the process of entering higher education; fostering student and parental involvement in planning and aspirations for college; increasing access to financial support and resources to minimize the potential lack of family resources; supporting first-generation student's transition into college through bridging and college orientation programs; and facilitating first-generation students'

participation and integration into college life by providing on-campus housing resources and fostering productive interactions with peers and faculty.

In a report of best practices commissioned by National TRIO Clearinghouse (Thayer, 2000), researchers noted several promising strategies for supporting first-generation student success, including pre-enrollment academic and social preparation, an "intrusive" advising process throughout freshman year, provision of academic services to support classes that first-generation students are enrolled in, and group services that build cohesion among participants. Consistent with these recommendations, many colleges are adopting a learning community approach to supporting first-generation and other underserved and underrepresented populations. Learning community programs incorporate many of these best practices with the goal of building a sense of community with an academic focus among incoming first-generation students (Thayer, 2000). One qualitative study examining the impact of a multicultural learning community on first generation students found that providing students with opportunities to reflect and incorporate their various identities with their lived experiences on a college campus bolstered their ability to develop a coherent "self-narrative" and take ownership and "authorship" of their college experiences (Jehangir, Williams, & Jeske, 2012).

Building upon the learning community approach, living-learning (L/L) programs are becoming more prevalent on university campuses. In a national sample of college students, first-generation students who lived on campus reported higher levels of engagement in their educational institution; this was associated with greater gains in learning and intellectual development (Pike & Kuh, 2005). L/L programs incorporate the learning community approach and add the extra dimension of having students live

together in a shared residence location. Researchers examining data from the National

Study of Living-Learning Programs (NSLLP) found that first generation students in L/L

programs reported an easier and more successful academic and social transition into

college life (Inkelas, Daver, Vogt, & Leonard, 2006). Factors that were especially

important to these students in making their transitions included having helpful

interactions with faculty members, utilizing resources available in their shared residence

halls, and having a supportive residence hall environment to feel a part of. However,

there is limited empirical data on the academic impact of learning communities

specifically targeted at first generation students. What these results do tell us is that

belonging and engagement within the university setting are important factors that

underlie students' decisions to remain enrolled in a university or college setting.

**Addressing Psychological Factors**

As described above, programs designed to support academic access and success

have become widespread at institutions of higher education. However, researchers are

also examining ways in which to design and implement interventions based on

psychosocial models of health and wellbeing. While these programs may not directly

influence first-generation student academic success, they seek to indirectly support

students so that they can live up to their full potential. Examples of these types of

interventions include those designed to link students' long-term career goals with

immediate academic pursuits, such as those based on social cognitive career theory

(SCCT; Lent, Brown, & Hackett, 1994); interventions focusing on first-generation

student identity, sense of belonging, and "fit" within the academic context (e.g. Stephens,

Hamedani, & Destin,2014); and clinical interventions designed to support college student

mental health and wellbeing, such as Acceptance and Commitment Therapy for College Life (ACT-CL; Levin, Hayes, Pistorello, & Seeley, 2016).

One way of enhancing first-generation college student's engagement and participation in college may be to link first-generation students' long-term career goals more directly to their academic pursuits. *Social cognitive career theory* (SCCT) provides a useful conceptual framework for considering the process of developing academic and career interests for students entering post-secondary institutions (Lent, et al., 1994). Derived from Bandura's (1986) general social cognitive theory of behavior, SCCT posits that there are three interdependent components of career development that all students experience to varying degrees. These are the formation and exploration of interests related to future careers, selection of academic and career options, and performance/completion of academic and career pursuits. One case study of a 16-year-old African American male whose parents did not attend college and who was approaching his high school graduation sought to examine the utility of applying SCCT principals to counseling this young man through his decision to pursue post-secondary education (Gibbons & Shoffner, 2004). The authors found that applying SCCT principals to working with their participant was fruitful, especially when discussions included considerations for bolstering self-efficacy, exploring outcome expectations, and identifying perceived barriers and supports for post-secondary participation.

Another study of a program consistent with SCCT implemented in a university setting and targeted at incoming first-generation students in their first year of college (Ayala & Striplen, 2002) examined the impact of a partnership between the researchers and the campus career counseling center. The authors sought to bolster the sense of

purpose and investment that first-generation students had in their educational pursuits by more directly connecting academics to future career paths. While this study was focused on the implementation of this pilot program, other studies of first-generation students in their first year of college support the hypothesis that experiences during the first-year of college play a critical role in students' decision to persist in post-secondary education and that academic self-efficacy is an important cognitive resource (Wright, Jenkins-Guarnieri, & Murdock, 2012).

A randomized, controlled trial using a *difference-education intervention* reduced the achievement gap between first and continuing-generation students by helping first-generation students better utilize college resources, such as their academic advisor and seeking advice from professors (Stephens, Hamedani, & Destin, 2014). Difference-education interventions emphasize students' various sociocultural backgrounds, link these to their college experiences, and help students view these differences as potential sources of strength rather than vulnerabilities (Stephens et al.). The beneficial impact of the difference-education intervention was apparent up to two years after students initially received the intervention, as evidenced by students incorporating their backgrounds when describing their educational experience and demonstrating a healthier physiological stress response compared to first and continuing-generation students who did not receive the intervention (Stephens, Townsend, Hamedani, Destin, & Manzo, 2015). The core feature of these difference education interventions is that they frame first-generation students' cultural backgrounds as strengths rather than weaknesses, rather than ignoring or minimizing these differences. This positive reframing appears to produce long lasting positive changes. Interventions focusing on individual differences (e.g., degree of

academic preparation for college), structural factors, and those that that fortify school-relevant identities may be critical for first-generation student success and lead to a reduction in class-based disparities in education outcomes (Stephens, Brannon, et al., 2015).

Another intervention approach for working proactively with first-generation students focused on a values affirmation writing exercise which asked students to describe their core personal values in an effort to bolster their sense of self and reduce stress. This brief writing intervention showed positive academic outcomes for these first-generation students in an important "gateway" course at a large university (Harackiewicz et al., 2014). A follow up study of this sample showed positive effects of the intervention persisted three years after the original intervention (Tibbetts et al., 2016). The authors found that first-generation students who had more of a focus on independence (affirming values consistent with culture of education) in their writing or were made to focus on independence in lab setting had better academic performance, indicating that those students who had assimilated the norms and values of independence were more successful academically. A similar intervention study focusing on exploration of personal values sought to differentiate the effects of values exploration, drawn from Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 2011), from mere academic goal setting and the associated impact on GPA (Chase, Houmanfar, Hayes, Ward, Vilgarda, & Follette, 2013). The authors found that the values *and* goals intervention was more effective in raising student GPA than just goal setting alone, which they criticize earlier authors for not testing explicitly as part of their intervention model. These types of values-based interventions may be particularly useful for first-generation students early in

their college careers, when they are still coping with the strain of adjustment to college life as well as taking on their new roles as college students.

<div align="center">Summary and Recommendations</div>

In order to close the achievement gap between first and continuing generation students, several interventions that specifically target first-generation students have been designed and delivered. These interventions are typically intended to promote wellness and support academic achievement in students' college careers, which in turn leads to better outcomes across a variety of domains, such as academic achievement, psychological well-being, and a sense of belonging in the college community. However, many of these programs may be underutilized for a variety of reasons, including the fact that they are not required for graduation, may be burdensome for students to participate in, or may neglect important aspects of the experiences of first-generation students, thus leading to low investment and buy in. In addition, these interventions neglect many of the sociocultural factors that exert a powerful influence upon first-generation students. In light of this, this author proposes a modification to Lent's social-cognitive model such that the category of environmental factors should be broadened to include the sociocultural context that first-generation students find themselves in. See Figure 1 for this adapted model. Given this gap in the intervention literature for first-generation students, a culturally adapted intervention designed specifically for first-generation students is warranted and necessary in order to adequately address their unique needs, leverage their strengths, and reduce disparities in achievement predicted by socioeconomic status.

CHAPTER 2: PURPOSE OF STUDY AND AIMS

Adaptation of evidence-based interventions with a focus on individual psychological as well as environmental and sociocultural factors may help to improve academic outcomes of first-generation college students. The previously reviewed research supports the idea that first-generation college students face unique internal and external barriers to achieving their goals for postsecondary education. Consistent with Lent's (2004) model, an ideal intervention for first-generation students would likely include elements to address multiple dimension of the first-generation student experience, specifically individual psychological factors as well as environmental and sociocultural factors. Examples of interventions which fall into these domains include academic preparation and support, case management to address potential lack of material and non-material resources (i.e., economic capital and sociocultural capital), and preventive mental health services to support overall health and wellbeing while students learn coping skills to manage stress associated with adjustment to college. A culturally adapted intervention for first-generation students, which would account for cultural behaviors, beliefs, and attitudes of this population (Whaley & Davis, 2007), is one way in which first generation students can be supported in achieving their goals and reducing class-based disparities in health and education. Based on the literature reviewed above, an ideal intervention would also likely incorporate a treatment approach to address individual values and goals and potential clinical mental health needs while also being attentive to the various sociocultural factors impacting first-generation student academic achievement. The ACT treatment model is well suited to address the need for identifying

and leveraging personal values and goals at the same time as addressing potential mental health needs and supporting emotional wellbeing in a preventive context. This study sought to identify the components of a potential ACT-based intervention for first-generation students that are most salient for this population while identifying areas for potential modification and cultural adaptation.

**Core Principles of ACT**

ACT is a broadly applicable treatment approach with demonstrated effectiveness across a wide variety of psychological presentations, most notably depression, anxiety, and substance use disorders (Ruiz, 2010). The primary focus of ACT, identifying core values and promoting meaningful action toward desired outcomes, is very consistent with previously reviewed psychological interventions, including those based on SCCT. The ACT model of intervention is inherently individualized and strengths-based and there is a growing body of research suggesting the utility of ACT as a preventive intervention to support mental health for students in postsecondary education settings (Muto, Hayes, & Jeffcoat, 2011; Levin, Pistorello, Seeley, & Hayes, 2014; Levin, MacLane, Daflos, Pistorello, Hayes, & Seeley, 2014; Levin, Pistorello, Hayes, Seeley, & Levin, 2015; Levin, Haeger, Pierce, & Twohig, 2016; and Levin, Hayes, et al.,Pistorello, & Seeley, 2016). However, the ACT approach has yet to be tested empirically in a sample of exclusively first-generation students.

ACT is rooted in the tradition of behavioral and cognitive therapies and has been described as a "third wave" cognitive-behavioral model of treatment (Hayes, 2004). The first wave of cognitive behavior therapy focused on purely behavioral approaches to intervention (e.g., direct focus on reducing or substituting problematic behavior through

conditioning or other behavioral interventions). The second wave incorporated cognitive

processes (e.g., the role of thoughts and emotional experience) into the behavioral

approach of the first wave, leading to the widely used term cognitive behavioral therapy

(CBT). The third wave, exemplified by ACT, incorporates considerations for

mindfulness, acceptance of negative emotional experiences, core personal values, and

commitment to meaningful action with previously established CBT interventions. The

result is a broadly applicable treatment approach that has been shown to be effective

across a wide range of psychological problems (see Ruiz, 2010 for a review).

The core theoretical underpinning of ACT is a model of human language called

Relational Frame Theory (RFT; Blackledge, 2003). RFT posits that human thought and

cognition are entirely dependent on "relational frames" (i.e., learned comparative

relationships between words, events, and ideas). This is a normative process for all

humans that helps us make sense of our world and communicate that understanding to

others. However, these associations can become problematic when unpleasant

experiences start to become "related" to objectively unrelated stimuli, such as a child

becoming fearful upon hearing the word "cat" (which is harmless in and of itself) because

he or she remembers being hurt by a cat in the past. Stated another way, relational frames

give us the capacity to experience pain in almost any situation regardless of the presence

of an actual threat. Two processes that necessarily follow from RFT are those of

*experiential avoidance* and *failure of suppression,* which are seen as the root cause of

most psychopathological processes (Hayes, 2004). *Experiential avoidance* is the natural

tendency of an organism to avoid or escape painful stimuli. In humans, this includes not

only external, physical threats, but also private experiences, such as distressing thoughts

and emotions. Paradoxically, this automatic avoidance or suppression of aversive

experiences often leads to an increase in their occurrence and further negative impact on

behavioral functioning (*failure of suppression*), thus psychopathological symptoms

maintain and perpetuate themselves through this process (Hayes, 2004). This maladaptive

process of persistent experiential avoidance has been associated with increased severity

of psychological symptoms, such as depression, anxiety, symptoms related to trauma, and

lower quality of life (Hayes et al., 2004).

The ACT model of treatment seeks to counteract this process by focusing on six

specific domains of *psychological inflexibility* and their associated targets of therapeutic

intervention designed to promote *psychological flexibility* (Hayes et al., 2006). Meta-

analyses examining the treatment components suggested by the psychological flexibility

model have found evidence that supports this theoretical underpinning in both clinical

and non-clinical samples (Levin, Hildebrandt, Lillis, & Hayes, 2012). The first domain is

*cognitive fusion,* which is the tendency to conflate thoughts and emotions as equivalent to

objective reality (becoming "stuck" or fused to thoughts). Hayes et al. (2006) define

*cognitive fusion* as "excessive or improper regulation of behavior by verbal processes"

(p.6). The therapeutic intervention is *cognitive defusion*, which seeks to change the

relational context of these thoughts in order to allow for the possibility of making

adaptive behavioral changes and reducing the negative consequences of the thoughts. An

example of a possible intervention to promote defusion is to have a client label the

process of their thinking by "thanking" their mind for having the thought or simply

altering the thought to include the phrase "I'm noticing that I'm having the thought…" So

the thought "I don't belong here" becomes "I'm noticing that I'm having the thought that I don't belong here."

The second domain of inflexibility is *experiential avoidance*, as outlined above. A more technical definition of this term can be found in Hayes et al. (2006): "the attempt to alter the form, frequency or situational sensitivity of private events even when doing so causes behavioral harm" (p.7). The corollary of avoidance then is *experiential acceptance,* which is the process of learning to be fully aware and accepting of the full range of emotional experiences, including aversive experiences. It should be noted that there is a sharp distinction between being accepting of unpleasant emotional experiences and tolerating injustices such as discrimination or passively allowing one's self to come to harm. For example, being discriminated against or marginalized is unacceptable, but if one is accepting of their personal reactions to their experience then they are freed to decide what course of action is most consistent with their personal values and goals (Stitt, 2014).

The third and fourth processes of inflexibility are the *dominance of the conceptualized past and/or feared future* and *attachment to conceptualized self.* These include rumination on feelings of guilt, shame, regret, and self-blame for events that have already occurred; anxiety linked to feared possible future conditions or events that have not yet happened; and tightly held beliefs about the self that lead to rigid and unchanging narratives about what is or isn't possible. The therapeutic interventions for these consist of inviting the client to interact with the here and now more directly (*being present*) and view themselves more flexibly as the context for their experiences rather than becoming attached to them (*self as context*). These interventions are enacted through non-

judgmental description of thoughts and feelings, mindfulness or grounding exercises, use of metaphor, and experiential processes.

Taken together, these first four domains of psychological flexibility/inflexibility can be viewed as the ACT conceptualization of mindfulness and acceptance processes. The final two domains, *Lack of Clarity/Clarification of Values* and *Avoidant Persistence/Committed Action,* then, are how these first four translate into behavior. The goal of clarifying values is to shift behavior away from the short-term goal of avoiding unpleasant experiences and make it possible for the client to commit to taking action toward more personally meaningful long-term goals. To this end, the process of behavior change in the context of ACT is very similar to other behavior-based strategies of intervention, including exposure, skill building, goal setting, and shaping (Hayes et al., 2006).

Several studies have found evidence for the utility of ACT-based interventions in college populations, with positive impact on mental health symptoms (e.g., Levin et al., 2012; Levin, MacLane, et al., 2014; Levin et al., 2015; Levin, Haeger, et al., 2016) as well as evidence for the utility of a preventive intervention strategy (e.g., Levin, Pistorello, Hayes, & Seeley, 2014; Levin, Hayes, Pistorello, & Seeley, 2016). However, these interventions tend to focus on internal barrier to academic success while neglecting attention to external barriers faced by many first-generation students (e.g., lack of resources, competing demands, role conflicts). The authors have also noted limitations in the representativeness of their samples which tended to be largely White, female, and restricted to a single institution. Further research is needed to establish the feasibility of a preventive ACT-based intervention tailored for a first-generation student population.

PURPOSE OF STUDY

This study is therefore an attempt to develop a tailored intervention for first-generation college students working from an adapted version of Lent's (2004) social-cognitive model of normative well-being. Essentially, academic participation, progress, satisfaction, and overall life satisfaction are all influenced by individual psychological factors, as well as environmental and sociocultural factors. Each of these factors are potentially mediated by domain specific self efficacy (i.e., academic self-efficacy) and domain specific outcome expectations (i.e., academic outcome expectations). The proposed intervention would seek to both positively influence individual psychological factors (e.g., providing a preventive mental health intervention, building resilience and coping skills, identifying values and setting values-based goals) as well as address environmental and sociocultural factors (e.g., assist students in leveraging academic resources, and building social and cultural capital) in accordance with the adapted Lent model. See Figure 1 for conceptual model.

The process of cultural adaptation utilized in this study will follow the model outlined by Castro, Barrera, and Streiker (2010). Castro and colleague's model posits that culturally adapted, evidence-based treatments must include both common mediators (i.e., factors that are the same for both the target population as well as the broader population) as well as unique sociocultural mediators (i.e., factors that are specific to the population of interest). Following from these there are common outcomes (e.g., college performance as measured by GPA, attrition or persistence in postsecondary education, and graduation rates) as well as outcomes of specific interest for the target population (e.g., college adjustment, sense of belonging and fit in the college environment, successful negotiation

of competing role demands). For an evidence-based practice to be considered successfully adapted, it must account for each of these factors in addition to factors that may influence participation and completion of the program. See Figure 2 for a conceptual model of needs for cultural adaptation adapted from Castro et al., 2010.
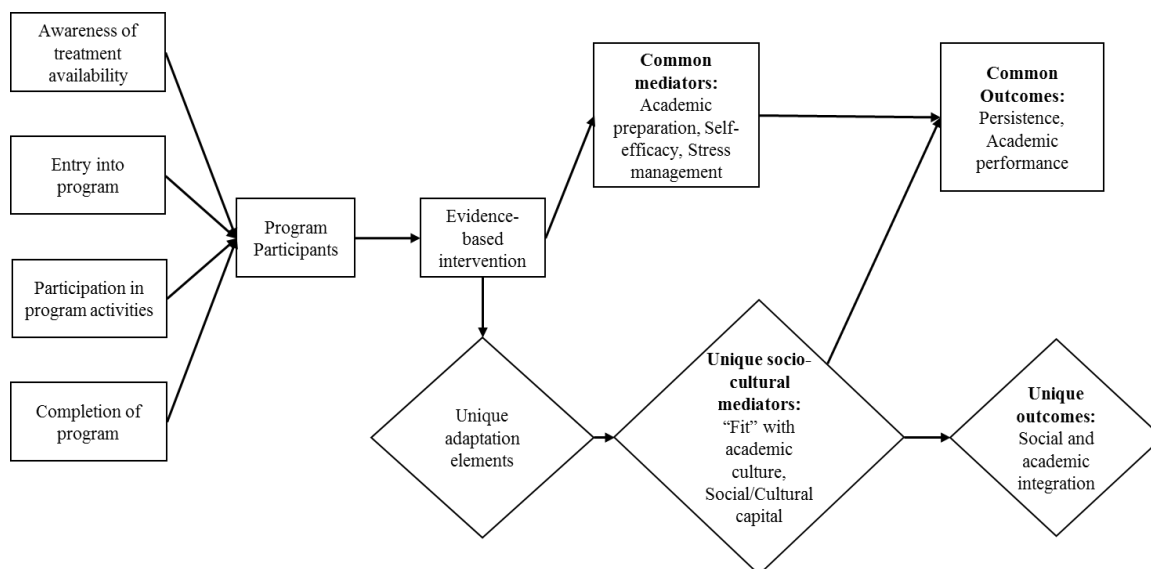


Figure 2: Conceptual model of potential adaptations needed to the evidence-based preventive mental health intervention for first-generation college students

While ACT has been shown to be a promising treatment model for both clinical and nonclinical populations, empirical evidence for its use in a college population is limited and it has yet to be tested specifically with first-generation students. To date, only three studies have specifically examined preventive ACT-based interventions for college students. Muto et al., (2011) tested a bibliotherapy approach to implementing ACT with a sample of international Japanese college students enrolled in a university in the United States. The authors gave participants a copy of an ACT workbook translated and adapted for a Japanese audience by a panel of native Japanese speakers who were doctoral level

behavior analysts or behavior therapists familiar with ACT. Despite mental health status not being part of the selection criteria for Muto et al.'s study, roughly 80% of their sample exceeded the clinical cutoff of a scale of depression and anxiety. Participants in this study showed improvements in reported symptoms of depression, anxiety, and stress after receiving the workbook, and these results were both mediated and moderated by psychological flexibility such that improvement in mental health outcomes could be accounted for by increases in psychological flexibility and participants with lower levels of psychological flexibility at baseline measurement showed greater improvements at follow up.

A recently developed, web-based preventive mental health intervention for college students, ACT on College Life (ACT-CL; Levin, Pistorello, et al., 2014), is still in the pilot stage of intervention development, but has shown promising results. ACT-CL is an interactive media package that college students can access from their personal computer. There are two modules, consisting of six lessons each, which provide psychoeducation and directed activities to reinforce lessons on exploring values and coping with barriers. Module 1: Exploring your values, consists of defining what values are, clarifying one's own personal values, reflecting on those values, defining effective and values-based goals, setting goals, and wrapping up. Module 2: Dealing with Barriers, consists of a review of the previous lesson, exploring internal barriers to actions, the problem with control strategies, defining and practicing willingness, linking willingness to values-based actions, and wrapping up. Each module was delivered one week apart and followed by a week of tailored emails and text messages to check in on participant progress, remind them of their goals, and encourage further participation.

A pilot study of this intervention (Levin, Pistorello, et al., 2014) found that the program itself was easy for participants to use, increased knowledge of ACT principals, increased personal goals related to education, and decreased symptoms of depression and anxiety (among students reporting at least minimal distress) relative to a waitlist control group. A follow up study of ACT-CL (Levin, Hayes, et al., 2016) compared ACT-CL to an existing web-based mental health education intervention. Their findings supported the feasibility of the ACT-CL and demonstrated that the prototype program was as effective at reducing mental health symptoms as a standardized online mental health education program. Results also supported previous findings that psychological flexibility is associated with reduction in mental health symptoms. However, the ACT-CL protocol demonstrated lower ratings for user engagement and satisfaction. Authors noted several possible revisions and improvements to be made to the ACT-CL protocol and further studies are underway.

One recent survey study conducted by this research group examined the potential barriers associated with providing online self-help programs in general to college students (Levin, Stocke, Pierce, & Levin, 2018). Results of this study indicated that while a subset of students expressed a preference for online self-help (when given the option between that and in-person therapy), the majority of the sample expressed low interest in the use of online self-help programs and were more likely to express intent to use and/or actual use of informal support (e.g., family members, friends). Noted barriers to using online self-help (e.g., using a website or mobile app) included concerns about privacy, data security, stigma, and credibility of the program. While offering an online self-help program may address some barriers to accessing mental health services, such as cost and

concerns for anonymity, the students surveyed in this study indicated a number of significant concerns related to seeking services in this format.

Taken together, these studies suggest that ACT may be a potentially useful way to proactively intervene with incoming first-generation students as they transition into college. Additionally, ACT may help to bolster the individual strengths of upper-classmen first generation students as well as increase opportunities to connect with other first-generation students at their institution. Utilizing the principles of ACT and attending to the core process of psychological flexibility/inflexibility may be a way to empower first-generation students to better cope with the psychosocialcultural strain associated with their first-generation status, adjustment to postsecondary educational settings, and pursuit of academic goals. These includes managing stress associated with experiencing a cultural mismatch between first-generation students' background and the university setting, coping with a lack of social and economic resources, thinking intentionally about their possible future selves, connecting the pursuit of a college education to important personal goals, and translating these tensions into meaningful action.

Specific Aims and Hypotheses

The goal of this study is to elicit information from first generation college students at various stages of their undergraduate or graduate career in order to inform the development of a tailored intervention to help support them in achieving their academic goals. This process will be carried out in two phases. The first phase will involve gathering a sample of first-generation college students currently enrolled in undergraduate courses at UNC Charlotte. These students will be asked to give feedback

on an example preventive mental health intervention for college students (i.e., ACT-CL). Specific aims and hypotheses for the first phase of the proposed project are presented below.

Aim 1a: To obtain feedback from first-generation college students at various stages of their academic career to make appropriate cultural adaptations to an ACT-based preventive mental health intervention

Aim 1b: Organize feedback from participants and develop an adaptation to the ACT-based preventive mental health program

Hypothesis 1a: Participants will suggest the need for changes and provide recommendations for adaptations to the ACT-based preventive mental health program

Hypothesis 1b: Feedback provided by participants will be of sufficient detail to suggest meaningful adaptations to the example ACT-based preventive mental health intervention.

Following this first round of interviews, modifications will be made to the example intervention in order to make it more culturally relevant to first-generation students and to address other feedback received in Phase 1. These modifications were based on both interview data as well as input from clinicians and faculty members familiar with both ACT-based interventions and the first-generation student population.

Participants in Phase 1 suggested a number of potential modifications to the example intervention. Among the most consistent of these recommendations was the desire for some kind of face-to-face interaction, either with a counselor or with other students, during the course of the program. Another of the most consistently coded themes was the importance of feeling a sense of community and making social connections on campus. Additionally, many participants worried that the online-only

format of ACT-CL would not be engaging enough for students to complete. However, the most consistently stated feedback had to do with broadening the focus of the program to address needs beyond psychological factors, such as providing support in navigating financial aid, receiving practical advice related to adjusting to campus life, and getting connected to other campus resources (e.g., university counseling services, tutoring services, student health services, disability services, etc.). In addition to these constructive comments, Phase 1 participants seemed to appreciate the core didactic components focusing on using ACT interventions to increase psychological flexibility and build resilience. Thus the Phase 2 intervention preserved the didactic portions of Phase 1 and added a group component. The modified interventions described to participants in Phase 2 followed the structure of a cognitive-behavioral group therapy intervention (Heimberg & Becker, 2002) which consisted of two in-person didactic sessions followed by regular weekly meetings with other first-generation college students. The intent of continuing to hold group sessions after delivering the didactic portion of the intervention was to foster connection between program participants, create opportunities for program participants to share knowledge, and to create opportunities for group facilitators to connect program participants with needed campus resources and other programs as appropriate.

A second round of first-generation student interviews were then conducted and feedback on this prototype intervention was solicited in order to make further refinements. Aims and hypotheses for this second round are identical to the first round with the exception that the example intervention described was the prototype intervention.

Aim 2a: To obtain feedback from first-generation college students at various stages of their academic career in order to make appropriate cultural adaptations to prototype preventive mental health intervention for first-generation students

Aim 2b: Organize feedback from participants and develop an adaptation to the prototype preventive mental health program

Hypothesis 2a: Participants will suggest the need for changes and provide recommendations for adaptations to the prototype preventive mental health program

Hypothesis 2b: Feedback provided by participants will be of sufficient detail to suggest meaningful adaptations to the example prototype preventive mental health intervention.

CHAPTER 3: METHODOLOGY

This study aimed to develop a cultural adaptation of an evidence-based, self-help, preventive, mental health intervention tailored for first-generation college students. Best practices for tailoring interventions for specific populations include an iterative process which applies both qualitative and quantitative methods (Castro, Barrera, & Steiker, 2010). The project followed Barrera, Castro, Strycker, & Toobert's (2013) five stage model of cultural adaptation. The first stage, information gathering, is used to determine if a cultural adaptation is warranted. The second stage of Barrera and colleagues' (2013) model describes a preliminary intervention design where feedback is solicited from potential recipients of the intervention and the intervention is further refined based on this feedback. This project involved two stages of interviews to gather qualitative and quantitative data to determine potential changes and adaptations to the ACT-CL protocol in order to develop a new ACT-based intervention. Steps three though five of Barrera and colleague's model involve conducting a pilot test based on the preliminary adapted intervention with a small group of individuals who are representative of the target population, refining the interventions using feedback from preliminary pilot studies, and finally implementing a full cultural adaptation trial to determine the effectiveness of the new intervention within the target population. These final stages were beyond the scope of the proposed project, though future research will hopefully extend the reach of this project and complete the process of culturally adapting an ACT-based intervention for first-generation college students. Detail of the methods employed in this study are provided below.

Overview of Research Design

The proposed project aimed to gather information to guide the development of an ACT-based, preventive mental health intervention for first-generation college students. This was accomplished by gathering direct feedback from first-generation students currently enrolled in college. Participants were recruited from the UNC Charlotte campus. Information or the most recently available academic year (2017-2018) indicates that 27% of newly enrolled undergraduates were first-generation college students and 54% received a Federal Pell grant (a need-based grant for students from low-income backgrounds) (UNC Charlotte Office of Institutional Research, 2018).

Eligible participants were recruited into the study on a first-come, first-served basis. In the first phase of this study, participants were asked questions about their overall college experiences, both positive and negative. Particular attention was paid to what factors participants felt had (or continue to) impacted their transition into college, their ability to pursue in their academic goals, remain enrolled, and the degree to which they felt they belonged or fit in with the campus culture. Following this introductory discussion, participants then listened to an example intervention and were asked to provide feedback. In Phase 1 of this study, participants heard a description of ACT-CL, a web-based self-help intervention for the general population of college students. Participant feedback about this intervention and more general information about positive and negative experiences as FGC-students were used to inform the development of a modified intervention tailored more specifically for use with FGC students.

This modified intervention was then described in a second round of interview sessions. The second round of interviews were identical to the first in terms of the

questions asked of participants, with the exception of the overview of ACT-CL being replaced with a description of the modified intervention. Following this second round of interviews, the description of the Phase 2 example interventions was further refined and recommendations for implementation were developed.

Data Collection Protocols and Procedures

Approval from the UNC Charlotte Institutional Review Board for research utilizing human subjects was initially granted on March 19th, 2018 and a revision to the original format was accepted on May 17th, 2018. IRB approval was received prior to recruitment activities. Fliers inviting people to participate in the study were posted on public poster boards on campus and an announcement was made through the UNCC SONA research system, a system for awarding credit to students for participating in research studies that is often required as part of undergraduate research methodology classes and labs. Potential participants who responded to advertisements and completed the online pre-screening survey and found to meet study eligibility requirements were contacted and invited to participate in interviews.

Thirty-seven potential participants were screened to determine if they met eligibility criteria. Eligibility criteria include participants being older than 18, self-identifying as a first-generation student (here defined as having no parent, guardian, or primary caregiver having completed a four-year degree), and currently enrolled at least half-time in undergraduate coursework. A total of 16 participants were enrolled in the study, four men and 12 women with ages ranging from 19 to 32. Participants were divided evenly across Phases 1 and 2, with the first eight participants being included in

Phase 1 and the last eight included in Phase 2. Participants were 16 currently enrolled undergraduate students who ranged in age from 19 to 32. Participant were enrolled in the study on a first-come-first-served basis, with the first eight eligible participants being assigned to Phase1 and the final eight being assigned to Phase 2.

Saturation sampling is a core methodological concept in qualitative research. A sample is said to have reached "saturation" at the point that additional data collection yields no additional information above and beyond what has already been collected from earlier participants (Green & Thorogood, 2014). While conceptual saturation is theoretically without limits, Green and Thorogood suggest a more pragmatic approach to sampling which involves documenting when new qualitative codes are added to the code book and tracking when new qualitative data does not substantively change the existing codes or code book. Samples sizes of between six and 12 are commonly suggested as being potentially adequate for narrowly focus research questions (Green & Thorogood, 2014). For the overall sample, 95% of codes were identified in the first 12 interviews. When looking at the individual phases of this study, 89% of codes in Phase 1 were identified in the first six interviews. In Phase 2, 89% of codes unique to Phase 2 were identified in the first five interviews. These suggest that the sample was saturated to a reasonable degree for the overall sample and within each Phase of the study.

Interviews were conducted by phone in order to reduce potential barriers to participation, such as traveling to campus or missing work. A short description of the study and review of confidentiality procedures were provided at the start of each interview and participants were asked to reaffirm their consent to participate in the study at that time. This author served as interviewer, note taker, and primary coder of interview

data. Interview procedures emphasize the importance of having a facilitator who is able to both listen to participants and probe effectively (Wilkinson & Birmingham, 2003). This author has experience in individual therapy settings and in conducting semi-structured interviews with college-age clients and is familiar with ACT-based interventions, which allowed for sufficient exploration of content in this context.

Interviews began with a brief overview of the study and the motivations behind it. This lead into an open-ended discussion of the various challenges that participants have faced over the course of their college career, particularly those that they attribute to being a first generation college student. Questions asked by the interviewer during the opening stages of the interview included: 1) Where are you in your college career?; 2) What were some things that made the transition into college easier and/or made it easier for you to stay at the university?; 3) Was there anything that seemed to get in the way or made it harder for you to be here?; and 4) What kinds of things are impacting you currently?

Participants in the first round of interviews were then given a brief overview of an existing ACT-based preventive intervention targeted at the general population of college students (ACT-CL, Levin, Haeger, et al., 2016). This description included a very brief introduction to the core concepts of ACT (i.e., focusing on values-based actions and acceptance of difficult emotional experiences) and relevant examples to each participant (e.g., procrastination) were discussed to increase participant's understanding. See Appendix A for transcript of this program description. Participants were then asked to provide thoughts and opinions, or general likes and dislikes of the existing program, as well as any perceived match or mismatch between the program and their sociocultural values. Questions used during interviews included: 1) What are your general thoughts on

the ACT-based program?; 2) What do you like about it? Why?; 3) What did you dislike about it? Why?; 4) What was something that might be helpful about it? Why?; 5) What was something that might be less helpful about it? Why?; 6) Do you think it would work for you or someone like you?; 7) What would you change about the program to make it more relevant to first-generation college students?; 8) What would be some important considerations that people should keep in mind (e.g., necessity of working while in school, potential conflict between family/home culture and predominate school culture) when working with first-generation college students?; 9) Do you think you would be able to follow this program? What might be a barrier to following this program?; 10) Would you recommend a program like this to other first-generation students? Why or why not?; 11) What changes would you make to this program to make it more relevant for first-generation students?; and 12) How can we make a program like this more helpful for first-generation students? These questions were adapted from items used in prior research that solicited feedback from a population of interest for the purpose of adapting evidence-based clinical interventions for use with specific populations (Shea, Cachelin, Urive, Striegel, Thompson, & Wilson, 2012). All questions were asked of all interview participants in Phase 1 and Phase 2 of the study. Occasionally, the interviewer would ask follow up questions or use reflective listening to clarify or encourage participants to elaborate on responses.

Following the interview, participants were asked to complete a demographic questionnaire to obtain additional information on educational history, family background, exposure to other college programs/treatments, and a battery of questionnaires designed to assess mental health symptomatology, and psychological flexibility/inflexibility. See

Measures for more information on these questionnaires. Participants who agreed to participate in an interview were given the option to be compensated with research credits or entry into a drawing for an Amazon Gift Card. See Figure 3 for flow chart of participant enrollment and study completion process.
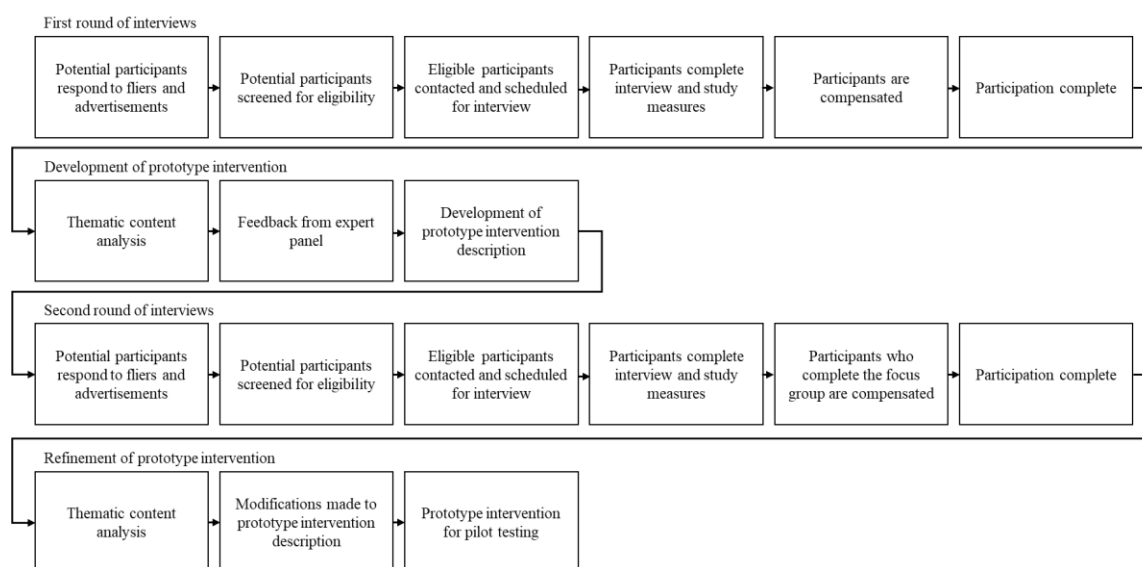
First round of interviews

| Potential participants respond to fliers and advertisements | Potential participants screened for eligibility | Eligible participants contacted and scheduled for interview | Participants complete interview and study measures | Participants are compensated | Participation complete |

Development of prototype intervention

| Thematic content analysis | Feedback from expert panel | Development of prototype intervention description |

Second round of interviews

| Potential participants respond to fliers and advertisements | Potential participants screened for eligibility | Eligible participants contacted and scheduled for interview | Participants complete interview and study measures | Participants who complete the focus group are compensated | Participation complete |

Refinement of prototype intervention

| Thematic content analysis | Modifications made to prototype intervention description | Prototype intervention for pilot testing |

Figure 3. Flowchart of study participation

Measures

*Eligibility screening*. Participants who volunteered to participate in the study were asked to disclose their age, race/ethnic background, highest level of parental/guardian education achieved, and current enrollment status in an online survey format.

Following the interview, participants were emailed a link to an online survey which contained a demographic questionnaire and a battery of psychological instruments. The questionnaire and instruments are described below.

*Demographic questionnaire*. Participants were asked to report their age, gender, race/ethnicity, parental and personal household income, relationship status, post-

secondary exposure prior to enrolling in college (i.e., the degree to which they were exposed to people with any post-secondary education), and any prior participation in student services (e.g., UNC Charlotte BEST program).

*Depression, Anxiety, and Stress Scale (DASS; Lovibond & Lovibond, 1995).* The DASS is comprised of three distinct subscales which assess depression, anxiety, and stress symptoms. Participants rated agreement with how much each of the 21 items applied to them over the course of the week prior to their completion of the assessment. Items were rated on a four-point scale from 0 (did not apply to me at all) to 3 (applied to me very much, or most of the time). Higher scores on subscales are indicative of greater distress across each domain. The DASS has demonstrated adequate reliability and validity in previous studies (Lovibond & Lovibond, 1995). The DASS has also demonstrated sensitivity to detecting treatment effects in previous studies of ACT interventions in college student samples (e.g., Muto et al., 2011; Levin, Haeger, et al., 2016).

*Mental Health Continuum-Short Form (MHC-SF; Keyes, 2005).* The MHC-SF assesses positive mental health. This includes dimension of mental health and wellbeing such as positive affect, satisfaction with life, social integration, social contribution, autonomy, personal growth, purpose in life, and self-acceptance. Participants were asked to rate agreement with 14 items, with higher scores indicating greater positive mental health. The MHC-SF has shown adequate reliability and validity in previous research (Keyes, 2005).

*Avoidance and Fusion Questionnaire for Youth (AFQ-Y; Greco, Lambert, & Baer, 2008).* The AFQ-Y is a 17-item measure of psychological flexibility and

inflexibility. Participants were asked to rate items on a five-point scale from 0 (not at all true) to 4 (very true), with higher scores indicating greater inflexibility (lower flexibility). The AFQ-Y has demonstrated adequate reliability and validity in university student samples (e.g., Schmalz & Murrell, 2010; Levin, Haeger, et al., 2016). The AFQ-Y was chosen rather than the adult version (AAQ-II) because the items which comprise the AFQ-Y are more relevant to a college-age population.

*Institutional Integration Scale (IIS; Pascarella & Terenzini, 1980).* The IIS consists of five subscales that ask participants to rate satisfaction with peer-group interactions, interactions with faculty, perceptions of faculty concern for student development and teaching, student rating of their own academic and intellectual development, and institutional and goal commitments. The IIS was developed specifically for use with college students and has demonstrated adequate reliability and validity (Pascarella & Terenzini, 1980).

*Ability Uncertainty Scale (AUS; Lewis & Hodges, 2015).* The AUS consists of 12 items that assess student's perception of their "fit" within their postsecondary settings. This concept of fit as measured by the AUS includes both intellectual fit and social belonging. The AUS was developed and validated using samples of undergraduate students and has demonstrated adequate reliability and validity in this population (Lewis & Hodges, 2015).

Data Analysis

Individual dialogue and responses to interview questions were transcribed into text documents and analyzed using thematic content analysis. This author generated an

initial codebook, which delineated and labeled ideas expressed by participants in the first round of interviews following the stages of thematic content analysis outlined in Braun and Clarke (2006). First, interviews were transcribed into text documents by this author and initial ideas were documented in order to become more familiar with the data. Next, a set of initial codes were generated based on ideas expressed by participants. These codes were then collated into potential themes. These themes were then reviewed to ensure that they were consistent with the coded responses and the data set as a whole to generate a thematic overview of the analysis. These themes were further refined to generate clearer definitions and names for each theme. This author and another member of the research team, a pre-doctoral intern in Counseling Psychology working in a university counseling center and providing psychological services to college students, collaboratively coded two transcripts to further refine the codebook. Following this, both members of the research team used the codebook to independently code two Phase 1 interview transcripts. Agreement of at least 80% is commonly considered the minimum for consistency in coding (Fleiss, 1981) and was achieved. Disagreements between coders were resolved through discussion until a consensus was reached about the data selection.

In addition to collaborating with members of the research team, an expert panel of clinicians working in a university counseling center setting were consulted to aid with the development of initial codes and robustness of the final code book. These clinicians were a Licensed Clinical Social Worker and a Licensed Psychologist, both of whom work in a university counseling center with college students and have a particular interest in working with students from underrepresented and marginalized backgrounds. These

themes in turn informed the development of the example intervention described to participants in Phase 2.

Themes generated from Phase 1 data along with input from an expert panel were used to inform the development of a modified ACT-based intervention for discussion in Phase 2 interviews. Because the majority of participants described the importance of making social connections on campus and expressed a desire for face-to-face interaction with a counselor or other supportive member of campus, an in-person group-based intervention was identified as a feasible way to address these concerns. Additionally, Phase 1 participants seemed to appreciate the structure and content of ACT-CL, so these didactic components were preserved in the Phase 2 example intervention. The Phase 2 example intervention was based upon the structure (but not the content) of Heimberg and Becker's (2002) Cognitive-Behavioral Group Therapy (CBGT) for Social Phobia. This group-based intervention focuses on the use of cognitive restructuring and exposure to alleviate symptoms of social anxiety and social phobia and is typically co-facilitated by at least two clinicians. The three main components of CBGT are: 1) group-based didactic sessions focusing of teaching CBT-based techniques to help participants learn to restructure their automatic negative thoughts and thus break the cycle of avoidance of feared stimuli which perpetuates social anxiety; 2) in-session exposure to feared social stimuli (i.e., role plays conducted with other program participants) in order to support the learning and rehearsal of skills learned in the didactic portion of the intervention, and 3) homework assignments which instruct program participants to seek out opportunities for *in vivo* exposure and to practice self-administered cognitive restructuring techniques.

In the Phase 2 example intervention, the didactic portions of the CBGT intervention were replaced with ACT-CL learning modules. Personalized reminders and prompts to focus on values and goals from ACT-CL protocol were described in place of homework assignments. Group-session format was preserved and rather than using group setting for *in vivo* exposure, example program participants were described as being encouraged to use the space as a supportive discussion group where participants could share their knowledge of helpful campus resources (with guidance and input from program facilitators) and develop social support through strengthening relationships with other group members. See Appendix B for script of the Phase 2 example intervention.

Quantitative Analysis

Descriptive statistics were utilized to determine the demographic, mental health, and level of social integration into the academic institution using SPSS Version 22 (IBM, 2013). Analyses were conducted for the full sample only. The initially proposed version of this study suggested analyzing quantitative data separately by class standing, in order to achieve a cross-sectional analysis of changes in variables captured by study measures over time. It was also suggested that participants in Phase 1 and 2 be compared to each other to determine if there were significant differences between participants in each half of this study. However, due to small sample size these comparisons were not feasible.

Qualitative Analysis

Qualitative data were managed using NVIVO Version 12 (QSR International, 2015). Interviews were audio recorded and transcribed by this author. Following

transcription, interview data were analyzed using thematic content analysis (Green & Thorogood, 2014) to identify important themes and areas for adaptation of the example ACT-based interventions. This approach helped to ensure that all themes identified in the data actually came from original participant opinions gathered in interview sessions and were not a product of bias on the part of the author. Qualitative data analysis followed guidelines outlined in Braun and Clarke (2006). Specifically, coding followed an iterative process with the initial stage being the development of a codebook detailing definitions and boundaries of each identified code. The second stage consisted of members of the research team using the codebook to independently code a subset of interview transcripts. After coding, results were compared to establish inter-rater agreement. Agreement of at least 80% (Kappa=.80) was considered the minimum acceptable level for this study and is considered the general standard for consistency (Landis & Koch, 1977). Disagreement between coders was resolved through discussion of the disagreement until a consensus was reached about that particular disagreement. This process of thematic content analysis was used after the first stage of interviews to inform the development of a prototype intervention to be described to participants in Phase 2. In addition to the identified themes, the Phase 2 example intervention was informed by expert clinicians familiar with both ACT and the first-generation college student population. This prototype intervention was presented in the second stage of interviews and a second round of thematic content analysis was conducted. Themes from the second round of interviews were then used to further refine the prototype intervention and provide recommendations for a culturally adapted intervention tailored for first-generation college students.

Summary

This study explored the utility of developing a culturally informed, ACT-based intervention tailored to the specific needs and strengths of first-generation college students. This study followed the model proposed by Barrera and colleagues (2013), though we do acknowledge the existence of other methods for developing culturally adapted interventions. This project sought to fulfill the first two steps in Barrera et al.'s model for cultural adaptation with the ultimate goal of carrying out the last three stages of the model (pilot testing the recommended intervention, further refining the intervention using feedback from pilot participants, and deploying a fully adapted intervention and analyzing outcome data) in future studies. This project used qualitative and quantitative methods to meet the research goals outlined above, explored stated hypotheses, and outlined the initial steps of developing a culturally adapted intervention to support academic success and overall health and wellbeing for first-generation college students.

CHAPTER 4: RESULTS

Quantitative Results

Participant Screening and Recruitment

A total of 37 participants were screened for the study. After reviewing the pre-screening survey, six participants were found to be not eligible due to not being first-generation students (i.e., one or more parents, guardians, and/or caregivers had completed a four-year degree or higher). Of the 31 eligible participants, 15 declined to participate in the interview portion of the study or were lost to follow up (i.e., did not respond to researcher's attempts to contact and schedule interview session). Of the remaining 16 participants, the first eight people who volunteered were placed in the Phase 1 interviews and the final eight who participated were placed in Phase 2. Fifteen of 16 participants completed the post-interview survey. See Figure 4 for a flowchart of participant recruitment.
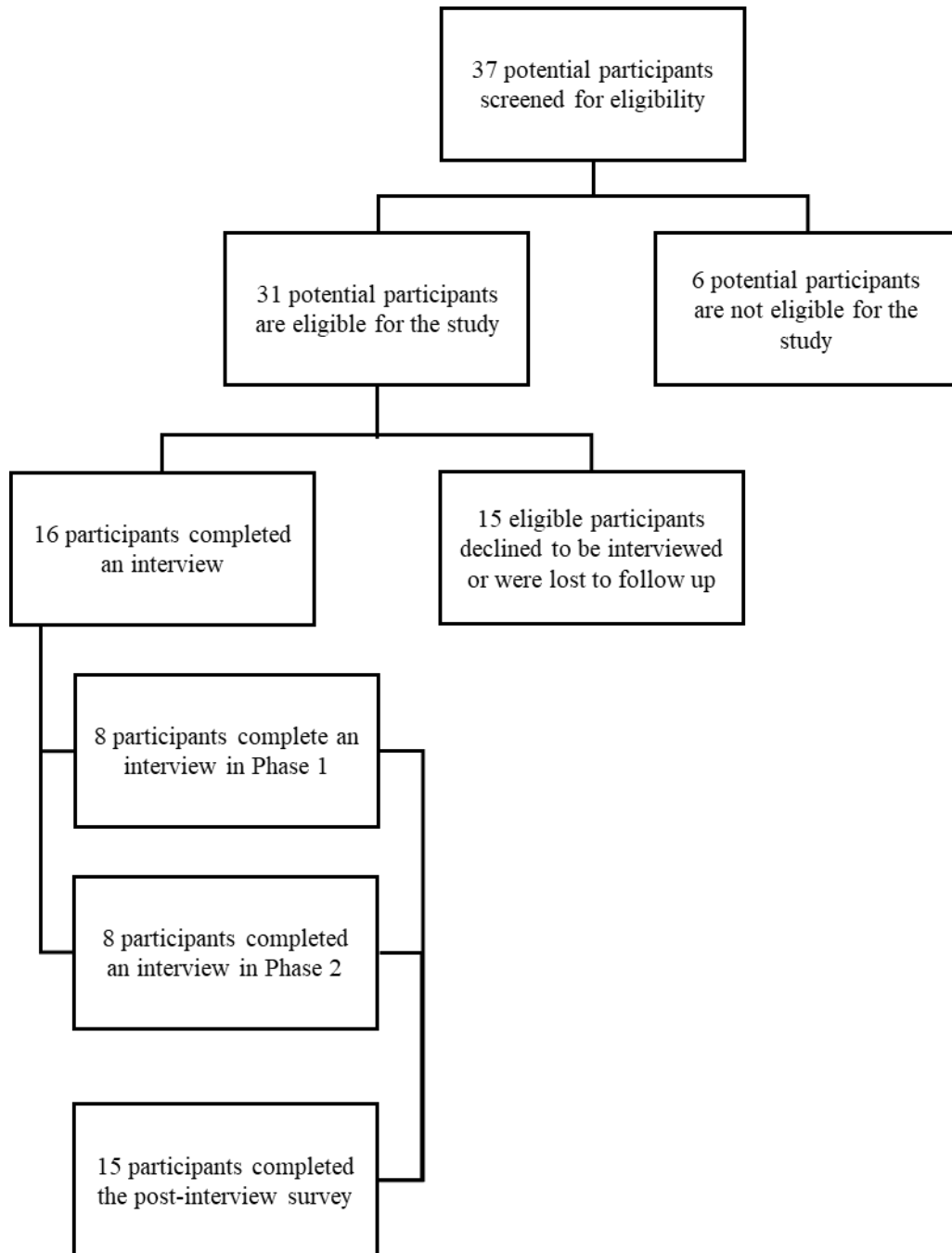
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                    ┌─────────────────────────┐
                    │  37 potential participants │
                    │   screened for eligibility │
                    └─────────────────────────┘
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37 potential participants screened for eligibility

31 potential participants are eligible for the study

6 potential participants are not eligible for the study

16 participants completed an interview

15 eligible participants declined to be interviewed or were lost to follow up

8 participants complete an interview in Phase 1

8 participants completed an interview in Phase 2

15 participants completed the post-interview survey

Figure 4: Flowchart of participant recruitment.

Participant Demographics

Participant ages ranged from 19 to 32 with a mean age of 23.46 (*SD*=4.24). One quarter of participants were men and 75% of the sample were women. Three participants

(19%) were sophomores or second-years, eight were juniors or third-years (56%), and five were seniors or 4/4+ year students (31%). Participants in Phase 2 of the student tended to be of higher class standing as compared to those who participated in Phase 1, with all seniors volunteering later than all sophomores: this resulted in all seniors participating in Phase 2 and all sophomores participating in Phase 1. The largest category for racial or ethnic identity was White (40%), with African Americans/Blacks making up a third (33%), Hispanics/Latino/as fifth (20%), and Asian Americans/Asians 13%. In terms of financial strain, only two of the participants described their financial situation as "rarely stressful" (13%) while the rest reported their financial situations as sometimes (40%), often (33%), or always stressful (13%).

One post-interview survey item asked participants to list "other people in your life who have completed post-secondary education." Two participants stated that they did not know of anyone else who had completed post-secondary education. Six participants nominated family members other than parents/guardians, such as aunts, uncles, siblings, and cousins. Six participants nominated peers, such as close friends and romantic partners. One participant nominated the parent of a close friend.

When asked about utilization of campus resources, the majority of participants indicated that they had utilized at least one campus resource during their time on campus. These resources included the university counseling center, student health services, tutoring services (both within academic departments and general campus tutoring services), the career center, the writing resource center, the student veteran's office, recreational facilities, athletic facilities, and student club and organization resources.

Post-interview questionnaires

Means and standard deviations were calculated for each of the post-interview mental health questionnaires. On the DASS, participants reported relatively low levels of anxiety (*M*=.49, *SD*=.75) and slightly (though not significantly) higher levels of depression (*M*=.70, *SD*=.90) and stress (*M*=.99, *SD*=.88) on a scale of 0 to 3, indicating relatively low levels of reported symptoms. On the MHC-short form, participants had an average score of 3.28 (*SD*=1.58) on a scale of 0 to 5, indicating a moderate level of positive mental health. On the AFQ, participant scores averaged 1.19 (*SD*=1.24) on a scale of 0 to 4, indicating little agreement with items related to psychological inflexibility. On the AUS, participant scores averaged 3.01 (*SD*=1.59) on a 1 to 6 scale, indicating slight disagreement with statements related to feeling unprepared or uncertain of their academic abilities.

Means scores for subscales of the IIS indicate that participants on average felt a certain degree of confidence in their own academic ability and commitment to the values of the university (*M*=4.25, *SD*=1.03) on a scale of 1 to 5. Other subscale scores were somewhat lower, including satisfaction with peer group interactions on campus (*M*=3.37, *SD*=1.14), interactions with faculty (*M*=3.57, *SD*=1.30), perception of faculty concern for students' development (*M*=3.59, *SD*=1.00), and personal academic and intellectual development (*M*=3.61, *SD*=.98). Comparison between subscale scores were nonsignificant with the exception of the comparison between institutional goals and commitment and satisfaction with peer group interactions, *t*(28)=2.21, *p*=.03.

Qualitative Results

Interview Findings

 Sixteen first-generation college students participated in interviews. Length of the interviews ranged from 32 minutes to 1 hour and 15 minutes (average length was 47 minutes). The codes created from the qualitative data are listed in Table 1. Consistency of the coding between the author and another member of the research team ranged from 87% to 95% for double-coded interview transcripts. Coded data were used to generate broad themes across interviews. The aim of this study was to identify specific feedback regarding the applicability and perceived usefulness of an ACT-based, preventive mental health intervention for assisting first-generation college students transitioning into post-secondary education settings. In addition to feedback on an example intervention, interviews began with a brief discussion of participants' experiences of transitioning into post-secondary education, what factors facilitated their transition and persistence in post-secondary education, and what barriers or set-backs they experienced. This information was collected to get a broader understanding of the needs and strengths of first-generation students, which were then incorporated into program modifications for Phase 2 and the prototype program. A description of themes (See Table 1) and representative statement from participants is below. Participant statements have been edited for clarity, readability, and in some cases to preserve anonymity. Care was taken to ensure that the original intent and character of participant responses was preserved, and as much verbatim content has been included as possible.

Theme: Barriers to Transition

Feeling unprepared

As described in the above cited literature, many first-generation college students face an uphill battle in terms of adjusting to life on campus and meeting the demands of post-secondary education. Half of participants mentioned feeling in some way unprepared, "blindsided," or overwhelmed by their transition into post-secondary education. These responses were typically given after participants were asked what their early experiences of transitioning into the university setting were like.

> I think it would have been easier to like have a more clear view going in what it would have been like, because you go from having such like a rigorous schedule and always having someone there, like my parents saying "sit down and do your homework" and "these are your grades you have to do this and you have to do this" to being all on your own and having a schedule in college where you have space and your classes aren't back-to-back and you have all this time and I didn't know what to do with it 1.7

> I guess my friend's parents who had gone to college, they told him all the tales of what it was like when they were in college, what's the best things to do when you get to college and what to make sure you do. 1.7

> I was excited coming in, it was like a new start. I was like almost the top of my class in high school and thought "this is going to be good!" But when I got there in the spring everyone was already in the swing of things and I was still trying to figure things out so it caught me off guard. 1.8

> Coming to the university after community college was such a big change because I don't know. Going from high school to community college felt like everything was different and bigger, but then when I went to the university it got even bigger and way more different and I felt like I was out of place. I just felt like a lot of people in my major were already into each other I just felt like the new person all over again. I don't know why I thought I was going to transition into something a little bit more comfortable because I think when I went to community college I felt more included in things, but like when I went to the university I didn't feel that way because it was such a big big campus. 2.6

> The size of campus was overwhelming. I honestly, my first day there, I didn't realize how big it was and that made it like kind of difficult because there are so

many places to try to fit in. It's kind of like looking at a menu at a restaurant where there's like tons of choices and you just feel overwhelmed and you don't know which one to pick. It was such a culture shock for me so it took me a little while to adjust because there were so many options send so many places to go to. I wish had someone reach out to me because that's what happened to me at community college. Someone like reached out to me and like grabbed me and that's how I felt comfortable there. It would have been nice for someone to just kind of like grab me and be like "hey look at this" and grab my attention. 2.6

Parents unable to provide support or assistance

One contributing factor to this feeling of being unprepared may have been the inability of participants' parents to pass along their personal experiences or knowledge. Several participants specifically mention wishing their parents had been better able to help prepare them for what to expect in college or give them specific advice for what to do once they got to campus. These responses were often mentioned in the context of recalling early transitional experiences onto campus, current barriers that are negatively impacting them, and some were also mentioned spontaneously as participants reflected on the question "what do you wish would have been different?"

> It's kind of weird just because I am the first person in my family to go to college, at least here in the United States, so I didn't really have support. I did in the sense that they were really proud of me, what I was doing, but I didn't have support in the sense that I had somebody I could go to and ask questions or be like "hey, what can I expect from, you know, going to college" and I definitely didn't have anybody giving me any type of, you know, any sense of direction in a sense. I get that that is something that you get from yourself, but at the same time, nobody really knew what they were talking about when they were talking to me about college. 1.3

> Anytime I would complain like "oh school is hard" or anything like that, it was hard for my family to relate to everything that one goes through when they're going to college. They thought it was the same as the high school thing, like you do what you need to do, just go to class and do the work. They didn't really understand like any of the emotional or psychological stress that I was going through 1.3

Personally, for me I really didn't know anything about college coming into college. My parents couldn't really guide me based on where they had been. Whereas other students, their parents have been to college they could maybe be giving them advice or helping them or something. Like they had told them their stories from college or they have been helping them prep. And I don't just mean SATs or prepping for coursework, but you know is in just other things that go into college other than the work. Their parents have probably been there to help them and give them a heads up about what you're going to experience. Me, I had no idea what to expect once I got into college so I basically just I had to experience it for myself. I didn't have anybody there to tell me like "hey look out for this or hey you should go ahead and take the summer classes so that she won't get behind" and stuff like that. 2.3

A lot of my friends now that I know about, they were a part of fraternities and sororities and my parents never even mentioned that. My parents aren't from here and there's a lot of things they just didn't know, and I'm so used to what was taught in my house. I wish I would have been a little bit more like geared towards joining one or at least being interested in one because I wasn't at all until I made a few friends and at that point it was too late. I'm sure I could join but I'm like "nah" because it was never important in my family. 2.6

I would just say the main thing was just trying to relate back to my parents the financial aspects of it. That was probably the main thing. It's hard to explain, they don't understand how many classes go toward a major so whenever I'd have to tell him how many classes I'd have to take and how many credit hours I was doing it was just a little overwhelming to them how much I was going through. 2.8

Lack of support on campus

In addition to feeling a lack of support from their parents, many participants expressed feeling a lack of support once they got to campus and sometimes even in their later years in undergraduate study. Some participants expressed having very negative experiences of university programs, offices, and departments while others simply felt as if they had no resources they could rely on. In some cases, this was related to the participants status as an older student while in other cases it seems that participants felt as if they had fallen through the cracks and were left to "figure things out" on their own. In

some cases, students described the loss of previous structure or relationships that had

helped them to thrive.

> I had a really awful orientation experience. They threw me in with a bunch of traditional-aged college students straight out of high school and just sort of showed us around campus but didn't really stop anywhere or tell us about the places that actually mattered, like the financial aid office. It was also pretty expensive for what it was. As a non-traditional student it was pretty inflexible and that was incredibly frustrating. When I first came in I also didn't have an academic advisor, but one lady who was helping me register gen ed for classes almost missed a really important prerequisite, which would have delayed my graduation and made me lose my scholarship and maybe even cost me my job. A mistake that would have cost literally thousands of dollars. I'm not mad at her, it was an easy mistake to make, but I just wish they would change up that whole process to make it more worthwhile. 1.2

> I think what I wish I would have had more of would be someone to tell me what we were actually doing, if that makes sense. Like if someone would say let's plan out your next four years, let's plan out what you need to do, because I think a lot of people go into college and they don't have anyone to help them. Other students could ask their parents "how many classes should I be taking" or something like that. 1.6

> The new people you meet don't know you from previously, so they don't know if you've changed or if something is wrong with you. So you kind of just need someone else to tell you you're doing okay, it's alright if you feel overwhelmed, it's okay. 1.7

> In college, you do everything on your own, you don't have anyone to help you like in high school. There are people there to help but not like in high school. 1.8

> I couldn't talk to anyone else about college stuff because I'm a first-generation student. It's like we're experiencing everything on our own without anyone else's advice. 1.8

Feeling isolated on campus

In addition to feeling a lack of institutional support from campus, another of the

most commonly mention themes was a feeling of social isolation. This finding in

particular is especially troubling given the relationship between feelings of belonging and

academic outcomes. In addition, previous research suggests that having a robust social

support network is also strongly predictive of outcomes related to mental health and

wellbeing.

> I didn't have the real like solid support system when I started. I felt very alone just feeling like a lot of people I had graduated from high school with didn't also decided to go to this university, so it was difficult to meet people. Commuting to and from campus also made it harder to meet people. I just never felt like, I just never feel like I made a connection with people and everybody there seems like they all know what they're doing, and I just never really felt that way. 1.3

> I just think knowing that you weren't all by yourself in some ways. Out of everyone I've met I've never met anyone else who's the first-generation college student, so I didn't have anyone who had similar experiences to me, so it was a little like more difficult. It made me feel more alone and like everyone else had more of an advantage. Also, going through those experiences, I feel like you're going to be more mature at your age because you had to deal with stuff like that, so your peers might not associate well with you. 1.7

> The fact of not knowing anyone, not having- like if I were to have went back to my hometown, I would have had my sister, my brothers, where they were going to school so they could help me around to I guess ease that movement into university or college. But over here it was more like I didn't have anybody to feel comfortable asking any kind of questions. It was pretty much, "Hey, there's this meeting, there's orientation at these times," and then sometimes I'm like "Oh man, I gotta work those hours, I already scheduled myself those hours," so I think that was the hardest part, not knowing people. 2.2

> It was it was a bit overwhelming at first because the friend that I was supposed to go here with ended up not coming here. So I initially didn't really know anybody and so it was a bit overwhelming kind of starting over and then I also kind of didn't know what to expect with academics at all so the first semester was kind of rough. 2.4

> It would have been helpful my first year just having sort of a group from the same backgrounds, you know like whatever I'm registering for classes and paying for everything and just getting situated, it would have been nice to have people in the same situation as me to talk to to try to understand that a little bit better. It would have been nice to know other first-generation students since we would all be sort of on the same path. It would be easier to talk about it, to understand what was going on, and if I had a question about anything I'm sure they would have had the same question, so it would have been nice to have other people to go off of. 2.8

Living off campus

One factor that likely contributed to this feeling of social isolation for some participants was their decision to live in off-campus housing early in their academic career or to continue living off-campus in their later years. This was a choice that was sometimes driven by economic concerns, some participants described being able to find cheaper housing off-campus as opposed to paying to stay in a dorm room. Occasionally participants described continuing to live with parents or other family in order to save money. Others felt their choice to live off-campus was more related to a lack of knowledge of what they would be missing out on, such as a greater feeling of integration with campus culture and opportunities for socializing and building their social support network. Current living situation was typically mentioned in the context of asking about current factors impacting participants.

> The commute is still kind of a thing, it's still hard to meet people and stuff but I mean it's definitely not as difficult as it was before. 1.3

> Yeah, yeah. I would just say, not necessarily anything major but I guess just kind of having to become familiar with everything on campus, and I also want to say I don't know if it made it easier or made it harder, but living on campus, or not living on campus, I didn't know if maybe living on campus would have been a better situation versus not living on campus, because maybe it would have been easier to adjust and figure out where everything was on campus. But I wouldn't say that was a bad decision, I don't regret not living on campus, but that could have potentially made a difference. 2.1

> Well I definitely 100% would not have stayed on campus as long as I did. I learned that it's a lot cheaper to live off of campus and to not rely on campus so much because living on campus and living off campus or two very different things. It kind of feels like school is school but then the real world is the real world. 2.3

> I live close to the campus and I didn't want to waste the extra money to live on campus, so I've been commuting back and forth. But I feel like it would have

been different if I had lived in the dorm because dorm life is a different kind of experience. I think I did miss out on the community aspect of it. 2.5

I didn't even stay on campus early on because I was so overwhelmed and so my parents let me stay in an off-campus student living apartment, which I would not recommend. I wish I would have lived on there my freshman year, but then again, I didn't know that that that would have been such an important time in my college career. Because a lot of people say that's how you make a lot of your friendships, you learn the layout of the campus, you take more advantage of things and I definitely missed out on that. I've continued to live off campus just because now that I'm a junior I just didn't feel like it would be necessary for me to live on there, but I wish I would have lived on there my freshman year and been a little more immersed on campus. 2.8

Being far away from home

While some participants were able to remain close to family, others described

being very far removed from their families and familiar settings of home. Since all

participants were recruited from the same university, one common experience was living

in or near a large urban setting. While some participants where used to this type of

setting, others felt they had more difficulty adjusting. Others described making long-

commutes between their hometown and the university in order to stay connected with

family. These comments were typically made in response to questions about what factors

made it more difficult for participants to remain on campus or enrolled in school.

The only bad thing about it all for me is being away from my family, but I actually travel every weekend. I would leave on Thursdays, drive home up here about a two-and-a-half-hour drive, and drive back down on Sunday nights If I couldn't do that I don't know if I'd be able to stay in college there. 1.4

I don't have any family in the area It was just me moving out there on my own. 1.8

This city is definitely a lot more fast-paced than where I grew up. It's about an hour away from here, but it's definitely a lot faster-paced and there's definitely a lot more people here. I liked being away from home, because my dad was kind of

a helicopter parent, so when I got to college it felt kind of freeing. It was kind of my escape. 2.3

Difficult interpersonal relationships on campus

Another major source of stress for participants who lived on campus were difficult interpersonal relationships, particularly with roommates and their roommate's romantic partners. Both comments were made in reference to factors that negatively impacted early experiences on campus.

> To be honest about it, the only thing I can say really that changed that helped me between the first semester and now is that in my first year of college I didn't get along with my roommate too well, which made things harder for me. 1.4

> Not knowing who your roommates are going to be and whether or not you're going to be able to get along with them while also having to do with all these really hard classes is not helpful, I mean, I didn't have the best roommate experience so far. My roommate's boyfriend and I really didn't get along and he would refuse to leave our room at times. I'm one of four siblings and luckily I have brothers, so I know how to deal with them. I think he found that out fast like "oh she's not one to mess with." It's like you're trying to write a paper then you have to deal with the stress of kicking someone out and then you know that person is not going to like you and then they're going to talk to other people and it's just more gossip that you didn't think existed in college. 1.7

Feeling unwelcome on campus

Several participants also described experiencing discrimination related to their status as first-generation students or other identities, such as being a student veteran or a person of color. These experiences ranged from subtle "off-hand" remarks to overt acts of racism or discrimination. These comments were made in regard to both early campus experiences as well as ongoing stressors in participants' lives.

> Another one of my early experiences on campus was trying to take a test but the class in the same room ran over time. The professor was really rude about it the

person that was administering the test was also really rude and told us if we were adults we would have known better than to go into the class. I also met with a counselor before I actually finished the orientation process and I forget what she said but it was something kind of off color about veterans. I really had an awful impression the first six months that I was here. 1.2

I think it would be nice, because a lot of people and I know like we hate to think about it, they look down on people's parents who haven't gone to college. I mean they're like "oh that's nice, what does your dad do? My dad is in corporate finance." So obviously since your parents didn't go to college their job isn't going to measure up. To have some people there that aren't going to be judging you for being the first one. I've heard people say "oh everyone has the opportunity to go to college" but sometimes stuff happens and that's just not true for reasons out of your and your family's control. So to not be judged would be nice. 1.7

They treat freshmen coming in straight from high-school differently, and I don't know, they give you a tour, they have this program to study on the campus. Then when I came in I didn't really get that experience. I just got like a simple tour around campus and then I didn't feel welcome or anything. I just tried to fit in because I feel like I've never done this before. 2.5

My previous university was very different. It's a smaller PWI [predominantly white institution], it's a smaller mountain school, it's really built in the mountains and I just didn't feel comfortable. There's a lot of racial tension going on right now and the administration was just not doing its job and it was making me feel uncomfortable, like students would put "black lives splatter" on the campus and things like that. 2.7

Financial strain

Another theme identified from interview data that is consistent with previous research is the impact that financial strain has on first-generation students. Participants described having to rely on financial aid to enroll or stay in school, struggling to communicate their financial need to parents, and feeling as if they lacked an understanding of the ins and outs of the financial aid process. In some cases, participants

describe over-spending due to not knowing what their tuition and fees did or did not

cover, which they learned only after they had been in school for several years.

> What's really stressful some days is I pay for everything. Financial aid is great, but it's extremely stressful. I mean you have to keep your GPA at a certain place to keep your financial aid and you might not get financial aid that covers everything. 1.7

> Definitely financial aid was a big part of it. Coming in, I think I was a bit ignorant of the financial cost and all of the different things that I could like use like scholarships and all that stuff. So I ended up having to take out loans for my first year, more than I wanted to and so that made it difficult in the sense it made it difficult on my parents and I don't like that feeling. 2.4

> Sometimes with the payments and everything, I mean my parents just don't understand how expensive college is so that was a little difficult at first trying to get them to understand how much things cost. The community college where my mom went for only 2 years, that isn't anything near to what university costs. So whenever I would explain to them how much each class costs and especially the books, they couldn't wrap their heads around how much books cost so that was always a big thing. It's crazy. My first textbook for bio was almost $300. It was just like a smack in the face to them. 2.8

Working while in school

As a result of this financial strain, many first-generation students must balance

work schedules with academic demands. While some participants described feeling able

to balance these competing demands on their time and attention, others described

working out of necessity. Having to work while in school was often mentioned by

participants in response to factors that impacted their experience, but it was not always

seen as a barrier. In some cases working while in school was simply a reality.

> It was an adjustment because I did have to change my work schedule on the days that I had classes, so it was a little bit of an adjustment. I had to start going to

work from 6 a.m. to 2:30 p.m. and then I would go to class will my first class was 3 to 3:30 to 4:45 and the next class was 5 to 6:15 so it was very long days. 1.1

Over the summer I was working 50 hours a week. I mean, I worked overnight and during the day and I made a ton of money to put towards school. Obviously, my parents would love to help out, but they can't. They have three other kids that need to go to the doctors, need clothes, and need to be taken care of and whatever they have left over I get, but that's the best they can do. 1.7

I'm working on an as-needed basis. Maybe about 35 hours a week? In addition to my classes. This summer I'm taking two courses and one lab and I'm having to take care of my kids too. 2.2

I don't really know about a barrier, but something that definitely takes out a large amount of time was I started out working in the summer of 2015 a full-time job in another city about two hours away. I wasn't taking summer classes so I was full time but once I started back in the fall of 2015 I went PRN, basically I made my own hours and I worked at the hospital and I still work there. I'm still PRN but I work full time so basically I'll work 12-hour shifts 4 days a week or like right now, since my classes are online, I'll be here half the week and then I'll be there half the week. So I travel a lot and I also have homework on days that I would have to work, so that kind of made things a little bit difficult. It's especially difficult over the summer right now because there is so much packed into such a short amount of time. That definitely had an effect on my school work and my body initially because I was so tired from having to work and do all the school work too. 2.3

For the past year I've been working two jobs while going to classes. Both of them combined are about 40 hours per week. So working full time on top of classes. 2.4

Multiple roles

In addition to balancing work with school responsibilities, participants also described fulfilling other roles, such as being a parent or a spouse, and having these responsibilities sometimes come into conflict with their role as a student.

I do have children, so you know my spouse was a tremendous help you know, cooking dinner on nights that I had classes just trying to spend as much free time

with him as I could, but they all understood that, you know, "hey, Mommy has to go to school and do homework." 1.1

I'm a married person, so at the same time, I got a job and everything, so I didn't really have the time to try to get involved in the community. I did try to join sports, but I guess they had to- you had to be drafted from high school or something. 2.2

Yes, and for me personally, I'm in the middle of it. 'Cause like again, my time, being an older student, you know, I think I have other responsibilities. So in cases like going to meetings and stuff, that'll be kind of hard for me to do. 2.2

Interference from mental health symptoms

A subset of participants described experiencing interference in their adjustment to post-secondary education due to anxiety and generally feeling overwhelmed with stress.

You might not know that you have the anxiety that you do until you go to college. I mean, I had never had a panic attack until I was in college, and then I had one in college. I knew I had anxiety, I always had testing anxiety and then I had a real life panic attack and I have never experienced something like that before but I was 20 when it happened. 1.7

Coming into college you deal with a lot of emotions, at least I did. It's a demanding time and you're trying to figure everything out. It's a new chapter. Being a first-generation college student, you're coming in…I came in with a lot on my mind, like I was already coming in stressed out. 1.8

Theme: Facilitators of transition

The majority of comments in these themes were made in response to questions about what factors made it easier for participants to persist in their academic career and what early experiences helped them transition into post-secondary education. Some comments were made spontaneously later in the interview as participants reflected on their past experiences.

Motivation to finish

One important protective factor which was mentioned by a number of participants were there various personal motivations to finish their degree. These motivations often involved a desire to help their other family members, such as by being an inspiration and mentor to younger siblings. In one case the participant saw achieving their academic goals as a way to elevate their whole family's socioeconomic status.

> I've wanted to be an engineer since I was probably about a sophomore in high school that's whenever it really popped into my head that that's probably what I wanted to do and I've just stuck with it since. Honestly the big thing for me being a first-generation student is how by getting a four-year degree and going to college that I'm going to change my life and the norms of how everything's been in my family for as long as everybody that's still alive has been alive. I look at colleges like this is, you know, my family, nobody and has money or anything like that if anything were on the poor side and by getting an engineering degree that's going to put me hopefully at least into the middle class. For first-gen students, college is how they're going to change their prospects in life. 1.4
>
> Since I'm the oldest I have to be an example for my siblings who are all in high school. So it's like if I have a bad experience than that setting them up to think that they'll have a bad one. I'm just taking classes right now and I'm pretty good, I'm just trying to get out of here. College isn't bad, but I just want to get to my job and be done with school. 1.7
>
> I came along way in terms of academics. Now that I'm acclimated and I'm about to graduate things are looking up. I got my core group of friends, I shed a couple of tears but I'm here and I made it and I can be proud of myself for being the first-generation college student. I was the first generation and my brother is now the second generation. 2.7

Family support

Support from family members also played an important role in helping some participants adjust to the post-secondary setting. On one occasion, this took the form of an older sibling encouraging the participant to pursue higher education despite the fact

that they would be the only person in their family with a post-secondary degree. In other cases, this support took the form of more general encouragement (sometime pressure) and emotional support, which was still helpful in the absence of parent's post-secondary experience.

> I've always had an interest in math and when I started High School I always just thought that I would just be a regular labor employee, I thought I might be a welder for a career and my older brother he's a mechanic and he told me one day, you know, "you don't want to be doing this your whole life. It's fine to do for a while but it takes a toll on you after you do it for a while so You should think about doing something a little bit better." He's actually the reason I came down there to the university, he was at the local community college and he's got an apartment down there. And I don't know I'm just kind of following in his footsteps. 1.4

> My parents want me to have a good education because they did not get opportunities. They want me to have a good education so I would not have a lot of struggles in my life. 1.5

> I mean, my parents put a lot of pressure on me to go to college. My dad said that he wanted me to have a better life than he had with like having to work so much, I mean, he's had a tough time obviously because when your parents die while you're in high school you have to do it all on your own… I think like it was harder in the first year. I called home a lot more because I just needed someone to reassure me a lot, that I was doing alright. Because there were no set measure marks to tell you that you're doing okay other than grades in college, because you barely talk to your professor sometimes, so other than grades you don't really know if you are fine. 1.7

Being close to home

This support from family members was facilitated for some participants by being able to attend university close to their family. This was at times a deciding factor in determining which institutions participants chose to attend.

I was at a community college for two years but it was only a 2-year school so I had to transfer to the university because it was a 4-year. This university was close to my home so I wouldn't have to spend a long time traveling. 1.5

I think resources on campus did help as well has having easy contact with my family because like I said, my hometown is not far, it's an easy drive home. 2.4

Helpful campus relationships

Just as difficult interpersonal interactions made the transition to post-secondary settings more difficult, positive interpersonal interactions often were mentioned as an important factor that helped participants through their post-secondary experiences. Almost every participant mentioned feeling more at ease on campus and thus better able to cope with academic demands when they had the support of peers on campus, informal and formal mentor figures, or became involved in student organizations.

I had a couple people that really helped me out during my first semester. One was a friend of mine who gave me some advice about not purchasing my text books until after going to the first class, because sometimes they tell you that you don't really need it or you can buy an older edition, which ended up saving me a few hundred dollars. Another was an academic advisor who suggested taking a class for non-traditional students. We actually had a class where she sat down and broke down a lot of stuff. She had a whole class on how to get on and off campus easily, where to get food, how to register for classes effectively, and she did all the basic skills that we should have had in orientation. She did that and then she taught you how to write an effective college paper in a time crunch. She did all the basic skills that you maybe would get from other people, she did that in a class because as an adult student, how many of you actually have a friend going to school? 1.2

My current roommate, and me and him have got along real well, we try to help each other out and usually when I need help trying to figure something out he can help me and then vice versa. I've known him my whole life, he's from up here in the mountains as well and so having him there is helpful for sure. I have felt better in the second year because I've gained more friends. You know, starting out I didn't know anybody. In the first year I made a few friends, and then in the second year I've made more friends and people that I have kind of liked even better. I feel

like the people in my major kind of stick together, we try to help each other out it's not like we're there to compete against each other, we're all there to benefit from one another. 1.4

I think what helped a lot is I got involved in a lot of organizations on campus and I joined a sorority which helps. Definitely makes it feel like a home away from home, it wasn't as scary because there were a lot of older people just kind of telling you the ins and outs of school. I think really the relationships are the best way to get through college. 1.6

I lived in a dorm where like we had a huge common room between two floors and I think that was one of the best things that I've ever done is live somewhere where everyone was forced to be in the same space because I met so many people that I never would have hung out with before. It helps to see those same people every day because once you got to know them over the semester they would know like when you need something, like if you're alright. 1.7

I joined fraternity and sorority life at my previous university and when I got here, one of the people in the office of fraternity and sorority life is actually one of my sorority sisters and she's my chapter's advisor on campus. She helped me when I was feeling down and out, when I felt like I wanted to give up she was one of the people that helped me get acclimated. She would introduce me to other girls on campus and little things like that. She gave me a sense of belonging through Greek life. So that was my first bit of finding my core group. 2.7

Helpful campus resources

In addition to helpful interpersonal relationships, about half of the participants mentioned specific campus resources and programs, such as the office of financial aid, university tutoring services, and academic advisors.

I wouldn't be able to be there in college if it wasn't for financial aid. My mom, she has been a cook her whole life, and my dad, he always worked in logging. So those kinds of people don't really have the financial stability to send their kids to college, so without financial aid there'd be no way that I would be there or would have been able to start doing it. 1.4

I think what helped me a lot when I came into college, I got a job working with the academic resources so... I don't think the school did a very good job of advertising those to students but once I worked for them, I had to learn all of the little things about the resources that are given to students and that helped me a lot.

Then from working with them I met a lot of other people and they helped me more. That helped me to help other students because a lot of people didn't know of the resources, so I think that that was the part that helped me the most. I guess in high school I didn't get the best grades because I didn't try as hard, but in college I had gotten really good grades just from the resources that I've had. I think without them I would be a lot more lost. 1.6

I think the one thing that helped me was the university website. Everything you need to know is on that website, so you didn't really need to go to campus and ask one of those departments or somebody to help you from the campus for the help desk area or even go to your counselor. You can just find information on the website, it'll help you with everything step by step so when I had a problem I just went to the website and just clicked in tell me my problems and it'll just pop up. 2.5

I'd say advisors help a lot, that was another big thing. I didn't really know where to start off. I knew I wanted to go to PA school and stuff like that, but I didn't know the exact major I wanted to do. I've talked to my advisor sometimes about sticking it through because I was thinking about transferring out, but she was like "it'll be worth it, you got to stick with it" so that definitely helps a lot. Even when it comes to me registering for classes each semester they've always been really helpful with the financial aspects of it and making sure I'm not taking too many classes, just taking what I need to take. So that's been really helpful. 2.8

Felt more prepared

For some participants, their current experiences were influenced by their prior exposure to post-secondary institutions. In some cases this involved having been suspended and then returning to campus. In other cases, the participant was an advanced student who felt they had learned from their first few years on campus. For participants who are older than traditional-age college students, their perception seemed to be based upon their impression of how they would have reacted or handled the transition to post-secondary education when they were younger.

I know for me being that I am a first-generation college student, now that I'm older I have a lot more drive, a lot more motivation to actually finish. So, it's like, whatever comes in my way now it's like I'm just going to jump over it and keep it moving. 1.1

I'm kind of glad that I didn't go back to school immediately because it made me more independent. Living on campus, I don't think would have been good for me. Now I don't define myself by my peers and the same way that a lot of younger people do and I know what I wanted so I didn't waste time in college. 1.2

I was suspended 2 years, so two years before I could come back, and I spent those two years working, talking to my family basically trying to figure out what I had to do and I ended up coming back and this time was better just because I understood that, you know, I'm not going to have a support system, it's just me at this point and as disappointing as that was in a sense, it gave me a lot of motivation and the strength to do better this time. I came back in the summer, last summer actually, and I took some summer courses which kind of worried me because they are like so condensed and they go so quick but it went really well and fall came and I did pretty well. then it's been like a completely different experience than last time, I just kind of knew what to expect. I guess I stopped concentrating on feeling lonely and weird or… and I was just like "well I might as well just do my best" and, like I said, I more or less knew what to expect and I know what I've got to do and it's just a matter of doing it this time. 1.3

I'm just getting used to how everything flows you know. I'm learning how to do homework and study like I should, which is totally different than the way I've done it in high school, you know. The transition from being in class several days a week and then an hour of homework at night, to having class twice a week or three times a week for an hour and then having, you know, hours upon hours of homework and studying, it's totally different. 1.4

ACT-based Intervention Feedback

Participants disclosed a wide variety of experiences which impacted their transition into the post-secondary education setting and their later experiences of being first-generation students. After this opening portion of the interview was concluded, the interviewer went on to describe an example, ACT-based preventive mental health

intervention and asked participants for their reactions and thoughts. In Phase 1 of the study, this example intervention was ACT for College Life (ACT-CL). In Phase 2 of the study, the example intervention was described as having the same didactic component as in Phase 1, but the program would be delivered in the context of a support group that would meet for the duration of the semester. This intervention was modeled after a group CBT intervention (Heimberg & Becker, 2002). As explained above, the feedback gathered in Phase 1 suggested that adding the group component to ACT-CL would make the intervention more effective and more culturally appropriate for first-generation students. Data gathered in this portion of the interview are here organized into feedback specifically about ACT components of both interventions (which were identical in content but differed in method of delivery), feedback specific to Phase 1 (ACT-CL delivered in online-only format), feedback specific to Phase 2 (group-based ACT intervention), and feedback that was applicable to both Phase 1 and 2 interventions, other than the ACT components.

Theme: ACT-specific feedback

Half of participants directly commented on at least one component specific to the ACT model of treatment. These participants seemed to unanimously appreciate specific ACT components and none of these comments were negative.

Increasing Acceptance and Reducing Avoidance

The idea of acceptance in ACT initially seems counter-intuitive in that participants aren't immediately encouraged to reduce or get rid of their negative emotional experiences. Within the ACT model, acceptance is both an outcome associated

with increased psychological flexibility and a mediator of negative emotional experiences. Thus, increasing acceptance of negative emotional experiences paradoxically leads to decreased distress stemming from these same experiences. This idea seemed to resonate with some participants and they quickly identified this as a key component of both example interventions. Other participants seemed to resonate more so with the idea of reducing experiential avoidance and reducing engagement with problematic avoidance-based coping strategies, such as substance use.

> I wish something like that had existed when I was going through all that that weird first-time stuff, I just, mindfulness and then being mindful of things like anxiety, depression, and stuff. I never really felt that up until that time in my life. 1.3

> I really like the acceptance part because I think that's something that transitioning out of high school into college, that people our age just don't have the maturity to actually accept that not everything that we do is correct and sometimes just that radical acceptance that…Like some things are so far-fetched that you have to accept that that's who you are and you just have to fix it. I feel like a lot of students just kind of I think... the biggest part is acceptance, I know people who are Juniors and they still don't realize what their problem is, not problem in a bad way, but they don't understand like little things and I think everyone just needs to go through a time where they accept that things aren't perfect. 1.6

> I think that definitely having to sit down and actually figure out your emotions that you don't want to deal with and thinking about things that you need to get done is pretty helpful. Because a lot of us just think that we need to do, go to class and do the work but we don't actually think about why we are doing the work, what do we feel about this, whatever we need to get done. I mean the classes go so fast compared to high school that you don't have time to not be focused and you don't get that winter break to be like to be like "oh my God I messed up I need to fix this." 1.7

> I'm a big believer in that journaling or like writing stuff out. I think that would help to get you to like to think about it and be mindful of those feelings and those things that you shouldn't be pushing away, because like a lot of people when they get negative feelings they drink or they party. The nice thing about doing that is that in the moment it's like "oh you don't feel anything" and you're having a fun

time and you think that all your friends are there for you. Then you wake up the next morning and you're hungover and you can't write your paper and you're like "what did I just do?" 1.7

The willingness to accept your emotions seems really important, because I keep everything in the closet. I store things up when I get stressed out. 1.8

Setting goals and clarifying values

Clarifying values and translating these values into meaningful action (e.g., setting specific value-based goals) is the second core component of an ACT-based intervention. The idea of setting specific behavioral goals based on one's own goals and values was identified by several participants as being especially helpful. Many participants connected this aspect of the ACT-based interventions to their own personal experiences of needing to learn to adjust their priorities and align their behavior with these priorities in order to be more successful in their academic careers. Some students also saw this aspect as a generalizable life skill that would be helpful outside of academic settings.

Sometimes I get into a mood where I'm like "Man, I'm super tired but I have homework to do and like, let me just sit here and lay here for 2 minutes," but, being able to set those kinds of goals- and it sounds like this program would definitely be able to help with procrastination or different obstacles that may hinder people from getting their school work done. 1.1

I feel like even setting some tiny goal, even just to be mindful three times in a week, is kind of setting you up to set different kind of goals, just because I think everyone thinks that they know how to set goals, but then not really at the same time. So I just think that you're not really expected to, but you have something telling you like "Hey, you have a goal that you set, remember to do it, remember to do something about it." 1.3

Someone asking "Hey, what's important to you," with all sorts of things that are going on, I think that's really important. Because sometimes you just need to figure out what really matters or what's really important. The goal setting thing and then dealing with depression and anxiety and the exercises that you guys provided- it's hard to get that if you're not really working for it, so just kind of

being prepared to feel that way, so you know that that might come up and you know how to deal with it. 1.3

I think it would be cool if there was like a calendar feature so that you can figure out when your goals need to get done. Like you could print it out for yourself and then just see if you're getting everything done. 1.7

Being a first generation student, a college student, it's kinda hard to know what goals you gotta come up with, 'cause you don't have your parents showing you or telling you "Hey, this would be a good idea for you to do" or "This is the way I did it, you should try it this way," you know? 2.2

Components Fit Together

Participants who commented on specific components of the ACT model also voiced appreciation for how well the separate topics discussed in the lesson plans built upon each other to form one cohesive program.

I think everything plays their own important role in the entire program: identifying those internal barriers, giving those exercises about how to deal with the unpleasant emotions- I think everything has its own purpose and helps with the overall picture or the overall goal of the program. 1.1

What I like the most about it is that all of this flows really well together, everything has something to do with another part of it. 1.3

Phase 1: Positive and Constructive Feedback

The following section summarize themes which refer specifically to components that were characteristic of ACT-CL as it was described to participants in Phase 1 interviews. These themes tended to focus on the potential costs and benefits of the program being delivered in a counselor-supported online format. Additionally, the scope of the program was fairly limited and consisted of two online learning modules, homework assignments, and personalized follow up. One potential strength and limitation of ACT-CL seemed to be that it is completely separate from the campuses and

institutions that it may be delivered on in the future. While this makes the program broadly applicable and easy to implement in any given system, this is a limitation in that many participants voiced concern about their needs for specific campus resources and relationships that could not be directly addressed through this program.

Theme: Phase 1 Positive Feedback

Not having to meet in person

Some participants seemed particularly averse to meeting with a counselor or group of people in person to address their concerns. For these participants, the online-only format of ACT-CL was ideal as it lowered that particular barrier to seeking supportive services.

> There's a lot of people that I know (and I've been this person at some point) I don't want to go sit in a group, I don't want to share those kinds of feelings in a setting where anyone else can see it. So if you don't want to talk to another human being, this is good. They'll get the care, but you don't feel as exposed. 1.2

> Knowing how to deal with anxiety, depression, and stuff and having a method of support that doesn't require having to show up to something, or be actually face-to-face with someone, put in that kind of pressure and nervousness, especially since I'm a pretty shy person- I think that would be super beneficial, especially since I didn't really know what was going on. 1.3

Online format is not burdensome

In addition to offering a degree of anonymity and distance from engaging in potential difficult self-reflection in front of another person, the online only format was seen as being relatively low in terms of the demands it would place on participants. This was especially helpful for participants who were engaged in activities outside of school

or who were having to attend to responsibilities across several roles. Being able to access

the program on their own time from anywhere was seen as a benefit.

> I think the online format is a really good idea actually, especially for older students like myself who are working full-time and are juggling (or trying to juggle) school work and home life. I think it's pretty easy; everybody now knows how to work a computer or a phone. It's pretty much available for pretty much everybody, so I think the way it is now is perfectly fine. Everybody pretty much knows how to work a computer or phone, unless it's like somebody's grandma. Even my grandmother knows how to work it, though. 1.1

> It's not super demanding on top of everything else that you have going on. You have a few minutes out of your day. I'm sure even though I feel like the time thing like, maybe 2 weeks wasn't enough- but at the same time, two weeks isn't this huge level of commitment that may deter people from wanting to do it. If it were something that asked me to do more things than just do a couple exercises to be mindful, I don't know- I like that it's very simple. Because if it were more complicated, it would feel like maybe work or something, rather than something to help me. 1.3

> I don't think it was extremely time-consuming, and I think people would be able to do it while still taking college classes. I think that it has, especially with the text messages, kind of an incentive to keep going. 1.6

Theme: Phase 1 Constructive Feedback

Add group component

While the impersonal nature of the online-only intervention was seen as a benefit

for some, other participants (and in one case the same participant) wished for some form

of group activity or interpersonal interaction as part of the program or worried that the

lack of direct interpersonal interaction would make the program less effective.

> Maybe incorporating some type of activity amongst a group of people who are taking this course, or some type of social activity if some people want to talk about their issues, or because there isn't any interaction with an actual counselor. 1.1

> I do worry that there's no human interaction, because if I have an issue with a company and I resolve my problem completely on a computer, on the one hand

it's very convenient. On the other, I don't know that they cared, you know what I'm saying? 1.2

Online format not engaging enough

In addition to the lack of interpersonal interaction leading to the program feeling impersonal and less effective, some participants worried that the online format would not be engaging enough to keep participants involved for the duration of the program. Some noted that for students who may lose interest in the program, it would be easy for them to disengage entirely and simple stop participating.

> I would think that the web-based training- I would think people may forget to do them, or if they're pretty limpy [sic] they may not want to do them. That's probably the only thing I would say could possibly be a hindrance, like they may not actually want all of those modules. 1.1

> My concern against it would be that people wouldn't actually follow it, because there would be no way of knowing whether people would follow it or not just by sending text messages or emails as reminders. There is no way of actually making sure that they are engaging in the program. A way that you could maybe fix that is instead of sending out text messages or emails every day, maybe just have them log on to the website and explain in a short paragraph or a few sentences something that they've done that day that was for what they were trying to do. Like there are the things they decided were something that they needed to focus on, you know what I'm saying? If you just send me a reminder every day, I probably would just kind of shut it off to the side, but if you actually had me engaged every day, then I would care about it a little bit more. 1.4

> The only thing that I don't like about the program would just be the online part, but I see how it seems like it would be really hard to do it not online. But I think people would benefit more from actually talking to someone rather than just clicking through modules. I know when I was a freshman I had to do online, like, alcohol education modules, and while they were very informational, I just wanted to get it done with, and so I clicked through as fast as I could. 1.6

Add academic support

A number of participants saw the lack of specific focus on skills necessary to succeed in post-secondary education as a potential gap in ACT-CL. These participants

noted that while learning to manage emotions more effectively might be generally

beneficial, it might not address concerns related to academic performance and thus would

ultimately not be very helpful for students who are coming into the university for the first

time.

> Technology's going to change, but high school is not in any way shape or form really preparatory for college anymore. So you're not even learning in the same style, you're not even doing similar things. The only thing that's similar is that you're sitting in the classroom and taking notes. Even the way you take notes is different. First-generation college students are going to have even less awareness of that change. I don't know how you would coach somebody on it though, that's where I think having a class your first semester of college that you have to take, and it stopped with somebody, and they gave you step 1 of being in college, and you had to take it in order to graduate. 1.2

> They're the first one in their families to go to go to a 4-year school, so they don't have a lot of idea. Sometimes they're taking many wrong classes that aren't going towards their career, so something to guide them regarding their career- what are the courses specifically that they need to take for a Master of Science or engineering. 1.5

> This is your first time in college, you have no idea what you're walking into. Your parents haven't taught you the skills yet, or what they learned in college, because they didn't learn them there. What they learned through a job may be completely different. They didn't teach you how to study for an exam because they never did. They don't know about all-nighters and having to cram and having three exams on the same day. They know about working, but it's not the same. High school doesn't really teach you to study, that teaches you to go to class and learn the information. You really don't have to do anything more. Just maybe some helpful tips like how to study, how to get yourself set up for the beginning of college to be successful. 1.7

Broaden focus of program

    While some participants focused specifically on the lack of attention to study and

general academic skills, others seemed to focus more on the limited scope of ACT-CL in

that it is a relatively short program. Participants worried that this would make it difficult

or impossible to address all of the needs and questions of first-generation students

effectively. Suggestions for addressing this concern included increasing the duration of

the program and adding in check-ins after the completion of the program.

> Maybe making it a little longer, or not just dealing with things like depression and anxiety. It's kind of broad, but I just feel like it's a little hard to tackle with this whole brand new situation that you just don't know much about, and you can't really go to many people about. It would be difficult to deal with that in just two weeks. 1.3

> I think it's important to be super thorough, because you know people have a lot, a lot, a lot, of questions, especially when you're doing something like going to college for the first time and you don't know what's going on. I guess making it just as thorough, maybe just as specific as possible. 1.3

> During midterms or exams, you may have signed up for it in the beginning to help you get on track with your school work until you figure out college life, and then you might be like oh, I need it now even more so with my exams and with my study habits. It would be nice If it was just like a little check-in every 2 months. 1.7

Phase 2 Positive and Constructive Feedback

The example intervention described to participants in Phase 2 was based on a

cognitive-behavioral group therapy (CBGT) intervention (Heimberg & Becker, 2002). In

this model, the intervention is delivered by clinicians in a group setting. The first two

session of this CBGT model are didactic and then the remainder of group sessions are

devoted to practicing skills and providing on-going opportunity for support. When

delivered in a university counseling setting, the group would typically last for an entire

semester. In the adapted ACT-based intervention, the didactic portion of the CBGT

model was replaced with learning module content from ACT-CL and personalized inter-

session reminders delivered on the same schedule as described in Phase 1. Rather than

devoting the remaining group sessions exclusively to practicing specific skills, the group

format would shift to more of a support and discussion group, which would allow

opportunity for first-generation students to build social support, share knowledge, and gain access to other campus resources.

Theme: Phase 2 Positive Feedback

Liked group support

The group-based nature of the Phase 2 intervention was well received by almost all of the participants. Having the opportunity to meet other students with similar backgrounds, share ideas, give and receive support, and the consistency and availability of the program seemed especially important. Not only was support from other first-generation students seen as being helpful, having the chance to work with a counselor and meet them face-to-face seemed to be another positive aspect of the shift toward a group-based intervention.

> For me, having a group that I know that's there and something that I can depend on. In one week if you're really struggling, either academically or personally, you're going through something and you feel like you don't have anyone to lean on or, no one's close that you can go to, especially being a freshman- that's why I did think about this, 'cause I feel like you don't know how to cope as well and stuff when you're a freshman because it's all so new. So I feel like just having a group that you know you can go to within that program, or no matter what you still have that program to kind of go to for help or guidance or whatever. I also like the consistency of the course throughout the entire semester versus one or two weeks. I think it's cool to have something consistent. The overall idea of the program- I think it's a good idea. 2.1

> I think being part of the group itself would be helpful. Knowing that you can have someone that is going through the same thing and you guys can ask questions within the group, and figure it out without having to be maybe too shy or too embarrassed to go to other students that have been going through this before, and maybe be judged by them, like "Wow, you don't know?" or "Where have you been all this time?" you know? So I think just having the group itself for support, I think that's the best part of it. 2.2

I like the idea of having a group to support you through the transition and knowing that you're not the only one facing that problem or those issues that you might be going through. 2.4

You said the first two meetings were a little bit more formal and being able to just sit in and see if that would have been like a good fit for me. And I like the idea of having those other meetings that like you said, but it's kind of like a support group for each other. I like that, to feel included and supported by the people I'm surrounded by. Just hearing stories from students who are different, but still experiencing the same things that I was probably would have made me not feel like such an outcast all the time. 2.6

Liked didactic component

As with Phase 1, participants seemed to appreciate the content of the didactic portion of the intervention, though this seemed to be less of a focus for them. This may have been related to the program offering a number of opportunities, resources, and experiences in addition to the ACT-CL content.

I think the two educational classes, I think that really starts the program off with a strong foundation, and a lot of helpful information for the students. 2.1

I really liked the idea of the reporting after the first session, and then coming back in talking about the first session. I like that idea because I feel like it's not only like a support group, but it gets people engaged and actually thinking about the issues that they face, or how they might feel, kind of detailing it a bit. 2.4

Theme: Phase 2 Constructive Feedback

Participants in Phase 2 had a number of additions and suggestions for improvement to the example intervention. This feedback tended to focus on the increased burden of having an in-person group meeting, suggestions for specific services that they wish the program had built into it, suggestions for how to better engage students in the program, and suggestions for potential alternate forms of the program (e.g., make the program a class rather than a counseling group).

Time conflict

Half of Phase 2 participants noted concern about the amount of time that would have to be spent in the program in order to benefit from it. This would be especially burdensome for students who were having to work or care for children while also in school, making the program less accessible to them. In other cases, participant expressed concern that students may simply not engage with the program at all if they have the impression that it is time consuming.

> I don't know how the program would work, but obviously everybody has different class schedules, people work, so I guess maybe like time conflicts? Like if you have a class during the same time, or you have work. I think that would kinda be the only barrier that I could think of. Or even just making excuses for yourself why you wouldn't go. But if it's helpful and it's benefitting you, I don't know why you would make excuses. Really the only thing I can think of are time conflicts. 2.1

> Nothing really comes to mind as a barrier, unless- maybe for instance I had friends that I met who weren't first generation college students, and then if I had other things that took up a lot of my time, for instance working full-time, maybe I couldn't devote a lot of time to the group and maybe I couldn't give as much support to the group. 2.3

> I guess the only thing that I can think of for anybody that could get in the way would be time, so sort of just based on what your schedule looks like, as far as if you work on top of going to class and then what time the group is usually set up, that would be the only thing that I can think of that would hold me back or someone else from finishing the program. 2.4

> The only issue I could see would probably be time, like there's always a lot going on and also, we got to study or work or whatever, so that may be an issue at one point or another. So maybe offering different times for whatever sessions that you have and seeing which fit for most people or something like that. 2.6

Connect program to future goals

Two participants in Phase 2 noted that doing more to overtly connect participation

in the program and achievement of academic goals to students' individual future goals

would be one of way increasing engagement and motivation to finish the program.

> I don't know- I would say really discussing the importance of four-year degrees, but at that point the student is already enrolled in college, so I feel like they know the importance, but I mean I guess some students might not have drive and would maybe more likely to drop out. I don't know, 'cause just speaking for me, my dad is actually very successful without a four-year degree, so I feel like some people might have the mindset like "I can still be successful, even though I'm in college, I'll be ok even if I don't continue on." So maybe in that aspect that would be helpful. But I guess for me personally, thinking about persistence, like don't give up, all this is going to get hard and rocky and you're going to go through hard times and you might make a bad grade here and there but don't let that stop you from I guess achieving your goals. 2.1

> I would just make it a point to really make them feel like it's a good idea, to make them feel like it's good that they're finally deciding to do this, that it's not just them deciding to go to college, that's the first step in starting a family- so instead of just "Oh, you're going to college, that's awesome," really make them feel like this is a big important decision Really make them feel welcome for sure. 2.8

Add mentorship

Phase 2 participants made suggestions to add an individual mentorship component

in addition to the group-based intervention. These participants indicated that this level of

support would have been beneficial to them in helping them to orient themselves to the

post-secondary institution and their own academic goals.

> Like kind of a guidance counselor- like, give me some examples of what college life is like and how college life will be like afterwards when you graduate, because as a first-generation student, I feel like I don't know what to do, you know. Kids who have parents who have college degrees, they have some guidance. Their parents can tell them "Oh, you need to do this major, or this will work, step-by-step" whereas first generation students don't have that. They have to do everything themselves, have to figure things out by themselves, and they don't have the guidance from their parents. Like if they wanted to further their

studies to get their masters or their doctor's degree, or like what life is like after college, and was college worth it. 2.5

How to get people involved in it is another thing, because I know like, first off, when I was a freshman coming into college I felt like I knew everything. I'm all like, "Ha, I'm a freshman, I'm grown, I can do what I want. I'm not going to do no intervention." And then I get those first semester grades, and then I'm like "Well you know, maybe I should have done this or this" and "Should have done that, though." I think something like that. Or like a mentor, you know? Like I feel like first semester freshman and first-generation college kids should have an option of getting a mentor, and do like, check-ups every two weeks. Like support, help learning the resources around campus. 2.7

Alternate form

Four Phase 2 participants made suggestions to change the format of how the program was delivered. In one case, the participant suggested that rather than have the program be offered as a didactic and support group, have the program take the form of a class which student could register and get credit for, which would likely increase buy-in and retention rates since it would be impacting students' GPA.

I don't know if this would be realistic, but I was just thinking instead of it just being a program, that somehow you guys could incorporate it into being like an elective class or something, because then it would be almost like- if you signed up for this class then obviously you'd have to go to get credit for it. It'd be almost be like more of an incentive, and in the end you could possibly get more out of it because you're attendance is going to be there, versus the program- you don't necessarily have to go. 2.1

Other participants suggested that the program could be operated as a student organization or club, with one participant suggesting that students who complete the program could serve as mentors or peer support specialists for future cohorts.

I would like instead of doing a program, make it as a club or something. 2.5

Maybe make it a club and give them resources, like resources for students of how they could receive it. If they were a freshman they can receive it and go forward in the program and be like counselors and mentors to help guide students around, and maybe discuss "How campus life is going" or "How are you dealing with this

problem" or "How is homework" and I don't know, ask questions. And maybe you could open up an online discussion, and whenever they are available they can check in. 2.5

Lastly, one participant suggested that the program could be run in two six-week cycles rather than having one section which lasts the full duration of the semester.

I feel like there should be a mandatory- like a group that they should do to talk about those type of topics, it doesn't even have to be for a full semester. It could be one of those offered for the first 6 weeks and then the last 6 weeks, the first two weeks and the last two weeks, something like that just to have those ideas in their heads. 2.7

Theme: General Program Feedback

Across both phases of this study, participants made recommendations and comments that pertained to any potential intervention targeting first-generation college students. This general feedback is among the most consistent across participants and encompasses feedback specific to aspects of the example interventions (e.g., reminders), suggestions for additional program features that were shared across Phase 1 and 2 (e.g., deliver the program early in academic career, connect students with other first-generation, continuing generation students, and other supportive campus services), and more global feedback about important considerations for working with first-generation students (e.g., avoid shaming or stigmatizing language when recruiting first-generation students, consider the diversity of experiences that students will have). These responses were typically given in response to the interview questions "What

Reminders helpful

Participants in both phases of this study seemed to appreciate the personalized

reminders that were built into the ACT-CL program. Many saw this as a way to enhance

engagement with the program, reinforce consistency of support, and to serve as

motivational reminders. Some participants offered suggestions for how to use reminders

beyond what was described in the program.

> I really think the text messages and emails, the reminders are a really good thing too because, you know, who doesn't have their phone with them now a days? 1.1
>
> I don't think it was extremely time-consuming and I think people would be able to do it while still taking college classes, and I think that it has, especially with the text messages, it has kind of an incentive to keep going. 1.6
>
> I liked that it would send you personalized text or emails- that's cool because then you won't feel like it's just a generic response or like everyone gets the same thing. Like, this is specific to your goals. It's like, Oh, there's like somebody out there that actually cares, that's not actually putting a ton of stress on me either because it's not like my parents who do care, who are also going to add the stress of "Did you do well, did you do this, did you do this, did you do that," this is just like a helpful reminder. 1.7
>
> I see a lot of people rebel or go off track because their parents aren't here. They really have no supervision anymore, they're accountable to themselves and they've never had to be accountable to themselves, and so to be accountable to the program would make them see what they need to do, and what they need to stay on track, and know that something knows their goals and is going to look out for them by sending them texts or email. Without the regular check-in then you can forget about it- well, you don't want to go back in, so it doesn't exist anymore. It's like the news, one day it's there the next day it's not. 1.7

Students might not engage

Several participants cautioned that first-generation students might have a hard

time engaging with the program at all, despite efforts on the part of the clinicians

delivering it. Many cited examples of feeling overwhelmed and then withdrawing from

activities that they saw as not being particularly helpful and time consuming. Others

noted that if a student feels left out or as if they don't measure up to the performance of

other students in the program, this may cause them to disengage. Others cited students

having competing time conflicts as a reason. These comments were often made in

response to the question "what are some reasons you might not finish the program" or

"what would get in the way of you completing a program like this?"

> If it's not during a period where that person has classes, maybe that would be a good thing. Maybe determining, you know, because if I have school work and class and homework and everything that I have going on, plus these modules that I have to go through, I'm like "I have enough on my plate." So maybe gearing the modules, you know, for when that person doesn't have such a large load, I guess. 1.1

> Yeah, 'cause I can just see from experience, I'll become a part of a club or a program or something and I feel like whenever a semester starts and in those first two weeks it is really kind of like anchoring in your head to keep coming back, and it's exciting because it's new and you want to learn stuff, but then almost after a few weeks, you're kind of like "OK, I'm over it" and it's almost harder to get the motivation to go and keep exploring what they have to offer. 2.1

> I feel like if one of the students is not really into it or committed, maybe all these messages and stuff like that might make him feel like maybe they're going into their own little personal bubble when they don't want to, you know? I think it's going to be up to the student and how committed they are going to be towards the program. 2.2

> I think discouragement might get in the way for most college kids because that's what often happens- discouraged, feeling like they're overwhelmed with things that can probably get in the way of them finishing the program. Feeling like they know that, feeling like they already know the information, so why am I here? That kind of situation. But that just depends on the person and the group of people that there are around. I think that's where the building of the community actually begins, it's like you have that core group of people and y'all stick together and y'all finish it and then y'all have that mutual bond. So then that is something that you can't take away. Especially if you have those people who are real, like I'm going to do it, I'm going to finish, and then that energy trickles down, especially to people who never worked with people, that energy definitely trickles down from people to people and how they perceive things. 2.7

I know whenever I was a freshman I would just get overwhelmed. Like it's a lot to take in being a first-generation college student, but I don't know, I guess the only reason that somebody might not follow through with it is just because they do get overwhelmed, and they maybe don't want to meet a bunch of other people as being other first-generation college students. And maybe they're doing really well, and maybe you're not doing as well. So I might just be like, you just don't really want to be surrounded by that when you're feeling like you're just not good enough for staying on point. 2.8

Deliver early

Many participants noted the importance of making the program available to first-generation students as early in their academic career as possible. Some participants emphasized that the content of ACT-CL would be better suited to a younger person, others pointed out that providing a preventive intervention as early as possible would help to set first-generation students off on a good trajectory in their academic career, while many expressed wishing that any kind of program tailored to first-generation students would have been offered when they were initially transitioning into post-secondary education.

I think if I were taking something like this, these modules, I definitely think it would have helped the younger me. Because, you know, when you're younger, you have a million trillion things maybe going on, you may be struggling with identity issues or sexuality or trying to find a group of friends or you just have so much more going on when you're younger than now. Like myself, I'm just pretty settled in my life, good with my hand full of group of friends. So yeah, I definitely think that it would be beneficial for someone who's younger. 1.1

Yeah, kind of like preparing you, because I feel like there's a lot of this stuff that you don't even consider, or you deal with until it's like, real life, time to do adult things and go to college. 1.3

Okay, so first thought that I had was if you were going to do something like that it would probably be best to do it in the first year of college, or maybe even part of the prerequisite stuff that is required by the university before you even get to college. I think it would help a lot of first semester or first-year students. Early in the first semester was the hardest semester for me just because of all of the

adapting and being able to handle studying and doing homework. I feel like if you waited until somebody like me was in their third year then, you kind of waited too late because most of the kids who struggle with adapting and figuring out how to do things, they've already dropped out, you know what I mean. Like my roommate my first year of college. He started out in engineering and he quickly realized that, you know, he can't do it, it was too much for him. And then he changed his major like three more times in the first year, and then he dropped out. Another thing that I mentioned that would have made it easier for me would have been, is if it would have been offered the summer before college started, that way I wasn't worried about trying to finish It while I was trying to do classes or while I'm in starting classes in the semester. 1.4

I think I would at least be willing to try it, and I think personally for me coming in as a freshman it would've been helpful. 2.1

Well, being a senior, it sounds like a really good idea if you were just coming in. Even though I took the step to put myself out there, some people might not have that mindset, and so they might need some support. Maybe if I hadn't been so involved in high school before I wouldn't have known, so maybe if they were approached about being in the group they might be more willing to do it. And being in a group with other people that have things in common with them, that would probably be really good for them. They might end up getting more involved that way and meeting more people that way. Might be really good for someone who maybe is kind of ignorant about reaching out and get involved. 2.3

Add guidance for building support

Getting connected with the campus community, building their personal support networks, and finding their place on campus were crucial parts of many of the participants' experiences. Participants in both phases of the study underscored the importance of this by suggesting that the program should specifically address the topic of building social support.

Maybe just an orientation type of thing for first-generation college students. I know there is SOAR, or another just regular first year college student orientation, but specifically geared for the first generation college students- just kind of what to expect, having or building a good support system whether it's friends, family, teachers, whomever, and even if they don't have that support system from family, they can get it from somewhere else, and why not from your school? 1.1

> I think a lot of these first generation students are going to be a little bit shy, a little bit maybe pressured? So I think one big thing that I think would help a lot is getting them involved in the community. So sometimes taking them out to the community and having them out there and learn stuff from the community and help the community, I think that's something that will benefit a lot. 2.2

Connect with other first-generation students

Along the same line of thinking, several participants suggested that fostering connections with other first-generation students as a part of the program would be especially impactful. One participant suggested having first-generation students who had successfully completed post-secondary could come and provide support and guidance to currently enrolled first-generation students. Others noted the potential benefit of having a connection on campus with someone in a similar situation to them.

> Even having first time or first gen students, successful ones, come and speak to the students so that, you know, if they have any questions on anything- I think they would definitely be helpful. 1.1

> I feel like you could connect with other people too, like if you find another first-generation student and they're in the same program as you, maybe you could like link up and talk about certain things. 1.8

> I think what I liked about it is maybe that it would help students, first generation kids, maybe connect more. 2.5

Connect with other students generally

Beyond wanting more opportunities to connect with other first-generation students, three participants noted the benefit of connecting with others on campus more generally, especially continuing-generation students who may be able to share some of the experiences and knowledge of university systems.

> Maybe connecting them or other students with other students whose parents have graduated, getting them so they can, you know, give them tips, helpful hints for going through college as first-generation students. 1.1

I would do something- I know that everyone's schedule is not the same- but if this is a perfect world, every weekend or every Friday or something all the first-generation college students would come together. We would just have a fun night or something, do something, talk about what's going on, what happened that weekend, college, what were the problems, what were your pros and cons of the week, and then maybe other non-first-generation college students can feel comfortable talking to the first-generation students to come give us advice. I feel personally like when I'm on campus I always have this pressure on me, I have to be good enough, I can't fail, I don't want to let anyone down. 1.8

I think it's just connecting with people and finding resources, like somebody to help kind of holding your hand and getting you along, or just connecting with people in general. 2.5

Address individual needs

Several participants emphasized the importance of attending to specific needs of individuals. This includes helping individual cope with unforeseen circumstances, responding to immediate concerns, and being adaptable to the individual learning styles of individuals in the programs.

There were some unforeseen events that caused me to stop going to school, but maybe dealing with unforeseen events could definitely be incorporated into the exercises or the modules. 1.1

The only thing I would say maybe that I wouldn't like is the fact that it was someone telling you one specific thing to do for the first couple of meetings because they were given specific assignments, and then coming back it wasn't necessarily as much a support group for the first team meetings as it was for the following meetings after the first two. It's just the fact that those first few meetings would be centered around helping really specific- maybe you had something going on that you wanted to focus on in the first couple of meetings, but you couldn't really focus on it because that's not what these meetings were about. 2.3

I would say including a lot of things from people that first generation students can relate to. I felt like a lot of the times that's just like support and money and those are usually like big factors, because you know our parents have little to no education past high school, and having people and students understand what exactly the university does offer would have been helpful. Because you know

there's only so much that we know, and what we hear from others, and what we look up on the internet. 2.6

When I met with my academic advisor at first, I just sort of felt overwhelmed, so I just think it's important not to completely overwhelmed them even if they don't have questions or they seem like they understand, to really make sure that they're getting everything that they're paying for. Making sure that they're comfortable, because a lot of times people just push it to the side and they get overwhelmed. I know I got overwhelmed, and I was afraid to ask questions that- everyone else around me had parents who'd been to college and stuff like that and so I was sort of embarrassed to ask questions and things like that. So just really making them feel welcomed. Maybe doing things like helping them work through the FAFSA and helping them work through registration and stuff like that. Maybe giving the materials on the access they need to do, things like that, but maybe not necessarily doing that with them. I wish I would have had somebody show me, like, you go here to do the FAFSA, this is what you need to want to do, but not necessarily sitting there with me completing it with me. So you still have that independence. 2.8

Connect to other supportive services

Almost half of participants mentioned the importance of connecting students to other campus supportive services in addition to the preventive mental health function that the original ACT-CL program was designed to serve. Participants described personal experiences of needing practical support to complete financial aid or register for classes and feeling as if there were no place of campus that they could turn to for help in completing those. Many participants noted that they later learned of campus resources that would have been beneficial to them earlier in their career and thus would want future students to learn about those resources as soon as possible.

They're doing a module and getting reminders, but if you're focusing on the concept of how to handle your feelings, what if that's not what they need at all? If I'm having trouble getting financial aid, that's not a feelings issue, that's a "I don't know how to pay for it" issue. 1.2

One of the things that also blew my mind, and this comes from working at the university tutoring center, was the baffling amount of resources that were

available to help students but no one had any idea about. I do about the Counseling Center because of a friend who worked there. I was in a general Psych class my first semester, still didn't come up. Also had tutoring work, all that stuff- none of that was brought up ever. I feel like if you were going to make an intervention program that was optional and that would benefit students, the module I would have liked instead of a value sorting activity would be geared towards that, like, "Hey here's a link, you don't have to go through a bunch of classes, but if you have any issues with this you can follow up here and someone will talk to you in this office and here's all the available information we've got." 1.2

Probably just add, even if it's still an online program, that maybe they can meet someone the very first day to talk about their goals, and then the very last day just so that they can meet more people on campus and feel like they have more resources, especially if the first generation student is meeting with like a counselor, that might help them a lot more because half the students on this campus don't even know that we have a Counseling Center. So just meeting someone and actually just having the time to make a connection with someone could help them on campus. 1.6

Yeah the career resource center- so if someone was looking for information like that, like if they were looking for jobs, so getting connected could be really important, and if they hadn't gone to this group thing then they probably wouldn't know. Then of course that wouldn't just help them just on campus, that might potentially help them get a job in the future, always have the resources available to them because that resource in particular is something that they have access to after they graduate. 2.3

To make it more helpful I guess it kind of goes in with the resources thing, like as far as sharing what the benefits of campus are and what campus can provide, the help the campus can provide me with, maybe you guys could get it together and organized like community service events. So things that people could add to their resume or could help further their college career or help them after college. 2.3

Marketing considerations

Along the same theme of making sure future first-generation students know about campus resources, several participants provided suggestions and/or emphasized the importance of making sure the program is marketed effectively. These suggestions included consideration for who might be delivering the message (e.g., hearing about the

program from faculty vs. another student), the specific means of advertising (e.g.,

through the student organization website or targeted advertising efforts), and also general

considerations for how to more effectively reach first-generation students.

> I think that would be the main point- find a way to advertise it very well so the information gets out there to the students that need it. Or finding a way to maybe, you guys getting the information of that student that is first generation student, so you guys could personally give them that information. 2.2

> Yeah, because especially if it's somebody who's a little bit more reserved they're probably not going to approach you, so maybe you've got to seem more approachable or maybe more personal. So maybe sending out an email is a little bit more personal, like you're contacting them personally and maybe then they would want to be in the group. Or you know like those people who stand on campus and physically hand out flyers to you or talk to you about what they're handing out- they might feel more personal and more welcoming. 2.3

> So I'm not quite sure what the requirements to post a group orgsync is, but I would think maybe using a platform like that- and I like the idea of using professors to advertise through word of mouth, so I was thinking things like that, alongside not only putting the posters in the academic buildings and stuff, but I know for one of my jobs I work as an office assistant and so we got posters that we would post around the building and that would be help residents know about important things they might be interested in. 2.4

> I would prefer to be like reached out to by a faculty rather than a student, only because I can trust faculty a little bit more. Because when students are doing it, it's just like there's a lot going on, and you don't know what to do, where to go, so I don't know. I also remember being reached out by a counselor back at my previous school some group that I said that I would join. Another person mentioned it and I heard it somewhere else, so it just felt a little bit more like okay, I would be willing to join something like this because it might fit with me. 2.6

> I've noticed with first-generation students it's all about honesty. I feel like I don't feed them something just to sell something. Tell them what it, is tell them what it's supposed to do, tell them how it's going to help. Because you say it's going to help, they're going to ask why. So I think you have to go into detail on explaining why certain things happen and why you should join the group and here are the benefits. Here's the pros, here's the cons, here's students who did similar programs, and this is the outcome versus students who didn't do programs. 2.7

Consider the diversity of experiences

Four participants noted the importance of considering the diversity of

backgrounds and experiences that first-generation students have. Rather than treating

first-generation students as a homogenous group, participants emphasized the variability

and differing life circumstances that the program will need to be able to address if it is

designed for all first-generation students and not just a certain subset. These comments

also indicate the need for any program staff to be culturally informed and sensitive when

working with FGC students.

> Some students might not have come from a background of education at all, like for me, my parents didn't not go to school at all, they just didn't necessarily attend a four year university. So I guess you're obviously going to be working with people from all different backgrounds, so I guess just kinda keep that in mind, like you're speaking to people who come from- you don't know what they come from. Somebody could come from a family of no education, just kinda working entry-level jobs their whole life, and this is completely new and just like a whole new experience, and then someone like me who I guess knows that you can be successful and you can work your way up. But I guess I didn't know about or wasn't introduced to a four year college, I wasn't completely aware of that, but I was aware- like I grew up in a family of education. I don't know if that made any sense at all. 2.1

> Maybe making sure that people in charge also know the background and the culture of where these students are coming from, and that will help too. You know people like Hispanics, they have different cultures and different views on going to college instead of straight to work after high school, some people from Africa have different views from that as well, where some people from like Europe, or some Americans have totally different views. Some cultures might agree "Yes, continue education" while other cultures might think "No, it's time to go to work and have responsibilities" you know? 2.2

> We like a lot of students just experience such a big culture shock, and it's overwhelming a lot of the time. And then on top of that you got to maintain good grades and also your social life and experimenting with different things and all that. Sometimes it's just a lot to handle, and a lot of people who work there don't always remember that. I also feel like maybe counseling should be pushed out there more, but not in a way that's like "Oh, you have a problem" more just like "We're just here to listen to what you have to say." 2.6

Avoid stigmatizing students

Several participants remarked on the language used to describe the program and the way it might be marketed on campus. Some expressed concern related to general stigma associated with seeking mental health treatment. Others noted concern about the terms "first-generation student" and "intervention," which might make first-generation students feel further stigmatized and singled out.

> Just the judgmental aspects, a lot of stuff- would probably feel like we're being judged by someone who wasn't first generation, so if you're like "Oh, this is only for first-generation students" I think in a way that might make people not want to come because it also feel like "Oh, I'm different, something other than normal. None of us want to feel different, no one does. Maybe you have two groups, like you have groups for college students that struggle and then you have a group for if you still have struggles in other aspects because you're first generation Maybe you offer it after, to initially to get them to come to something that's for every college student, and then maybe they need more help because their parents don't understand, and then you earned their trust so that way they would carry over into their own group, because I don't think I would go to something that singled me out. 1.7

> I just think it's really important obviously as a psych minor to get in touch with your feelings. I mean everyone gets depressed, it happens. You get stressed and that leads you to getting a bad grade and then you get depressed, And then you have that stigma around it sometimes, so to just have something to help you out would be really nice without labeling it like a group for those that are. It's not support for those that are depressed, like secretly maybe it's monitoring that you're upset and you're having a hard time but you don't know that. 1.7

> My sister struggled- my sister has depression and a lot of things, and she will not talk to anyone about it and she does not want to deal with it. I mean in this day and age, people who are older than us love to say like "Oh, what could you possibly have to feel depressed about?" And then you also have people that don't understand that some people unfortunately are born depressed. 1.7

> So I guess I wouldn't change anything then, I would just add a name for the group that seems more welcoming, or that doesn't make people feel ashamed to be first generation. Some people might feel ashamed of it because their parents don't have that particular educational background. I think it's important to avoid, within the main advertisements of it or the main name of the group, to kind of avoid the use of first-generation- maybe kind of find a more interesting, different way to

highlight the fact that it's first generation without saying first generation. I guess it's like, rather than highlighting first generation, maybe like first graduate, or something of that nature, to basically show the progress that they're going to make. 2.4

I feel like when you say intervention, I feel like something's wrong. I feel like it should be more of a support group, not intervention, because then I feel like maybe something is wrong. 'Cause when I think of intervention, I think of a family sitting somebody down and "We need to talk about what's wrong." 2.7

In summary, participants provided an abundance of feedback about their own personal experiences of transitioning and persisting in post-secondary education settings as well as specific comments related to the example interventions. The hypotheses that participants would suggest the need for changes to the interventions (1a and 1b) and that this feedback would be of sufficient detail to suggest meaningful adaptations (2a and 2b) were fully supported in both Phases 1 and 2. In addition to high quality feedback regarding specific interventions, participant feedback about their own personal experiences provided rich data that contributed greatly to the modifications.

Table 1: List of interview themes

| **FGC Student Experiences** | |
|---|---|
| **Theme: Barriers to Transition** | Working while in school |
| Feeling Unprepared | Multiple roles |
| Parents unable to provide support or assistance | Interference due to mental health symptoms |
| Lack of support on campus | **Theme: Facilitators of Transition** |
| Feeling isolated on campus | Motivation to finish |
| Living off campus | Family support |
| Being far from home | Being close to home |
| Difficult interpersonal relationships on campus | Helpful campus relationships |
| Feeling unwelcome on campus | Helpful campus resources |
| Financial strain | Felt more prepared |
| **ACT-based Intervention Feedback** | |
| **Theme: ACT-Specific Feedback** | Add academic support |
| Increasing acceptance and reducing avoidance | Broaden focus of program |
| Setting goals and clarifying values | **Theme: Phase 2 Positive Feedback** |
| Components fit together | Liked group support |
| **Theme: Phase 1 Positive Feedback** | Liked didactic component |
| Not having to meet in person | **Theme: Phase 2 Constructive Feedback** |
| Online format not burdensome | Time conflict |
| **Theme: Phase 1 Constructive Feedback** | Connect program to future goals |
| Add group component | Add mentorship |
| Online format not engaging enough | Alternate form |
| **Theme: General Program Feedback** | |
| Reminders helpful | Address individual needs |
| Students might not engage | Connect to other supportive services |
| Deliver early | Marketing considerations |
| Add guidance for building support | Consider the diversity of experiences |
| Connect with other first-generation students | Avoid stigmatizing students |
| Connect with other students generally | |

CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

Participants in this study provided an abundance of thoughtful, detailed comments with regard to reporting their own experiences of transitioning into post-secondary education as well as giving feedback on example interventions. Stated hypotheses for this study, i.e. that participants in both phases of the study would suggest modifications to the example interventions and that their feedback would be detailed enough to direct meaningful changes, were fully supported as evidenced by the above sampled comments. In addition to specific feedback, participant reports of their own general experiences as first-generation students and how those experiences impacted their academic performance and overall wellbeing were invaluable in informing which aspects of the interventions were more or less helpful or relevant to participants.

Proposed Adaptations to the ACT-based Example Interventions

As previously described, interventions reviewed in this study targeting first-generation college (FGC) students broadly classify into interventions focusing on individual *psychological factors* of students and *environmental & sociocultural factors*. Each of these are conceptualized as directly and indirectly impacting academic satisfaction and general life satisfaction. Participants in this study provided feedback that was broadly consistent with this conceptualization, and while it was not a primary focus of this study, this lends credence to the validity and applicability of the modified social-cognitive model (Lent, 2004) of normative well-being for FGC students described in Chapter 1. The example intervention in Phase 1 of this study was described as

exclusively focusing on individual psychological factors, such as increasing psychological flexibility in accordance with the ACT model of therapy as well as increasing resilience through teaching healthy coping skills and encouraging engagement in goal-directed behavior. Participants in Phase 1 provided feedback that the intervention needed to be broader in scope if it was going to be truly helpful for FGC students. This broadening of scope was consistent with the need for consideration of the second major exogenous variable outlined in the modified Lent model: environmental and sociocultural factors. In Phase 2 of the study, the example intervention was described as including a group component to address the need for building supportive relationships on campus as well as providing opportunities for connecting students with other support services on campus. The Phase 2 example program attempted to address both psychological and sociocultural factors. Participants provided positive feedback for this modification, though many continued to express concern that the program would not do enough to address their need for more direct academic and financial support.

The most commonly reported experiences among participants were feelings of being isolated on campus, feeling unprepared for the transition into college, feeling a lack of support from both their campuses and their families, and generally feeling as if they had been "thrown into the deep end." Helping to alleviate this strain was the frequently mentioned benefit of building support and relationships on campus, focusing on their motivations for completing their degree and getting connected to supportive campus services. Given these broad experiences, it is evident that interventions targeting only a small piece of first-generation students' experiences will ultimately be insufficient to significantly impact the first-generation achievement gap. Participants in this study

readily provided meaningful critique and suggested substantial additions to the example

interventions presented, as well as provided important considerations for future work

with first-generation college students.

In the first phase of this study, participants were presented with a self-mediated

online preventive mental health intervention (ACT-CL). Students felt this program was

accessible and that it presented a relatively low burden due to its nature as a therapist-

supported but ultimately self-guided intervention. While participants generally

appreciated the components of ACT, specifically the program's focus on identifying

value-based goals and coping with internal barriers that may prevent students from

achieving those goals, many were concerned with the lack of interpersonal interaction

with a therapist or other students. In addition, many felt that their more practical needs

would not have been addressed through this program. For example, one participant

astutely pointed out that though learning coping skills for managing depression and

anxiety is beneficial in general, doing so would not have helped him meaningfully

address his concerns related to acquiring financial aid, which would have in turn

prevented him from continuing in his academic career. This sentiment was echoed by

several other participants, who suggested broadening the focus of program to include

support for navigating academic services, learning effective study skills, and adjusting to

life on a university campus. Some participants felt that an online-only intervention would

not have felt personal or engaging enough, which would lead them to discontinue the

program despite its relatively short duration. While Phase 1 participants liked the idea of

the program, ultimately, they were dissatisfied: they felt that while it may have been

helpful early in their academic career, their needs would not have been adequately addressed.

In developing the Phase 2 example intervention, the research team had to consider both the feedback specific to the ACT-CL intervention, as well as participants' reports of facilitative and deleterious experiences which impacted their adjusting to college. The decision was made to conceptualize the Phase 2 example intervention as being ACT-CL with the exception that it would be delivered in an in-person group format facilitated by staff members of the university counseling center, and would have an additional support and discussion group component for students to participate in following the didactic portion. This program was based on a group CBT intervention (Heimberg & Becker, 2002) which has been adapted for delivery in a university counseling setting. While this choice made the program less accessible and more burdensome, in that students would need to travel to a specific location and receive services in person rather than online, adding the group component to address Phase 1 participants reported need for community and social support on campus made the tradeoff seem worthwhile. While this change was contrary to the feedback given by two Phase 1 participants, it was consistent with the majority of feedback as well as prior research indicating the barriers to engagement with online or web-based services described in prior research (e.g., Levin et al., 2018). Additionally, the connection of the Phase 2 example program to the university counseling center created a pathway for counseling professionals to connect students with other campus providers, and for students in the program to directly share knowledge with each other and build relationships with other first-generation students.

Participants in Phase 2 again voiced appreciation for ACT didactic components. Participants also expressed appreciation for the group format, particularly the increased opportunity for connection to campus resources and the increased duration of the program. However, the most appreciated feature of the Phase 2 example intervention was the group format itself, as many participants indicated that having an opportunity to interact with other first-generation students would have helped them to feel less alone and like less of an outsider on campus. The main concern that participants expressed about the format change for Phase 2 was that the time commitment required to benefit from the program may cause some students to either disengage or not be able to participate at all. Phase 2 participants also suggested other additions to the program, such as adding individual mentorship, or moving the program outside of the context of the university counseling center setting in order to reduce stigma or the perception that something is "wrong" with them because they are seeking the service.

Across both phases of this study, participants made a number of general recommendations and considerations for working with first-generation students that were not specific to either example intervention. These included the necessity of programs to connect first-generation students with other supportive campus services (which the Phase 2 intervention attempted to address), the desire for flexibility in the program to accommodate individual needs, the potential benefit of delivering the program as early as possible in first-generation students' academic careers, and considerations for avoiding stigmatizing language related to either first-generation status or mental health needs. Throughout all of the interviews, participants stressed the importance of supportive

campus relationships with first-generation students, continuing generation college (CGC) students, and campus providers.

The model of cultural adaptation of evidence-based interventions outlined by Castro, Barrera, and Streiker (2010) and described in Chapter 2 posits that any successful program adaptation must account for factors that will influence program participation, common mediators (factors that will impact both FGC and CGC students), and unique mediators (factors that are likely to impact only FGC students) which will in turn impact common and unique outcomes, such as academic performance and social and academic integration. Participant feedback regarding each of the example programs and general experiences for FGC students was broadly consistent with this model. Participants provided a great deal of practical advice concerning factors directly impacting program participation, such as considerations for how a potential program would be advertised on campus, barriers that might interfere with participants ability to complete the program, and how potential participants might hear about the program. Participants also stressed the importance of attending to common mediators of academic outcomes, such as academic and financial resources. While participants seldom mentioned unique socio-cultural mediators (e.g., "fit" with academic culture, social and cultural capital in campus relationships) in the context of providing program feedback, these concerns arose consistently when participants were asked to describe the factors that positively and negatively influenced their academic careers.

Proposed Culturally Adapted Intervention for FGC Students

Based on the above described findings, one potentially useful template for a program that addresses much of the participant feedback and could be adapted for use with first-generation students is the RENEW model (Rehabilitation for Empowerment, Natural Supports, Education, and Work; Malloy, 2013). RENEW is an intervention based on wraparound (Bruns, Walker, & The National Wraparound Initiative Advisory Group, 2008) principles, which are commonly applied in community settings to address the needs of youth at risk for disengagement from work or educational pursuits and increased risk of involvement with the criminal justice system. While Bruns et al., outline 10 principles common to all wraparound implementations, there are a subset that seem particularly well suited for use with FGC students in the post-secondary education setting. First, the perspective of individual program participants (FGC themselves in this instance) is intentionally elicited and given high priority in terms of developing an intervention plan and exploring options and choices. Second, wraparound programs are always team-based interventions which capitalize on connecting program participants with supportive services through formal, informal, and community support relationships. Third, wraparound programs emphasize the strengthening of natural supportive relationships (e.g., non-professional relationships) as well as the utilization of community-based resources (e.g., professional services). Fourth, wraparound programs strive to be culturally competent in that the process and facilitators demonstrate respect for values, preferences, beliefs, cultures, and identities of participants. Fifth, wraparound programs are individualized to every participant's needs and strengths. Lastly, wraparound programs are outcome based and regularly integrate measures of participant

progress and success grounded in the participant's treatment plan and outcomes that are relevant to the overarching goal of the program.

The RENEW model is an intervention designed based on wraparound principles that has been implemented in a variety of contexts, such as in secondary education settings and community mental health service settings. In each implementation, the RENEW model is adapted and modified based on unique needs and characteristics of the population being served. One specific example of RENEW implementation is the On Ramp Resource Center located in Charlotte, NC. On Ramp provides services to at-risk youth ages 16 to 24, many of whom are aging out of the foster care system. It entails providing intensive case management services, a one-on-one planning activity (Futures Planning Meeting) focusing on helping youth identify and work towards important personal goals related to work and education, and also includes a drop-in resource center, where program participants could spend time interacting with program staff and ask for specific resources, e.g. resume writing, support in the job application process, having a safe and quiet place to study. The RENEW model demonstrated some effectiveness in helping youth get connected to supportive services and feel supported in their autonomy (Laporte, Haber, & Malloy, 2014) and a multistate implementation study of the RENEW model funded by the U.S. Department of Education National Center for Education Research is currently underway.

Implementing a program similar to RENEW in a university campus setting would be one way to address several components of participant feedback. Ideally, this program would include services similar to those in the RENEW program. Specifically, a case management component where FGC student participants could get connected to helpful

campus resources and receive support for specific needs or concerns, a drop-in resource center that would be dedicated to serving FGC students, and an in-person didactic component. In this case, the didactic component would be based on ACT-CL modules rather than On Ramp's Futures Planning. Staff involved with the program (e.g. counselors, case managers, and administrative support staff) would be familiar with working with first-generation students or might have been first-generation students themselves. One innovative program implemented in the University of California system is the First-Gen Faculty Initiative (Flaherty, 2017), which seeks to increase the visibility of potential academic role models for FGC students, which could serve as a useful template for this program to follow. This particular model of intervention could be expanded to include organized group discussion, as well as less formal opportunities for socialization with other first-generation students. Ideally this program model would allow for first-generation students to learn coping skills to help them manage with emotional reactions to the transition to college, clarify their values and goals, identify meaningful ways to take action towards those goals, and capitalize on the broad array of resources available on college campuses.

Related to campus resources- several participants mentioned learning about the wide array of services available to them long after those services would have been most fruitful or most productive for them. Anecdotally, faculty working with college students in general are often surprised to learn that resources thought to be widely utilized and well known about on campus remain unknown to a significant portion of the undergraduate student body. While the services offered by sizeable campuses are robust, the problem of getting students effectively connected to these services persists. Rather

than wholly reinventing services, if campus providers could do more to actively coordinate their work together, this would likely increase the efficiency with which these services are delivered to students broadly. The problem of "siloing" campus services is one that has come under increasing scrutiny in recent years (Craig, 2017; Fusch & Tegtmeier, 2017) and feedback provided by study participants emphasized the need for better connections between campus services in order to decrease confusion and opportunities for FGC students to "fall through the cracks." One important function that this proposed first-generation resource center could serve would be as a clearing house for campus resources. Therefore, program staff would need to be knowledgeable of services available at the university and must be well-versed in working with other professionals from diverse training backgrounds. Essentially the proposed program would become a service hub on campus for FGC students.

Another potential consideration for this proposed intervention would be the department in which it would be housed on campus. During the Phase 2 interviews, participants noted some concerns related to receiving services through the university counseling center due to the stigma involved with seeking mental health services. One participant in particular voiced concern about the example program in Phase 2:

> I feel like the program and the way you were talking about it feels like therapy. It sounded like, you know how you go to a therapist or a psychiatrist, you tell them your problems, and a psychiatrist will tell you to do a task to help you through that problem? It feels like that. 2.5

One way to address this concern would be to house the program in a more neutral and less clinically focused setting on campus, such as a student union complex or library. Participants also expressed concern about how the program would be marketed, with one

participant in particular expressing concern with being labelled as a program for "first-generation students" and the participant suggested alternative, more hopeful language, such as "academic pioneer," or "academic trailblazer." As this program is being developed, a panel of potential stakeholders in the program should be consulted. An alternative way in which the program could be marketed specifically to first-generation students would be direct referrals from academic advisors and mentors or other professionals that the student already has a relationship with.

The above described intervention, an on-campus FGC student resource center offering training in ACT-based skills and opportunities to connect with other FGC students, is largely focused on addressing the needs of individual students. However, there exist other levels of intervention that should be addressed in order to more fully address the needs of FGC students. In a recent review, Hermann and Varnum (2018) outline three levels of intervention for working with FGC students: Individual or Student-level interventions, Family-Level interventions, and Institutional Interventions. The authors emphasize that the onus should not be placed wholly on students and their families to change and adapt to the culture and demands of the university. The above described program has the capacity to be expanded to include considerations for family and institution-level intervention. Rather than being limited to working with current FGC students, program staff could offer consultation services to families of currently enrolled FGC students. In acting as a hub for campus services, the program could begin to address the issue of siloing of services. The program could also focus not just on educating students and families, but could also offer consultation services to faculty and staff so

that they may be better prepared to address the needs and work with the strengths of FGC students.

## Potential Biases of the Author

This author is a continuing-generation college student and thus does not have direct, first-hand knowledge of first-generation student experiences transitioning into post-secondary education. The relative privilege afforded by this author's identities may have influenced the way in which participant feedback was heard and understood. In order to combat this tendency, as much original data and verbatim language from participants was preserved in the codebook used for this study as possible. Additionally, during interviews, the author made every attempt to use reflective listening techniques in order to ensure that what the author heard was what the participant intended to say. Lastly, the specific questions asked of each participant with regard to their experiences in post-secondary education settings and feedback about the example interventions remained constant through all interviews so that data gathered were not influenced by responses that individual participants provided.

The models of intervention used to develop the Phase 2 example intervention and the final proposed intervention, CBGT and RENEW respectively, are treatment models that this author has direct experience with: delivering, in the case of CBGT, and conducting program evaluation in the case of RENEW. While these experiences served to increase the author's familiarity with these programs, it may have unduly biased the author towards seeing them as a good fit for participant feedback. In order to mitigate this potential bias, during the course of this study, the author consulted with clinicians and

experts in the field in order to receive outside input. These professionals agreed that these modelled interventions seemed to be a good fit for participant feedback. Nevertheless, this author's perspective is inherently limited and constrained by his own experience, and there are likely other intervention models that would have also adequately addressed participant feedback.

## Limitations and Strengths

This sample is limited by the use of a relatively small sample size and the use of individual interviews. Nevertheless, the ideas expressed in both Phase 1 and Phase 2 appears to have at least reasonably approximated saturation despite the relatively small sample size. Given this, it is unlikely that additional interviews would have substantially impacted the findings of this study. In the initial proposal, the author intended to gather a larger sample size, roughly double the number of participants sampled, and use a focus group approach rather than individual interviews. However, scheduling for in-person focus group sessions proved to be a major barrier for study participation and the decision was made to transition the study to individual interviews. In making this decision, considerations for fundamental differences between single-person interviews and group-interviews (e.g., focus groups) were made. Specifically, the benefits of focus groups (e.g., being able to observe between-participant interactions, participants being more comfortable giving critical feedback to service providers when speaking in groups; Green & Thorogood, 2014) were not central to the aims of this study because the interviewer was not a service provider (merely providing an example and asking for feedback). Individual interviews were seen to be just as effective in collecting relevant data (i.e.,

feedback on example interventions for first-generation students and personal experiences of being a first-generation college student) and individual interviews may have even allowed for participants to be more open about their personal experiences. After reviewing potential costs and benefits of group vs. individual interview formats, the potential benefits of focus groups over individual interviews did not outweigh the cost (i.e., high barrier to participation) in this case.

An additional limitation is the nature of interview data. Participants were recounting experiences they had, in some cases several years prior to the interview, and giving feedback on a hypothetical intervention that they had not personally participated in themselves. This may have influenced the types of responses that participants gave. For example, participants may have underestimated the impact of the additional time-commitment of having to come to an on-campus meeting on a weekly basis in the Phase 2 intervention. Participants may also have given feedback that is consistent with their current academic standing and level of acculturation to the university setting, which may not have been consistent with their worldview earlier in their academic career.

As with previous studies of ACT-based interventions, this study is limited to sampling from a single university setting. Previous studies of ACT interventions in college settings have been criticized for sampling predominantly White women. While this study sample was majority women (75%), only 40% of the sample identified themselves as White with the other 60% identifying as African American or Black, Hispanic/Latino/a, Asian American or Asian, or multiracial. Findings from this study related to the applicability of ACT-based interventions to college students and to FGC students in particular were largely consistent with previous studies of ACT on college

campuses in that the majority of participants seemed to see ACT as beneficial and relevant to their needs.

## Future Directions

As described in Chapter 2, the process of adapting interventions is an iterative one. This project encompasses only the first two stages of Barrera, Castro, Strycker, and Toobert's (2013) five stage model of cultural adaptation. Future directions for this line of research involve moving on to Stages 3 and 4 of the Barrera model, i.e., implementing a pilot study of the proposed intervention and collecting feedback and outcome data on pilot study participants. In this particular case, the pilot study outcomes would not be limited to outcomes for individual participants, but would also include institutional outcomes, such as the degree of connectedness between campus services. Individual outcomes would follow from the Castro et al. (2010) model and focus on common outcomes (e.g., academic performance, persistence in academic enrollment) and unique outcomes (e.g., social and academic integration with the university setting). These outcomes could be compared between participants in the pilot program and participants in a "treatment as usual" condition, which in this case might be connection with existing campus resources. Additionally, the services and information offered by the program could be compared to an online program (such as the original ACT-CL intervention) in order to examine the impact of the in-person aspects of the program. Another potential variable that could be measured would be the fidelity with which the intervention was delivered by pilot program staff. Institution level outcomes are less well defined but could include increasing faculty and staff knowledge of campus services that might be

particularly helpful for FGC and their confidence in referring FGC students to the program.

## Contributions

Socioeconomic disparities in academic achievement contribute to the persistent and widening gap between first and continuing generation college students, thus maintaining and perpetuating social and economic inequality. This inequality particularly impacts students from marginalized and underserved backgrounds. This study provides a framework for implementing a program designed to increase resilience among FGC students, improve their social and academic functioning in post-secondary education settings, and ultimately reduce inequalities in health, education, and income. This study also meaningfully contributes to the literature examining the feasibility of implementing a preventive ACT-based intervention for use with FGC students, a population that has not yet been explicitly studied in the ACT literature.

First generation students are an increasingly represented population in post-secondary education, yet achievement gaps based on SES and generational status persist. A recent working paper published by the National Bureau of Economic Research (Papageorge & Thom, 2018) suggests that while genetic markers associated with academic achievement and labor market outcomes later in life are equally distributed among people from low and high-income households, children born to wealthier parents are more likely graduate from college. The authors interpret their findings as evidence that children born into conditions of economic disadvantage face "an uphill battle" in terms of academic achievement and lifetime earning potential. This study represents an

effort to address this disparity. While there are a variety of services available to students on college campuses, interventions designed specifically to address the sociocultural factors that impact FGC students remain scarce.

The most consistent theme identified in the study was not one specific to the example interventions or FGC student experiences. Rather it was the enthusiasm that participants had for the possibility of having a program tailored specifically for them. Almost all participants expressed the sentiment that the program would have been helpful for them in the past during their transition into college and many expressed feeling as if they would benefit from a program in their current stage

> This program sounds like something that I would probably do like right now. College is like, you have this one first experience and then it's like a million first experiences no matter how long you've been there for. 1.3

A number of participants even requested to be contacted for participation in future studies because of their enthusiasm for the possibility of a program, like the ones discussed, being offered on campus. Participants seemed to truly value not only the opportunity to receive support themselves, but to give back to other FGC students as well.

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APPENDIX A: SCRIPT FOR PHASE 1 EXAMPLE INTERVENTION

This program consists of two online learning modules. The first is about exploring your values, thinking about what really matters to you as a person and how to translate those values into goals and actions. The module has six lessons in it, which include defining what values are, clarifying your personal values, learning how to reflect on those values on a consistent basis, learning how to set manageable and values-based goals, setting a specific goal for the following week, and a final summary of the content.

During the next week, you'll receive a number of personalized reminders based on the values and goals you defined in the learning module. Over the course of the week you'll get two emails and two text messages on alternating days of the week. These reminders will ask you to do things like reflect on your values, reflect on values you admire in others, a prompt to think about which of your personal values you engaged with during your day, a prompt to reflect on your actions during the day and how consistent those were with your values, a reminder to set a specific values-based goal for that day, and resources to help you practice mindfulness throughout your week.

The second learning module focuses on learning to manage internal barriers, or difficult emotional experiences that might get in the way of achieving your goals. This module begins with a review of the first learning module and then goes into six lessons, which include learning to identify internal barriers, learning about problems with control strategies, defining willingness, a practice exercise to experience willingness, setting a specific willingness goal for the week, and finally a summary of the module.

Just like the previous week, you'll receive a series of text message and email reminders. These reminders will include prompts to practice willingness, take actions toward goals defined during the module, think about how to implement ACT skills in the future, and more resources to help apply mindfulness principles to difficult internal experiences.

APPENDIX B: SCRIPT FOR PHASE 2 EXAMPLE INTERVENTION

This program consists of a series of in-person meetings with two co-facilitators from the university counseling center and a group of other first-generation college students. The first two sessions focus on teaching specific ACT-based skills and then the following group sessions are focused on discussion between group members.

The first group session is about exploring your values, thinking about what really matters to you as a person and how to translate those values into goals and actions. The session has six lessons in it, which include defining what values are, clarifying your personal values, learning how to reflect on those values on a consistent basis, learning how to set manageable and values-based goals, setting a specific goal for the following week, and a final summary of the content.

During the next week, you'll receive a number of personalized reminders based on the values and goals you defined in the learning module. Over the course of the week you'll get two emails and two text messages on alternating days of the week. These reminders will ask you to do things like reflect on your values, reflect on values you admire in others, a prompt to think about which of your personal values you engaged with during your day, a prompt to reflect on your actions during the day and how consistent those were with your values, a reminder to set a specific values-based goal for that day, and resources to help you practice mindfulness throughout your week.

The second group session focuses on learning to manage internal barriers, or difficult emotional experiences that might get in the way of achieving your goals. This session begins with a review of the first session and then goes into six new lessons, which include learning to identify internal barriers, learning about problems with control strategies, defining willingness, a practice exercise to experience willingness, setting a specific willingness goal for the week, and finally a summary of the module.

Just like the previous week, you'll receive a series of text message and email reminders. These reminders will include prompts to practice willingness, take actions toward goals defined during the module, think about how to implement ACT skills in the future, and more resources to help apply mindfulness principles to difficult internal experiences.

After these first two session, the group would continue to meet, but the sessions would have less of a formal structure. Instead, group members could talk openly about what experiences they have been having, share information about resources that they found to be helpful, or ask for advice or support from other group members. The co-facilitators would be there to help the group work through potentially difficult topics but would ideally just be present to guide discussion and share resources if necessary.