A Holistic Look at First-Generation College Students in Graduate Healthcare Programs

by

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ABSTRACT

First-generation college students (FGCS) are considered underrepresented minorities in healthcare. While there are numerous studies on undergraduate students, little is known about FGCS in graduate programs, as this information has not been routinely collected. As such, diversity has been measured only based on race or ethnicity, which may not capture diversity from a broader definition. Furthermore, current research provides a deficit narrative, presenting these students as lacking in abilities and capital. However, these students were successful as undergraduates to enter graduate school and likely have undisclosed strengths. The purpose of this mixed methods study was to develop a comprehensive understanding of FGCS in graduate healthcare programs. All students enrolled in physical therapy, occupational therapy, or pharmacy programs at Creighton University in Phoenix were invited to complete a survey with items related to demographics, parental educational attainment, cultural capital, help-seeking and help-avoidance, and sense of belonging. Additionally, most of the FGCS in this study participated in semi-structured interviews with questions related to cultural capital and experiences in their current programs. The results show that FGCS in this study demonstrate similar cultural capital, help-seeking and help-avoidance, and sense of belonging as their peers. From the interviews, the FGCS strengths include family support, navigational capital, a desire to give back to their communities by providing care in underserved areas, and they have a desire to connect to faculty and peers. Challenges include family stressors, finances, mental health, and academic issues. These are presented with evidence-based recommendations for faculty and administrators. This

study provides a more holistic view of FGCS as they navigate graduate school. By avoiding a deficit narrative, this study improves our understanding of FGCS.

DEDICATION

"And so, *lifting as we climb*, onward and upward we go, struggling and striving, and hoping that the buds and blossoms of our desires will burst into glorious fruition 'ere long. With courage, born of success achieved in the past, with a keen sense of the responsibility which we shall continue to assume, we look forward to a future large with promise and hope. Seeking no favors because of our color, nor patronage because of our needs, we knock at the bar of justice, asking an equal chance."

Mary Church Terrell

This work is dedicated to the following:

To my fellow first-generation students, you are a source of inspiration and a reminder that adversity can be transformed into strength. May our collective pursuit of knowledge continue to pave the way for future generations, showing that with resilience, determination, and the support of a community, the pursuit of knowledge knows no bounds.

To my husband, Gabe, the love of my life, for always saying yes to my crazy ideas. This would not have been possible without your love and encouragement.

To my parents, whose love and belief in my potential have been the cornerstone of my journey, this dissertation is a testament to your enduring support.

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Character cannot be developed in ease and quiet. Only through experience of trial and suffering can the soul be strengthened, ambition inspired, and success achieved.   Hellen Keller

CHAPTER 1

CONTEXT AND PROBLEM OF PRACTICE

Introduction

First-generation college students (FGCS), those first in their family to attend college, represent approximately one quarter of all college-aged students (Horn & Nunez, 2000). This underrepresented minority (URM) group is often overlooked in the desire to increase diversity within healthcare (Wise et al., 2017). Moreover, many have unique obstacles that they must overcome, frequently on their own, to be successful. It is our responsibility as educators to improve our approach for our FGCS and all URM's on our campuses. This will ensure their success as college students and help to address the health disparities present in the U.S.

The disparities in our current healthcare system contribute to worsening health status and increased mortality rates in racial and ethnic minority groups. These disparities are a result of a complex interplay of multiple factors including, but not limited to, income, social class, education, and environmental factors (Geronimus et al., 2011; Isaacs & Schroeder, 2004; Muntaner et al., 2004). Patients have difficulty with access, communication, and trust of healthcare providers and the healthcare system at large (Haskins & Kirk-Sanchez, 2006). More specifically, healthcare practitioners in the United States are not accurately representative of the larger population demographics

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(Lett et al., 2018; Salsberg et al., 2021). This may limit the ability of healthcare providers to offer culturally competent care that meets the needs of diverse communities (Piggott & Cariaga-Lo, 2019). In addition to placing a higher burden of disease and mortality on minority groups, inequities in care are a threat to the quality of care for all Americans (Smedley et al., 2002). Increasing the diversity among healthcare professionals will improve patient interactions, satisfaction, and access to care (Spencer, 2020).

It is crucial that we implement strategies to increase the number of minorities in healthcare to improve health disparities and improve outcomes. The Institute of Medicine recommends an increase in the proportion of racial and ethnic minorities among healthcare professionals (Smedley et al., 2002). Several studies highlight the importance and benefits of diversifying the healthcare workforce to advance towards health equity (Larson, 2006; Sulman et al., 2007; Etowa & Debs-Ivall, 2017; Gomez & Bernet, 2019; Piggott & Cariaga-Lo, 2019). For example, healthcare providers of color, African American/Black, Hispanic/Latino, Asian/Pacific Islander, American Indian/Alaska Native, and multiracial individuals, are more likely than others to address health disparities in a culturally competent manner (Valentine et al., 2016). Greater diversity improves the accuracy of clinical decision making and decreases clinical uncertainty, leading to improved health outcomes and higher patient satisfaction (LaVeist & Pierre, 2014; Gomez & Bernet, 2019). Diverse healthcare teams are more effective communicators (Dreachslin et al., 2000). In addition to patient care, diverse teams have been shown to drive innovation and new discoveries in medical research to address health issues across the globe (Piggott & Cariaga-Lo, 2019). Increased diversity in the healthcare workforce helps reduce health disparities and is vital to achieving accessible,

equitable healthcare (LaVeist & Pierre, 2014; McGee, 2012). Clearly increased diversity is important in improving patient outcomes. The literature has also shown that a lack of representation within healthcare negatively affects patient outcomes (Sarfraz et al., 2021; Donini-Lenhoff & Brotherton, 2010). From cancer, heart disease and HIV/AIDS to diabetes and mental health, minorities receive less and lower quality healthcare, contributing to higher mortality rates (National Quality Forum, 2017). Patient satisfaction has also been found to be strongly related to patient-provider matching on ethnic origin and cultural similarity (Nayer et al., 2010). Medical providers should reflect the variety of patients for which they provide care.

Increasing the diversity of the healthcare system will allow providers to respond to patients' varied cultural backgrounds and social differences. Providers from underrepresented groups are crucial to healthcare access and quality for the broader U.S. population (Silver et al., 2019). Educating a more diverse workforce has been a recent goal of many healthcare educational programs. Underrepresented students can benefit from more effective mentorship from a healthcare practitioner of a similar background (Zayas & McGuigan, 2006). The various healthcare fields, such as physicians, nurses, pharmacists, and dentists, are primarily white and not reflective of the population of the Unites States (U.S. Department of Health and Human Services, 2017). The American Physical Therapy Association (APTA) reported that physical therapists are 65% female and 84.3% white, based on 2019 data (2020), which, again, falls short of representing the population of the United States. Racial and ethnic minorities in nursing are represented at levels below what is reflected in the U.S. population (Relf, 2016).

Efforts to increase admission rates of underrepresented minorities in healthcare education programs began several years ago (Yanchick et al., 2014; AOTA, 2007; American Council of Academic Physical Therapy, 2021). Many healthcare professions have made changes to policies and accreditation requirements to increase diversity. For example, in 2013, the American Council of Academic Physical Therapy (ACAPT) created the first Diversity Task Committee, which was responsible for developing strategies and resources to increase diversity in PT student recruitment (American Council of Academic Physical Therapy, 2021). In 2016, the Commission on Accreditation in Physical Therapy Education (CAPTE) developed new Standards and Required Elements for Accreditation of Physical Therapy Education Programs which states: "The program recruits, admits and graduates students consistent with societal needs for physical therapy services for a diverse population" (Commission on Accreditation in Physical Therapy Education, 2020). PT education programs are required to uphold these standards to maintain accreditation. As a result, physical therapy education programs are implementing recruitment and retention strategies for URM students (Haskins & Kirk-Sanchez, 2006). The ACAPT defines underrepresented minority as racial and ethnic populations that are underrepresented relative to their numbers in the general population, as well as individuals from geographically underrepresented areas, lower economic strata, and educationally disadvantaged backgrounds (e.g., first generation college student) (American Council of Academic Physical Therapy, n.d.). In addition to physical therapy, other healthcare fields are also focused on increasing diversity in the workforce. The American Occupational Therapy Association included a strong commitment to diversity, equity, and inclusion in their

most recent vision statement (AOTA, 2019). The American Association of Colleges of Pharmacy adopted statements valuing and striving to increase diversity in the future population of pharmacists (Yanchik et al., 2014). Other healthcare programs are also seeking increased diversity. The 2010 Accreditation Standards for Dental Education Programs of the Commission on Dental Accreditation states

> Diversity in education is essential to academic excellence. A significant amount of learning occurs through informal interactions among individuals who are of different races, ethnicities, religions, and backgrounds; come from cities, rural areas and from various geographic regions; and have a wide variety of interests, talents, and perspectives. These interactions allow students to directly and indirectly learn from their differences, and to stimulate one another to reexamine even their most deeply held assumptions about themselves and their world. Cultural competence cannot be effectively acquired in a relatively homogeneous environment. Programs must create an environment that ensures an in-depth exchange of ideas and beliefs across gender, racial, ethnic, cultural and socioeconomic lines." (p. 16)

In their Standard 2, for example, the policies and procedures are required to help dental schools:

> achieve appropriate levels of diversity among its students, faculty and staff; engage in ongoing systematic and focused efforts to attract and retain students, faculty and staff from diverse backgrounds; and systematically evaluate comprehensive strategies to improve the institutional climate for diversity. (p. 22)

Moreover, Standard 4 demands that admission policies that are "designed to include recruitment and admission of a diverse student population" (p. 33). Comparably, the Liaison Committee on Medical Education (LCME) "Standards for Accreditation of Medical Education Programs Leading to the M.D. Degree" (LCME, 2015) also promotes a commitment to diversity. The LCME's Standard 3, which focuses on the Academic and Learning Environments, discusses "Diversity/Pipeline Programs and Partnerships" (p. 4). This significant component states:

> a medical school has effective policies and practices in place, and engages in ongoing, systematic, and focused recruitment and retention activities, to achieve mission-appropriate diversity outcomes among its students, faculty, senior administrative staff, and other relevant members of its academic community. These activities include the use of programs and/or partnerships aimed at achieving diversity among qualified applicants for medical school admission and the evaluation of program and partnership outcomes. (p. 4)

Lastly, the American Association of Colleges of Nursing included a diversity, equity, and inclusion in their most recent vision and principles statements (Breslin et al., 2018).

Due to these changes in policy and visions of healthcare professions, many programs have adopted admission processes to increase the diversity of their cohorts. Although much work remains to improve recruitment of diverse students into educational programs, many have seen an increase in racial and ethnic diversity (Taff & Blash, 2017; Tanni & Qian, 2021; Brotherton et al., 2021; Coleman-Salgado, 2021; Brown et al., 2021). However, most do not include the educational, geographic, and/or socioeconomic disadvantaged in their definition of underrepresentation. Therefore, these disadvantaged

students remain invisible or unacknowledged components of the focus on underrepresented minorities students (Wise et al., 2017). As a result, student diversity and the healthcare professions' diversity has been measured, tracked, and understood solely based on racial/ethnic origin, which may not comprehensively capture diversity as defined by a broader set of metrics (Moerchen et al., 2018). There is very little data on underrepresented groups other than racial and ethnic minorities (e.g., first-generation college student, students that have experienced homelessness) in healthcare, as this information has not been routinely collected (Moerchen et al., 2018). Given that these disadvantaged groups are underrepresented in medicine (Romero et al., 2020), it is likely that this phenomenon extends to other healthcare professions. Additionally, most institutions have not created policies or recommended curricular or programmatic changes to ensure the success and retention of students in healthcare programs who are an URM.

Local Context

From 2018-2021, I was the Program Director for the physical therapy program at Northern Arizona University on the Phoenix campus. Some of my duties included managing student concerns and complaints, as well as developing plans for students on academic probation. Through these interactions with students, I learned that many of our struggling students are first-generation college students (FGCS). FGCS have been defined as one whose parents have no college or postsecondary experience (Chen & Carroll, 2005; Choy, 2001; Horn & Nunez, 2000; Nunez & Cuccaro-Alamin, 1998; Pryor et al., 2006; Saenz et al., 2007). Other studies define FGCS as students whose parents' college experiences are less than that of an associate degree (Soria & Gorny, 2012) or

less than a bachelor's degree (Toutkoushian et al., 2018; Soria & Gorny, 2012). I was the first person in my immediate and extended family to attend college and the only one to obtain a graduate degree. Due to my personal experiences, I was interested in learning more about these students. I began meeting with interested FGCS once or twice a semester to share our stories and to discuss their concerns. The barriers and obstacles that these students experienced while trying to attend graduate school were astounding. These included financial concerns, lack of family support, difficulty navigating graduate school, and imposture syndrome. These informal meetings led me to seek ways to improve FGCS' experiences and outcomes in our program. While we have increased the diversity of our cohorts through intentional changes in our admissions process, we have not made changes to ensure the success of these students. Additionally, FGCS students are commonly seen as lacking information or experiences that are beneficial to negotiating higher education. Instead of approaching these students with a deficit narrative in mind, I would like to emphasize their strengths. As such, I will be using the Community Cultural Wealth Model (CCWM) (Yosso, 2005) to guide this study. The CCWM has its origins in critical race theory and highlights the various capital of URM. Chapter 2 will provide a more detailed explanation of this model.

In January of 2022, I began working at Creighton University (CU) in downtown Phoenix as an associate clinical professor. The Departments of Physical Therapy, Occupational Therapy (OT), and Pharmacy at (CU) reside in the School of Pharmacy and Health Professions and are situated on two campuses. The School of Pharmacy and Health Professions originated in Omaha, Nebraska and have recently expanded to a campus in downtown Phoenix, Arizona. In addition to these programs, the campus is also

home to nursing, physician's assistant, and medicine programs. The PT program admits 42 students per year with 9 full-time faculty. The program is a 3-year doctoral program. The OT program is also a doctoral program and admits 30 students per year with 3 full-time faculty in Phoenix. Pharmacy admits 20 students per year with 2 full-time faculty in Phoenix for their Doctor of Pharmacy program. While there are several student services available to students (e.g., student affairs department, counseling, and tutoring) my problem of practice is related to FGCS' experiences in CU's healthcare programs in light of the recent changes to increase diversity in our programs.

Problem of Practice

Most healthcare programs have changed their admissions processes to increase the diversity of their student cohorts. This has been in response to directives from our accrediting bodies and changes in values from our national associations. While this has potentially increased diversity in our programs, there are no mechanisms to ensure the success of our underrepresented students. In addition to racial and ethnic minorities, FGCS are also considered an underrepresented group in healthcare. FGCS have unique strengths, needs, and barriers that student services could potentially address. Considering the recent changes to increase diversity in our programs, my problem of practice is to improve FGCS' experiences in CU's physical therapy, occupational therapy, and pharmacy programs. The purpose of this mixed methods study is to understand the FGCS in CU's healthcare programs and, using this information, create a comprehensive faculty development program to improve FGCS' experiences.

Research Questions

1. To what extent do first generation college students in healthcare programs at Creighton University feel that they belong as compared to their non-FGCS peers?

2. To what extent do first generation college students in healthcare programs at Creighton University report help seeking and help seeking avoidance, and cultural capital compared to their non-FGCS peers?

3. In what ways do first-generation college students in Creighton University's healthcare programs describe their various forms of cultural capital?

CHAPTER 2

LITERATURE REVIEW

In this chapter, I examine the literature regarding the characteristics of FGCS, sense of belonging, and student engagement. While there is an abundance of literature on first-generation college undergraduate students, there are notably fewer regarding first-generation graduate students in healthcare programs. Therefore, the information that follows is based on undergraduate students, unless specified. Moreover, a review of the literature regarding theoretical frameworks will be provided.

Literature Review

First Generation College Students

For the purposes of this dissertation, FGCS are defined as college students whose parents or guardians did not obtain their bachelor's degree. While this definition of FGCS includes students who may have received some guidance or exposure to college which may have influenced how they progressed during their college years, this definition is consistent with the literature regarding undergraduate outcomes. Regardless of how FGCS is defined, students with parents who have not obtained a bachelor's degree are at a disadvantage compared to their peers (Toutkoushian et al., 2018). Therefore, in this study, an FGCS may have parents who did not attend college, attended some college, or completed an associate degree, but not a bachelor's degree.

FGCS have unique needs and barriers as compared to continuing generation students. They are more likely to grow up in low-income families, hold a full-time job during college (Pratt et al., 2019), and spend less time interacting with faculty (Terenzini et al., 1996). They are more likely to speak English as a second language, be students of

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color, older, immigrants, and have a disability (Engle & Tinto, 2008). FGCS have less familial and social support (Collier & Morgan, 2008; Jenkins et al., 2013; Mehta et al., 2011) and higher levels of stress (Mehta et al., 2011; Wilbur, 2021), including stress about finances (Pratt et al., 2019; Gibbons et al., 2019). FGCS are less likely to complete any degree, even when controlling for age, ethnicity, and socioeconomic status (Nunez & Cuccaro-Alamin, 1998; Radunzel, 2021). Additionally, they are more likely to suffer from imposter syndrome and at higher levels that their peers (Canning et al., 2020; Terenzini et al., 1996). Imposter syndrome refers to a feeling of intellectual phoniness that occurs among underrepresented minorities (Clance & Imes, 1978; Ewing et al., 1996). These individuals rationalize their academic success as derived from an external factor, such as luck, or their minority status instead of their own intelligence and hard work. This syndrome can be debilitating for individuals, particularly since these students work to ensure that their "stupidity" will not be discovered by others (Gardner & Holley, 2011). Imposter syndrome has been shown to be related to anxiety (Chae et al., 1995) and burnout (Villwock et al., 2016). Healthcare education programs that attempt to increase the diversity of their programs would be well served to consider how these factors play out in their underrepresented students.

Sense of Belonging

Sense of belonging has been defined by Hagerty and colleagues as "…the experience of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment" (1992, p. 173). As humans, we have an innate desire to belong (Baumeister & Leary, 1995). Graduate students in healthcare programs are no different. Studies have shown improved outcomes

in students that report higher sense of belonging in their programs (Cassidy et al., 2020; Vivekananda-Schmidt & Sandars, 2018). For example, Vivekananda-Schmidt and Sandars (2018) found sense of belonging in health professions education was related to academic performance, engagement, and mental wellbeing. Sense of belonging was also associated with student persistence and improved mental health (Gopalan & Brady, 2020). With respect to graduate students, O'Meara and colleagues (2017) found that sense of belonging can influence student outcomes, including retention and success. The greater the sense of belonging, the higher the likelihood of success with regards to retention and graduation. To cultivate this sense of belonging, programs must develop effective interpersonal relationships between students and instructors and be flexible to the diverse needs of students (Levett-Jones & Lathlean, 2008). Haggins (2020) recommends medical schools alter academic spaces (marketing materials, websites), individual behaviors (eliminating microaggressions), and processes to cultivate a sense of belonging for URM's. Another study used virtual mentorship with racially concordant peer mentoring to improve belonging for racial and ethnic minorities in physical therapy and nursing programs (Naidoo et al., 2022).

The role that sense of belonging plays in higher education is particularly true for FGCS (Jehangir, 2010). According to O'Keeffe (2013), FGCS are at risk for non-completion of their studies, in part, due to feeling as though they do not fit in and are unable to develop a sense of belonging. Salient to my study, FGCS have less sense of belonging than their peers (Gopalan & Brady, 2020; Stebleton et al., 2014). There are several possibilities for this, such as lack of inclusion at the institution and the fact that FGCS are less likely to live on campus and typically commute (Pascarella et al., 2004;

Pascarella & Terenzini, 2005). Living off campus may limit opportunities for social and academic engagement (Stebleton et al., 2014). Additional family and job responsibilities may also limit FGCS from participating in activities on campus. Institutions should adapt their cultures and provide opportunities for the non-traditional students to develop a sense of belonging (Zepke and Leach, 2010). Creating a sense of belonging for FGCS in graduate school is essential for their success and graduation (Pascale, 2018). Additionally, professional relationships appeared to be more important at this level (O'Meara, 2017). Applying this to graduate healthcare programs, these professional relationships can be created with academic and/or clinical faculty.

Student Engagement

Student engagement is defined as an activity that allows for growth where the student pays attention and focuses on responding to their environment (Hart et al., 2011). Engagement can be measured by observation of behaviors, measuring student attitudes, and participation in activities that contribute to meaningful learning (Mazumder et al., 2020). Karabenick (2004) used the Help Seeking and Help Seeking Avoidance Scale to measure engagement of college students, specifically their likelihood to engage with or avoid faculty and peers. For example, one item assessed if a student would ask a professor rather than another student for help. Wolf-Wendel et al. (2009) connect the idea of student engagement to involvement and integration:

> The concept of student engagement represents two key components. The first is the amount of time and effort students put into their studies and other activities that lead to the experiences and outcomes that constitute student success. The second is how institutions of higher education allocate their human and other

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resources and organize learning opportunities and services to encourage students

to participate in and benefit from such activities. (p. 412–413)

FGCS demonstrate less engagement than their peers (Soria & Stebleton, 2012; Mazumder et al., 2020; Lundberg et al., 2007; Pike et al., 2003). Soria & Stebleton (2012) found that FGCS did not interact with faculty, ask questions in class, nor engage in class discussions as often as their peers. Additionally, compared to their peers, they exhibited higher attrition rates. Engle and Tinto (2008) reported that FGCS and low-income students are less likely to be engaged academically and socially. For example, they do not participate in activities such as study groups, extra-curricular activities, utilization of student services, or interacting with faculty and peers. Pike and Kuh (2005) also found FGCS were less engaged and described the college environment as less supportive than their peers. The authors felt speculated that this is because FGCS do not understand how to engage in college nor the importance of student engagement likely due to their lack of college experiences. Additionally, two items were found to be directly related to this lack of engagement: living off campus and having lower educational aspirations. FGCS have less confidence in their level of preparedness for college and their academic ability. As a result, they are less likely to ask questions or seek assistance from faculty (Jenkins et al., 2009). Collier and Morgan (2008) noted that FGCS tend to have more confusion than their peers about faculty's expectations for assignments.

Several studies have linked student engagement to successful academic outcomes (Guo et al., 2022; Jones & Carter, 2019; Bae & Han, 2019; Athens, 2018). Students that attend office hours, ask questions, and have a good understanding of the expectations for assignments are more successful in college (Soria & Stebleton, 2012). In addition to

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student behaviors, there are also strategies faculty can implement to increase student engagement. Faculty that challenge students and use active learning techniques, student collaboration activities, and experiential learning have higher levels of student engagement and learning (Umbach & Wawrzynski, 2005). In addition to success in coursework, faculty interaction can also lead students to aspire to earn more advanced degrees (Kim & Sax, 2009).

Interaction of Sense of Belonging and Engagement

Soria and Stebleton (2012) found students feel isolated and disconnected when they do not actively engage with faculty and peers. These challenges are exacerbated at larger universities, where classes tend to be larger and interactions with faculty can be limited (Kim & Sax, 2009). FGCS tend to rely on peer academic support rather faculty or other institutional staff (Soria & Stebleton, 2012). As a result, they have less opportunities for mentorship with faculty and their overall engagement can suffer. Gillen-O'Neel (2019) found that FGCS' sense of belonging was related to student engagement and is an important part of maintaining student engagement among FGCS. Without a sense of belonging, students are less likely to complete their education (Russel & Jarvis, 2019).

Epistemology and Theoretical Framework

In this section, the epistemology for this study and two theoretical frameworks will be discussed that are applicable to this problem of practice. The epistemology chosen for this study is social constructivism (Vygotsky, 1978), as FGCS' realities have been constructed by their life experiences. FGCS students have many skills and strengths from their lived experiences that are not captured through traditional means. Therefore,

Yosso's Community Cultural Wealth Model (CCWM) (2005) will be introduced with a discussion of the literature related to the model. This section will end with the implications of this problem of practice through the lens of these theoretical frameworks.

Epistemology: Social Constructivism

This study is grounded in social constructivism which is a learning theory that proposes that an individual creates their reality through social interactions. This learning theory was developed by Vygotsky (1978) and focuses on how individuals create meaning through cultural, historical, and social norms. The environment and the social context the individual experiences are critical to their understanding of the world. With new experiences, learners build upon previous learning. Social constructivism is appropriate for examining FGCS' thoughts and experiences about participating in a graduate healthcare program. Their past experiences have constructed their realities and knowledge about their current experiences in their programs. Additionally, I have personal experience as an FGCS that completed a graduate healthcare program. Being the first in my family to attend college and graduate school, my reality of graduate school was very different from my peers. I am fully aware of my biases for this particular area of study, and I will keep these at the forefront of my mind as I am exploring other first-generation college students' experiences. My background as a FGCS assisted with choosing the social constructivist paradigm for this study, as I have firsthand knowledge of my reality changing as I navigated higher education and made more social connections. Therefore, students' lived experiences will be combined with current literature regarding high impact education practices to ensure the success of this underrepresented population.

Theoretical Framework: Community Cultural Wealth Model

Social capital is defined as any aspect of social structure that creates value and enables action of the individuals within that social structure (Coleman, 1988). The most important function of social capital involves the creation of human capital for the next generation (Bourdieu, 1986; Coleman, 1988). It is the ability of individuals to secure a benefit by virtue of their membership in a group (Portes, 1998). There is sharing of information, resources, interests, values, training, socialization, and/or worldviews with social capital (Ibarra, 1995; Lincoln & Miller, 1979; Seibert et al., 2001). The Social Capital Theory has been used to explain the differences between various groups, specifically lower socioeconomic groups and people of color. Essentially concluding that these groups lack social capital and therefore are unable to progress in education or society. More recently, Yosso (2005) viewed the Social Capital Theory through a critical lens and determined that the deficit narrative was detrimental to URM's.

> Bourdieu's theoretical insight about how a hierarchical society reproduces itself has often been interpreted as a way to explain why the academic and social outcomes of People of Color are significantly lower than the outcomes of Whites. The assumption follows that People of Color 'lack' the social and cultural capital required for social mobility. As a result, schools most often work from this assumption in structuring ways to help 'disadvantaged' students whose race and class background has left them lacking necessary knowledge, social skills, abilities and cultural capital. (Yosso, 2005, p. 70)

Yosso proposed that URM students have various forms of capital, including familial, aspirational, resistance, linguistic, social, and navigational (See Figure 1) that have

emerged from "accumulated assets and resources in the histories and lives of Communities of Color" (p. 77). Combined, these create a person's cultural capital. By viewing URM through this lens, it not only avoids a deficit narrative, but provides an opportunity to highlight their strengths. Yosso created the CCWM as a means to capture the various capital for URM populations. I will present the six measures of capital as well as discussions about the applicability to FGCS. It is also important to emphasize how the CCWM aligns with institutional value to understand how the various capital aides in FGCS success.

Figure 1

Community Cultural Wealth Model
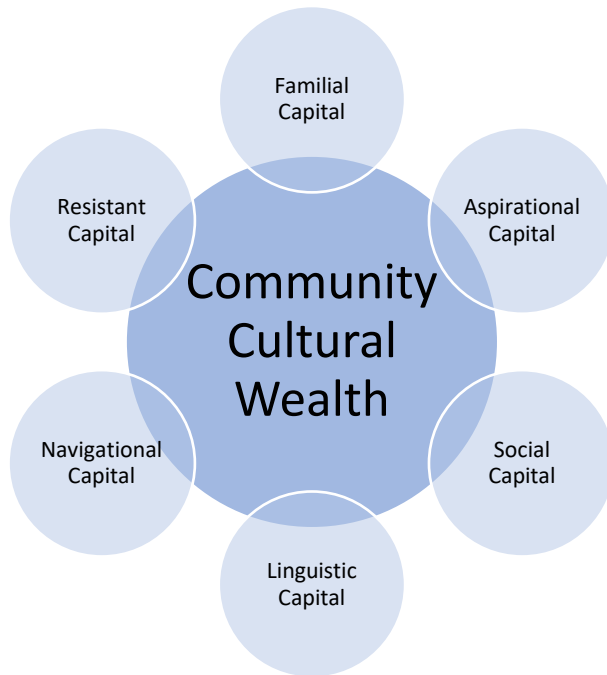
Note. Adapted from Yosso, 2005

  Familial Capital. Yosso developed familial capital from the funds of knowledge literature (Moll et al., 1992), defined as the "historically accumulated and culturally

developed bodies of knowledge and skills essential for household or individual

functioning and well being" (Moll & González, 1994, p.143). She also expands Delgado

Bernal's (2001) work on teachings in the home, which are focused on resistance

strategies. Through this work, Yosso defines familial capital as "cultural knowledges

nurtured among familia (kin) that carry a sense of community history, memory and

cultural intuition" (Yosso, 2005, p. 79). It is important to note that familial capital also

includes extended family, friends, and members of the community. While FGCS are the

first to attend college, family and others are still able to provide support in the decision to

go to college (Mitchall & Jaeger, 2018). Additionally, many FGCS report having mentors

in college that helped them be successful (McCallen & Johnson, 2020). The institutional

value of familial capital comes from the positive messages FGCS receive from their

families. Families encourage students to persist, show pride in their accomplishments,

support their career choice, encourage resilience through stories, set expectations for

school, and of being respectful towards professors (Denton et al., 2020). These positive

family messages frames education as the means to a better life and encourages

determination (Ayala & Contreras, 2019). Students themselves then become capital. They

become role models for younger family members. Familial capital is a positive influence

for motivation, attending college, and having a sense of responsibility to the family

(Harvey and Mallman, 2019).

    Aspirational Capital. Yosso (2005) defined aspirational capital as: "the ability to

maintain hopes and dreams for the future, even in the face of real and perceived barriers"

(Yosso, 2005, p. 77). She has shown that URM students develop their college aspirations

through their familial and aspirational capital. For example, many children of immigrants

are inspired to go to college from stories of their families' immigration to the U.S (López, 2016). Additionally, aspirational capital may provide the motivation to complete college (Kouyoumdjian et al., 2017) and to attend graduate school (Espino, 2014). As previously mentioned, FGCS have notable barriers to completing an undergraduate degree. For many healthcare graduate programs, not only do students have to complete a bachelor's degree, but they have to be quite successful to ensure admission to the graduate program. The FGCS that are successfully admitted to these programs have shown tremendous persistence, despite the presence of barriers. The institutional value of aspirational capital is linked to persistence, resilience, motivation. Hope and optimism have been shown to improve college retention (Bryce et al., 2021) and predict academic performance and well-being in college (Rand et al., 2020). Aspirational capital was found to be the most important form of capital in the perseverance of URM engineering students (Dika et al., 2017).

Linguistic Capital. FGCS may have a variety of ways that they have learned how to communicate. Many FGCS learned English as a second language and have been called upon to translate for their families. Additionally, students may use more creative methods to express themselves, such as music, art, and storytelling (Acevedo & Solorzano, 2021). Linguistic capital is the ability to communicate in a variety of forms. Garrison and Gardner (2012) reported that FGCS students use reflexivity as shown by their insightfulness and self-awareness when speaking about themselves and their situations. This ability to express themselves is an example of FGCS' linguistic capital (Hands, 2020). Yosso (2005) felt that linguistic capital improved students' ability to memorize and pay attention to detail through communication and storytelling. Additionally, she felt

that these skills provide students with the ability to communicate "in more than one language and/or style" (Yosso, 2005, p. 78) of communication and within different cultural environments. Institutional value of linguistic capital is evident from the value of being bilingual, having cross-cultural awareness and communication skills, improved memorization skills, and the ability to decipher facial cues (Yosso, 2005). It is thought that universities and professional fields have their own jargon and rules for communication (Ruitenberg & Towle, 2015; Wong et al., 2021). Students that are bilingual will, theoretically, more easily learn these languages. Additionally, two studies discussed code-switching as a form of linguistic capital (Martin & Newton, 2016; McPherson, 2012). Code switching is changing language and dialect based on the environment (home vs. school) (Denton et al, 2020). Many healthcare professionals report having a professional side and a personal side (Fraser & Bigham, 2021). This could be an example of code switching and is valuable to maintain professional relationships with patients.

   Navigational Capital. FGCS students, particularly graduate students, have learned how to navigate many institutions that were not inherently straightforward, as they were not created with FGCS in mind (Yosso, 2013). For example, CU's graduate FGCS successfully navigated their undergraduate institutions in order to be admitted into a highly competitive graduate program. Plikuhn and Knoester (2015) recognize that these students are caught between two worlds, and they must adapt to a new culture. In addition, many of these students have had to help their families navigate other complex institutions. These experiences have provided them with navigational capital. Navigational capital has been demonstrated in persons of color, first-generation college

students (Covarrubias et al., 2022), the deaf community (Listman & Dingus-Eason, 2018), students with physical conditions (Wilt et al., 2021), and LGBQT+ communities (Pennell, 2016). The institutional value of navigational capital is demonstrated by students' ability to navigate unknown institutions. Successful students use faculty, staff, peers, student organizations, counselors, and web-based resources to navigate higher education (Denton et al., 2020). This skill can result in increased academic support, emotional support, and opportunities, such as internships, research experiences, and letters of recommendation. Personal characteristics of FGCS can also be seen as navigational capital (Samuelson & Litzler, 2016). These include their ability to think outside of the box, ask questions, and their time management skills (Carbajal, 2015).

Resistant Capital. Resistant capital are the skills that are developed when challenging injustices and inequities to the student, their family, and/or their specific race/ethnicities (Acevedo & Solorzano, 2021). These skillsets develop because of students' "resistance to subordination" (Yosso, 2005, p. 80). In fact, resistant capital has been found to be a motivating force to attend college, as students were discontent with the labels others had given them (e.g., first-generation or student-mother) (O'Shea, 2016). The institutional value in resistant capital is in the form of student motivation and persistence. Solórzano and Delgado Bernal (2001) define three types of resistance: self-defeating, conformist, and transformative. Conformist resistance was identified most frequently in STEM majors (Denton et al., 2020). These students persisted and overcame the stereotypes about their belonging and ability to succeed. Instead of striving for transformational change, they conformed and pushed for smaller, incremental social justice transformations. Resistant capital fuels the fire to prove them wrong (Harvey and

Mallman, 2019). Through this resistance, students may also connect with others (classmates, instructors, or peers through student organizations) that are like minded (Carbajal, 2015). Resistant capital may be the motivating factor for FGCS to obtain their bachelor's degree and continue to graduate school, particularly when they are told this is not possible due to their backgrounds.

Social Capital. As mentioned previously, social capital is defined as any aspect of social structure that creates value and enables action of the individuals within that social structure (Coleman, 1988). Increasing social capital for an individual relies on increasing their social network. This includes family support and benefits from outside the family (Portes, 1998). It is the ability of individuals to secure a benefit by virtue of their membership in a group (Portes, 1998). There is sharing of information, resources, interests, values, training, socialization, and/or worldviews with social capital (Ibarra, 1995; Lincoln & Miller, 1979; Seibert et al., 2001).

Applying this concept to higher education demonstrates the importance of having a social structure that includes college educated individuals. The information possessed by any one member is likely to be shared with the other members (Seibert et al., 2001). An individual's social structure can therefore facilitate discussions about higher education. FGCS do not have the social capital that their peers do. FGCS have not had the discussions about college within their families or with their peers. Their parents are unable to help them navigate higher education because they do not have those experiences. Studies indicate that social capital plays a critical role in academic success, and unequal social capital contributes to the lower college completion rates among first-generation college students (Guiffrida, 2006; Stanton-Salazar, 2011; Schwartz et al.,

2018). While FGCS do not have social capital related to a college education, they do have social capital from the networks of people in their communities. For example, Beard (2021) discovered that Latinx FGCS use three levels of support, including social support, apprenticeships, and institutional support (e.g., faculty). While the institutional agents are used less frequently and the social supports are focused primarily on the students' well-being, the apprentice agents were "near peer models, peer advisors, and opportunity brokers with access to privileged knowledge and resources" (Beard, 2021, p.101).

There are several studies that support the Social Capital Theory for FGCS. Schwartz et al. (2018) determined that a program directed at improving social capital can significantly influence FGCS' attitudes and behaviors related to the cultivation of social capital. This program also contributed to improved academic outcomes. Findings suggest that students participating in the intervention strengthened their belief in the importance of social capital. They increased their self-reported likelihood to seek support and had improved relationships with instructors. This study suggests teaching students to reach out for support can provide them with a skill that they can use throughout college and beyond. This strategy is consistent with other studies indicating the efficacy of skills training in developing social support and connections (Hogan et al., 2002). Stanton-Salazar (2011) promoted the importance of the social capital and supportive relationships in predicting college and career success for FGCS.

There are few articles that refute Social Capital Theory, however, there are studies that question the nature of the social ties. Sobel (2002) critiques the inherently positive nature of the social ties that is presumed and the potential for weakened networks due to size. Daly and Silver (2008) report that the causes of social capital have been

exhaustively studied, but not the development of it. They recommend further studies that emphasize explanatory factors and the context of social ties.

Higher education institutions should be aware that students have varying experiences prior to admission. FGCS may face challenges not encountered by their peers, such as difficulty finding resources on a new campus environment (Peabody, 2013). An understanding of social capital and FGCS can be helpful to develop effective interventions to improve their experiences and outcomes in graduate school. There are several published interventions that could provide options to improve FGCS' social capital (Peabody, 2013; Schwartz et al., 2018; Stanton-Salazar, 2011). These include programs that allow FGCS to remain on campus (e.g., on campus housing) to facilitate increased social connections, peer mentoring, advisors, advocates, summer bridge programs, and a networking coach to empowering FGCS. Additionally, improved programming and orientation can improve FGCS' knowledge of the institution. These programs have also been shown to improve attitudes, behaviors, and grade point average (Schwartz et al., 2018). For the FGCS in CU's physical therapy program at the Phoenix campus, it would be beneficial to implement a more comprehensive orientation to the program, as well as a formal mentorship programs. While social capital is important, The Community Cultural Wealth model is more comprehensive than the Social Capital Theory. It provides an asset-based lens with which to view FGCS. The institutional value of social capital with respect to FGCS can be seen in using peers to help navigate the environment and provide social and emotional support (Denton et al., 2020). Cohort programs and professional organizations can assist with transition to university life by providing opportunities to connect with others with similar backgrounds (Denton et al.,

2020). Lastly, URM students can provide a different perspective for recruiting and retaining diverse students under the new initiatives for DEI for higher education.

Support for the Community Cultural Wealth Model

Garriott (2020) used the CCWM and investigated FGCS and low-income college students' academic and career development. The CCWM highlighted the strengths and assets that these students bring with them to college. Similarly, Holley & Gardner (2012) found that being an FGCS was found to be an asset by some of their participants. Students acknowledged their willingness to work hard and showed a sense of pride. They also "felt their accomplishments were largely attributable to their background" (Holley & Gardner, 2012, p. 119). This finding supports the asset-based approach for FGCS. Duffy et al. (2020) used the CCWM to investigate FGCS' financial stress, sense of belonging, and perception of their freedom in choosing work (work volition). They found that the CCWM directly predicted life satisfaction and concluded that "the CCWM may help to provide a more complete picture of how educational leaders and service providers can make the transformational changes needed to better support FGCS" (Duffy et al., 2020, p. 181).

Criticisms of the Community Cultural Wealth Model

The few critiques of the CCWM feel that it is not as comprehensive as it could be. O'Shea (2016) felt that the CCWM was missing some aspects that she deemed "experiential capital" which FGCS referred to during qualitative interviews. This capital is related to age and experience, as many FGCS are older, non-traditional students that have had more work experiences. O'Shea felt that they draw upon these skills and experiences as the navigate college. Another author felt that the CCWM focuses

primarily on matriculation, persistence, resources, and wellbeing, but should include career development as well (Bañuelos, 2021). Additionally, Bañuelos felt there are opportunities to investigate the role of the institution and faculty/staff, as the majority of studies to date are focused primarily on the students themselves (Kiyama, 2010; Lu, 2013). This is unfortunate, given how important the role of faculty and the institutions are in FGCS' career development (Maietta, 2016). Lastly, the majority of research using the CCWM is qualitative in nature, however, I will be incorporating a recent qualitative survey related to this model (Sablan, 2019).

Implications of the Community Cultural Wealth Model

Yosso's CCWM (2005) provides a framework to better understand FGCS in CU's graduate healthcare programs. FGCS are most impacted by those around them, such as family and friends. In addition, there are several studies that support the Social Capital Theory for FGCS. Schwartz et al. (2018) found that a program directed at improving social capital can significantly influence FGCS' attitudes and behaviors related to the cultivation of social capital. This study suggests teaching students to reach out for support can provide them with a skill that they can use throughout college and beyond. This strategy is consistent with other studies indicating the efficacy of skills training in developing social support and connections (Hogan et al., 2002). Stanton-Salazar (2011) promotes the importance of the Social Capital Theory and supportive relationships in predicting college and career success for FGCS.

CHAPTER 3

METHODS

The following chapter details the methods of this action research study. This section will begin with a description of my own experiences to speak to my positionality as an FGCS and the impetus behind this dissertation. Prior to discussing the current study's methods, previous cycles of action research will be summarized. The methods will include the setting, participants, and the role of the researcher. Supporting studies will be provided for the methods chosen.

Author Positionality

Throughout my education, my parents have been very supportive. Without fully understanding the process, we explored several colleges and universities when I was in high school. Part of this included a trip to the east coast to visit schools. Eventually I chose a state university that was closer to home. This was primarily out of comfort because I had extended family and friends nearby.

As an undergraduate student, I knew nothing about student services. Frankly, I do not remember orientation of any kind. I started by taking courses that would fit my general education requirements, but I was lost when it came to choosing a major. I chose exercise science and physical education, primarily because I played sports in high school, and it fit those interests. As I reflect on my education, I recognize a repeating pattern of making a life-altering decision with very little exploration. I often describe myself as a pinball, being pushed in one direction or another. I ultimately decided to apply to physical therapy school after a one-semester internship at a clinic. Again, I made this decision with relatively few experiences and no mentorship or guidance from others.

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I did have a one notable experience the first time I met with an academic counselor. With minimal knowledge of my grades or my background, she assumed I would not get into physical therapy school because of how competitive it was at the time. She wanted me to establish a plan B. Her lack of confidence in me was off putting and I did not return to academic counseling. I still decided to apply to physical therapy school. I applied to one school, the University of Southern California, because they were number one PT program in the country. Again, I made this decision with very little research. To my astonishment, I was admitted. My parents did voice their concerns about the cost of a private school and paying for housing, but I was determined. Regrettably, I did not fully comprehend the costs of the program, student loans, or living in Los Angeles.

Graduate school mirrored my undergraduate degree experiences. I was still oblivious to the student services available. I never met with an academic counselor or advisor. From the day one, I had a fear of failure and imposter syndrome. Listening to the student introductions the first week of orientation was intimidating. Many of my classmates went to prestigious schools, with very few going to state schools for their undergraduate degrees. I did not feel as though I belonged and questioned whether this was a mistake. As a result of this fear, I sat in the front row the entire first semester because I anxious about performing well. Thankfully, I earned mostly A's and began to relax some. Academically, I felt comparable to my classmates, however, socially I did not. I was unable to go to the PT conferences or take lavish spring break trips due to financial concerns. I borrowed the maximum amount of federal loans and still came up short. Private loans helped subsidize tuition and cost of living expenses. Trying to make my loans stretch to the end of each semester was constant stressor. At the end of my

three-year physical therapy program, I owed more than $170,000. In addition to my lack of research regarding graduate school, I similarly had no idea how much a physical therapist earns. The concept of paying off such a large sum was overwhelming. At the time, I was unaware of opportunities through the university to learn about financial literacy. At the end of the program, students that borrowed federal loans were required to participate in a one-hour financial aid exit session. This was primarily a discussion about monthly payment amounts, deferments, and forbearances, not financial literacy.

The final aspect of being FGCS that I experienced throughout my education and beyond was the concept of having different identities, depending on the situation. This aligns with Goffman's (1959) theory of self. In Goffman's (1959) *The Presentation of Self in Everyday Life*, he theorizes that our identities are developed socially, through interaction with others. Through these interactions and trial and error, we learn about appropriate behavior and norms. We also learn to wear figurative masks, depending on the situation, with a goal of social acceptance. This theory purports that our identity is constantly changing as we have more interactions. This occurs often in different races and ethnicities, similar to code-switching. As an FGCS, I have experienced this throughout my life. Whether I was trying to fit in with my peers in class or with my family at home, there has been a definite sense of having more than one personality. While my family has been nothing but supportive, it can be difficult to discuss aspects related to school or work. This has also carried over into my professional career. I find I have my professional side and my non-work personality for differing situations. I am unsure if this is a common experience for those entering a profession or for a FGCS.

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Previous Action Research Cycles

As a precursor to this cycle of action research, I completed two studies at Northern Arizona University. The first was a qualitative study that investigated physical therapy faculty's views on the characteristics of students that struggle in the physical therapy program, potential student services that would be beneficial, and characteristics of FGCS. A main theme I identified from the data during my analysis was the importance of faculty-student interactions and lack of knowledge about FGCS. The second study assessed the effect of an FGCS special interest group on FGCS using a mixed methods approach. The results of these studies guided the format for this study, to create a faculty professional development program to increase faculty's understanding of FGCS.

Methods

For the current study, I used a mixed methods approach. The participants are 1st and 2nd year graduate students in CU's PT, OT, Pharmacy, and nursing programs on the Phoenix campus. These 140 students include males and females and are considered a homogenous sample, as they are all CU healthcare students. Participants were recruited electronically via email from the principal investigator near the end of their fall semester. The email included a description of the study, contact information of the principal investigator, and a link to informed consent and an electronic Qualtrics survey. Additionally, participants were entered into a drawing for two $50 gift cards. This was used to promote the study and ensure an appropriate sample size. All FGCS students that completed the survey were then invited to participate in qualitative interviews. With the assistance from a small grant from Arizona State University, I was able to offer $50 Amazon gift cards to all that participated in the interviews.

Quantitative Data Collection

Once participants agree to the informed consent, they were asked to complete demographic information and a 63-item survey. The demographic questions include age, gender, race/ethnicity, family educational attainment of parents and siblings, and time spent on activities outside of class. Participants were then asked to complete items related to community cultural wealth, social capital, and their sense of belonging at the university.

Survey. The survey consisted of items from the Nondominant Cultural Capital Scale (Sablan, 2019), Social Capital (Schwartz et al., 2018), Help-Seeking and Help-Seeking Avoidance (Karabenick, 2004), and Sense of Belonging (Maestas et al., 2007) (See Appendix A). The following is a discussion about these items and literature to support their use for this study.

Sablan (2019) created the Nondominant Cultural Capital scale (NCCS) to quantitatively measure Yosso's CCWM. This uses a 6-point Likert scale from *not at all like me to exactly like me* to assess aspirational capital, familial capital, navigational capital, and resistant capital. For example, one item for familial capital is "I am encouraged to learn about my family's history." For aspirational capital, one of the items is "I have pursued my goals despite barriers to my schooling." Respondents choose to what degree this statement is like them. Sablan instituted several mechanisms to determine the reliability and validity of the NCCS scale. After she developed the initial 31 items, she established content validity from expert reviewers. A group of undergraduate students completed the survey as part of a pilot study. These students were Asian and Native Hawaiian/Pacific Islander students. They provided feedback and

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participated in cognitive interviews for further interpretation of the items. Sablan used factor analysis to determine the variance in the items. Based on the results of the analysis, five items were deleted from the final survey. These items were from the aspirational and resistant capital sections. The final survey as 26 items. Sablan determined that the NCCS scale is reliable (α coefficients = 0.78 to 0.87) and valid. Although Sablan does argue that further validation studies are needed. For the current study, all 26 items will be used.

The social capital items include a survey from Schwartz et al. (2018) to determine relationships with faculty and classmates. They surveyed FGCS with items adapted from the Relationships with Instructors (Rhodes et al., 2014), the Student-Instructor Relationship Scale (Creasey et al., 2009), and Network Orientation (Vaux et al., 1986). The original survey consisted of 24 items total. Samples of survey items included, "I feel close to at least one faculty member," and "I talked to instructors outside of class." Respondents rate each item on a 6-point scale from *strongly agree* to *strongly disagree*. The constructs being assessed include social capital at the individual level and the students' willingness to seek help if they are struggling in a course. Students' willingness to seek help has been studied in the context of Social Capital previously (Schwartz et al., 2018). Schwartz and colleagues (2018) reported that these items demonstrate acceptable to strong reliability (α coefficients = 0.74 to 0.92). In addition to the items from Schwartz (2018), one item was added to this scale ("When I need help with coursework, I go to the internet") as there has been an increased use and reliance on technology among college students (Cassidy et al., 2014). With this change, there are 21 total items for this construct. Additionally, the respondents completed the Help-Seeking and Help-Seeking Avoidance items from Karabenick (2004). This questionnaire has 15 items related to

seeking assistance in a course or avoiding help in a course. An example is, "If I didn't understand something in a class, I would guess rather than ask someone for assistance." Karabenick surveyed undergraduate chemistry students and found the items had acceptable reliability with Cronbach's alpha ranging from 0.60 to 0.88. For the current study, references to a "course" were changed to "my program" to allow the survey to be more general in nature. Additionally, three items were removed as they were duplicative from the social capital scale. There are twelve remaining items.

To assess students' sense of belonging, the three-item sense of belonging subscale from the College Student Experiences Questionnaire (Maestas et al., 2007) was used. This was originally used to assess sense of belonging at the author's institution. It has since been used to assess sense of belonging in FGCS (Duffy et al., 2020). Participants responded to the three items based on a 7-point Likert scale ranging from *strongly disagree* to *strongly agree*. The three items are as follows: "I see myself as part of the university community," "I feel a sense of belonging to this university," and "I feel that I am a member of the university community." These items demonstrated strong internal consistency reliability of greater than .90 in prior research (Duffy et al., 2020; Maestas et al., 2007).

All survey data is stored in a password-protected file on the hard drive of the principal investigator's computer.

Qualitative Data Collection

There are approximately 30 FGCS in CU's OT, PT, and Pharmacy programs. Twelve FGCS completed semi-structured one-on-one interviews. Interviewing 40% of the FGCS students on campus provided a thorough exploration of their perspectives and

experiences. Semi-structured interviews allowed for follow-up questions to fully investigate the FGCS students' experiences and opinions. The interview questions (See Appendix B) are grounded in Yosso's CCWM. O'Shea (2016) completed qualitative interviews with first-generation students in Australia. She identified the various forms of capital mentioned by Yosso (2005) through these interviews. The interview questions were based on broad topics such as the students' experiences at a university, motivation, and reactions from family and friends. The questions for the current study were more explicit with respect to the CCWM and student engagement. For example, "In what ways does your family feel about your enrollment in your graduate program? Have they been involved in your education up to this point? If so, how?" provided participants an opportunity to discuss their familial capital. There are also questions related to student engagement and their experiences on campus. For example, "Are you working with a faculty member outside of class? For example, a research project or a student organization? Tell me how those interactions are going?" These questions explored participants' perspectives on their engagement with others at Creighton University.

All interviews occurred via Zoom. They were digitally recorded and transcribed using Zoom's transcription feature. The recordings and the transcriptions were downloaded to a password-protected file on the principal investigator's hard drive.

Data Analysis

After participants completed the surveys and FGCS were chosen for the qualitative portion of the study, the quantitative data was deidentified and presented only in the aggregate. The survey data was imported into SPSS for analysis. In order to

prepare the data for analysis, six items were reverse coded to match positivity with the entire survey.

Descriptive statistics were calculated for the quantitative data. This included participant demographics and survey items, including measures of central tendency (mean, mode, median). The survey data was grouped by constructs. These constructs are Aspirational Capital, Familial Capital, Navigational Capital, Resistant Capital, Social Capital, Help Seeking and Help avoidance, and Sense of Belonging. The average Likert scale scores for each construct were determined for FGCS and non-FGCS. Independent t-tests were calculated to determine if the FGCS students are different from their peers on the survey constructs. In addition to the grouped constructs, pairwise analyses were conducted to explore whether individual items differed by groups.

For the qualitative data analysis, both inductive and deductive methods were used. The deductive method employed the CCWM as a framework for the final themes. The remaining codes were determined inductively through analysis, as there were several themes that were not adequately covered by the CCWM. Two coding cycles were completed, as recommended by Saldaña (2021). He recommends In Vivo coding for the first cycle coding method. In Vivo coding uses the individuals' own words for the coding process. For this population of underrepresented minorities, I feel strongly that their own words should be used. The use of quotations during the coding process highlights this method. I began the qualitative data analysis by listening to the interviews and reading the transcripts several times to develop a strong sense of the content. For the first coding cycle, I used line-by-line coding to make the data more manageable and identify nuances that possibly communicate important information about the participants as well as the

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research process (Charmaz, 2014). Initial coding allowed me to dissect, analyze, and understand the information in order to identify categories that might answer the research questions. For a transition to the second cycle, I used Code Mapping (Saldaña, 2021) to further narrow the data down into categories and concepts. This process required decisions about the themes and importance placed during the interviews.

For the second cycle of coding, I used Focused Coding (Saldaña, 2021). I chose this method because, according to Saldaña (2021), it aligns well with In Vivo coding. It is used to further condense the data into fewer, more manageable parts. Focused coding utilizes the most frequent or significant codes (Charmaz, 2014). In addition to determining the most significant codes, there is a level of analysis that occurs with the categorizations. Determining which codes to keep, which codes to drop, and which codes to reorganize requires the researcher to analyze each code again. This iterative approach allowed for reflexivity for the researcher. Throughout the cycles of coding, I kept an analytic memo. According to Saldaña (2021), an analytic memo discloses the researchers thought process about the codes and categories. I also practiced reflexivity throughout the coding process to identify my own biases. I have also been transparent about my reasons for pursuing this line of research as well as my personal perceptions about being a first-generation college student. Lastly, I reflected on potential conflicts with participants considering the power differential and how these may interfere with the results. After these processes, I instituted member checking by some of the FGCS. This allowed the participants to provide feedback on the interpretation of the interviews and improve the credibility of the data.

CHAPTER 4

RESULTS

The purpose of this mixed method study was to explore the differences between FGCS in graduate healthcare programs and their peers. A secondary purpose was to apply Yosso's CCWM to FGCS to provide a more comprehensive view of FGCS, avoiding the current deficit view. This study was conducted using a mixed method design. Mixed methods research includes both qualitative and quantitative data. This method allows for improved insights and validity (Palinkas et al., 2019).

This chapter will discuss the results of this study, including descriptive statistics, data preparation and the chosen statistical analyses. Additionally, a description of the content analysis for the qualitative interviews will be provided, including student quotes.

Description of the Sample

A convenience sample of healthcare students attending Creighton University's physical therapy, occupational therapy, and pharmacy programs in Phoenix, AZ were recruited in the Spring of 2023. Convenience sampling uses the most convenient available people as participants (Etikan et al., 2016). A limitation to convenience sampling is a potential lack of generalizability to the entire population of interest (Bornstein et al., 2013). While these students are a convenience sample, they do represent the population being studied: students enrolled in graduate healthcare programs.

Sample Characteristics

A total of 42 full-time physical therapy, occupational therapy, and pharmacy students participated in this study. The participants completed an electronic survey, including demographics. Demographic data is presented in Table 1.

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Table 1

Sample Demographics

Category	Subcategory	Frequency (n)	Percent (%)
Age	20 – 25	30	71.4%
	26 – 30	9	21.4%
	31 – 35	2	4.8%
	36 – 40	1	2.4%
Gender	Male	15	35.7%
	Female	27	64.3%
Race	Caucasian	23	54.8%
	Latino/Hispanic	9	21.4%
	Black/African American	3	7.1%
	Asian/Pacific Islander	3	7.1%
	Native American/Alaskan Native	3	7.1%
	Not listed	1	2.4%
Parent Educational Attainment	Both parents graduated from 4-year university	19	45.2%
	One graduated from 4-year university	10	23.8%
	Both attended at least one semester	1	2.4%
	One attended one semester	4	9.5%
	Neither attended college	8	19.0%
Healthcare Program	Physical therapy	33	78.6%
	Occupational Therapy	7	16.7%
	Pharmacy	2	4.8%

There were 15 participants who identified as male (35.71%); 27 who identified as female (64.28%). There were 33 participants from PT (78.57%), 7 participants from OT (16.67%), and 2 participants (4.76%) from pharmacy. The majority of participants were in the age range of 20-25 year of age (71.43%) and over half were Caucasian (54.76%).

Of the 42 participants, 13 were considered FGCS (30.95%) based on the previously defined parameters. In fact, eight of these participants reported that their parents had no college experience at all (61.54%). These students were slightly different from the entire sample in terms of age and race (Table 2). For example, the FGCS had a

greater percent in the 26-30 age range (30.8% compared to 21.4%) and were more likely

to be Latin/Latinx/Hispanic (30.8% compared to 21.4%). Table 2 shows the

demographics for the FGCS subgroup.

Table 2

First-Generation College Student Demographics

Category	Subcategory	Frequency (n)	Percent (%)
Age	20 – 25	8	61.5%
	26 – 30	4	30.8%
	31 – 35	0	0%
	36 – 40	1	7.7%
Gender	Male	6	46.2%
	Female	7	53.8%
Race	Caucasian	6	46.2%
	Latino/Latinx/Hispanic	4	30.8%
	Black/African American	0	0%
	Asian/Pacific Islander	1	7.7%
	Native American/Alaskan Native	1	7.7%
	Not listed	1	7.7%
Healthcare Program	Physical Therapy	11	84.6%
	Occupational Therapy	1	7.7%
	Pharmacy	1	7.7%

Analysis

Quantitative Results

The data from the Qualtrics survey of student participants was imported into

SPSS. It was then transformed into usable data for calculations. For example, all Likert

data was changed into numerical values in order to compare means.

Descriptive statistics such as the mean, standard deviation, minimum and

maximum values were determined for the continuous variables. Frequencies and

percentages were calculated for categorical variables. Independent samples t-tests were calculated for the seven constructs from the survey items (e.g., Aspirational Capital) to compare the scores between FGCS and their peers. Table 3 provides the results of the independent t-tests.

Table 3

Independent T-Test Statistics for Survey Data

Construct	Group	M	SD	t	df	*p*
Aspirational	FGCS	21.69	2.057	-1.171	42	0.250
	Non-FGCS	20.74	3.214			
Familial	FGCS	31.31	7.846	0.604	42	0.549
	Non-FGCS	33.06	9.161			
Navigational	FGCS	34.46	6.654	-0.791	42	0.433
	Non-FGCS	32.74	6.547			
Resistant	FGCS	29.08	6.664	-0.656	42	0.516
	Non-FGCS	27.58	6.999			
Social	FGCS	78.69	14.62	-0.298	42	0.768
	Non-FGCS	83.32	11.965			
Belonging	FGCS	15.15	3.693	-0.410	42	0.342
	Non-FGCS	14.77	2.348			
Help Seeking & Help Seeking Avoidance	FGCS	33.00	3.916	-0.476	42	0.320
	Non-FGCS	35.13	4.972			

There were no statistical differences found between the FGCS and their peers for any construct measured.

In addition to the constructs, independent t-tests were also calculated on individual items to better understand the differences between FGCS and their peers.

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There were nine items that were statistically different between the two groups. Table 4

provides the results for those survey items that were significant.

Table 4

Independent T-Test Statistic for Significant Survey Items

Survey Item	Groups	Mean	SD	t	df	Significance
Make a difference in my community	FGCS	4.92	1.038	-2.033	42	0.048
	Non-FGCS	4.03	1.426			
When I need help with coursework, I go to a classmate	FGCS	5.54	0.998	-2.153	42	0.040
	Non-FGCS	4.94	0.776			
Emotional support, I go to a professor	FGCS	1.85	0.899	2.761	42	0.009
	Non-FGCS	2.9	1.248			
Emotional support, I go to a classmate	FGCS	3.15	1.676	2.49	42	0.017
	Non-FGCS	4.26	1.182			
If you can't figure out your problems, nobody can	FGCS	1.54	0.66	2.87	42	0.006
	Non-FGCS	2.48	1.525			
I would guess rather than ask someone for assistance	FGCS	1.46	0.519	2.351	42	0.023
	Non-FGCS	2.23	1.117			
Getting help means I am just not smart enough	FGCS	1.38	0.65	2.531	42	0.015
	Non-FGCS	2.23	1.117			
It's important to understand the work, not just memorize it	FGCS	5	0	-2.257	42	0.031
	Non-FGCS	4.81	0.477			
If I had trouble understanding the material, I would ask someone	FGCS	5	0	-4.522	42	<.001
	Non-FGCS	4.45	0.675			
I would feel like a failure if I needed help in my program	FGCS	1.08	0.277	3.872	42	<.001
	Non-FGCS	1.74	0.855			

FGCS are more likely to report that they want to make a difference in their community. They are more likely to go to a classmate for academic help and they are less likely to go to a classmate of faculty for emotional support. However, FGCS are report less agreement with several statements that are related to help-seeking avoidance. For example, FGCS were less likely to agree with the statement "If you can't figure out your problems, nobody can." There were no significant differences between FGCS and their peers for the amount of time they devote to activities outside of class. Cronbach's alpha was determined to be 0.864 for the 63 construct items, showing a high level of internal reliability among the items.

Qualitative Results

At the end of the survey, all FGCS were invited to participate in online one-on-one interviews. Twelve of the thirteen FGCS that completed the survey agreed to be interviewed and recorded. The interviews consisted of approximately twelve questions and averaged 30 minutes in length. The interviews were recorded and transcribed prior to content analysis. These interviews provided an opportunity to learn more about the FGCS at Creighton University, particularly as they relate to the CCWM.

Content analysis from the qualitative interviews was conducted using Nvivo. The first coding cycle used the In Vivo technique (Saldaña, 2021). With this method, the participants own words become the codes. The codes were then analyzed for categories and subsequently themes. In addition to the themes related to the CCWM, three additional themes were identified. These were Challenges, Family Issues, and Insecurities. The categories and themes from all participants are organized in tables.

The first theme was familial capital (Table 5). All the FGCS interviewed described their families and communities in a positive manner. The support their family provides as they are in graduate school includes financial, emotional, and many others. Several of the participants have regular communication with their families, even daily for some. It was surprising that 11 of the 12 FGCS had family that were either in college or completed college. These included siblings as well as extended family. Additionally, half of the FGCS had immediate family members that work in healthcare. Participant 2 stated, "My mom has her nursing degree, but she got it when it was a two-year associate at SCC." Participant 3 mentioned:

> My mom got her, um…it was like a certificate at the time. I think it's kind of like an associate degree, but she got that. She's an MRI technologist. Um. It's kind of like, um, I would say like just a certificate to do that MRI technology.

And participant 4 stated, "Um and then also I have a sister that's older than me. 4 years older. Um. Also, first-gen technically. She went to Creighton as well, but she did dental school." These two factors may have provided these students with guidance through their education.

Table 5

One-On-One Interviews – Familial Capital and Categories

Categories	Theme
Blue Collar	Familial Capital
Close to Extended Family	
Family Business	
Family in College	
Family in Healthcare	
Good Childhood	

Financially Secure
Parents' Desire for Happiness
Pride
Regular Communication
Resources
Stressed Education
Support

Many of the students described their families as either blue collar workers or independent business owners. Participant 12 shared, "Um so my dad works at the mine. His dad worked at the mine and his dad worked at the mine. So, I come from a long line of miners and construction workers, farmers."

Table 6 highlights the second theme, aspirational capital. The questions related to this theme were: What are your aspirations? How will you accomplish these? These align with the research question related to how FGCS describe their community cultural wealth. These questions attempt to understand the students' goals and aspirations during and after graduate school.

Table 6

One-On-One Interviews – Aspirational Capital and Categories

Categories	Themes
Career Goals	Aspirational Capital
Life Goals	
Greatest Successes	
Happiness	
Purpose	
Independent	
Hard Worker	

During the analysis of this content, it became apparent that all the FGCS students describe aspirations, in light of being in a challenging graduate program. For some, their aspirations were as simple as graduating and finding a job that was fulfilling. Others had aspirations beyond their career, as exemplified by this participant's comment:

> I always told my mom I'm just going to buy you a car. I'm going to spend my money probably how I shouldn't. And then you know settle down a little more. Um. I plan on doing Pharmacy part-time. You know once I'm like financially in a position where that would be wise. And then um I would do that other organization part time as well.

The third theme, navigational capital, was highly evident among all FGCS. The categories are shown in Table 7. Students repeatedly described situations where they "had to figure it out" or "learn on my own." While a few of the students utilized student services, these students more frequently sought help from mentors or classmates. Participant 4 mentions:

> I feel like in undergrad it was just kind of like just get through the classes and professors didn't care as much you know yeah, I just feel I was kind of on my own in terms of uh also like learning, and how to learn, become a good student. Like that was just something I had to learn on my own.

Similarly, participant 6 shared:

> I would say the challenges and barriers that I face is kind of like I said earlier not having that person that I've followed forever and can you know how does graduate schoolwork. It's kind of all these connections that I have to reach out and make on myself. Um, so I would say that's definitely the biggest challenge is

getting out of my comfort zone and going up to people and asking them…. Like

hey, how would you do this? Or how did you do this in PT school? And combat

that and stuff.

And participant 8 concurs:

I think first-gen is, I would say kind of like just a lot of figuring it out on your

own cuz there's nobody that you have to ask about it. So, I feel like for me it was

a lot of that. Just kind of researching, diving into, I guess the internet. I know I

had resources, but I feel like I've always been that person to like, let me figure it

out on my own first before I dive in or ask for questions. And so yeah, I feel like

being a first-gen was a lot of that. A lot of hard work to get to where you're at.

Table 7

One-On-One Interviews – Navigational Capital and Categories

Categories	Theme
Changing Majors	Navigational Capital
Getting Out of Comfort Zone	
Student Services	
Learn on My Own	
Mentorship	
Multiple Schools for Undergrad	
Outside Resources	
Undergraduate Preparation	

Social capital was the fourth theme from the CCWM. Questions pertaining to this

construct included "What are some of the strategies that you have used to engage with

other students or faculty?" and "Are you working with a faculty member outside of class?

For example, a research project or a student organization? Tell me how those interactions are going?" The categories for this theme are located in Table 8.

Table 8

One-On-One Interviews – Social Capital and Categories

Categories	Theme
Close Cohort	Social Capital
Faculty Engagement	
Seating in Classroom	
Professional Associations/Conferences	
Helping with Research	
Student Government	

Many of these students describe close relationships with their respective cohorts. Additionally, students overwhelmingly described faculty interactions as positive. For example, participant 11 mentions:

> Faculty…I, I've approached some of them. I've gone to the office hours. I feel like I've done pretty well just communicating with them and building some sort of like connection. I feel pretty comfortable with everyone.

However, only two of the participants work with faculty on projects outside of class.

The fifth theme was linguistic capital. Table 9 highlights the categories for this theme. More than half of the participants discussed items related to linguistic capital. This is likely because these many of these participants were also bilingual and from non-Caucasian households. The intersectionality between FGCS and race/ethnicity has been prevalent in the literature (Santa-Ramirez et al., 2022; Nguyen & Nguyen, 2018), so it is not surprising that this theme emerged from some of the participants. In addition to being

bilingual, several participants mentioned re-watching recorded lectures as a means to learn the material. This might also be considered linguistic capital, as students are using a media different from their textbook and lecture notes to learn the material. Perhaps their learning style requires more auditory input compared to their peers.

Table 9

One-On-One Interviews – Linguistic Capital and Categories

Categories	Theme
Bilingual	Linguistic Capital
Intersectionality	
Recorded Lectures	

The sixth and final theme related to Yosso's CCWM was resistant capital (Table 10). While there was some evidence of this from a few of the participants, it was not a major theme across the entire group. Those that discussed these topics were, again, from non-Caucasian households. They describe their exposure to poverty as a child and their desire to live a life free of financial stress. They also discuss their deep connections to their communities. These students have a strong desire to return to their communities and provide healthcare.

Table 10

One-On-One Interviews – Resistant Capital and Categories

Categories	Theme
Give Back to Their Communities	Resistant Capital
Deep Connection to Their Community	
Being First	
Gained Perspective	

One participant (8) mentions:

>From where I'm from, there's not a lot of healthcare. And I didn't realize that till I moved to Phoenix. Like I would turn the corner and there's a clinic at every corner and at home there was one clinic that I had growing up and that was it. So, I feel like there's no health care there and that would be my biggest goal is to go home and just give back to my community and give what I've learned here in Phoenix.

Participant 7 discusses their desire to give back to communities that he interacted with in the military:

>So, my long-term goal is to retire in around twenty years and work with, uh, Veritas Frontier. Doctors Without Borders. Uh, because serving the military, seeing the damage we do to, the collateral damage we do to uh civilians and just nearby people, I want to go to those regions and help them out. Uh, provide aid. Which would be weird because of most likely it's countries that we harmed and was like okay you are the reason I'm hurt but you're helping me. It seems weird, but it doesn't matter. I just want to try to help…. rather than destroy.

>There were three themes that emerged that were not related to Yosso's CCWM. These themes highlight the continued struggles FGCS have to manage as they navigate graduate school. The first is family issues and the categories related to this are in Table 11. These included statements related to lack of understanding from parents, family, drama, stressors, and issues with extended family. For example, participant 3 shared:

>My parents, um, didn't really know what getting my bachelor's and, um, going to school and stuff all entailed. So, I didn't really have a lot of advice from them of

as far as like getting loans for school, on the best steps for receiving guidance, and
advice if I did need it.

Similarly, participant 5 mentions:

And, um, I guess, they, they didn't really know how to assist me in, like
navigating that process, but I think going to graduate school… they didn't fully
understand what occupational therapy was. So, I kind of had to explain to them
there. And they're like 'oh so it's like physical therapy' and that's always their
response. And I'm like yeah similar but… And I… but now I think they
understand, um, and then, I think, they didn't understand like it costs a lot of
money to apply to graduate school. Like I applied to five different schools and I
think that by itself was like…. at least $500. Like maybe like $600. And then
paying for… to hold your spot. They're like what? You have to pay to hold your
spot? That was kind of surprising to them.

Most participants (10/12) described family crises and/or family stressors when asked
about their childhood. These ranged from poverty, divorce, death, loss of a business, and
falling out of relationships with family. Many of these events still affect the participant.
Participant 11 shared:

Throughout my childhood I did spend a lot of my time going down to Mexico for
like months. Um. Like where my grandparents lived or grandma now. But it's a
really rural area, like way rural kind of almost like I don't even know how to
describe it it's like super small. You could count the people that are there like in
the hundreds. And I think there I really grew as a humble individual and like I
saw like what poverty is really like. When, when you compare it to like here in

the US, yes there is poverty and there is people in need, but being over there it's a whole different whole different thing. And I feel like I've kept that along with me as I've like gone through… through different stages in my life.

Table 11

One-On-One Interviews – Family Issues and Categories

Categories	Theme
Lack of Understanding	Family Issues
Drama	
Not Close Anymore with Extended Family	
Never Close with Extended Family	
Stressors	

The next theme that emerged was challenges (Table 12). These FGCS described many challenges as they progress through their programs. These included financial stress, mental health issues, and academic struggles. Almost all the participants mentioned their financial concerns, either how to manage their student loans or worries about the massive debt they are accumulating. When asked about their challenges or barriers as they progress through their programs, participant 3 responded,

I would say my main barrier would be the money aspect of going through the program. Um. Just because, I mean, I am currently right now six figures in debt… or by the end I will be six figures in debt at the program. So, um, that was just kind of a barrier of, I mean, especially living in downtown Phoenix. The cost of living down here is just very, very expensive. Um, so even just having to pay for my apartment every day or every month. Um. And being able to get food and, um, focus on school and everything that I need to do for just being in this program

without working full time, um, has been really hard. I have picked up… on the

weekends I work at a hair salon just as a receptionist. Just to be able to make a

little bit more extra money to help me save. Cuz even that loan disbursement that

I do get, um, every semester, I have found, is really hard to be able to stay afloat

until I graduate.

Table 12

One-On-One Interviews – Challenges and Categories

Categories	Themes
Academic Struggles	Challenges
COVID	
Far From Family	
Financial Stress	
First-Cohort Issues	
Help Avoidance	
Lack of Cohesiveness	
Lack of Participation in Extracurricular	
Activities	
Mental Health	
Stress	
Guilt	
Imposter Syndrome	
Pressure	
Not Utilizing Student Services	
Omaha	
Time Management	

While there was no mention of a specific mental health diagnosis, participants did

describe high levels of stress, pressure (both from parents and from themselves), guilt,

and imposter syndrome. Participant 11, when asked about how being a first-generation

college student affect them, they answered:

Uh, I feel like there's stuff that you have to go through that's a little bit more

complicated like just sometimes like financial situation, sometimes the silly stuff

like oh do I have to have a part to be here or stuff like that. It just accumulates and

it makes it a little bit more difficult to do the same things.

The final theme from the qualitative interviews was insecurities. The categories

for this theme can be seen in Table 13. Every participant described being unsure of

themselves. Eleven of the participants report that they do not speak up in class. There is

also evidence of help-seeking avoidance. Most of the participants are self-described

introverts.

Table 13

One-On-One Interviews – Insecurities and Categories

Categories	Themes
Avoids Difficult Conversations	Insecurities
Avoids Conflict	
Comparison with Siblings	
Different Goals than Parents	
Discomfort Pushes Student to Engage in Class	
Guilt	
Help Avoidance	
Imposter Syndrome	
Introvert	
Pressure	
Quiet in Class	
Unsure	

One interesting pattern that emerged was related to being compared to a more

successful sibling. It did appear that some of these participants are motivated through

their insecurities. Participant 3 was asked about their family, and this was part of their response:

My older brother… He also went on to graduate school. He got his um, his masters in mechanical engineering and started a company called the ocean cleanup out in the Netherlands. Um. So, he is very, very successful. Um. I kind of I feel like, I mean, I feel like what I'm doing it, I mean, I, what I am doing is very proud and everything from my parents, but I feel like also with him with everything he's doing, it kind of makes me feel like a little less than him.

Moreover, participant 9 discusses their goals as it relates to being compared to their twin, "I've always been doubted. And I've been compared to my sister a lot for obvious reasons. And she was always the more academic one. So now that I've progressed my education further…much further. So that's… all."

There were some inconstancies noted between the individual interviews. Only one participant had a child. One had been in the military. Only one mentioned poverty. In fact, several mentioned specifically that they grew up in middle or middle to upper class households. There also appears to be more pressure and guilt for students that are also from families of immigrants. The majority of participants have the full support of their families. Only one participant that did not. Finally, only two participants felt it was important that faculty be made aware of what it means to be first-generation college student.

Summary of Findings

In summary, the overall results of the study's findings indicate that FGCS in CU's graduate healthcare programs in Phoenix may be more similar to their peers than was

expected, based on the quantitative data. They demonstrate a similar sense of belonging, help-seeking, help-avoidance behavior, and characteristics from the CCWM survey. Nevertheless, from the qualitative data, they do appear to exhibit the forms of capital described by Yosso (2005). These students describe Familial, Aspirational, and Navigational Capital to a greater extent than Linguistic, Social, and Resistant Capital. In addition to these strengths, FGCS also revealed several difficulties that are common in undergraduate FGCS as well. Chapter five will provide a more detailed discussion of these results.

CHAPTER 5

DISCUSSION

This chapter will begin with revisiting the research questions and a summary of the findings followed by more detailed discussions with recommendations, where needed, based on the literature. This section will also include a thorough examination of implications for practice for faculty in higher education to improve the experiences of FGCS.

The purpose of this study was to better understand the FGCS in CU's healthcare graduate. This mixed methods study aimed to answer the following research questions:

1. To what extent do first generation college students in healthcare programs at Creighton University feel that they belong as compared to their non-FGCS peers?

2. To what extent do first generation college students in healthcare programs at Creighton University report help seeking and help seeking avoidance, and cultural capital compared to their non-FGCS peers?

3. In what ways do first-generation college students in Creighton University's healthcare programs describe their various forms of cultural capital?

The results of this study have provided insights into characteristics of FGCS in graduate healthcare programs, including various forms of capital, help-seeking and avoiding behavior, and sense of belonging. While there were few differences between FGCS and their peers on the survey, this lack of differences is critical to understand, nevertheless. It is possible that first-generation graduate students may be a separate subgroup of students that necessitates a better understanding. For instance, the FGCS exhibited the same sense of belonging and cultural capital as their peers in the

quantitative aspect of this study. There were some differences in help-seeking and help-seeking avoidance, which will be discussed in greater detail. The qualitative interviews highlighted both assets and challenges, as well as community cultural wealth in this population of students. A more thorough discussion of these findings follow.

Help-Seeking and Help-Seeking Avoidance

Quantitatively, there were individual items on the survey that demonstrated significant differences between FGCS and their peers. Some of these items are in alignment with the undergraduate literature. For example, this sample of FGCS were more likely to seek help from a classmate compared to their peers. FGCS typically do not seek help from their professors. They do not initiate contact and have less face-to-face time in and out of the classroom (Engle & Tinto, 2008; Kim & Sax, 2009, Soria & Stebleton, 2012). They are likely less intimidated by a classmate compared to a faculty member (Longwell-Grice & Longwell-Grice, 2008). Similarly, FGCS reported that they were less likely to seek emotional support from a professor or a classmate. This also aligns with the literature regarding fewer interactions with faculty.

There was one item that was unsurprising given the previous literature on FGCS. The FGCS in this study had a higher level of agreement with "I would feel like a failure if I needed help in my program" compared to their peers. So, while this group of FGCS graduate students appears to be more similar to their peers in most areas, there are still insecurities present. It is possible that this statement is related to FGCS experiencing low self-efficacy and low self-esteem, which is in agreement with prior literature. There are numerous studies showing decreased self-efficacy and self-esteem in FGCS (Ávila Reyes et al., 2021; Covarrubias et al., 2015; Ramos-Sánchez & Nichols, 2007). This survey item

is not only related to help-seeking and help-seeking avoidance, but also to perfectionism. Bogardus et al. (2022) found that that graduate students in healthcare programs present with perfectionism that is related to mental health concerns. In a separate qualitative study, Bogardus et al. (2021) found that physical therapy graduate students described their fear of failure as an important aspect of perfectionism, suggesting that their perception of graduate school was a high stakes, unyielding path to learning. Filipkowski and colleagues (2021) studied adaptive and maladaptive perfectionism in graduate students in a health science program. They defined adaptive perfectionism as having high standards for oneself and maladaptive perfectionism as having negative thoughts when those standards are not reached. The authors found that adaptive perfectionism was linked to better quality of life, mental health, and social capacities. This could be a direction for future FGCS studies, as it is possible that these students present with more maladaptive perfectionism than their peers. Understanding how our healthcare programs may be promoting or discouraging perfectionism would be an important aspect to investigate as well.

Perfectionism is related to imposter syndrome, which was mentioned by some of the FGCS during the qualitative interviews. While previous studies have shown high rates of imposter syndrome in FGCS (Parkman, 2016; Peteet et al., 2015; Ramsey & Brown, 2018), Holden et al. (2021) found no statistically significant differences in imposter syndrome or stress between FGCS and continuing-generation undergraduate students. However, the authors reported that both FGCS and continuing-generation students experience comparable levels of both imposter syndrome and stress. This study also found positive correlation between self-perfection and stress for continuing

generation students. The authors postulated that this focus on individual perfectionism may be related to the burden of maintaining their family's legacy, while the FGCS students have the pressure of being first in their family to go to college.

Some of the survey items were unexpected based on the literature, including FGCS having lower scores (agreeing less) than their peers with the statement "If you can't figure out your problems, nobody can." As well as agreeing less with "If I didn't understand something in a class, I would guess rather than ask someone for assistance" and "Getting help in a class would be an admission that I am just not smart enough to do the work on my own." Additionally, FGCS agreed more with the statement "In this program, it's important to understand the work, not just memorize it," and "If I were having trouble understanding the material in this program, I would ask someone who could help me understand the general ideas." These items could be a reflection of how their success in their undergraduate programs has prepared them for the rigorousness of a graduate healthcare program. It may also reflect a maturity in the FGCS that developed through their undergraduate experiences from navigating institutions, finding resources, and becoming more responsible (Covarrubias et al., 2019).

Recommendations

Based on these findings, it is recommended that all students have access to mental health services. Same-day therapy, mindfulness activities, and other stress relieving activities can be beneficial for the students (Holden et al., 2021). Group interventions by university counselors can be used address the maladaptive perfectionism exhibited by students (Kutlesa et al., 2008). Faculty should also continue to review academic policies and participate in training related to mental health (Margrove et al., 2014). Particularly

for students in doctoral programs, it is recommended that educational programs promote a sense of belonging, opportunities for socialization into their field of study, facilitating supportive relationships with peers and faculty, and eliminating financial stress (Bekkouche et al., 2022).

The first step is to have the resources available, however, this may not result in the utilization of services by students (Johnson et al., 2022). For example, Stebleton et al. (2014) found that FGCS were less likely to use mental health services on campus, even though they realized there was a need. Therefore, in addition to programmatic changes, there may be classroom changes that can help promote improvements in student and faculty relationships. Karabenick (2004) found courses that emphasize mastery versus performance demonstrated improved help-seeking behavior. Lab courses in OT and PT could be used as an example of mastery. A significant amount of time is spent teaching and practicing psychomotor skills in these labs. While we still assess students on these skills, the focus is on obtaining the skill instead of earning an 'A' in the course. In contrast, many lecture courses tend to focus on performance of the student on exams. According to Karabenick (2004), courses that emphasize mastery facilitated a help-seeking approach and those that emphasize performance predicted help-seeking avoidance. Students who were more focused on the learning instead of the performance outcomes of a course were more likely to engage with faculty (Karabenick, 1998, 2003). Faculty can use this information throughout their courses. For example, faculty can have students create goals for themselves in a course that are mastery in nature. Bullock et al. (2022) recommends changing courses to pass/fail with more formative feedback for students. This was associated with improved student perceptions of their assessments and

helped to promote a learning environment that focused on mastery instead of performance. Students also felt that the evaluations and grading were fairer. They also perceived the feedback they received was more useful. Additionally, faculty can provide the real-life context for the information that is being taught. For example, presenting information in a case-based format provides students with the opportunity to see and understand the application of this knowledge. In addition to goals and application, simply stating on the course syllabus that the faculty member will provide help outside of class can improve a student's willingness to seek it (Perrine et al., 1995).

Sense of Belonging

In many aspects of this study, remarkably, FGCS were more similar to their peers than originally hypothesized. One positive element was the fact that there were no differences in sense of belonging compared to their peers. This finding agrees with a recent study that found graduate FGCS presented with a greater sense of belonging, but greater financial concerns (Collier & Blanchard, 2023). While this study was completed at one institution, it is encouraging to think that universities may be improving their approaches towards promoting inclusivity. Pascale (2018) investigated sense of belonging in graduate students and found several differences compared to undergraduate students. Themes that emerged in her qualitative study included perceived faculty support, perceived peer support, feelings of being comfortable in class, perceived isolation, and faculty's demonstration of empathy and understanding. Participants saw graduate school as an investment, which affected their motivation to engage in the classroom. They also felt closer to their faculty, with more of a mentor-mentee relationship than a teacher-student.

There may be additional aspects of FGCS graduate students that promote a greater sense of belonging. It is possible that these students had to assimilate in their undergraduate studies to be successful. Moreover, perhaps the successful students in undergraduate programs are more likely to feel like they belong in any setting. Another possibility is the fact that these graduate programs all use cohort models. The nature of cohort models provides a built-in social network, as students take all their course together as a group. Johnson and colleagues (2020) recommend program-specific cohort models for the benefit of FGCS undergraduate students in STEM degrees, as this narrowed the gaps between them and their peers. The cohort models may also explain the lack of a difference between FGCS and their peers regarding the time spent on activities outside of class. Several studies have shown that undergraduate FGCS spend more time commuting (Pascarella & Terenzini, 2005), working off campus, and less time participating in extracurricular activities than their peers (Engle & Tinto, 2008). With this cohort model, there is little flexibility compared to undergraduate studies. Students are enrolled in all the same courses at the same time. These programs are also full-time, with students being enrolled in 16 to 18 credit hours per semester. By nature, these programs do not allow for a significant time to be devoted to activities outside of class.

The absence of differences in sense of belonging could also be a by-product of CU's Jesuit values and is not generalizable to other institutions. The Ignatian values include finding God in all things, magis (the greater good), cura personalis (care for the person), women and men for and with others, and faith that does justice. These Ignatian values frame our decision-making and are repeatedly referred to by the department and school during recruiting and admissions events, orientation, and beyond. As a result, CU

may attract like-minded students that helps to facilitate sense of belonging. Finally, it is conceivable that the questions used to assess sense of belonging were not comprehensive enough. Other measures of sense of belonging have nine or more items that are more specific in nature (Hagerty & Patusky, 1995; Lee & Robbins, 1995; Malone et al., 2012) compared to the three-item assessment in this study. A more comprehensive assessment of sense of belonging should be investigated because graduate student sense of belonging has been shown to improve retention and success (O'Meara et al., 2017).

Community Cultural Wealth Model

In addition to sense of belonging, FGCS are similar in aspirational capital, navigational capital, and familial capital compared to their peers based on the survey. Not only were these constructs similar, but there were also no individual items within these constructs that showed a significant difference. There are likely several reasons for these similarities. Aspirational capital is "the ability to maintain hopes and dreams for the future, even in the face of real and perceived barriers" (Yosso, 2005, p. 77). It is probable that all graduate students have high hopes and dreams for the future. These students have all intentionally chosen a healthcare profession and are in the final steps to becoming the practitioner of their choice. These programs are full-time, year-round, and intensive, with a high number of credits each semester. For example, physical therapy students are often taking 17-18 credits per semester. One could argue that all students in these programs have to persevere to attain their goals of becoming a healthcare practitioner. While the survey data did not show differences between FGCS and their peers, one theme that developed from the interviews related to aspirational capital was that FGCS showed a strong desire to give back to their communities. For familial capital, it is quite possible

that most of the students are close with their families and feel supported as they traverse their educational programs. The lack of differences for navigational capital may also be related to the students' success in their undergraduate institutions. Perhaps the FGCS have learned how to navigate a foreign institution through their prior experiences, therefore making it easier to navigate at CU.

One item related to resistant capital that was significantly different between FGCS and their peers was "I want to make a difference in my racial/ethnic/cultural community." This is likely representative of the intersectionality between race/ethnicity and FGCS. Intersectionality of race and ethnicity may play a role in the degree that these participants exhibit community cultural wealth. Their identities as a minority and their backgrounds guide their decisions and connections to others and institutions (Nguyen & Nguyen, 2018). Of the twelve FGCS, seven were from nonwhite races/ethnicities and six were first-generation American citizens. Their experiences as first-generation American citizens, as well as FGCS, cannot be overstated. The CCWM highlights the experiences of intersectionality that may lead to academic perseverance, student satisfaction, and overall well-being (Garriott et al., 2021). Garriott et al. (2021) used the CCWM to better understand FGCS and other economically marginalized students. Using this framework, the authors argued that they are able to capture the specific needs, strengths, and challenges as these students begin their education and careers. By using the CCWM, they were able to look at associations between institutional factors, various forms of capital, and social-emotional experiences. Garriott and colleagues also found differences between White and non-White, alluding to the possibility that "students who are racially minoritized may struggle with accessing academic resources within institutionally classist

environments regardless of their first-generation status" (p.14). Additionally, the authors discovered that FGCS of color demonstrated the strongest relationship between classism and integration of school and family. These students reported more "psychological distancing between academics and family" (p.14). In addition to classism, one could argue that all FGCS have to negotiate their new identity as they are entering a graduate program and taking a major step towards a professional career. This aligns with Goffman's (1959) theory of self where he posits that our identities are developed through interactions with others. Our identity is constantly changing as we have more interactions. With these changes, one could argue that FGCS move further from their families.

In addition to navigating education as a FGCS, those of color have the added burden of determining the sociocultural differences between school and home, often participating in "code switching" and identity negotiating in this new environment (Williams et al., 2022). Williams et al. (2022) found first-generation Black women had to "renegotiate their understanding of themselves … where they shifted from being in the majority, due to their predominantly Black environments, to being in the minority. In addition to their minoritized racial status, participants revealed struggles with the norms, rules, and expectations associated with their new … contexts" (p. 472). The incongruities between the institution and home, particularly for FGCS of color, likely affect their sense of belonging and feelings of imposter syndrome. Another study found that "racial codeswitching is a necessary behavior for Black employees to be perceived as professionals" (McCluney et al., 2021, p. 9). The concept of professionalism and professional formation is threaded throughout the curriculum at CU. Viewing this

through the lens of a racial minority has been enlightening. Recently students were asked about their feelings about the white coat ceremony at CU. This is a ceremony held at the beginning of matriculation for PT, OT, and Pharmacy students. This tradition began in medical schools and signifies students' entrance into a profession. Upon reflection, one of our students of color mentioned that they felt as though they were selling out their own culture. This aligns heavily with the concept of code switching. Due to the small sample size, it was not possible to investigate differences between race/ethnicities of FGCS. This is a potential avenue for future studies.

Yosso's (2005) original paper discussing CCWM focused on URM students, specifically of difference races and ethnicities. Resistant capital are the skills that are developed when challenging injustices and inequities to the student, their family, and/or their specific race/ethnicities. These skills are acquired because of students' "resistance to subordination" (Yosso, 2005, p. 80). A large percent of the FGCS students in this study are racial or ethnic minorities, so it is not surprising that this item was significantly different from their peers. This aligned with the qualitative data, which provided a more comprehensive description of their resistant capital. These students see themselves in the larger context of society, likely due to the injustices that they have seen or experienced.

Effect of Older Siblings

Kim et al. (2020) challenged the notion that FGCS are a homogenous group. The authors studied the effect of older siblings on their contribution to FGCS. Those with an older sibling that attended college were more similar to continuing generation students with respect to their parental support, peer supports, and institutional support. They also had a higher likelihood of academic success. These findings align with the current study.

There were two FGCS whose older siblings had an associate degree and six had an older sibling that graduated from college, with several continuing on to graduate school. These older siblings may assist their siblings with choosing schools, reading comprehension, homework, preparing for college by "demystifying norms and rules about education and attempt to position their loved ones on a path of upward mobility" (Delgado, 2023, p. 1). Additionally, Roksa et al. (2020) found that having an older sibling that went to college changes the conversations within families. Those without an older sibling had more superficial discussions that were often focused on grades. Students with an older sibling that had gone to college tended to have more specific and detailed conversations. For example, discussion about their favorite classes or professors. Therefore, having an older sibling that was successful in college was beneficial for student-parental engagement and support. This familial capital and these deeper conversations likely contribute to overall cultural capital for FGCS.

The qualitative data elicited several of the various forms of capital described by Yosso (2005). These students describe familial, aspirational, and navigational capital to a greater extent than linguistic, social, and resistant capital. One interesting fact that came out of the qualitative interviews was the fact that many of these participants have a family member that is currently in healthcare. In addition to healthcare professionals that do not require a bachelor's degree, several have siblings that completed graduate healthcare programs. It is possible that this familial capital has helped these participants decide to pursue a healthcare degree.

Recommendations

There are several recommendations from the literature to utilize the strengths of FGCS in a manner that is beneficial to learning. First, self-affirmation activities are an option for faculty to help FGCS to adapt to a new environment (Harackiewicz et al., 2014; Tibbetts et al., 2016). This can also help deter the negative perseverating thoughts and low self-confidence that commonly occurs with imposter syndrome (Clance & Imes, 1978). Another activity is allowing students to discuss their personal values and provide a rationale. This activity has been shown to improve FGCS academic performance and reduce their anxiety about fitting in (Harackiewicz et al., 2014; Tibbetts et al., 2016). It is beneficial to provide FGCS opportunities to hear from those with similar backgrounds that have already been successful in their fields. This has been shown to improve FGCS academic performance, coping skills, and awareness of how their backgrounds might impact their educational experience (Stephens et al., 2014). This could include sharing college adjustment stories and highlighting how they became more comfortable with their differing backgrounds (Stephens et al., 2014). For example, I have been more intentional with selecting our adjunct faculty to reflect more diversity. This allows students to engage with physical therapists that are similar to themselves, be that race, ethnicity, religion, or sexual orientation. We are also working on connecting students to potential clinical instructors that have similar backgrounds, including a specific race or ethnicity, being first-generation, or having a similar background (e.g., growing up in a rural area). These minor strategies can be impactful to URM students.

First-Generation College Student Challenges

In addition to these strengths, FGCS also revealed several challenges and concerns, many of which are common in undergraduate FGCS as well. These include financial stress, personal and academic struggles, and insecurity. Many of the FGCS did not know what services are available to them. If they did have a comprehensive understanding of the accessible resources, they were not apt to utilize them.

First-Generation College Student Insecurities

Every participant discussed feeling unsure of themselves and almost all the participants described themselves as introverts. Eleven of the participants reported that they do not speak up in class. Interestingly, the one student that did report speaking up in class came across as particularly assertive compared to the other participants. She makes a point to get to know faculty and become active in extracurricular activities. For the majority, there was evidence of help-seeking avoidance. They do not meet with faculty regularly. They are not involved in any extracurricular activities on campus, such as research, student government, or student interest groups. Some of the participants directly mentioned feelings of imposter syndrome. One interesting pattern that emerged with some of the participants was comparing themselves to a more successful sibling. There did not appear to be room for two successful siblings in their families, according to the participants. This irrational insecurity did appear to motivate the participants to succeed to outshine their sibling. The results related to insecurities is similar to other literature showing higher levels of depression and anxiety in FGCS compared to their peers (Noel et al., 2021).

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Recommendations. Several studies recommend mentorship and role models for FGCS to improve their well-being (Collier & Blanchard, 2023; Demetriou et al., 2017; Wang, 2012). Demetriou et al. (2017) showed mentorship from organic experiences (compared to assigned mentors) were important for FGCS' success. Other studies have shown mentorship of any kind can improve graduate student well-being and overall mental health (Charles et al., 2022; Lorenzetti et al., 2019; Demetriou et al., 2017) particularly for underrepresented students (Grilo et al., 2023). Grilo et al. (2023) found that mentorship can improve URM graduate students' well-being, which is related to relationships with advisors, career prospects, financial stability, social support, and health overall. The authors recommend faculty mentorships for these students to improve student satisfaction, experiences, and quality of life. This mentorship program was also valuable in community building, professional development, and socialization for underrepresented students, including FGCS. Instead of assigning mentors for incoming students, the literature recommends development of mentorship through experiences such as research interests, employment, or other creative activities (Demetriou et al., 2017). Within most healthcare programs there are specializations, such as orthopedics or pediatrics. It would be advantageous for FGCS to be paired with mentors, faculty, or peers, that have similar clinical interests. Holding office hours is not enough to create meaningful connections and mentorship opportunities.

While these insecurities are likely deeply rooted, it is important that these students are provided messaging about the importance of faculty connection and interaction. This could be as simple as education regarding the characteristics of FGCS as the first step in creating behavior change. As part of an earlier action research study, I created a first-

generation special interest group for students. This was a voluntary peer group that met three times to discuss characteristics of FGCS and the importance of networking and developing social capital. After the intervention, one of the FGCS participants reported that she had gotten out of her comfort zone and went to a faculty member's office to review a recent exam. While this seems like a small change, it was encouraging to see how a small time commitment could affect their behavior.

Personal Struggles

There were many personal struggles that were mentioned during the interviews. Many of these were related to relationships with family. While it is probable that non-FGCS also have family drama, it was remarkable that every FGCS described discord, divorce, illness, loss of income, and/or death. Several of these participants describe being estranged from entire sides of their extended family. These family stressors likely play a role in some of the mental health concerns that we see in FGCS. Walsh et al. (2023) found issues with communication, stress, and familial relationships contributed to challenges experienced by graduate students and their families. They also discovered that the family's lack of understanding of the students' responsibilities and struggles during school contributed to the family conflict. The participants were also reluctant to include their family in university events due to the differences in life experiences and comprehension. However, family support and relationships were considered a strength for these students and their families. The majority of participants in the current study reported feeling overwhelmingly supported by their families, even though they did not fully understand the process.

Recommendations. In part to foster a sense of belonging, but also to promote family connection, programs should provide family-friendly events for students. This could be educational and social in nature. For example, offering families an opportunity to learn more about the school, program, and healthcare profession that their student has chosen can help families feel more connected and informed. Specialized programming

In a qualitative study of URM doctoral students, including FGCS, and their families, Walsh et al. (2023) uncovered the importance of family support, specifically nonfinancial, including emotional, communicative, and mental health support. Programs can capitalize on this support by periodically providing opportunities to include families. At Creighton University, the PT, OT, and pharmacy programs begin with a white coat ceremony. While this ceremony signifies a student's entry into a profession, it is also an opportunity for families to tour the campus and interact with faculty. Perhaps there are other creative ways to connect with students and their families.

Knowledge and Utilization of Student Services

Many of the FGCS interviewed had only a cursory knowledge of student services. One student even expressed a sense of guilt about using services as it could limit someone else's opportunities. In addition to academic support, FGCS specifically need mental health services with appropriate messaging about these services. At CU, we are fortunate to have two full time mental health practitioners, however few of the participants knew about them nor used them. Currently, we introduce the mental health practitioners during orientation. Unfortunately, students are being inundated with information and may not retain this information. Even with knowledge of the services available, FGCS do not utilize them (Stebleton et al., 2014).

Recommendations. There may be opportunities during orientation to improve FGCS' knowledge of student services available them. According to Demetriou et al. (2017), this time can be used to establish FGCS' expectations as well. Including the possible challenges they might encounter but seeing these as learning opportunities instead of barriers to success. The authors also recommend setting short-and long-term goals and to anticipate possible difficulties they may encounter while attempting to achieve these goals. Both academic mentors and more experienced peers can be helpful in this process. Assuming most graduate programs provide an orientation to their students to acclimate them to the university, program, student services, and policies and procedures, I would argue this is not enough to ensure success for FGCS. It would also be beneficial to periodically remind students about the student services available. A formal referral process for faculty would be helpful as well.

Financial Stresses

The final area that FGCS graduate students reported having challenges is financial. Almost all the participants mentioned their financial concerns, either how to manage their student loans while they are in school and/or worries about the massive debt they are accumulating. CU is a private institution with extremely high tuition compared to other schools. For example, tuition to complete a Doctor of Physical Therapy degree at CU is $149,128. This does not include housing or fees. In light of this, it is not surprising that these participants verbalize stress about finances. This aligns with the current literature on FGCS (Collier & Blanchard, 2023; Wilcox et al., 2022). Being a FGCS contributes to economic difficulties and stress. These graduate students experience delays in achieving their goals as a result, even after controlling for their socioeconomic status

(Wilcox et al., 2022). This likely reflects FGCS' lack of social and navigational capital to understand the financial aspects of college (Collier & Blanchard, 2023). Additionally, increased financial stress is related to greater distress, both family distress and academic distress, as well as a lower grade point average (Cadaret & Bennett, 2019). Therefore, it is paramount for institutions to improve the financial literacy of their students.

Recommendations. Transparency with all costs students will incur during their programs is imperative (Collier & Blanchard, 2023; Wilcox et al., 2022). Many healthcare programs are required to provide a cost breakdown; however, this is typically limited to publishing tuition and program fees on their website. This does not include some of the hidden costs that are often encountered by students. In addition to transparency of all costs, it is also important to identify the FGCS in the program, as these students may not be in the lower socioeconomic categories, but they may still have difficulties with the financial side of higher education (Wilcox et al., 2022). Programs can foster an environment where students feel comfortable discussing their questions and concerns about finances (Lantz & Davis, 2017). Other studies recommend outreach programs specific to financial issues, including counselors trained in this area to connect students to resources regarding finances and financial decision-making (Cadaret & Bennett, 2019). This connection between counseling and finances can alleviate the stress students feel, as well as assist in financial services and literacy. Programs should provide assistance with fellowships, grants, student loans, finding an assistantship, and the entire financial aid process (Collier & Blanchard, 2023). Financial literacy outreach opportunities should also be considered. These could be presentations, information tables, and online educational resources (Arch & Gilman, 2019; Cadaret & Bennett, 2019). Arch

and Gilman (2019) promote the use of the library for programming specific to FGCS and financial literacy. During the PT orientation, we have added a short discussion about financial literacy with the hope that it will help alleviate fear in students.

Other programmatic recommendations related to finances include offering no-cost or low-cost extracurricular activities (Tran et al., 2018). Many FGCS do not have the means to participate in activities that have a cost associated with them. As a result, they have less opportunities for networking and developing relationships with their peers and faculty. A final recommendation to address the financial stressors that FGCS experience is related to classroom management. Garriott et al. (2021) recommends faculty use open educational resources that are free for both students and faculty, as well as limiting required materials where students incur a cost.

Implications for Practice

A comprehensive understanding of FGCS is necessary to improving FGCS experiences in graduate healthcare programs while avoid a deficit narrative. The results of this study have several implications for practice for higher education faculty. With increasing numbers of FGCS enrolled in college and progressing to graduate programs, it is crucial that we understand this population better. By using Yosso's (2005) Community Cultural Wealth Model, an attempt was made to investigate not only the challenges these students have, but also their strengths. These students have a history of being successful in college, as evidenced by their matriculation into a graduate healthcare program. It is highly probable that graduate FGCS constitute a subgroup of FGCS. They are similar to their peers in a majority of ways. These similarities tended to be positive attributes of the FGCS. However, this study revealed that some of the characteristics of undergraduate

FGCS continue into graduate school. These students are less likely to speak up in class, actively seek help, or volunteer for extracurricular activities, which is seen in undergraduate FGCS. It is not enough to know these students; programs need to provide opportunities for these students to engage with classmates and faculty.

Recommendations

The first step in improving experiences for FGCS must be identification of these students (Wilcox et al., 2022; Nielsen et al., 2017). Most programs collect this information during admissions, similar to race and ethnicity, but it is rarely shared with faculty or discussed in a meaningful way. Once students are identified, faculty can focus on engagement and mentorship specifically for FGCS, including both formal and informal opportunities. Faculty should also be made aware of the importance of mentorship.

In addition to identification of FGCS, Collier & Blanchard (2023) recommend faculty discuss the difference in experiences between graduate students of different backgrounds. Arif et al. (2021) provides ten recommendations for supporting historically URM students, specifically in science majors. These include teaching with empathy, implementing student-centered learning, empowering students, diversifying perspectives, reducing financial obstacles, advocating for and creating accessibility in learning environments, connecting students with resources and opportunities, facilitating access to opportunities for informal education, integrating community, and committing to lifelong learning and accountability. These items could be a starting point for faculty discussions about supporting students from different backgrounds.

Pedagogical Recommendations

In addition to mentorship and engagement strategies, there are several recommendations for pedagogical strategies that are specific to FGCS. Some of these include active learning techniques (Theobald et al., 2020) and connecting students' lived experiences to the subject matter (Ives & Castillo-Montoya, 2020). Connecting students' lived experiences can contribute to learning, personal growth, and building community (Theobald et al., 2020). For instance, Bass and Halverson (2012) found FGCS valued the ability to examine and draw upon their own life experiences for their learning. Castillo-Montoya (2017) found enhanced learning for racially and ethnically diverse FGCS when faculty valued these students' prior knowledge and life experiences. Similarly, Jehangir (2010) highlighted the importance of validating low income, diverse, FGCS' cultural wealth and knowledge in the classroom to encourage deeper understanding and learning. Slate et al. (2009) also points to FGCS appreciating classroom instruction that builds upon their lived experiences and prior knowledge. This literature demonstrates the importance of instructors that recognize the valuable experiences FGCS bring to the classroom. Relating these to subject-matter using a variety of strategies, such as discussion and reflections, can bring to light this knowledge and deepen all students' understanding (Theobald et al., 2020). An example of this might be to have all students discuss and share their experiences with a specific diagnosis (e.g., osteoarthritis). It is quite possible their responses will be varied and linked to their experiences with healthcare accessibility and socioeconomic status. For instance, perhaps one student's experience with the healthcare system was negative due to the lack of accessibility in

their community. Discussing the variability in experiences will provide all students with a more comprehensive understanding of healthcare.

The evidence-based recommendations provided are not only beneficial for FGCS and other URM, but all students. While teaching is considered a significant part of a faculty member's role, training for this aspect of their career is not typically formal or a recommended part of their doctoral programs. Some faculty advisors go so far as to view teaching as supplementary to a doctoral or post-doctoral student's training (Brownell & Tanner, 2012). Additionally, junior faculty that are interested in expanding their teaching and learning techniques are often discouraged by senior faculty. As a result, they conform to the traditional methods of teaching (Gibbs and Coffey, 2004). Many teach how they were taught and feel ill-equipped to make the changes necessary to improve student engagement without formal training (Brownell & Tanner, 2012). Another concern is the length of time it takes for evidence-based teaching strategies to make it into practice (Henderson et al., 2012). There are many reasons for this, with time being consistently reported as a major difficulty to overcome (Shadle et al., 2017; Henderson & Dancy, 2007). Gaining a better understanding of the barriers to change can allow for a more individualized approach to improving teaching and learning. The literature suggests that sociocultural context can influence a teacher's development and willingness to change (Englund et al., 2018). The culture of the institution and the department can influence this. Knowing the local context may improve the likelihood of shifting the teaching norms associated with higher education (Shadle et al, 2017). Englund and colleagues (2018) found that change occurs with departmental-level support that includes open

communication and reflection on teaching and learning. A community of practice can also be used to implement and sustain changes (Sturtevant & Wheeler, 2019).

In contrast to evidence-based pedagogical techniques, Shadle and colleagues (2017) recommended taking a more holistic approach by proposing a broader vision of pedagogy, rather than focusing solely on evidence-based strategies. For example, one study presented faculty with exam results to see if this would facilitate changes in instruction (Mercer et al., 2018). They surmised that, "while literature is a powerful resource, utilizing student data from the courses faculty teach is personal and helpful in support of self-reflection" (p. 387). The authors recommended intentional teaching teams that include self-reflection on student performance and teaching strategies. This concept of reflection aligns well with the Ignatian values, as daily reflection is encouraged as a means to see God in all things. Adopting this method at Creighton University would likely be more easily accepted compared to other institutions because of this. Additionally, in order to implement changes in teaching, faculty need to obtain an awareness of their current techniques and outcomes. "Community support in combination with individual willingness to reflect on and discuss past teaching experiences could contribute to an increase in the success and consistent use" (Corrales et al., 2020, p. 13).

Other suggestions for faculty that have been shown to improve outcomes for FGCs and URM students include and simply disclosing the backgrounds of faculty on their biographies on the institutional website (Taylor et al., 2022). According to Taylor et al. (2022), "regarding personal identities, faculty members rarely disclosed their race/ethnicity (1.1%) or religion (11.8%) and never disclosed their gender, first-generation college student status/background, or socioeconomic status/background" (p.

27). By providing a more thorough description of faculty's backgrounds, students may find similarities to help create a connection. This could also be a strategy to for recruiting URM students to an institution. Creating early personal connections with FGCS and other URM may improve a sense of belonging and alleviate some of the psychological stress these students experience due to an emotional disconnection from their family (Garriott et al., 2021). One interesting finding from Taylor and colleagues (2022) was faculty of a higher rank tended to disclose more in their biographies. This highlights the possibility of an unwritten rule regarding junior faculty avoiding anything that might be construed as controversial.

Other Recommendations

One remarkable aspect that emerged during the interviews was the importance of classroom seating to become acquainted with classmates. The importance of space and proximity has not been something I recognized as a faculty member. Perhaps requiring seat changes on a weekly or monthly basis could improve students' social capital and feelings of belonginess. Since PT and OT are hands-on professions, much of our teaching and learning occurs in a lab setting. I have intentionally asked students to change lab partners every lab to enhance their social connections and improve their manual skills.

The final recommendation is related to virtual tutoring and advising. Being that Creighton University in Phoenix is an extension of the Omaha campus, there are some implications with advising and tutoring. The first cohorts did not have peers on campus. While an effort was made to connect Phoenix and Omaha students, there was minimal interaction. Some Omaha students were paid tutors for both campuses, yet very few Phoenix students participated in this. In addition to tutoring, Phoenix does not currently

have an academic counselor on campus. Until this position is filled, students will be directed to Omaha counselors through virtual meetings. Unfortunately, students are, again, reluctant to use these resources. Their reluctance is related to the limited opportunities for students to connect to these counselors in person. Since the recent pandemic, students are not interested in interacting virtually, possibly due to Zoom fatigue (Deniz et al., 2022). It is imperative that campuses have in-person academic counselors and tutors.

Implications for Yosso's Community Cultural Wealth Model

Using Yosso's (2005) CCWM as a framework to view FGCS allowed for a more comprehensive investigation compared to exclusively a deficit narrative, which has been the case in prior literature. This study, while not ignoring their challenges, provides an opportunity to understand the strengths of these students. They have strong family and community support. They have aspirations beyond obtaining a job and making money, with several mentioning giving back to their communities. These FGCS exhibit navigational capital in their abilities to engage with and traverse through institutions that may not have their needs in mind.

There were some aspects of the CCWM that were not embodied by this group of FGCS. There were very few references to linguistic and resistant capital exhibited by these participants. It is possible that these components were not captured with the survey items or interview questions. Future studies can be more intentional with questions, particularly during qualitative interviews. For example, it would have been helpful to ask participants directly about resistant capital instead of alluding to it through general questions.

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In addition to the CCWM, there are likely additional forms of capital that FGCS students have that was not captured in this study. Future iterations of this research may include investigating academic capital and psychological capital. Academic capital is defined as "social processes that build family knowledge of educational and career options and support navigation through educational systems and professional organizations" (St. John et al., 2010, p. 1). Academic capital is passed along from generation to generation, similar to other forms of capital. Therefore, it can be assumed that FGCS may not have the academic capital compared to their peers. St. John et al. (2010) advocate for specific interventions aimed at improving academic capital in underrepresented students, such as providing supportive networks, assisting with navigation of systems, and providing reliable information. These can provide knowledge and membership in networks to help URM students be successful.

Academic capital has been shown to be related to help-seeking behavior by Hodge (2022). They report that "the theory of academic capital is discussed as one means of explaining differences in academic help-seeking behavior between first- and continuing- generation students, and the role of educational systems … in contributing to those differences" (p. 3). In other words, successful students adopted behaviors associated with their peers and were rewarded by their institutions. Viewing students' undergraduate degrees as a form of academic capital may be a useful lens to view first-generation graduate students. This form of capital can then be transmitted to future generations (Lareau & Weininger, 2003). It is possible that the participants in the current study had some academic capital from their sibling's experiences in higher education.

The other from of capital that may not have been captured with this study is psychological capital. Psychological capital is defined as:

> An individual's positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success. (Luthans et al., 2007, p. 3)

This concept links an individual's well-being to social support through optimism and self-efficacy (Au et al., 2009). Psychological capital also emphasizes the role an institutional environment plays in the development of psychological assets (Nigah, Davis, and Hurrell, 2012). Nielsen et al. (2017) found a positive relationship between faculty support and student psychological capital. Additionally, family support was found to effect psychological capital as well. Those students without strong family support likely need more support from faculty. The authors recommend an individualized approach to mentorship, including tutors, one-on-one sessions, counseling, and mindfulness activities.

Saleem et al. (2022) determined that psychological capital and academic engagement were affected by positive emotions of graduate students. Further, measures of psychological capital had a positive effect on student engagement. They also discovered that stress can negatively affect this relationship. The authors conclude that positive emotions can create cognitive resources that positively affect engagement and programs should focus on stress management strategies (e.g., personal

coaching/counseling and goal setting) to avoid the deleterious effect of stress. Often, students that are struggling academically become trapped in a cycle of perseverating negative thoughts. It would be beneficial for these students to understand the relationship between engagement, learning, and positivity. Future research should investigate both academic and psychological capital and the effect they have on FGCS.

Study Limitations

There were several limitations to this study. As this was a sample of convenience, these results may not be generalizable to the larger population of FGCS in healthcare programs. While this study is not likely generalizable, the goal of action research is to promote local change through a systematic and iterative approach. These participants are all enrolled in CU, which is a private, Jesuit institution. It is possible that there would be differences in FGCS enrolled at a state institution. For example, CU is one of the most expensive physical therapy programs in the United States. It is a strong possibility that CU's physical therapy students experience more stress due to financial issues than other programs.

There were relatively low numbers of OT and pharmacy students enrolled in the study. This is likely because the principal investigator is faculty in the physical therapy department. The disproportionate number of physical therapy students in the study likely skews the data. Additionally, the overall sample size was small due to the small size of the three programs. Future iterations of this study will include students from the Omaha campus and other institutions in the state of Arizona.

The timing of survey may have played an important role in the results. For example, sense of belonging likely changes as they progress through their programs. It is

possible that all students have less of a sense of belonging at the beginning of their programs and this may improve with time. For this study, the PT students were in the middle of their first year. The other students were second year students. Perhaps second year students learn better engagement strategies as they feel more comfortable with faculty as well. Due to the small sample size, it was not possible to compare first and second year FGCS students, but this would be an option for future iterations of this study.

Conclusion

Historically, FGCS have been studied through a deficit lens, highlighting what these students lack, including less engagement, poorer academic self-efficacy, fewer interactions with faculty, reluctance or inability to seek help, and poorer outcomes (Ives & Castillo-Montoya, 2020). This deficit perspective feeds the narrative of under preparedness that has led to the development of support programs that are focused only on addressing deficits (Ávila Reyes et al., 2021). This "implies that students must address their own under preparedness through initiatives outside the curriculum to "level" their knowledge" (O'Shea et al., 2016). The result of this is perpetuation of the stereotype of these underrepresented students. Unfortunately, this deficit narrative has also been shown to be internalized by students as well (Ávila Reyes et al., 2021), leading to insecurities. By avoiding solely a deficit narrative we can have a more comprehensive understanding of these students. Specifically focusing on graduate FGCS also contributes to a gap in our knowledge, as relatively little is known about the experiences of successful FGCS students. "Appreciating the experiences of FGCS who are retained and graduate from college enhances our ability to develop effective retention and degree-completion strategies" (Demetriou et al., 2017, p. 20). The results of this study challenge the deficit

narrative for FGCS as well as provide a better understanding of graduate FGCS in healthcare programs.

To conclude, FGCS have the same sense of belonging, aspirational capital, linguistic capital, navigational capital, social capital as their peers. They have more resistant capital and, in some cases, healthier help-seeking behaviors. However, they still do not seek help from faculty, and they do not know all the student services that are available. Like the students in this study, I felt supported by my parents, I did not seek help, I had no idea about the services available to students, I worried about finances, and I had aspirations. However, I did not have a strong sense of belonging at either of my institutions. It is my hope that this and future studies improve the outcomes and experiences of FGCS, both in undergraduate and graduate programs.

The current state of graduate healthcare education is concerning. Both number of applicants and number of applications have been decreasing for the past several years in pharmacy, OT, and PT. As a result, acceptance rates into most programs have increased. The primary concern with this is that students with more challenges will be enrolling in these rigorous programs. As a response to this, many programs pride themselves on their remediation plans. This should not be the approach to ensure all students are successful. With the push for more diversity and this shift in admissions dynamics, studies such as this are imperative to be proactive with our teaching and learning strategies, as well as to discontinue the perpetuation of a deficit narrative for FGCS and other URM students.

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APPENDIX A

SURVEY

Demographics
What is your age?
What is your gender?
What is your race/ethnicity?
Please check one response below that best fits your situation:
>   Both of my parents graduated from a four-year college
>   One of my parents graduated from a four-year college
>   Both of my parents/guardians attended at least one semester of college
>   One of my parents/guardians attended at least one semester college
>   Neither of my parents/guardians attended college
>   Not sure

What is the highest level of educational attainment of your parents or guardians?
Do you have an older sibling?
If yes, what is the highest level of their educational attainment?
About how many hours do you spend in a typical 7-day week doing the following?
0, 1-5, 6-10, 11-15, 16-29, 21-25, 26-30, more than 30 hours per week
>   Participating in co-curricular activities (organizations, research, student government, etc.)
>   Working for pay on campus
>   Working for pay off campus
>   Doing community service or volunteer work
>   Relaxing and socializing (time with friends, video games, TV or videos, keeping up with friends online, etc.)
>   Providing care for dependents (children, parents, etc.)
>   Commuting to campus (driving, walking, etc.)

Directions: For the following sections please indicate how much you identify with each item.

Nondominant Cultural Capital Scales (from Sablan, 2019)
1 = Not at all like me
2 = Very little like me
3 = Somewhat like me
4 = Like me
5 = To a great extent like me
6 = Exactly like me

Aspirational Capital
1. I have pursued my goals despite barriers to my schooling
2. I believe that my dreams for my future are possible
3. I am hopeful for my future
4. I consider myself an ambitious person

Familial Capital
5. I am encouraged to learn about my family's history
6. I know about my family's history
7. I frequently attend family gatherings (e.g., parties, weddings, religious events)

8. I have passed down storied about my family to younger relatives
9. I learn a lot of valuable knowledge from my family members
10. A family member or family members have passed down lessons to me that I can use in my schooling
11. I am connected to my extended family members, such as aunts, uncles, cousins, and others beyond my parents and siblings
12. I have strong role models in my family

Navigational Capital
13. I have sought out mentors in school who share my interests
14. I have succeeded despite barriers to my success
15. I know how to find resources at my college
16. Even when presented with obstacles, I am able to access resources at my college
17. I am confident in my ability to network on campus
18. Even when I have limited resources (e.g., finances), I can find ways to secure the essentials for my education (e.g., tuition, books)
19. I am confident in my ability to get through struggles in college

Resistant Capital
20. I believe there are injustices on my ethnic/racial/cultural community
21. I believe I have faced discrimination in society
22. I want to make a difference in the broader society
23. I believe there are injustices in my neighborhood or where I grew up
24. I want to make a difference in my racial/ethnic/cultural community
25. I believe I will be able to make a difference in society
26. I believe racism is a major factor for issues in society

Social Capital Scale (adapted from Schwartz, 2018)
Directions: For the following sections please indicate your level of agreement with each of these statements regarding interactions on and off campus.
1= Strongly Disagree
2 = Disagree
3 = Slightly Disagree
4 = Slightly Agree
5 = Agree
6 = Strongly Agree

27. When I need help with coursework, I go to a professor.
28. When I need help with coursework, I go to a classmate.
29. When I need help with coursework, I go to student services
30. When I need help with coursework, I go to a tutor
31. When I need help with coursework I go to the internet
32. When I need help with coursework I go to a textbook
33. When I need social support, I go to a professor
34. When I need social support, I go to a classmate
35. When I need social support, I go to student services
36. When I need social support, I go to a friend or family member outside of school

37. When I need emotional support, I go to a professor
38. When I need emotional support, I go to a classmate
39. When I need emotional support, I go to student services
40. When I need emotional support, I go to a friend or family member outside of school
41. I feel close to at least one faculty member
42. I feel close to at least one classmate
43. I talk to instructors outside of class time
44. If you can't figure out your problems, nobody can
45. If I didn't understand something in a class, I would guess rather than ask someone for assistance
46. Getting help in a class would be an admission that I am just not smart enough to do the work on my own.
47. I will go to a professor's office hours, even if I don't need extra help.
48. I will reach out to professionals in a career or interest area of mine.

Sense of Belonging
49. I see myself as part of the university community
50. I feel a sense of belonging to this university
51. I feel that I am a member of the university community

Help-Seeking and Help-Seeking Avoidance Survey (adapted from Karabenick, 2004)
5-point response scale
(1 = not at all true, 2 = somewhat untrue, 3 = neutral, 4 = somewhat true, 5 = completely true)
52. I like schoolwork that I'll learn from even if I make a lot of mistakes.
53. I'm concerned about the possibility of not completely mastering the material in my program.
54. It is important for me to do better than any other student in my program
55. It is important to me that I don't look stupid relative to the other students in my program
56. In this program, it's important to understand the work, not just memorize it
57. In this program, it's important to get higher scores on tests than the other students
58. In this program, the instructors stress not to do worse than other students
59. If I were having trouble understanding the material in this program, I would ask someone who could help me understand the general ideas
60. The purpose of asking somebody for help in this program would be to succeed without having to work as hard
61. I would feel like a failure if I needed help in my program.
62. If I didn't understand something in my program, I would guess rather than ask someone for assistance
63. If I were to seek help in my program, I would ask a professor rather than another student

APPENDIX B

QUALITATIVE INTERVIEW QUESTIONS

May I record this interview?

As you respond to the questions, please do not mention names of individuals in your responses.

1. From your perspective, what does it mean to be a first-generation college student? How does this affect you?
2. Tell me about your childhood. Familial capital, linguistic capital
   a. Tell me about your family.
3. How does your family feel about your enrollment in your graduate program? Have they been involved in your education up to this point? If so, how? Familial capital
4. Tell me about how your undergraduate program prepared you for graduate school. Navigational capital
5. Describe one of your greatest successes.
6. What are your aspirations? How will you accomplish these? Aspirational, navigational capital
7. What are the challenges or barriers you face as you progress through this program?
   a. How do you think you will manage or overcome these? Navigational capital
8. Tell me about your experiences here at Creighton University.
9. What services are available to students? Are there any additional services that would benefit you? Navigational capital
10. What are some of the strategies that you have used to engage with other students or faculty? Do you think this is important? Social capital and Engagement
    a. Are you working with a faculty member outside of class? For example, a research project or a student organization? Tell me how those interactions are going?
    b. Explain to me how you are in class. For example, do you speak up in class?
11. Is there anything you would like your professors to know about you? Resistance capital
12. Is there anything else you would like to add?

APPENDIX C

HUMAN SUBJECTS INSTITUTIONAL REVIEW BOARD LETTER

EXEMPTION GRANTED

Jill Koyama
Division of Educational Leadership and Innovation - Tempe
480/965-7652
Jill.Koyama@asu.edu

Dear Jill Koyama:

On 12/12/2022 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	First-Generation Graduate Healthcare Students
Investigator:	Jill Koyama
IRB ID:	STUDY00016935
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• Consent Form, Category: Consent Form; • Interview Questions, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • IRB Protocol, Category: IRB Protocol; • Recruitment Email, Category: Recruitment Materials; • Shaibi CV, Category: Vitaes/resumes of study team; • Site Permission Letter - Dean Wilson, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc); • Survey, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Video Consent, Category: Consent Form;

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2)(ii) Tests, surveys, interviews, or observation (low risk) on 12/12/2022.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

If any changes are made to the study, the IRB must be notified at research.integrity@asu.edu to determine if additional reviews/approvals are required. Changes may include but not limited to revisions to data collection, survey and/or interview questions, and vulnerable populations, etc.

Sincerely,

IRB Administrator

cc: Stefany Shaibi
        Jill Koyama
        Stefany Shaibi