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# Cultural Wealth of First-Generation College Students and Its Effects on Well-Being, Persistence, and Major Satisfaction

## Abstract

Although understanding of FGCS's success in higher education has been enhanced over the last decade, less is known about their career and educational development, and how their strengths and assets promote college success. The purpose of this study was to explore the relations between first-generation college student (FGCS, [N= 130]) cultural wealth variables, work volition, and outcomes (i.e., academic major satisfaction, persistence, and well-being) using the Critical Cultural Wealth Model (CCWM; Garriott, 2020). Results of regression analyses partially supported CCWM propositions. Significant, positive correlations were observed between resilience and work volition, academic major satisfaction, and well-being. Significant, positive correlations were also observed between family encouragement and work volition, academic major satisfaction, and well-being. Critical consciousness correlated in unexpected directions with the criterion variables. Specifically, critical consciousness related to perceived inequality was significantly, negatively correlated with work volition; critical consciousness related to egalitarianism was significantly, negatively associated with academic major satisfaction; and critical consciousness related to sociopolitical involvement was significantly, negatively correlated with work volition and well-being. In line with predictions, work volition was significantly, positively correlated with well-being and academic major satisfaction. Work volition also explained relations between cultural wealth and outcome variables in each indirect effects model. Implications for research and practice are discussed, including recommendations for ways to promote FGCS work volition.

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Cultural Wealth of First-Generation College Students and its Effects on Well-Being,  
Persistence, and Major Satisfaction

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A Dissertation

Presented to

the Faculty of the Morgridge College of Education

University of Denver

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In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

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by

Eve M. F. Sussman

August 2020

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Advisor: Pat Garriott, PhD  
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## ABSTRACT

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Implications for research and practice are discussed, including recommendations for ways to promote FGCS work volition.

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## CHAPTER ONE:

### INTRODUCTION

About one-third of students enrolled in postsecondary education in the United States (U.S.) identify as a first-generation college student (FGCS) (Cataldi, Bennett, & Chen, 2018). First-generation students have been defined in a variety of ways in the literature (Nyugen & Nyugen, 2018). Definitions have included: a student whose parents never attended college, a student whose parents never completed a college degree, or a student with only one parent who attended college, among others. For the purposes of this study, FGCS is defined as students with no parent that has completed a bachelor's degree. This definition is inclusive of a large group of students who experience educational disparities compared to their continuing-generation peers (Toutkoushian, Stollberg, & Slaton, 2018). It is important to also consider intersectionality among FGCS, recognizing that first-generation student status is just one of many identities these students hold that impact their experiences in higher education. FGCS often share other minoritized identities which should be taken into account, such as coming from lower family income, identifying as a Student of Color, having a disability, being a non-native English speaker, being an immigrant, among others (Engle & Tinto, 2008). For example, Black and Latinx students are more likely to also identify as a FGCS and to experience social class oppression, which may result in increased exposure to racism and classism (Fischer, 2007; Strayhorn, 2006; Yosso, Smith, Ceja, & Solorzano, 2009).

FGCS experience greater challenges accessing and persisting in postsecondary education (e.g. Choy, 2001; Ishitani, 2006; Pascarella et al., 2004; Stephens et al., 2012; Woosley & Shepler, 2011). These challenges have been attributed to a lack of college readiness (DeAngelo & Franke, 2016) and exposure to cultural capital from parents who attended college (Collier & Morgan, 2008). Cultural capital deficits have also been attributed to FGCS' challenges identifying financial aid resources and supports to attend college (Levine & Nidiffer, 1996).

Researchers have also posited that lower levels of FGCS involvement in their college environment may contribute to academic challenges (Lundberg, Schreiner, Hovaguimian, & Slavin Miller, 2007). Having greater financial responsibilities outside of school, for example, could limit FGCS's ability to engage in extracurricular activities on campus due to lack of time or resources. FGCS are also more likely to commute to campus compared to their continuing-generation peers, limiting their time on, and access to campus (Pike & Kuh, 2005).

These challenges may affect college persistence for FGCS. Students whose parents completed their bachelor's degrees demonstrate higher levels of persistence compared to their FGCS peers: 67% persisted for at least 3 years in college, compared to 48-53% of FGCS (Cataldi, Bennett, & Chen, 2018). This discrepancy leads to the continuation of income inequality, as completing a college degree is touted as a primary mechanism of social mobility (DeAngelo & Franke, 2016). The benefits of attending college and receiving a bachelor's degree are substantial for FGCS. For example, FGCS who complete their degree have employment rates and salaries four years post-graduation equal to continuing-generation students (Cataldi, Bennett, & Chen, 2018). Further, those

with college degrees obtain higher wages than those who do not finish their degrees: young college graduates earn an average of \$37,300 a year compared to an average of \$21,600 a year for young high school graduates (Davis, Kimball, & Gould, 2015).

The challenges and difficulties detailed above provide an informative, but limited perspective on the experiences of FGCS. The focus on deficits of FGCS reduces the complexity of their experiences and limits understanding of the strengths and assets they bring to educational settings. It is important to understand potential barriers, while also acknowledging factors that lead to FGCS's success. In the present study, FGCS's strengths will be explored to develop a more balanced perspective of FGCS's academic success and well-being.

### **Moving Away from the Deficit-Based Narrative**

Nguyen and Nguyen (2018) suggest the focus on FGCS's difficulties highlights the privilege that postsecondary institutions offer to "traditional" students in favor of FGCS. The authors argue that institutions regenerate inequity through the values they promote (e.g., individualism and independence), supports they provide, and cultural environments they foster. Research has shown that the cultural mismatch between universities and FGCS is a contributor to FGCS's lower academic performance (Stephens et al., 2012). Universities often value and propagate a culture of independence that contrasts with some FGCS's personal value systems of interdependence and community. Conversely, research shows that when universities are able to promote a more *interdependent* culture, FGCS fare better in terms of academic performance (Stephens et al., 2012).

The first-generation student term itself is also problematic, as it labels students with a single lens on their identity (Nguyen & Nguyen, 2018). This leads to a narrow view of their experiences and shallow understanding of the unique strengths and assets that they may bring to the college environment. Additionally, due to confusion about the term's definition, FGCS have been defined in a myriad of ways in past research, which limits its usefulness. By examining FGCS's strengths more broadly, related or not to their FGCS identity, their experiences and pathways to success can be better understood and explained.

### **Theoretical Framework**

Scholars have utilized the tenets of critical race theory (CRT) to promote a counternarrative to the deficit-based frameworks and dominant ideologies in education and center the voices and experiences of marginalized groups (e.g., Yosso, 2005; Smith, Yosso, & Solorzano, 2007; Yosso, Smith, Ceja, & Solorzano, 2009). Yosso's (2005) proposed model of cultural capital based in CRT identifies several categories of community cultural wealth. This model utilizes CRT as a means of critiquing and dismantling systems of oppression and deficit-based views of individuals with minoritized identities. Based on work by Bourdieu (1977), Yosso posited that dominant groups often maintain their position and power due to cultural capital valued by dominant culture. Yosso (2005) suggests that deficit thinking is a primary form of racism in our society, which occurs through the education system. Minoritized students and their families are often blamed for poor academic performance because of assumptions about parents' lack of valuing or supporting their children's education, in addition to not having "normative cultural knowledge and skills" (p. 75). Yosso (2005) suggests that shifting

towards the cultural capital of communities of color is one way to change the narrative and illuminate areas of strength and wealth within those communities.

Community cultural wealth is defined as “an array of knowledge, skills, abilities and contacts possessed and utilized by Communities of Color to survive and resist macro and micro-forms of oppression” (p. 77). Yosso defined several forms of community cultural wealth: aspirational capital, familial capital, social capital, navigational capital, resistant capital, and linguistic capital. Aspirational capital is the ability to maintain a sense of hope for the future despite barriers one might face. Familial capital is the cultural knowledge that is promoted within the family and community, and acknowledges the history and culture of the community. Social capital, while similar to familial capital, is distinguished by its focus on the networks of people one is connected to and the resources those networks provide. Social capital provides both emotional support and access to resources through social networks. Navigational capital is defined as the skills of navigating through systems and institutions, particularly those created by those in power and not with Communities of Color in mind. Resistant capital is described as the skills and knowledge developed through acts of resistance against inequality and oppression. Finally, linguistic capital is defined as the ability to communicate in different languages or styles.

### **Strengths of First-Generation College Students**

Researchers have explored the experiences of first-generation students from an asset-based lens (e.g. Demetriou, Meece, Eaker-Rich, & Powell, 2017; Garrison & Gardner, 2012; O’Shea, 2015; O’Neal et al., 2016; Jehangir, 2010; Moreno, 2017). For example, Garrison and Gardner (2012) identified several strengths of FGCS, including

proactivity, goal direction, optimism, resourcefulness, strategic thinking, and persistence. The authors added that many participants in their study attributed these personal strengths to be the result of their lived experiences and marginalization they had faced. O'Shea (2015) described the aspirational capital demonstrated by FGCS through their encounters with challenges during their first year in college, and maintaining hope for their future. Research has also shown that FGCS's utilize social and familial capital to access support and resources and exhibit a desire to "pay it forward" (Moreno, 2017).

### **Critical Cultural Wealth Model of Academic and Career Development**

Although FGCS have been a focus of attention in research for decades, much of the research is deficit-based, and there has been a recent push to examine these topics from a strengths-based lens (Demetriou et al. 2017; Walker, Gleaves, & Grey, 2006). Most of the research in this realm however is qualitative, and quantitative studies are lacking. Having a better understanding of the strengths, particularly cultural wealth, which first-generation students bring to college and how these assets impact their success, satisfaction, and well-being will be critical in moving the field forward and providing institutions with guidance on areas to continue building effective support for first-generation students.

Taking a critical view on the use of quantitative methods is important as well, as this topic is typically explored from social constructivist paradigms. *QuantCrit* integrates critical race theory (CRT) with quantitative research methodologies (Garcia, López, & Vélez, 2018). QuantCrit researchers state that, "quantitative approaches cannot be adopted for racial justice aims without an ontological reckoning that considers historical, social, political, and economical power relations" (p. 155). Quantitative methods have

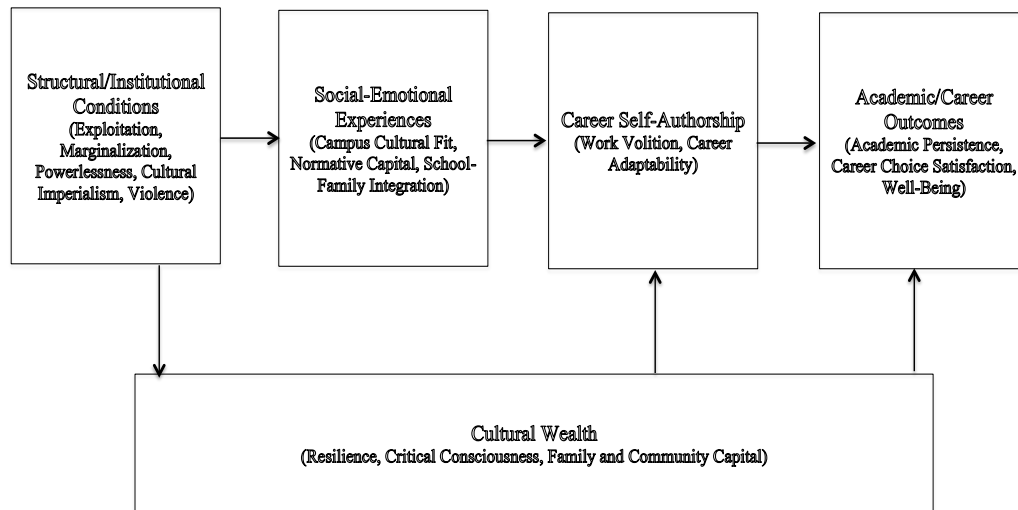
long been used as a tool of oppression, including legitimizing prejudice and engaging in unethical and harmful studies (Cokley & Awad, 2013). It is important when using quantitative methods to examine their history and ontological assumptions, and not believe that simply because the topic being studied is based in social justice or a strengths-based lens, that the methods are value-free. Ultimately, quantitative methods, despite their tarnished history, still “dominate” graduate coursework and are likely to continue having a strong influence on public policy (p. 36). To use the “master’s tools” to promote social justice, as opposed to promoting injustice, is important but is not always a simple or easy task. Based on the recommendations of Cokley and Awad (2013), this study aims to produce research which is relevant to the community and has implications for practice or policy within institutions of higher education. In doing so, this research hopes to dismantle deficit-based views of FGCS, provide quantitative data supporting strengths of FGCS, and identifying steps that institutions can take to promote their success and well-being. Vera and Speight (2003) argue that researchers using quantitative methods should in fact “be explicit about aligning with values that promote social justice, liberation, and community empowerment” (p. 266). To achieve this aim, a positionality statement will be included in Chapter 3 and discussion of how QuantCrit is utilized will also be addressed in Chapter 5.

Although theoretical models of academic and career development have been applied to FGCS, these were not developed with FGCS in mind and thus do not take in other important factors, such as cultural wealth or intersectionality. Within the counseling psychology literature, Lent, Brown, & Hackett’s (1994) social cognitive career theory, Lent’s (2004) model of normative well-being, and Nora’s (2003) student/institution



engagement model have all been used to address factors relating to the success of FGCS. Research testing these models with FGCS has shown some support for their application, however they do not fully explain the diverse, nuanced experiences of FGCS or their unique strengths and assets (e.g. Garriott, Navarro, & Flores, 2017; Garriott, Hudyma, Keene, & Santiago, 2015).

In response to the lack of a model designed for FGCS’s career and academic development, Garriott (2020) proposed a model to account for their unique experiences in higher education and career development (See Figure 1).



*Figure 1.* The critical cultural wealth model of academic and career development.

The critical model proposes a framework for understanding the career and academic decision-making and development of FGCS that incorporates unique contextual factors and social-emotional experiences. The model suggests that while FGCS do experience barriers related to their first-generation status and other identities, they also exhibit strengths (i.e. cultural wealth) that may buffer the effects from such challenges

and promote their success. The components of the model are described in further depth below.

*Structural/institutional conditions* reflect the policies and practices of institutions and, more broadly, of governing agencies which may include supports and barriers for FGCS. For example, programs geared toward helping FGCS find needed financial support could minimize students' financial stressors and barriers. Conversely, policies that threaten students' access to financial aid and loans could present a major barrier to FGCS's ability to access and engage in a higher education environment (e.g. the Tax Cuts and Jobs Act; see American Council on Education, 2017). The critical model suggests that these challenges and barriers are "symptoms of an oppressive system" (Garriott, 2020, p. 84). These conditions are broad environmental factors that impact FGCS, and also reflect institutional policies and practices that lead to five forms of oppression: exploitation, marginalization, powerlessness, cultural imperialism, and violence (Young, 2013).

Exploitation refers to the "steady process of the transfer of the results of the labor of one social group to benefit another" (Young, 2013, p. 14). Working off-campus or in work-study positions may be necessary to help FGCS financially support their lives and education (Ward et al., 2012). This places FGCS at a disadvantage to other students who may not have to pursue additional sources of income to survive, but it provides a substantial benefit to institutions and employers who have access to workers for relatively low pay.

Marginalization refers to the exclusion from participation in social life and experience of discrimination that individuals may experience (Young, 2013). In regards

to FGCS, this can be defined as exclusion from activities and resources on their campus, in addition to discrimination (Garriott, 2020). FGCS may have difficulty attending activities on campus or accessing resources due to other obligations or the cost associated, such as family obligations (Sy, 2006). Additionally, they may feel their experiences are not fully represented or included in curriculum, policies, or events on campus (Jehangir, 2010a).

Young (2013) defines powerlessness as a lack of power and authority. The powerless “are situated so that they must take orders and rarely have the right to give them” (p. 21). FGCS report lower subjective social status than their peers, feeling undervalued, and lacking voice and agency in their education (Allan, Garriott, & Keene, 2016; Tate et al., 2015).

Cultural imperialism refers to the establishment of the dominant group’s experiences and culture as the norm (Young, 2013). In regards to FGCS, this can be understood as the dominant norms within higher education that are imposed on students, such as individualism and capitalism (Garriott, 2020). Research has shown that norms of independence and individualism are often not a “fit” with FGCS’s personal values (Stephens, Fryberg, Markus, Johnson, & Covarrubias, 2012).

Lastly, violence is defined as the experience of violence or fear of violence based on identity. Young (2013) states that this includes physical violence as well as experiences of “harassment, intimidation, or ridicule simply for the purpose of degrading, humiliating, or stigmatizing group members” (p. 46). FGCS may already face these experiences of oppression based on their intersecting identities, however recently, these may be even more common in the current sociopolitical climate. Research has

demonstrated that incidents of hate crimes on college campuses rose sharply after the 2016 presidential election, and were motivated by race, gender, and religious affiliation (Bauman, 2018).

These multiple dimensions help to depict the intersecting axes of power, privilege, and oppression that FGCS experience (Moradi & Grzanka, 2017). Because parental education level is only one aspect of FGCS's identity, understanding students' positionality incorporates an intersectional lens that provides greater nuance to the experiences of FGCS (Nguyen & Nguyen, 2018). For example, a FGCS who is also a recent immigrant to the US will face very different experiences and constraints compared to a FGCS who spent their whole life in the US. Similarly, a student of color who comes from a low-income background will face different constraints from a student of color whose family has a large amount of wealth. While both may encounter racism or marginalization, their differing social class and income will offer unique advantages and constraints.

*Social-Emotional Crossroads* refer to the psychological experiences of FGCS within a higher education setting. While the experiences of each individual student will be unique, this construct represents certain commonalities among FGCS, including tensions related to campus cultural fit, normative capital, and school-family integration. Campus cultural fit has been explored in research with FGCS and indicated the importance of congruence between a student's values and culture and the culture promoted by the educational setting, not only for a sense of belonging and fit but also for academic persistence (Stephens et al., 2012; Gloria, Castellanos, Scull, & Villegas, 2009). Normative capital refers to FGCS's "subjective assessment of the degree to which

their access to resources and knowledge align with normative forms of capital privileged by their institution” (Garriott, 2020, p. 86). These resources could include access to financial resources such as financial aid and loans, knowing where to go on campus to resolve issues, and knowing how to access faculty office hours. Access to the “hidden curriculum”, or the unwritten rules, norms, values, and expectations within an education setting, may require FGCS to engage in forms of code switching to adjust and assimilate to the norms of their institution (Smith, 2004; Engle, Bermeo, & O’Brien, 2006). Finally, school-family integration indicates a FGCS’s sense of support from their family related to their attending college in addition to potential tension with family. Research has shown that FGCS may feel supported by their family for attending college, while at the same time feeling intense pressure to be successful in school and make their family proud (Bryan & Simmons, 2009).

The combination of structural/institutional conditions and social-emotional experiences of being a FGCS can lead to additional stressors and ultimately shape their holistic experience. These stressors are in response to the hegemonic ideologies and practices that FGCS face and often place them at a disadvantage. Financial constraints, familial obligations, and living situation (e.g. living off-campus and commuting) may present barriers for FGCS to fully engage in their college environment and create additional stress, in addition to impacting students’ sense of belonging (Engle & Tinto, 2008; Phinney & Haas, 2003; Pike & Kuh, 2005; Ostrove & Long, 2007).

*Career self-authorship* is defined as the ability “to build complex belief systems, to form a coherent sense of identity, and to develop authentic, mature relations with diverse others” (Baxter Magolda, 2008, p. 269). Another component of self-authorship is

the capacity to make decisions and choices that effectively balances one's own values and negotiates other competing interests (Jehangir, 2010a; Baxter Magolda, 2008).

Research with FGCS has shown the importance of self-authorship for understanding their identities, making meaning of their experiences, and making reflective decisions based in their values (Jehangir, Williams, & Pete, 2012). Making a decision about a career is a provocative situation which prompts an individual to reflect and consider their multiple identities, strengths, and values. This concept is considered career self-authorship, defined as "one's ability to make career decisions that are self-reflective, account for context, and incorporate one's capacity for agency and problem solving in the face of challenges" (Garriott, 2020, p. 87).

The idea of taking context into account and feeling a sense of agency in career decisions as described above aligns with existing definitions of work volition. Work volition is defined as "the perceived capacity to make occupation choices despite constraints" (Duffy, Diemer, & Jadidian, 2012). Career adaptability has some overlap with this area, including the ability to self-reflect, account for context, and problem-solve career development issues. Career adaptability incorporates four components: concern about preparing for one's future career, control in shaping their future career and making decisions, curiosity about exploring options and finding a vocational fit, and confidence in being able to overcome potential variables and make choices (Savickas, 2005). These two concepts have been shown in research to predict many outcomes related to career and education, including career indecision, academic satisfaction, life satisfaction, and academic persistence decisions (Autin, Douglass, Duffy, England, & Allan, 2017; Duffy,

Diemer, & Jadidian, 2012). For the purposes of this study, work volition will be used to capture a component of career self-authorship within the critical model.

*Cultural wealth* refers to the knowledge, abilities, and strengths held by marginalized groups (Yosso, 2005). Three examples of cultural wealth will be focused on in the present study: resilience, family and community capital, and critical consciousness. Per Yosso's (2005) theory, aspirational capital, or *resilience*, is the ability to maintain a sense of hope for the future in spite of real and perceived barriers. FGCS have been shown to hold high career aspirations and maintain hope for their future as they pursue college, despite barriers faced (Garriott, Flores, & Martens, 2013; Thompson, Her, & Nitzarim, 2014; O'Shea, 2015). *Family and community capital* is described as networks of people and community resources that offer support, guidance, and access to means to navigate systems such as higher education. This includes family support and encouragement and is not only social or emotional support, but also support in sharing knowledge and resources. Research has shown the importance of social support for FGCS as they find a sense of community in college and connect with others (Jehangir, 2008; Moreno, 2017). Finally, *critical consciousness* is defined as "oppressed or marginalized people's critical analysis of their social conditions and individual or collective action taken to change perceived inequalities" (Diemer, Rapa, Park, & Perry, 2017, p. 462). This definition aligns with Yosso's (2005) description of resistant and navigational capital as the ability to navigate systems and institutions, particularly those built without FGCS or Communities of Color in mind, and the resultant skills and knowledge "fostered through oppositional behavior that challenges inequality" (p. 80). These skills are not only useful in the college setting, but transcend beyond in students'

development of self-awareness, agency, and psychological healing (Jehangir, Williams, & Jeske, 2012; Carmen et al., 2015).

Outcomes for FGCS in the critical model include well-being, career choice satisfaction, and academic persistence. Academic persistence is an outcome of considerable interest in the FGCS literature and is critical to students' ability to be socially mobile and have greater future financial stability. Career choice satisfaction, or in the case of the present study, major choice satisfaction is also an important area of interest. Related to the idea of self-authorship, major choice satisfaction indicates how FGCS can negotiate competing interests and personal values in order to make academic and career decisions that are congruent with their values and culture. FGCS may also take into account the desires of their family and community on their career decisions, making their satisfaction with those choices significant (Tate et al., 2015). Finally, well-being is a measure of FGCS's overall life satisfaction. This outcome is important to include as research has shown strong links between FGCS's academic experiences and their life satisfaction (Garriott, Hudyma, Keene, & Santiago, 2015). The critical model's propositions have started to garner empirical support (e.g. Duffy et al., 2020), though more work is needed to test the model's hypotheses. Initial support for a predictive relationship between work volition, career choice satisfaction, and overall well-being were found in the study, indicating early support for this model which will be explored further in the present study.

### ***Cultural Wealth and Academic and Career Outcomes***

This study will focus on several propositions within the critical model. Specifically, this study will explore cultural wealth variables (critical consciousness,



resilience, and family and community capital) and their relation to self-authorship as well as the three outcome variables in the model: academic persistence, major choice satisfaction, and well-being. The relation between cultural wealth and major choice satisfaction will also be examined. The critical model proposes that because FGCS must often negotiate between potential competing interests (e.g. their own aspirations and values, their family or community's needs and desires), it is important "to assess how a [FGCS's] career aspirations fit within their broader sociocultural context" (Garriott, 2020, p. 82). FGCS's cultural wealth and its association with well-being and overall life satisfaction will also be explored. Research has shown links between FGCS's academic satisfaction and environmental supports, and overall life satisfaction (Garriott et al., 2015). Thus, it is predicted that FGCS's perceived cultural wealth will be positively associated with academic persistence, major choice satisfaction, and well-being (*Hypothesis 1*).

The present study will also examine associations between self-authorship and academic persistence, major choice satisfaction, and well-being. Self-authorship has been shown to relate to academic performance, career decision-making, and well-being (Strayhorn, 2014; Creamer & Laughlin, 2005; Pizzolato, 2005) and is hypothesized to predict academic persistence, major choice satisfaction, and well-being (*Hypothesis 2*). It is also proposed that self-authorship may act as a mediator between cultural wealth and academic outcomes. In the critical model, self-authorship for FGCS is described as involving several components: "(a) the ability to analyze structural forces and how they shape one's experiences, (b) a sense of agency, and (c) engaging in life choices that are consistent with one's values" (Garriott, 2020, p. 87). This indicates that students' sense of

self-authorship may allow them to critically analyze themselves and their environment, helping them to navigate barriers and make decisions congruent with their values, leading to greater satisfaction with their choices (i.e. major choice satisfaction) and greater desire and intent to persist. Further, students may feel a greater sense of personal well-being and life satisfaction as they see they are able to use their strengths and assets (i.e. cultural wealth) in ways that promote their success and personal development. Thus, it is hypothesized that FGCS's sense of self-authorship, and specifically work volition, will mediate the relationship between cultural wealth and outcome variables (*Hypothesis 3*).

### **Purpose of the Present Study**

The purpose of this study is to contribute to the literature on FGCS from a strengths-based lens. Focusing on FGCS's cultural wealth and its associations with academic persistence, well-being, and major satisfaction, will promote greater understanding of FGCS and how to best support them. The following hypotheses will be tested:

*Hypothesis 1)* Significant, positive correlations will be observed between FGCS cultural wealth variables and work volition, well-being, academic persistence, and major choice satisfaction.

*Hypothesis 2)* Significant, positive correlations will be observed between work volition and well-being, academic persistence, and major choice satisfaction.

*Hypothesis 3)* FGCS cultural wealth variables will be significant, positive predictors of academic persistence, major choice satisfaction, and well-being.

*Hypothesis 4)* Work volition will be a significant, positive predictor of academic persistence, major choice satisfaction, and well-being.

*Hypothesis 5)* There will be a significant indirect effect from cultural wealth variables to academic persistence, well-being, and major choice satisfaction through work volition.

CHAPTER TWO:  
LITERATURE REVIEW

This chapter will provide an overview of several areas of importance for this study. First, a historical overview of the FGCS literature will be provided. Next, the primary variables of focus in this study will be reviewed: resilience, family encouragement, critical consciousness, and self-authorship. Finally, existing career development theories will be examined and critiqued for their applicability to FGCS.

**First-Generation College Students and Historical Challenges**

The term, “first-generation college student,” (FGCS) has been used by researchers and educational institutions since the 1980’s (Davis, 2010). While FGCS have always existed in the education system, the majority of college students had college-going parents until the institution of the GI Bill, which granted greater access to a larger pool of people. This seems to partly explain why institutions, until more recently, may not have been keeping track of FGCS or identifying a common definition. This has led to confusion about the term itself and who actually qualifies as a FGCS, as researchers and institutions have used a variety of definitions over time (Nguyen & Nguyen, 2018). Even now, there is not one unifying definition, though many use the qualification of *neither parent completing a bachelor’s degree* (which will be used for the purposes of this study as well; Davis, 2010).

Research on FGCS began with examining the effects of parental education on students in general, including their aspirations, persistence, and attrition levels (e.g. Blau & Duncan, 1967; Coleman, 1976). Parental education levels were found to have a strong relationship to the college and career aspirations of high school students, including ultimate educational attainment. Billson and Terry (1982) pointed out that the relationship between parental education level and persistence had been explored on numerous occasions in past research, but had not gone deeply into the nuances of this association or who these students were. Their study is one of the first to explore the barriers FGCS face in more depth, and they found that FGCS demonstrated lower levels of social and institutional integration compared to their continuing-generation peers, despite having similar levels of value placed on higher education. Additionally, they found that FGCS experienced lower levels of support from their parents in attending college and felt more conflict between their school and work lives. All of these factors were suggested to lead to greater attrition levels of FGCS. Similar findings are echoed in studies over time, replete with evidence of the many barriers and difficulties faced by FGCS. Many of these studies provide little to no information about FGCS's demographic characteristics, simply describing their deficits and occasionally making recommendations for supporting FGCS.

Despite the challenges faced by FGCS, the desire for social mobility granted by a college education continued to be a motivation for students. In fact, individuals in our society may feel they require higher education simply to *maintain* their social position from previous generations (London, 1992; London, 1996). Even if just maintaining their social position, students still report difficult cultural clashes and conflict between

themselves and their family in attending college (London, 1989; London, 1992). Accessing and persisting in higher education is only one component of the FGCS experience; contextual factors, such as family support, also play a major role and uniquely influence how FGCS experience higher education.

Some authors have explored cultural transitions that occur for FGCS as well as conflicts between students and their families, friends, and college environment (e.g. London, 1992; Weis, 1992; Lara, 1992; Rendon, 1992). Research has shown that FGCS may not be able to fully engage as a student or in campus activities because of the many other roles they hold, including being a parent and having a job in addition to their academic studies (Richardson & Skinner, 1992). Other students have reported having parents who did not understand their reasons for attending college, and saw that choice as something reserved for “the elite” (Rendon, 1992, p. 57). Rendon (1992) documented her personal experience of emotional and physical separation from her family in attending college, and the isolation she felt once she arrived as a FGCS and one of few Mexican American students. These studies are some of the few that delve into the complex experiences of FGCS and the ways they are able to persevere through challenges. While most studies at this time were focused on descriptive data about FGCS, which was usually oriented toward their challenges with persisting in college, these articles portray the unique cultural experiences FGCS have and how they were able to utilize their backgrounds as a source of strength.

Though many studies depict the challenges faced by FGCS, some have found FGCS experience fewer “risk factors” for attrition. In a study examining differences between FGCS and continuing-generation college students (CGCS), researchers found no

differences in academic integration, and only minor differences in social integration and goal commitment (Pratt & Skaggs, 1989). These non-significant differences indicated that FGCS should not experience higher levels of attrition than CGCS, despite the evidence seen in much of the prior research. While not as deficit-based, this study still did not take contextual factors into account or go in-depth as to “why” these results were found. There are some possible explanations for these results. First, students were surveyed in September of their first year at college, meaning they had just begun adjusting to the environment and establishing themselves, likely nervous but quite hopeful about the possibilities for the future. Results may have been different if students were surveyed farther along in their first year, having experienced more of the college environment and culture. Additionally, only one public university was utilized for the sample (University of Maine), which happens to be in a secluded, rural area. Students attending may have been more intentional with their choice considering the location, and thus may have had greater commitment to the university as a whole. In fact, results indicated FGCS surveyed demonstrated higher levels of institutional commitment than CGCS, and 31% of FGCS stated the University of Maine was the only school they applied to, and 63.5% ranked it as their first choice.

In contrast, other research has shown that FGCS demonstrate lower levels of academic and social integration compared to CGCS (Nunez & Cuccaro-Alamin, 1998). Research has also demonstrated that FGCS differ from CGCS in pre-college characteristics, such as having lower critical thinking skills, being more likely to be low-income, and having more non-academic responsibilities like children and full-time jobs (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1996). These results imply that FGCS

are less academically capable and intelligent than their CGCS peers, perpetuating the deficit-based focus on their future in higher education. Furthermore, FGCS were also shown to differ in their college experiences, including working more hours off-campus, having fewer experiences of supportive faculty members, and receiving less encouragement from peers to continue in college. FGCS were also more likely to experience discrimination. Although it is true that FGCS do face challenges, this is only one side to their experience. FGCS *do* succeed, graduate, and go on to lead productive lives (Donovan & Johnson, 2005; Rodriguez, 2003; Orbe, 2004).

Rendon (1996) explored the importance of validation for FGCS who may struggle to integrate academically and socially, feel doubtful of their abilities as college students, and feel lost in such a new academic environment. She noted that FGCS often lack the social and cultural capital in order to fully engage in the college community, but in validating FGCS's through one-on-one support and encouragement, may develop greater confidence to do so. Research has supported these ideas and suggests that social support can play a crucial role in FGCS's adjustment to college and the ability to overcome these barriers (Gist-Mackey, Wiley, & Erba, 2018). Specifically, emotional and appraisal support once in college are particularly important, but informational support prior to beginning college can also help prepare students for the transition. Scholars have indicated the importance of validation and other forms of subtle encouragement for FGCS (Davis, 2010), such as faculty and staff sending "important signals that they [FGCS] are competent learners, that they can succeed, that they have a rightful place in the academic community, and that their background and past experiences are sources of



knowledge and pride, not something to be demeaned or devalued” (Terenzini, Springer, Yaeger, Pascarella, & Nora, 1995, p. 13).

### **Institutional Shortcomings and Areas for Growth**

Some authors have pointed out that while much of the research about FGCS indicates challenges related to the students themselves, institutions of higher education are often the source of their difficulties (Hottinger & Rose, 2006; Stephens et al., 2012; Nyugen & Nyugen, 2018). Indeed, the FGCS’s experiences detailed above describe many challenges in adjusting to and being successful in higher education, but there are also significant logistical and institutional challenges such as accessing financial aid and encountering high levels of student debt (Somers, Woodhouse, & Cofer, 2004). Research has demonstrated that FGCS who received financial aid were between 5-6% more likely to persist with each increment of \$1,000 in aid rewarded, while accumulated debt was associated with lower levels of persistence. Engle and Tinto (2008) found that despite the importance of financial aid for the persistence of FGCS, particularly those from low-income backgrounds, many do not receive enough aid (including loans) to cover the full cost of attendance and thus pay, at times, thousands out of pocket. Even though low-income FGCS often receive aid in the form of grants, such as the Pell Grant, such grants only cover a portion of the cost of attending college due to the rising costs of tuition. For instance, Pell Grants in 1980 used to be able to cover up to 77% of the cost of attendance at a public, four-year institution (Cook & King, 2007). Now, the maximum amount granted by Pell Grants can only cover up to 36% of the cost of attendance, primarily due to rising costs of tuition. This presents a significant challenge for low-income FGCS.

Research has also shown the importance of the educational environment in encouraging student success, including if students feel valued, have access to support services, and are surrounded by faculty and staff that expect them to succeed (Tinto, 2000). Although important, many educational institutions are not built with FGCS in mind and thus do not have the structure built in to provide this kind of support or help students access it. Further, FGCS may struggle not only with navigating this new cultural and social environment, but also in facing a learning environment that does not reflect their background and worldviews (Jehangir, 2010). Students are pressured to assimilate into the culture of their institution from the moment they walk onto campus and the rituals and traditions of that setting become clear (Magolda, 2001). Magolda (2001) argues that college campuses endorse a “normalizing community” in which certain people, behaviors, roles, and relationships are deemed the norm and those who do not fit in are set on the margins. These norms are typically based on White, male, and middle class values, and are communicated implicitly and explicitly (Jehangir, 2010). Students who do not share these values receive the message that they must reshape themselves to fit in to this culture and be successful. In trying to do so, or failing to, students are likely to feel marginalized and isolated, and feel obligated to push away their unique identities and the diverse knowledge and assets that come with them. Feeling “othered” and a lack of belonging has been shown to be a theme of FGCS experiences, especially within predominantly White institutions (Havlik, Pulliam, Malott, & Steen, 2020). The sense of otherness stemmed from their identities, including socioeconomic status and race, and feeling lesser than peers, invalidated, and undervalued in their educational setting.

Jehangir (2008, 2010, 2012) has examined the impact of Multicultural Learning Communities (MLC) on FGCS. Not only have learning communities been shown to improve retention and student engagement, but also other areas of student development and growth (Zhao & Kuh, 2004; Engstrom & Tinto, 2008). In Jehangir's (2008, 2010, 2012) studies on MLC, students reported feeling validated in connecting with other FGCS and developing a sense of family and community where before they felt isolated and alone. FGCS reported using the MLC space to share their experiences, speak their voices, and further develop the cultural capital they have as diverse FGCS (Jehangir, 2010). Jehangir (2010) argues that in this space, FGCS can begin to bridge the gap between their home and academic lives, and put a voice to their unique experiences. Further, through MLC, FGCS appeared to develop their sense of identity and move toward self-authorship, or the ability "to build complex belief systems, to form a coherent sense of identity, and to develop authentic, mature relations with diverse others" (Baxter Magolda, 2008, p. 269; Jehangir, 2012). Students in the MLC were able to recognize their own intersectionality and develop a greater understanding of who they were and how to navigate their multiple identities in the college setting.

### **Moving Toward Intersectionality**

More recent studies have also provided greater depth into the complexities of first-generation student experiences as individuals with varied experiences of privilege and oppression (e.g. Holley & Gardner, 2012; Wright, Maylor, & Becker, 2015; Bravo-Gutierrez, 2014; Kanagui-Munoz, 2014). O'Neal and colleagues (2016) examined experiences of FGCS who also identified as Latina/o and compared between citizen and non-citizen students. Specifically, they found that all participants exhibited high levels of

grit, and they utilized positive self-talk and social support through peers or family as coping mechanisms for the stresses they faced, including financial challenges, navigating institutional policies and barriers, and accessing and maintaining their status as non-citizen students (e.g. through federal policies such as Deferred Action for Childhood Arrivals; DACA). Similarly, Wright and colleagues (2015) explored how FGCS students who identified as Black used different forms of community cultural capital to develop personal success and reject the deficit-based narrative they had been faced with, and create a new narrative that proved their qualities and strengths. In another study, first-generation doctoral students who also identified as People of Color noted the importance of their racial identity in how they experienced their academic life, particularly in the “divide” they felt between their personal and academic communities (Holley & Gardner, 2012). Other Students of Color who also identified as FGCS have reported the strong impact of faculty’s low expectations for them, making students feel as though they had to go above and beyond to prove their competence (Richardson & Skinner, 1992).

As mentioned previously, FGCS often identify as coming from a low SES or working class background in addition to other minoritized identities (Pascarella, Pierson, Wolniak, & Terenzini, 2004). This is often framed as an additional challenge for FGCS to face, due to limited financial resources and access to financial aid. When FGCS were able to learn about how their social class backgrounds impacted their college experience, they exhibited greater psychological thriving in the face of stressful college situations and experiences two years after the educational intervention (Stephens et al., 2015).

Furthermore, FGCS demonstrated greater anabolic balance (i.e. stress hormones being

more regulated) and a more adaptive response to stressful situations, and verbally expressed their working class background as an area of personal awareness and strength.

Although more recent studies have begun to explore FGCS in a more complex and nuanced way, few have explored specific strengths of FGCS. Many qualitative studies in this area have shown FGCS's personal sense of strengths and assets, but quantitative examinations of this issue are limited. In fact, much of the quantitative research with FGCS perpetuates the deficit-based narrative surrounding their experiences in higher education. The present study will instead take FGCS's strengths, through cultural wealth variables, and determine how they promote success, not failure. The following sections will serve as a review of these variables and their connection to FGCS.

### **Resilience**

Yosso (2005) describes aspirational capital as the capacity to “maintain hopes and dreams for the future, even in the face of real and perceived barriers” (p. 77). Similarly, resilience is defined as a process of positive adaptation when faced with adversity (Luthar, Cicchetti, & Becker, 2000). In the present study, FGCS's sense of resilience will be examined as one area of cultural wealth that students bring to the higher educational setting.

Resilience shares some overlap with the concept of grit. Researchers have defined grit as “the ability to effortfully persist in the face of a struggle”, and having two distinct elements: interest and persistence (Hodge, Wright, & Bennett, 2018, p. 449). The concept of grit is intended to capture multiple components, including resilience, self-control, conscientiousness, and perseverance (Bashant, 2014). This distinguishes grit from resilience in that resilience has been suggested to be a separate component of grit, though

it is clear there is overlap. Resilience is more focused on the idea of adaptation and coping in the face of adversity or struggle, whereas grit integrates other concepts such as dependability, self-regulation, persistence, and being hard-working. Ultimately, resilience represents a component of grit but remains conceptually distinct from the other elements of grit defined in the literature.

Resilience has been a focus of attention for psychologists for decades (Luthar, Cicchetti, & Becker, 2000). Researchers have long examined how individuals cope when confronted with adversity and stressful life events (Masten, 2018; Harvey & Delfabbro, 2004). Initially, research in this area was focused on deficit-based views of adversity, stressors, and the negative consequences or risk factors for future dysfunction. Over time, the study of individual resilience became the greater focus, and scholars sought to understand how individuals, even when faced with significant adversity, were able to cope and adapt. Since this shift in perspective, resilience has been studied in many contexts, such as childhood adversity's links to depression in adulthood (Poole, Dobson, & Pusch, 2017), connection of resilience to positive emotions and coping with stress (Ong, Bergeman, Bisconti, & Wallace, 2006), resilience as a protective factor against development of alcohol abuse (Freen, Beckham, Youssef, & Elbogen, 2014), the lifelong effects of resilience (Gooding, Hurst, Johnson, & Tarrrier, 2012), and many more.

Resilience as a psychological concept has also faced critique. Though the term speaks to a reversal of a deficit-based model, focusing on the strengths someone may have in overcoming obstacles and adapting, it is important to acknowledge the hidden values in the term. Mohaupt (2009) argues that how we define positive outcomes differs among sociocultural groups and identities, and so to blindly apply the original term to all

groups lacks cultural sensitivity and specificity as to what groups define as resilience. As the definition of resilience originates from within a Western, White, academic culture, it is unclear how it incorporates other communities' experiences and understandings of resilience. As Yosso (2005) posits, the primary goal of exploring cultural wealth is to "empower People of Color to utilize assets already abundant in their communities," yet frequently these narratives and experiences are left out of the discussion (p. 82). Yosso suggests that resilience speaks to the "culture of possibility", that one can face barriers, setbacks, oppression, and continue to dream of a brighter future (p. 78). Meanwhile, dominant U.S. culture may place resilience within the realm of the assumptive "American Dream"; that with hard work, no matter who you are or what you face, you can accomplish whatever you desire, regardless of the systemic and contextual forces at play (Choi, 2014). It is possible that resilience could be used as a way to maintain the American Dream, ignore the realities of systemic and institutional oppression, and euphemize difficult experiences. Research on resilience has in fact been criticized for being overly focused on individuals as opposed to systemic and structural factors (Mohaupt, 2009). This can lead to putting the responsibility on individuals to engage in resilience as if it is a personal choice or trait as opposed to a process of adaptation.

Although resilience has been examined extensively in the realms of developmental psychology, trauma, and mental health fields, its integration into career development is limited. However, terms such as *educational resilience* have been explored more heavily. The term refers to "the heightened likelihood of success in school and in other life accomplishments, despite environmental adversities, brought about by early traits, conditions, and experiences" (Wang, Haertel, & Walberg, 1993). Although

research has confirmed that adversity is indeed a risk factor for poor academic achievement, several other factors have been shown to mitigate this risk, including teacher expectations, personal educational motivation, parental involvement and aspirations, and personal career expectations (Schoon, Parsons, & Sacker, 2004). Specifically with individuals from marginalized backgrounds, the importance of parental support is significant in promoting resilience and future success (Donovan & Johnson, 2005; Rodriguez, 2003; Gofen, 2009).

Resilience has also been shown to be a significant factor in FGCS educational futures. FGCS have shown equally high levels of work hope compared to their CGCS peers, despite barriers and challenges they face (Thompson, Her, & Nitzarim, 2014). Additionally, research has shown that higher levels of resilience in FGCS are correlated with higher grades, higher academic self-efficacy, and better adjustment to the university setting (Reed, Maodzwa-Taruvunga, Ndofirepi, & Moosa, 2018). A qualitative study of first-generation, female Students of Color also demonstrated the many structural, relational, and personal adversities faced by students, and the resilience they exhibited to combat them and maintain hope for the future (Portnoi & Kwong, 2015). Specifically, many students recounted situations that could be turning points in positive and negative ways (loss of family members, pregnancies, illness, being told they were not “college material”), but they chose to push through and use their personal sources of resilience to keep moving forward. Students in this study spoke about a “prove them wrong” mentality in which they encountered challenges and difficulties, but they chose to continue pushing forward to prove their worth through achievement. Another qualitative study with FGCS supported these findings, and found that students frequently identified resilience in the



face of discrimination and other struggles as a primary strength that helped them to persist in college (Havlik, Pulliam, Malott, & Steen, 2020).

Resilience is often touted as a means of promoting the success of “at-risk” populations, and a source of strength in FGCS (Walker, Gleaves, & Grey, 2006). Resilience has not only been shown to promote success academically for “at risk” populations, but also with the general college student population (Hines, Merdinger, & Wyatt, 2005; Hartley, 2011). Research suggests that students with higher levels of resilience are more likely to have higher grades, tolerate stress more effectively, and have better overall health (Hartley, 2011). The authors also suggested that being academically and socially integrated in college may support students’ resiliency in overcoming adversity.

In a study focused on Mexican American college students, research showed that traditional cultural values predicted resilience and were related to students’ perseverance (Consoli & Llamas, 2013). Another qualitative study examining experiences of Mexican American FGCS found that students reported many challenges (crossing the border, undocumented parents, learning English, adjusting to school, discrimination; Cabrera & Padilla, 2004). Despite the students’ struggles, they reported relying on their cultural and personal values, parents, and finding other sources of support at their university. Through learning strong coping skills growing up as they faced many challenges in their families and environment, they attended college with a resilient mindset that they could overcome anything in their way. Further, they utilized their own resourcefulness in identifying sources of support in college, as well as utilizing their family members and friends for support and encouragement.

## Critical Consciousness

Critical consciousness is defined as “oppressed or marginalized people’s critical analysis of their social conditions and individual or collective action taken to change perceived inequities,” (Diemer, Rapa, Park, & Perry, 2017, p. 462). Critical consciousness aligns well with Yosso’s (2005) definition of resistant capital, referring to the knowledge and skills developed through action that oppose and challenge inequalities. Additionally, critical consciousness appears to connect to Yosso’s definition of navigational capital as well, in that individuals who challenge systemic inequality must also have some ability to navigate through systems built without Communities of Color in mind. For the purposes of this study, critical consciousness is suggested to be a second primary area of cultural wealth that FGCS bring to the higher education setting.

The concept of critical consciousness was originally developed by Paulo Freire (1973; 1993) who believed that through increasing literacy to rural Brazilian peasants, they could also increase their ability to think critically about their social conditions and the inequities they faced. In turn, these oppressed individuals could begin to take action in opposition to the systemic inequalities in society. Freire noticed that as oppressed people began to develop more critical and nuanced views of their own social conditions and those of larger society, they also “became less constrained by their social conditions and, in turn, developed the agency and capacity to change these conditions, resolve developmental challenges, and determine their own lives” (Diemer, Rapa, Voight, & McWhirter, 2016, p. 216).

Since its origination, much research has been dedicated to further exploring the concept of critical consciousness and its potential impacts on a variety of populations and

contexts (Jemal, 2017; Diemer, Rapa, Park, & Perry, 2014). Specifically, researchers have examined critical consciousness as it takes shape in indigenous populations (Smith, 1975), urban youth of color in the United States (Berg, Coman, & Schensul, 2009; Diemer, Kauffman, Koenig, Trahan, & Hsieh, 2006; O'Connor, 1997; Ramos-Zayas, 2003), and how it can be utilized to improve health disparities (Campbell & MacPhail, 2002), address domestic violence (Chronister & McWhirter, 2006), and improve mental health (Zimmerman, Ramirez-Valles, & Maton, 1999).

While clearly explored in very diverse contexts, critical consciousness has also been explored to some extent within the career development and educational realms as well (e.g. McWhirter & McWhirter, 2016; Olle & Fouad, 2015; Diemer & Blustein, 2006). Research indicates that students' level of critical consciousness is related to career development. In one study, urban high school students of diverse racial backgrounds were measured on levels of critical consciousness, vocational identity, career commitment, and work salience. Results indicated that the students' critical consciousness was strongly associated with commitment to their vocational future and work role salience, and moderately associated to clarity of their vocational identity (Diemer & Blustein, 2006). The authors suggested that critical consciousness may foster greater connection to urban adolescents' future careers, possibly encouraging resilience in overcoming inequitable systems to achieve personal success. This finding could connect well with FGCS who face their fair share of inequity in education, and utilizing critical consciousness as a means of acknowledging those barriers and finding ways to overcome them.

Olle and Fouad (2015) also examined critical consciousness in urban high school students, many of whom identified as low-income. Critical consciousness was found to moderate the association between outcome expectations and career goals/intentions. When outcome expectations and critical consciousness were factored in together, the association between high outcome expectations and career goals/intentions was weaker. However, critical consciousness was also significantly associated with goals/intentions in this study, indicating a complex and important relationship between critical consciousness and the career development of marginalized students. It is essential to continue examining the impact of critical consciousness on marginalized individuals to fully determine the nature of this relationship.

Critical consciousness has been shown to predict academic achievement as well, though also with a complex relationship (Seider, Clark, & Graves, 2020). This study examined the relationship between baseline levels of critical consciousness, growth in critical consciousness, and academic achievement indicators in high school students (GPA and SAT scores). Results indicated that baseline levels of critical consciousness predicted SAT scores, but not GPA. Conversely, growth in critical consciousness over the four years of high school predicted GPA, but not SAT scores. This study again points to the unique and complex relationship of critical consciousness with academic achievement.

Research on critical consciousness with FGCS is significantly lacking. However, research with FGCS has indicated that developing greater awareness of one's identity and understanding potential barriers faced as FGCS can be a very empowering and liberating experience (Jehangir, Williams, & Jeske, 2012). These findings indicate the potential for

critical consciousness to be a significant factor in fostering FGCS's sense of agency, hope, and ultimately, personal success and satisfaction.

### **Family and Community Capital**

A final source of cultural capital among FGCS is family and community capital, or for the purposes of this study, family encouragement. Yosso (2005) describes familial capital as “those knowledges nurtured among *familia* (kin) that carry a sense of community history, memory and cultural intuition” (p. 79). This form of capital is not only about maintaining connection to one's community, but it also informs one's values system. Yosso adds that familial capital is not necessarily limited by who is technically “family,” but also includes one's extended family and close friends who nurture the connection to their community and its resources. Familial capital is also related to the construct of *funds of knowledge*, which is defined as the “historically accumulated and culturally developed bodies of knowledge and skills essential for household or individual functioning and well-being,” (Moll, Amanti, Neff, & Gonzalez, 1992, p. 133). The concepts of familial capital and funds of knowledge foster a more accurate narrative about the impact of family and community on college-going individuals, particularly those with minoritized identities.

The concept of family encouragement has been explored broadly in a number of domains, but has been a focus in the education and academic field for many years. It has also been labeled in a variety of ways, including familial capital, family or parental involvement, family encouragement, and family support. Research has shown that perceived family social support (i.e. not economic support) was significantly and positively associated with students' college GPA and stability of GPA over time (Cheng,

Ickes, & Verhofstadt, 2012). In a study focused specifically on low-income college students, family support was also shown to be significantly and positively associated with students' academic success, including grades, persistence, and psychological well-being (Roksa & Kinsley, 2018).

While the importance of family support is apparent, a lack of family support has long been touted as a barrier for FGCS in achieving academic success (Terenzini et al., 1996; Phinney & Haas, 2003). Research has also shown the difficulty of the ensuing conflict that occurs when a FGCS “breaks” with tradition and is the first in the family to seek a college education (London, 1989; Billson & Terry, 1982). Students have discussed how parents felt their children would become estranged from them, lose their values, and made them feel guilty for leaving (London, 1989).

Contrary to the historical view of family background holding FGCS back, research has begun to show the facilitative nature of family for FGCS and students of other minoritized identities. Kiyama (2010) has explored the role of funds of knowledge and parental involvement for Mexican American students in higher education, challenging the deficit-based literature surrounding Mexican Americans lack of valuing of education. Research has demonstrated the high value that Mexican parents placed on education, despite not always having the experiential knowledge to guide their children along the way. Similarly, Cabrera and Padilla (2004) found that parental support (specifically from mothers) was critical in fostering strength, motivation, a strong work ethic, and placing a high value on education for two Mexican-American FGCS. In a qualitative study with Israeli FGCS, results indicated overwhelmingly that family was a primary facilitator for their academic success (Gofen, 2009). Specifically, students

identified their families' attitudes toward education, their relationships with their families, and their families' values were all significant contributors to their future academic achievements. Other studies have found similar results, indicating the importance of family support to encourage academic achievement and success, as well as overcoming stress and hurdles associated with attending college (e.g. Brooks, 2015; Bryan & Simmons, 2009).

Family encouragement has also been shown to be associated with higher educational aspirations (McCarron & Inkelas, 2006) and outcome expectations (Olle & Fouad, 2015) for FGCS. Research with Mexican American high school students indicated that students who reported higher levels of familism (feelings and beliefs about family, and loyalty, solidarity within the family) were more likely to receive greater support from family in their career and educational choices, which also promoted students' educational goals and self-efficacy (Garriott, Raque-Bogdan, Zoma, Mackie-Hernandez, & Lavin, 2017).

While there is a large literature base on the issue of family encouragement, its connection to self-authorship, academic satisfaction, and overall well-being have not been explored thoroughly. This study will serve as an examination of the effects of family encouragement on FGCS's outcomes in higher education, beyond academic persistence and achievement.

### **Career Self-Authorship and Work Volition**

Self-authorship is defined as "the internal capacity to define one's beliefs, identity, and social relations" (Baxter Magolda, 2008, p. 269). Further, self-authorship involves the capacity to distinguish one's personal beliefs and values from external

values and other interpersonal relationships, while also making decisions which effectively negotiate personal values and other competing interests (Boes, Maxter Magolda, & Buckley, 2010). For the purposes of this study, *career self-authorship* is identified further as “one’s ability to make career decisions that are self-reflective, account for context, and incorporate one’s capacity for agency and problem solving in the face of challenges” (Garriott, 2020, p. 87). Garriott (2020) identified two existing vocational constructs that represent the concept of career self-authorship: work volition and career adaptability.

Work volition is defined as the “perceived capacity to make occupational choices despite constraints” (Duffy, Diemer, & Jadidian, 2012, p. 292). Work volition is a cornerstone of the Psychology of Working Framework (PWF) proposed by Blustein and colleagues (Blustein, 2006). The PWF argues that while individuals can meet many needs through work, the ability to meet those needs can be hindered by a lack of work volition, particularly among less privileged individuals. Thus, one’s ability to effectively make decisions in the face of those barriers indicates a higher level of work volition. This definition overlaps with concepts within the working definition of career self-authorship: make career decisions, navigate competing demands and values, feel a sense of agency, and overcome challenges. In Garriott’s critical model (2020), career self-authorship is proposed to be predicted by FGCS’s cultural wealth, and to predict FGCS’s outcomes, including persistence, well-being, and major choice satisfaction.

The concept of self-authorship is developmental in nature; it develops slowly over time as individuals learn to rely more strongly on their own internal values system and beliefs to make choices and move through the world. In a 22-year long longitudinal study



conducted on self-authorship, Baxter Magolda revealed several processes of developing self-authorship over time (Baxter Magolda, 2010). Participants initially included 101 traditional-age college students (51 women and 50 men) from a Midwestern public university. After 20 years, 30 participants remained due to attrition, all of whom identified as White. From participant interviews, three stages of self-authorship development arose: following external formulas, the crossroads, and achieving self-authorship. Participants spoke about internal conflict pulling them in multiple directions, trying to balance external demands, and feeling unsure of the “right” decision to make. Over time, participants who developed self-authorship began to feel a greater sense of balance internally and were able to make major life decisions based on personal values, despite the many competing interests and opinions of others (e.g. having a baby).

This developmental process is often one that begins to take shape during young adulthood, when some individuals choose to pursue a college education. Students entering college are faced with many new situations and choices to make, and often seek external affirmation or guidance to inform their decisions to ensure they make the “right” choice (Pizzolato, 2003). During this time, college students are challenged to think outside of their comfort zone and engage with conflict as they determine who they are (Baxter Magolda, 2001; Jehangir, 2010a). Research has suggested that certain “provocative moments” produce in students a greater commitment to turn inward and determine for themselves what the “right” decision is, as opposed to relying on external sources and opinions (Pizzolato, 2005). Often, students are faced with a feeling of disequilibrium in the provocative moment, as they try to sort through the internal and external conflicts in front of them (Jehangir, 2010a; Pizzolato, 2005). This provocative

moment can, but does not always, lead students to search inward for answers and “become the author” (Pizzolato, 2005).

Though self-authorship is often described as a long-term developmental journey (Baxter Magolda, 2010), research suggests that some individuals may develop self-authorship much earlier. Pizzolato (2003; 2004) examined this issue more in-depth to understand how “high-risk” college students may actually be capable of developing self-authorship prior to their early 20s. “High-risk” college students were conceptualized as having weaker academic backgrounds, poorer prior academic performance, and characteristics such as being a FGCS, low-income, or a member of other marginalized groups. Pizzolato (2003) argues that “high-risk” college students have likely had to face additional barriers to attending college, including standing out as different from peers or family who did not seek out a college education. Rather than trying to fit in or follow the external opinions of those around them, “high-risk” college students may have had to follow their own internal values and set themselves apart in order to work toward becoming a college student. Findings from this research indicated that many “high-risk” college students had developed self-authorship prior to attending college. However, these ideals were challenged and students felt obligated to find other formulas for success (Pizzolato, 2004). Students encountered situations which made them question their confidence and skills, as well as experiences of marginalization or discrimination. These encounters pushed students to pull away from their previous sense of self-authorship, feeling unable to balance the external expectations and demands they faced. With support from others or using other coping strategies, some students were able to see their self-authorship reemerge over time.

Another study on self-authorship with FGCS showed similar results, suggesting they reach self-authorship earlier than other undergraduate populations (Carpenter & Peña, 2017). Students in the study were all either in the crossroads phase (40%) or had achieved self-authorship (60%), indicating that FGCS may develop self-authorship in unique ways. Carpenter and Peña (2017) argued that participants in their study encountered “catalysts” which promoted their self-authorship development, including difficult life events, experiencing internal dissonance and finding new meaning, and role modeling or mentorship.

For many FGCS, the college experience is one, big provocative moment (Jehangir, 2010a). Often juggling life between school, home, and other life roles, FGCS seek balance between internal and external demands placed on them from the start of their college career. Jehangir (2010a) argues that FGCS need “learning environments that draw upon these strengths and create opportunities for them to reflect upon their challenges so that they can incorporate their social and cultural capital into the academy” (p. 142). Multicultural learning communities (MLC) are one type of learning environment that may promote students’ sense of self-authorship and personal growth (Jehangir, Williams, & Jeske, 2012). Students who participated in the MLC reported being able to make sense of their multiple identities and find a true self as well as negotiate the competing demands placed on them to make their own self-authored decisions in their lives. Though each student was at their own stage in the self-authorship process, all students reported being challenged to reflect on their identities, to question who they were, and to give meaning and voice to their experiences (Jehangir, 2010a; Jehangir, Williams, & Jeske, 2012).

## **Critique of Existing Theories**

The present study utilizes Garriott's (2020) Critical Cultural Wealth Model.

While there are existing theories related to academic and career development that have been utilized with FGCS, none take a comprehensive examination of social and cultural factors which have been shown to impact FGCS. Further, the onus in these theories is most often on the student themselves. They are in charge of their own career destinies, regardless of barriers or supports in place which help students access the needed resources in order to navigate these systems, explore their desires and interests, and make confident career decisions.

Braxton and colleagues (2013) proposed nine institutional recommendations intended to reduce student departure. All involve a commitment to student welfare, which is proposed to benefit social integration, institutional commitment, and academic and intellectual development. These recommendations provide policy guidance and deepen awareness of the many areas in which institutions can be lacking in providing needed resources to their students. The nine imperatives recommend all staff "embrace a commitment to safeguarding the welfare of students as clients of the institution," "treat students equitably and fairly," and demonstrate respect for students (p. 39). Staff who show their high value and respect of students should be rewarded for doing so in the rewards/benefits structure of the institution. Further, any communications, documents, or public speeches for the institution should communicate concern for students' growth and development, the valuing of students, and portray their efforts in these areas accurately to prospective students. It is important to note in these recommendations to improve student persistence, the onus is placed on the institutions to provide a cultural environment which

is truly student-centered and inclusive. In examining the many theories which have been used in over time to help explain the career and educational development of FGCS, none take the institutional weaknesses into account, or attempt to challenge them. The critical cultural wealth model (Garriott, 2020) offers a critique of this established norm by empowering students in naming their strengths, recognizes the importance of positionality and cultural differences, takes contextual barriers into full account, and acknowledges the impact of the institution itself, in terms of culture, values, systemic oppression, policies, and practices. Ignoring the institutional impacts removes a primary component of what impacts student retention, as well as negates a significant part of the FGCS experience. While Braxton's (2013) framework offers guidance in this area, it still does not take into account career and vocational issues, as its focus is on the experience in institutions of higher education. Garriott's (2020) critical model takes a greater focus on career in addition to education, bridging the gap between students' experiences during and after college. If theories are to accurately depict the aspects of FGCS development, there must be recognition of the institutional barriers, supports, culture, policies, and practices which impact students directly and their likelihood to persist in college.

Social-cognitive career theory (SCCT; Lent, Brown, & Hackett, 1994) has been widely studied with a variety of populations over the years (Lent, 2005) and more recently, FGCS as well (Garriott, Navarro, & Flores, 2017; Garriott, Hudyma, Keene, & Santiago, 2015; Olson, 2014). While SCCT does include some aspects of identity, socio-cultural barriers and affordances, these are more peripheral to the theory itself as it focuses primarily on domain-specific interests and resultant goal-directed decision-making (Lent et al., 1994). Specifically with regards to FGCS, SCCT does not take into

account the nuances of their experiences related to supports and barriers, decision-making processes, positionality, and areas of strength such as cultural wealth. Additionally, the systemic and institutional barriers that are especially salient for FGCS are not accounted for. The interaction of the student with the context, such as the cultural environment of a university, is also not addressed, leaving a wide gap in fully understanding students' experiences and ultimately missing a major factor in their developmental process. Similarly, Lent's model of normative well-being (2004) includes environmental supports, but does not include more socio-cultural-related factors that are very relevant to FGCS and their psychological experience. While a variable for proximal barriers exists in the models, it appears to limit the full range of experiences that impact FGCS. Proximal barriers and supports, as explained in SCCT, do not fully explicate the many layers of conditions faced by FGCS within their environment, whether systemic or individualized, and how those conditions impact the career development of marginalized individuals. For example, certain barriers which have been shown to be important to FGCS's well-being are not represented, such as experiences with classism, racism, and other forms of marginalization (Orbe, 2004). Further, these conditions and barriers are linked primarily to the development of interests and future choices, as well as the opportunities available, but not to the psychological experiences of barriers or the layers of conditions which impact students' success and well-being in the present.

Tinto's (1987) model of student integration has also been widely used to explore issues of persistence, however it has been critiqued for its orientation toward more "traditional" college students (Davis, 2010; Braxton, Milem, & Sullivan, 2000; Metz, 2004). It has also been applied to FGCS on multiple occasions (Longwell-Grice &

Longwell-Grice, 2007; Woosley & Shepler, 2011; Ishitani, 2016). Tinto's (1987) model was further criticized for its lack of integration of social and cultural factors which may be important to non-traditional students, including the importance of cultural differences, experiences for individuals with minoritized identities, students on non-residential campuses, and access to financial aid (Metz, 2004). Beyond these criticisms, the model does not connect educational and career development and instead focuses solely on academic persistence. The career development process is connected to FGCS's college experiences and how they establish their choices and goals to reflect their values (Jehangir, 2012).

Tierney (1999) clearly outlines how Tinto's (1987) model overlooks several important components for minority students and proposes an alternative model based on the concepts of cultural capital. He argues that there are several significant assumptions inherent in Tinto's (1987) model which are problematic. One of the largest assumptions is that of how academic and social integration occur. Tinto's (1987) model is predicated on the belief that college is an initiation of rituals, and the success of the students in this initiation process is incumbent on their ability to sufficiently assimilate into the institution's culture. This places the onus on the student to find a sense of fit and belonging, and there is no responsibility placed on the institution to provide supports and or assistance during this transition. Further, this suggests that students' own background, values, and cultural beliefs bear no consequence within the institution—those are to be left in the past for the student to successfully integrate into the university's cultural expectations and values. Tierney (1999) argues the idea of college being a rite of passage

is also inappropriate. Rites of passage are always successful, and they typically involve youth to be initiated within their own culture, not into a “foreign” one (p. 82).

Ultimately, students with minoritized identities are entering institutions based on what are likely to be quite different cultural values and beliefs. Tinto’s (1987) model then also implies students coming from different backgrounds must assimilate into that culture, undergoing:

a form of cultural suicide, whereby they make a clean break from the communities and cultures in which they were raised and integrate and assimilate into the dominant culture of the colleges they attend. To the extent that they integrate and assimilate, Tinto contends, college students will be successful (Tierney, 1999, p. 82).

These issues in Tinto’s (1987) model depict a broader picture of cultural background being irrelevant for students’ ability to succeed, and if they do not, it is the student’s problem, not the institution’s. Tierney (1999) goes on to argue that, contrary to Tinto’s assertions, strength and integrity of cultural values are areas that can promote student retention, academic success, and ultimately, graduation. Affirming students’ cultural identities and strengths, as opposed to encouraging the separation or loss of culture, is what encourages student success. It is up to the institution to take meaningful action, not the student. Ultimately, Tinto’s (1987) model simply does not do justice to these critical areas for FGCS, and Tierney (1999) offers these critiques as guideposts for understanding what models should take into account.

Nora’s (2003) model of student/institution engagement does take socio-cultural factors into account more actively than the previous theories do, and has been used to understand persistence decisions of diverse groups (Crisp & Nora, 2010; Crisp & Delgado, 2014; Crisp, Nora, & Taggart, 2009). While Nora (2003) incorporates salient



factors for FGCS more actively, including the importance of financial aid, contextual factors including work and family responsibilities, and the potential for marginalization and discrimination on campus, the model only focuses on persistence decisions for college and does not meaningfully address career development. Further, it does not integrate areas such as cultural wealth or cultural capital as strengths that may promote student success, nor the experience students face in integrating themselves culturally within their educational settings. As Tierney (1999) proposes, the importance of cultural experiences and actively affirming different cultural backgrounds within higher education settings is paramount to students' success, including retention.

Finally, the psychology of working framework attempts to understand how individuals make career choices amid constraints and barriers (Duffy, Blustein, Diemer, & Autin, 2016). Specifically developed to account for the unique career development trajectories of those in poverty, facing marginalization, or other difficult work constraints, this theory examines contextual variables related to career development of diverse populations. The authors incorporate aspects of positionality, work volition, and the impact of privilege and oppression on individuals' working lives. While this theory could be applicable to FGCS and incorporates important contextual factors related to their career development, it is designed to examine experiences of working and does not take into account the academic experiences, outcomes, and development that occurs in higher education, a critical component for understanding the experiences of FGCS.

Overall, while these theories have made significant and important contributions to the literature on career and educational development, and made attempts to connect with FGCS's experiences and explain their career development, they are lacking in critical

ways, primarily around the socio-cultural factors which are crucial to FGCS's educational and career development. Specifically, the theories are lacking in their integration of contextual factors, including supports and barriers, which FGCS often face. While they may include them as a peripheral variable, FGCS's multiple social locations are critical to their experiences and impact them at multiple levels. Additionally, the theories do not effectively take FGCS's strengths into account and often place the responsibility on students to navigate and be successful in these systems. Onus must also be placed on the institutions themselves, as the environment curated by the university is also impacts student experiences. In using a new model that examines these contextual, academic, and career variables, FGCS's experiences can be examined in a more nuanced and balanced way.

## CHAPTER THREE:

### METHODOLOGY

This chapter will serve as an overview of participant recruitment procedures, administrative plan, overview of the sample, review of instruments used, and an outline of the statistical analyses.

#### **Positionality Statement**

In my journey as a student within counseling psychology, I have always found myself most drawn to educational and career development, and as my social awareness grew over time, I became more and more interested in exploring the different educational and career trajectories for students who do not fit the traditional academic mold. My background and passion in social justice and advocacy work drew me to want to understand and advocate for students who may face additional constraints and barriers due to their identities or cultural background. Upon applying to doctoral programs, I set my sights on my “dream” research project: examining the experiences of students of color and students from low SES backgrounds within higher education, including the factors that help them to be most successful in college. My strengths-based lens showed even back then when I was early in my training. From the beginning, I wanted to understand and promote the success of students who do not always start on a level playing field, who face discrimination, and who are often seen in deficit-based views enumerating the many barriers and failures as opposed to their potential and strength. I

saw institutions of higher education, especially predominantly White institutions, as systems which were not built for these students and thus *failed them*. As my journey through my education continued, I discovered that FGCS in particular were incredibly diverse, full of strength, and increasingly growing in the higher education system. I felt motivated and inspired to understand their nuanced experiences and help promote a strengths-based lens through which to view their development. This is where the motivation for my research comes from.

I enter this field of study with my own biases and assumptions. As a therapist, I practice from a strengths-based approach and frequently search for strengths as means of coping and resilience. This strongly influences my approach in this study. Though I do not have qualitative data to interpret through this lens, I am still hoping to find strengths in the quantitative results and will seek them out. This may make it harder for me to accept an alternative—that the strengths I propose are there, are actually not. Additionally, having worked in therapy with FGCS, I have been continuously inspired by their strength in facing challenges and their dedication to pursue their goals. Hearing the stories of how they navigated big decisions, faced great uncertainty, and maintained steadfast in their path gave me even more evidence of the strengths of these students, as well as the series of barriers they face. I believe these experiences as a therapist further inform my strengths-based approach and my search for evidence to support their existence and importance. Thinking of the past clients I have worked with creates an even greater desire to provide some evidence-based guidance to institutions of higher education on how to best support and empower FGCS.

Other biases take shape through my own identities as a White, cisgender, heterosexual, upper-middle class, continuing-generation student. Further, I have had the opportunity to attend years of graduate education. I have been granted a substantial amount of privilege based on my identities, and this can lead me to be naïve about the experiences of others, interpret data through a privileged lens, and even feed into a “White savior” complex. While I cannot separate these identities from who I am as a person, I will try to combat these “pulls” by remaining grounded in theory, especially critical theory and the community cultural wealth model, as means of staying the course and remaining focused on my ultimate goal: to promote a strengths-based lens for understanding and promoting the success of FGCS, based not in what society deems as “strengths” or “capital”, but in the areas that may be unique to FGCS.

Another component of my positionality is my family’s background in education. While my father’s side of my family has had a couple of generations of college-goers, my mother is a FGCS. I grew up hearing the stories of her fumbles in college, her struggles to navigate a complex system, and the lack of resources and support she received from all angles. She has often stated, “I had no idea what I was doing!” The experience she and her friends have shared with me are additional motivating factors for me. I have the proof that she made it through that experience to lead a successful career, but it took many twists and turns with road blocks along the way. This foundation is a strong motivation for me to share stories of strength and resilience of FGCS, combat the deficit-based narratives in the literature, and provide institutions with clear data to promote strengths in FGCS on their terms and needs.

Ultimately, while I may be approaching this research from a strengths-based lens and an incorporation of social justice, cultural wealth, and systemic awareness, I am still not a FGCS myself. I am analyzing and interpreting the data from an outsider's perspective, albeit grounded in the literature and my own personal views. This could be a strength in that I am not examining experiences similar to my own or trying to fit the results in to what I have felt myself, but it could also lead me to overlook important factors or make conclusions that do not truly reflect FGCS's experiences. I hope that I can lean on my committee members and other supports to validate the results and implications found as a means of grounding and separating my own biases and assumptions from the findings of this study.

### **Participant Recruitment**

The University of Denver institutional review board (IRB) approved all study procedures prior to beginning data collection. Participants were recruited through collaboration with other universities that serve FGCS. Specifically, students who are currently enrolled at their college or university, who are 18 years or older, and whose parents have not completed bachelor's degrees were considered eligible for the study. Participants were recruited through university programs that allowed for direct connection with FGCS, such as offices related to the first-year experience, TRIO, and student support services. Several universities were identified as potential options for recruitment due to their larger number of FGCS served or strong FGCS programs offered, including: Metropolitan State University of Denver, Adams State University, Colorado State University, California State University—Los Angeles, University of Washington, University of Texas—Rio Grande Valley, University of Florida, University of Maryland,

Drexel University, and Northern Illinois University. Initial outreach attempts were sent to offices within the universities outlined above, and follow-up messages were sent if there was no response within 2-3 weeks of initial contact. Some contacts referred me to other offices within the universities, who I contacted with the same approach and sent follow-up emails if there was no response. Ultimately, the initial group of universities identified was not sufficient to reach the needed number of participants, and I utilized compiled lists of universities sponsoring TRIO programs to identify additional programs to contact. I also connected with the organization Strive for College, which sponsors a FGCS forum, and received approval to recruit from their students.

In my initial outreach attempts, I connected with individuals in the offices to explain the purpose of the study and share any additional information to assist in recruitment via email, including copies of the study's questionnaire and procedures. University offices that agreed to assist in recruitment of students were provided an email document to share with students that included access to the online questionnaire through Qualtrics.com. The research was described to students as a study exploring the experiences of first-generation college students and factors related to their well-being, and academic experience and satisfaction.

Participants were required to read the consent form and give their authorization through a response option on the online questionnaire, stating that they understood and agreed to the terms of the study. Participants were encouraged to request a copy of the consent form to be emailed to them if they wished. After completing the questionnaire, students were thanked for their participation, and invited to enter into a drawing to win one of several gift cards.

## **Participants**

The sample consisted of 130 FGCS. Participants were asked about the education level of their parents in order to determine first-generation student status. Other demographic information was requested as well, including gender identity, racial/ethnic identity, age range, year in college, GPA, living situation (on-campus, off-campus, off-campus with family), subjective social class, and employment status (work study, off-campus job, none). Following the demographic information, participants will be asked to complete the surveys (described in the following section). The survey took 20-30 minutes to complete.

## **Measures**

Participants completed the following instruments: the Brief Resilience Scale (BRS), the Career Support Scale (CSS), the Critical Consciousness Scale (CCS), the Persistence/Voluntary Dropout Decision Scale (P/VDDS), the Academic Major Satisfaction Scale (AMSS), the Satisfaction With Life Scale (SWLS), and the Work Volition Scale—Student Version (WVS—SV).

### **Brief Resilience Scale (BRS; See Appendix A)**

The BRS is a 6-item self-report measure that assesses a person's perceived ability to bounce back and recover from stress (Smith, Dalen, Wiggings, Tooley, Christopher, & Bernard, 2008). Psychometric properties of the BRS have been examined with a sample of undergraduate college students (Smith et al., 2008). Factor analysis indicated that a one-factor solution accounted for 61% of the variance and Cronbach's alpha ranged from .84 to .87. One-month test-retest reliability was .69. Scores on the BRS were positively correlated with other existing resilience measures, optimism, purpose in life, social



support, and active coping. The BRS was shown to be negatively correlated with pessimism, negative interactions, behavioral disengagement, and self-blame. Results indicated no differences between men and women on BRS scores. The BRS has been used with a sample of undergraduate college students, 47% of whom identified as a FGCS. With this sample, the BRS demonstrated strong internal consistency with Cronbach's alpha of .88 (Frazier, Gabriel, Merians, & Lust, 2019).

The BRS uses Likert scale responses ranging from 1 (strongly disagree) to 5 (strongly agree). It contains three items worded positively, and three items worded negatively which are reverse-scored. Higher scores on the BRS indicate higher levels of resilience. Sample items from the BRS include, "I tend to bounce back quickly after hard times" and "It is hard for me to snap back after something bad happens" (reverse-coded).

### **The Career Support Scale (CSS; See Appendix B)**

The CSS is a self-report measure that assesses the level of perceived support received from parents for educational and career pursuits (Binen, Franta, & Thye, 1995). The original measure was created to assess support from both parents separately, with one scale for "mother" (22 items) and one for "father" (18 items). Internal consistency estimates for the original version of the measure were high, with estimates of .87 and .90. The CSS has since been adapted to assess support from both parents concomitantly, using a smaller number of items (10 items total; Flores & O'Brien, 2002). Cronbach's alpha for this adapted version was .76, in a sample of Mexican American high school seniors. In another study using this measure with a sample of diverse undergraduate engineering students, scores indicated an internal consistency of .81 (Garriott, Navarro, & Flores, 2017). The CSS has demonstrated evidence of convergent validity, as it was significantly

associated with career aspirations and career prestige (Flores & O'Brien, 2002), and vocational exploration and commitment (Leal-Muniz & Constantine, 2005). Additionally, in the original version of the CSS, subscales were not significantly associated with social desirability, providing evidence of discriminant validity (Binen, Franta, & Thye, 1995). The CSS has been utilized with FGCS and demonstrated adequate internal consistency, with a Cronbach's alpha of .81 in the sample (Garriott, Navarro, & Flores, 2017).

The adapted scale was used in the present study and included more inclusive terminology referencing the participants' primary caregivers (e.g. "My primary caregiver(s) and I ..."). Participants were asked to respond to 10 items using Likert scale responses ranging from 1 (almost never) to 5 (almost always). Scores are calculated by averaging item responses, with items 3 and 6 being reverse-coded. Higher scores indicate higher levels of perceived support and encouragement from parents. Sample items from the measure include, "My primary caregiver(s) agree with my career goals" and "My primary caregiver(s) and I often discuss my career plans."

### **The Critical Consciousness Scale (CCS; See Appendix C)**

The CCS is a 22-item measure that assesses critical consciousness in two domains: critical reflection and critical action (Diemer, Rapa, Park, & Perry, 2017). In the initial development of the measure, youth of color, many of whom also identified as low-income, were recruited from high schools. An exploratory factor analysis resulted in a 22-item measure and three factors: Critical Reflection—Perceived Inequality (items 1-8), Critical Reflection—Egalitarianism (items 9-13), and Critical Action—Sociopolitical Participation (items 14-22). A follow-up confirmatory factor analysis was also conducted and showed adequate fit. Cronbach's alphas for the three subscales were .76 (Critical

Reflection Egalitarianism), .87 (Critical Action: Sociopolitical Participation), and .89 (Critical Reflection: Perceived Inequality). The CCS has not yet been validated in a sample of FGCS. The scale has been used with college students, but additional psychometric properties of the scale were not explored in the study (Aydin, 2016). A recent study with adult women of color utilized the CCS and the subscales demonstrated adequate internal consistency (Reid Marks, Harrell-Williams, Tate, Coleman, & Moore, 2018). Cronbach's alphas for the three subscales ranged from .89-.94.

The measure uses a Likert scale ranging from 1 (strongly disagree) to 6 (strongly agree) on the first 13 items, with only item 9 being reverse-scored. Items 14-22 are also on a Likert-type response scale but reference frequency of certain activities or behaviors, from 1 (never did this) to 5 (at least once a week). Scores are averaged for each subscale, with higher scores on each subscale indicating higher levels of critical reflection or critical action. The perceived inequality subscale assesses the critical analysis of different constraints on educational and career opportunity. The egalitarianism subscale assesses endorsement of societal equality among groups. The sociopolitical action subscale assesses participation in social and political activities. Sample items from the measure include, "Certain racial or ethnic groups have fewer chances to get ahead," "All groups should be given an equal chance in life," and "Participated in a discussion about a social or political issue."

#### **Persistence/Voluntary Dropout Decision Scale (P/VDDS; See Appendix D)**

The P/VDDS is a 30-item self-report measure that assesses academic persistence decisions of college students (Pascarella & Terenzini, 1980). In the initial validation of the measure, scores were shown to correctly identify 78.9% of persisters, and 75.8% of

students who later dropped out (Pascarella & Terenzini, 1980). Cronbach's alpha coefficients for the scale ranged from .71 to .84 in a sample of 1,457 undergraduate students. In a follow-up validation study with a sample of 1,360 undergraduate students, internal consistency ranged from .58 to .84 (Terenzini, Lorang, & Pascarella, 1981). The measure has also been used with Latinx undergraduate students, half of whom identified as FGCS (Aguinaga & Gloria, 2015). The Cronbach's alpha was .75 for scale scores in the study.

There are five subscales in this measure which map onto components of Tinto's model of student departure (1987), including peer group relations (7 items), informal interactions with faculty (5 items), faculty concern for student development and teaching (5 items), academic and intellectual development (7 items), and institutional and goal commitments (6 items). For the purposes of this study, only the final subscale related to institutional and goal commitments was used to measure persistence intentions. This subscale demonstrated a Cronbach's alpha of .71 in the original validation, as well as significant and positive correlations with dropout decisions, indicating evidence of predictive validity ( $r = .34, p < .01$ ; Pascarella & Terenzini, 1980). Additionally, this subscale was shown to have the largest unique contribution in differentiating between persisters and students who did not re-enroll (Terenzini, Lorang, & Pascarella, 1981). A more recent study using this subscale with immigrant Latinx college students, a sizeable portion of whom identified as FGCS, demonstrated good internal consistency, with Cronbach's alpha at .83 (Cadenas, 2016). Additionally, the scale has shown evidence of convergent validity in a sample of diverse undergraduate students with positive and significant correlations between the scale and GPA, educational self-efficacy, and valuing

of education (Robinson Kurpius, Payakkakom, Ryale, Chee, & Arredondo, 2008).

Results indicated no differences between men and women on scores on the subscale (Baker, Caison, & Meade, 2007).

The measure uses a 5-point Likert scale, ranging from 1 (strongly agree) to 5 (strongly disagree). Higher scores indicate greater likelihood of dropping out. With this subscale, items 4, 5, and 6 are reverse-coded. Sample items from the measure include, “It is important for me to graduate from college” and “Getting good grades is important to me.” Cronbach’s alpha for this measure in the present study was .26.

### **Academic Major Satisfaction Scale (AMSS; See Appendix E)**

The AMSS assesses college students’ global satisfaction with their major (Nauta, 2007). The initial validation of the measure suggested 10 items that loaded onto a single factor. The items that were best able to distinguish between those who did and did not change majors were retained for the final version of measure resulting in six items. The internal consistency for the measure was shown to be high, with a Cronbach’s alpha of .94. In a follow-up validation study, 244 undergraduate students completed the AMSS (Nauta, 2007). Convergent validity was also demonstrated as scores on the AMSS were positively associated with students’ GPAs and career decision self-efficacy, and negatively associated with career-choice anxiety and generalized indecisiveness. In another study with a sample of diverse undergraduate students, internal consistency was also shown to be high, with a Cronbach’s alpha of .92 (Jadidian & Duffy, 2012). In a study with Black undergraduate students, about 30% of whom identified as a FGCS, the AMSS indicated strong internal consistency with a Cronbach’s alpha of .92 (Peterson, 2019).

The 6-item measure asks participants to respond using a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Items 1, 2, 3, and 6 are reverse-coded. After reverse-coding, scores are averaged with higher scores indicating greater satisfaction with a chosen major. Sample items for this measure include, “I wish I was happier with my choice of an academic major,” and “Overall, I’m happy with the major I’ve chosen.” Cronbach’s alpha for this measure in the current study was .91.

### **Satisfaction With Life Scale (SWLS; See Appendix F)**

The SWLS is a brief, self-report measure intended to assess a person’s sense of overall life satisfaction, one of the primary components of well-being (Diener, Emmons, Larsen, & Griffin, 1985). After initial factor analyses, 5 items were identified which captured the construct and loaded onto a single factor. Validation of the measure initially occurred with a sample of undergraduate college students. Test-retest reliability at two months was high at .82. Internal consistency was also high, with Cronbach’s alpha at .87. A confirmatory factor analysis confirmed that all items loaded onto a single factor. In a follow-up validation study with a second sample of undergraduate college students, the items showed medium to large correlations with other similar measures, indicating evidence of convergent validity (Diener et al., 1985). In a more recent study with undergraduate college students, over half of who identified as a FGCS, internal consistency was shown to be high with coefficient alpha at .88 (Garriott, Hudyma, Keene, & Santiago, 2015).

The SWLS contains 5 items that on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores reflect higher levels of life satisfaction. Sample items from this measure include, “In most ways my life is close to my ideal,” and

“So far I have gotten the important things I want in life.” Cronbach’s alpha for the SWLS in this study was .86.

### **Work Volition Scale—Student Version (WVS-SV; See Appendix G)**

The WVS-SV is a brief, self-report measure that assesses college students’ perceived ability to make career choices amid potential adversity or constraints (Duffy, Diemer, & Jadidian, 2012). This measure was used in the study as a proxy for measuring students’ sense of career self-authorship related to career and education-related decisions. Exploratory factor analysis of initial WVS-SV items was conducted with a sample of racially diverse undergraduate students. This analysis led to a two-factor solution with a total of 17 items, 7 of which loaded onto perceived ability to make future career choices, and 10 of which loaded onto constraints to volition. The internal consistency was high at .92, and Cronbach’s alpha was also high, with .78 (volition) and .89 (constraints). In a follow-up validation study, another item was removed leading to a total of 16 items with the same two factors as above: volition and constraints. While loading onto two factors, the measure is still scored in its entirety and reflective of the overall construct of work volition. Evidence of convergent validity has been shown through positive associations to other related career constructs (career decision-making self-efficacy and core self-evaluations). Test-retest reliability at two weeks was .73 for the total scale. In another study with a sample of racially diverse undergraduate college students, estimated internal consistency was .95 (Jadidian & Duffy, 2012). Work volition was shown to be correlated with work locus of control, career decision self-efficacy, and academic satisfaction. It was also shown to be higher among White students in the sample. A recent study using

this measure with a sample of diverse FGCS also found strong internal consistency, with a Cronbach's alpha of .89 (Duffy, Kim, Gensmer, Pendleton, Boren, & Garriott, 2020).

The measure contains 16 items on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Higher scores after reverse-coding represent higher levels of work volition. Sample items from this measure include, "Once I enter the work world, I will easily find a new job if I want to," and "I worry that my family situation limits the types of jobs I might pursue." Cronbach's alpha for the WVS in this study was .85.

### **Data Analysis Plan**

#### **Power Analysis**

A power analysis was conducted to determine the sample size needed (Cohen, 1988). Fritz and MacKinnon (2007) recommend using one of several procedures that have been shown to be effective in achieving adequate power using tests of mediation. Using bias-corrected bootstrapping procedures, power should be adequate to detect a mediation effect, as long as both *a* and *b* path coefficients are equal to or greater than an effect size of 0.26. According to Fritz & MacKinnon (2007), a sample size of 148 is required to reach a power of 0.8. If path coefficients have small effect sizes, equal to 0.14, 462 participants would be needed to reach a power of 0.8. While this sample only reached 130 participants, it provided sufficient power to detect at least small to medium (path a) to medium (path b) path coefficients in the model.

#### **Missing Data**

Cases were removed from further analysis due to ineligibility for the study's requirements, complete non-response of survey items, or failed validity checks. Remaining missing data and patterns of missing data were examined through SPSS using



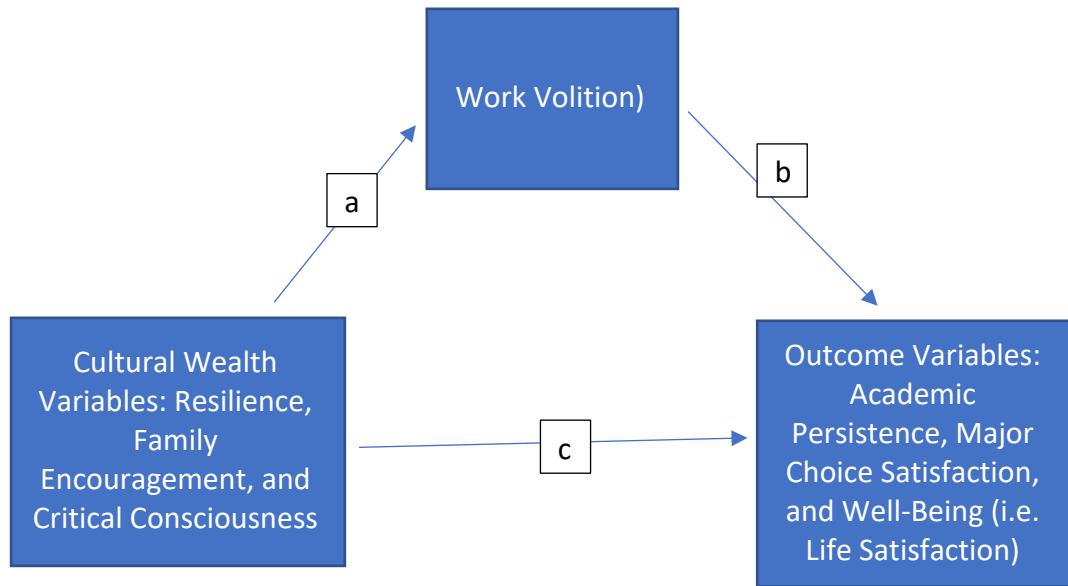
the Missing Values Analysis function. Data appeared completely missing at random (MCAR). Little's test of MCAR was nonsignificant indicating data was MCAR ( $p = .68$ ). I addressed the missing data in accord with best practices based on the pattern of missing data observed (Schlomer, Bauman, & Card, 2010).

### **Univariate and Multivariate Normality and Test Assumptions**

Multivariate and univariate normality was examined for main study variables. I also checked for multivariate outliers by calculating Mahalanobis distances and z-scores for each case (Tabachnick & Fidell, 2001). Outliers present at  $p < .001$  were dropped from the remaining analyses. I examined the data for skewness and kurtosis and variables appeared normally distributed, thus no transformations were performed.

### **Testing Mediated Effects**

In order to test the mediated effects in this study, I utilized a bootstrapping procedure through the PROCESS macro for SPSS (2014). This procedure allowed for testing of the indirect effects through mediation. Additionally, I ran five regressions, one for each of the predictor variables, and critical consciousness which has three subscales computed independently of each other: resilience, critical consciousness, and family encouragement. The macro generated random samples (10,000 resamples) from the original sample in order to test the significance of the indirect effects. As suggested by Hayes (2013), 95% bias-corrected confidence intervals were generated. Confidence intervals that did not include zero were considered statistically significant. The hypothesized mediation model is shown below in Figure 2.



*Figure 2.* Hypothesized mediation model.

## CHAPTER FOUR:

### RESULTS

This chapter will explore the results from statistical analyses conducted, including a review of the data, descriptive statistics of the participants, and a summary of the primary variables of the study. Next, this chapter will review results from preliminary statistical analyses and tests of assumptions. Each research hypothesis will be discussed with tables and figures to illustrate the findings from the analysis.

#### **Data Preparation**

Participants completed an online survey through Qualtrics. Survey data was downloaded directly from Qualtrics into an SPSS data file and checked for entry errors and missing data. Twelve cases were removed due to complete non-response beyond consenting to the study. Seven more were removed due to only completing the demographic information questions but not the survey questions. Six were removed due to incomplete responses on measures (less than 80% of a survey completed or skipped surveys). Two cases were removed due to failed validity checks. Twenty additional cases were removed due to being ineligible for the study, either for not being an undergraduate student or not being a FGCS. Following the deletion of these cases, no other missing values were observed.

Next, participant data was examined for univariate and multivariate outliers. Seven univariate outliers were detected and removed using  $\pm 3.29$  as the standard

deviation threshold. Two multivariate outliers were removed due to significant Mahalanobis distance values ( $p < .001$ ).

### Study Participants

The final sample consisted of 130 FGCS. The demographic statistics are presented in Table 1.

Table 1.  
*Demographic Characteristics of the Sample (N = 130)*

<i>Variable</i>		<i>n</i>	<i>%</i>
Education Level of Parent 1	Less than High School	38	29.2
	High School Diploma/GED	75	57.5
	Associate's Degree	17	13.1
Education Level of Parent 2	Less than High School	44	33.8
	High School Diploma/GED	70	53.8
	Associate's Degree	13	10
	Missing	3	2.4
Gender Identity	Man	33	25.4
	Woman	95	73.1
	Trans man	2	1.5
Race/Ethnicity	Asian or Asian American	16	12.3
	Black or African American	11	8.5
	Hispanic or Latinx	55	42.3
	White, European, not Hispanic	53	40.8
	Native American	5	3.8
	Multiracial or Multiethnic	7	5.4
	Other	2	1.6
Age	17-22 years old	104	82.3
	23-28 years old	20	15.4
	29-48 years old	3	.02
Year in School	1 <sup>st</sup> Year	33	25.4
	2 <sup>nd</sup> Year	29	22.3
	3 <sup>rd</sup> Year	29	22.3
	4 <sup>th</sup> Year	29	22.3
	5 <sup>th</sup> Year or beyond	9	6.9

GPA	1.8-2	3	2.3
	2.1-2.5	8	6.2
	2.6-3	30	23.1
	3.1-3.5	43	33.1
	3.6-4	36	27.7
	4+	1	.08
	N/A	3	2.3
	Missing	6	4.6
Living Situation	On Campus	41	31.5
	Off Campus with Roommates	38	29.2
	Off Campus with Family	30	23.1
	Off Campus with Partner/Spouse	15	11.5
	Off Campus Alone	6	4.6
Employment	Work Study	40	30.8
	On Campus, Non Work Study	19	14.6
	Off Campus	47	36.2
	Not Employed	31	23.8
Self-Reported Socio-Economic Status (MacArthur Ladder)	8	3	2.3
	7	12	9.2
	6	20	15.4
	5	39	30
	4	29	22.3
	3	20	15.4
	2	6	4.6
	1	1	.8

### **Preliminary Analyses**

Instruments used in this study measured the following variables: resilience (Brief Resilience Scale, BRS; Smith, Dalen, Wiggings, Tooley, Christopher, & Bernard, 2008), critical consciousness (Critical Consciousness Scale, CCS; Diemer, Rapa, Park, & Perry, 2017), family encouragement (Career Support Scale, CSS; Binen, Franta, & Thye, 1995; Flores & O'Brien, 2002), work volition (Work Volition Scale, WVS; Duffy, Diemer, & Jadidian, 2012), persistence (Persistence/Voluntary Drop Out Decision Scale, P/VDDS;

Pascarella & Terenzini, 1980), major satisfaction (Academic Major Satisfaction Scale, AMSS; Nauta, 2007), and well-being (Satisfaction With Life Scale, SWLS; Diener, Emmons, Larsen, & Griffin, 1985). Descriptive statistics for these measures are provided below in Table 2.

Table 2.  
*Descriptive Statistics and Cronbach's Alphas for Study Variables*

	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	<i>Range</i>	<i>α</i>
BRS	3.28	.74	1.83	5	3.71	.85
CSS	3.78	.80	1	5	4	.87
CCS CR PI	4.57	1.07	1.25	6	4.75	.94
CCS CR E	5.27	.75	2.8	6	3.2	.83
CCS CA SP	1.71	.60	1	3.56	2.56	.81
WVS	4.56	.91	2	6.56	4.56	.85
P/VDDS	4.55	.42	3.33	5	1.67	.26
AMSS	4.19	.90	1.33	5	3.67	.91
SWLS	4.38	1.25	1.2	7	5.8	.86

Note.  $N = 130$

The mean of the BRS was 3.28 ( $SD = .74$ ) with a maximum possible mean score of 5. The mean for this scale indicated that participants reported moderate levels of resilience.

The mean for the CSS was 3.78 ( $SD = .80$ ) with a maximum possible mean score of 5. This indicated that participants experienced moderate to high levels of support in their careers from caregivers.

The CCS is broken down into three subscales which are examined separately as components of critical consciousness: Critical Reflection—Perceived Inequality (CCS CR PI), Critical Reflection—Egalitarianism (CCS CR E), and Critical Action—Sociopolitical Involvement (CCS CA SP). The mean for the CCS CR PI subscale was 4.57 ( $SD = 1.07$ ) with a maximum possible mean score of 6. The mean indicated a

moderately high level of critical reflection and analysis of different constraints on educational and career opportunity within this sample. The mean for the CCS CR E subscale was 5.27 ( $SD = .75$ ), with a maximum possible mean score of 6. The mean on this subscale indicated participants have a high level of reported endorsement of societal equality among different groups. Lastly, the CCS CA SP subscale had a mean of 1.71 ( $SD = .60$ ), with a maximum possible mean score of 5. The mean of this subscale indicated moderately low participation in sociopolitical activities within this sample.

The mean of the P/VDDS was 4.55 ( $SD = .42$ ) with a maximum possible mean score of 5. The mean for this scale indicated that participants in this sample reported high intentions of persisting and remaining committed to their particular institution. Due to low Cronbach's alpha for this scale, it was not included in the primary data analyses. See the Discussion chapter for further interpretation of these results.

The mean of the AMSS was 4.19 ( $SD = .90$ ) with a maximum possible mean score of 5. The mean of this scale indicated moderately high levels of academic major satisfaction among participants in this sample.

The mean of the SWLS was 4.38 ( $SD = 1.25$ ) with a maximum possible mean score of 7. The mean of this scale indicated participants were slightly satisfied with their life.

### ***Testing of Assumptions***

Statistical assumptions for regression analysis were examined (Hayes, 2013). A scatterplot was examined to examine if the relationship between predictor and outcome variables was linear. The scatterplots for the variables appeared linear.

To test the assumption that variables were measured without error, internal consistency estimates for each measure were examined. Cronbach's alphas were calculated for each scale and values are shown in Table 2. All but one measure had scale score reliability of .80 or above (good to excellent). Due to the P/VDDS scale showing such a low Cronbach's alpha (.26), this scale was removed from future analysis. Since the remainder of the scales indicate good to excellent Cronbach's alphas, the assumption that variables were measured with minimal error was met.

The assumption of normality was also tested for each of the scales by examining skewness and kurtosis values as well as histograms. All values of skewness and kurtosis indicated normality, and examination of histograms supported this. Skewness on variables ranged from -1.13 to .978 ( $SE = .212$  for all variables). Kurtosis values ranged from -.745 to .839 ( $SE = .422$  for all variables). The cutoff for acceptable levels of skewness and kurtosis was set at +/- 1.96 (Hair, Black, Babin, & Anderson, 2010).

The Variance Inflation Factors (VIFs) across all scales were well beneath the level of multicollinearity and ranged from 1.05 (BRS) to 1.37 (CCS CR PI). These results indicated that the assumption of multicollinearity was met for all scales in this study based on recommended values (Gordon, 2015; Hair, Black, Babin, & Anderson, 2010).

## **Primary Analyses**

### **Independent Variables**

Table 3 presents bivariate correlations for the variables examined in the study. Correlations were interpreted as small (.10), medium (.30), and large (.50) based on Cohen's (1988) recommendations for assessing effect sizes. Effect sizes ranged from small to medium. In support of Hypothesis 1, significant, positive correlations were



observed between resilience and work volition (i.e. WVS), academic major satisfaction, and well-being ( $r = .190, p < .05$ ;  $r = .271, p < .01$ ;  $r = .294, p < .01$ , respectively). The correlations indicated that higher levels of resilience were associated with higher levels of work volition, major satisfaction, and well-being. Similarly, family encouragement (i.e. CSS) was positively correlated with work volition, academic major satisfaction, and well-being ( $r = .324, p < .01$ ;  $r = .293, p < .01$ ;  $r = .236, p < .01$ , respectively). These correlations suggested that greater family encouragement was related to increased work volition, major satisfaction, and well-being in this sample.

The Critical Reflection—Perceived Inequality subscale was significantly correlated with work volition, but not any other variables ( $r = -.320, p < .01$ ). The correlation between perceived inequality and work volition was negative, which did not support Hypothesis 1. Higher levels of critical reflection and analysis of constraints on educational and career opportunities were associated with lower levels of work volition. The Critical Reflection—Egalitarianism subscale was significantly correlated with academic major satisfaction, but did not show any other significant correlations ( $r = -.190, p < .05$ ). This subscale was significantly negatively correlated with academic major satisfaction, indicating that higher endorsement of societal equality was associated with lower levels of major satisfaction. Lastly, the Critical Action—Sociopolitical Involvement subscale showed two significant, negative correlations. This subscale was negatively correlated with work volition and well-being ( $r = -.338, p < .01$ ;  $r = -.247, p < .01$ , respectively). These correlations indicated that higher levels of involvement in sociopolitical action and activism were related to lower levels of work volition and well-being in this sample.

Correlations between work volition and outcome variables were also examined to test the hypothesis that significant, positive correlations would be observed between work volition and well-being, and major choice satisfaction. Hypothesis 2 was partially supported as work volition showed positive, significant correlations with academic major satisfaction and well-being ( $r = .304, p < .01$ ;  $r = .458, p < .01$ , respectively). These findings indicated that higher levels of work volition were associated with higher levels of academic major satisfaction and well-being.

Table 3.  
*Correlations among Study Variables*

Variable	1	2	3	4	5	6	7	8
1. BRS	---	.07	-.14	-.14	-.06	.19*	.27**	.29**
2. CSS		---	-.13	-.07	-.29**	.32**	.29**	.24**
3. CCS CR PI			---	.36**	.36**	-.32**	-.16	-.14
4. CCS CR E				---	.05	-.16	-.14	-.19*
5. CCS CA SP					---	-.34**	-.25**	-.06
6. WVS						---	.46**	.30**
7. SWLS							---	.36**
8. AMSS								---

*Note.* BRS = Brief Resilience Scale; CSS = Career Support Scale; CCS CR PI = Critical Consciousness Scale—Critical Reflection: Perceived Inequality; CCS CR E = Critical Consciousness Scale—Critical Reflection: Egalitarianism; CCS CA SP = Critical Consciousness Scale—Critical Action: Sociopolitical Involvement; WVS = Work Volition Scale; SWLS = Satisfaction with Life Scale; AMSS = Academic Major Satisfaction Scale.

\*  $p < .05$ , \*\*  $p < .01$

### **Tests of Indirect Effects**

The PROCESS macro (Hayes, 2013) for SPSS 26.0 was used to analyze the relationships between cultural wealth variables (resilience, critical consciousness, and family encouragement), work volition, and outcome variables (academic major

satisfaction and well-being). The mediation model tested is shown in Figure 3 below. The mediator ( $M$ ; work volition) was hypothesized to explain the relationship between the predictor variables ( $X$ ; resilience, family encouragement, critical consciousness) and the criterion variables ( $Y$ ; academic major satisfaction, and well-being). Specifically, resilience, family encouragement, and critical consciousness were each hypothesized to predict work volition ( $a$ ), which was then hypothesized to predict academic major satisfaction, and well-being ( $b$ ). This is the indirect effect ( $ab$ ) of the independent variables on the outcome variables. This effect was calculated by multiplying the two effects ( $a$  and  $b$ ) in the model (Hayes, 2013). The direct effect ( $c'$ ), or the relationship between independent variables and outcome variables while keeping work volition constant was also calculated. The total effect of both direct and indirect effects ( $c$ ) was calculated and indicates the coefficient obtained by regressing the outcome variables onto each of the independent variables. The coefficients ( $a$ ,  $b$ ,  $ab$ ,  $c'$ , and  $c$ ) are all unstandardized regression coefficients. See Figure 3 below.

In order to test the significance of indirect effects in these models 10,000 bootstrap samples were used to determine the upper and lower bounds of 95% bias-corrected confidence intervals (CI), and those which did not include zero were interpreted as statistically significant. Effect sizes for the regressions in this study were interpreted as small (.14), medium (.39), and large (.59) bases on the criteria recommended by Fritz and MacKinnon (2007). Effect sizes of the regressions ranged from small to large.

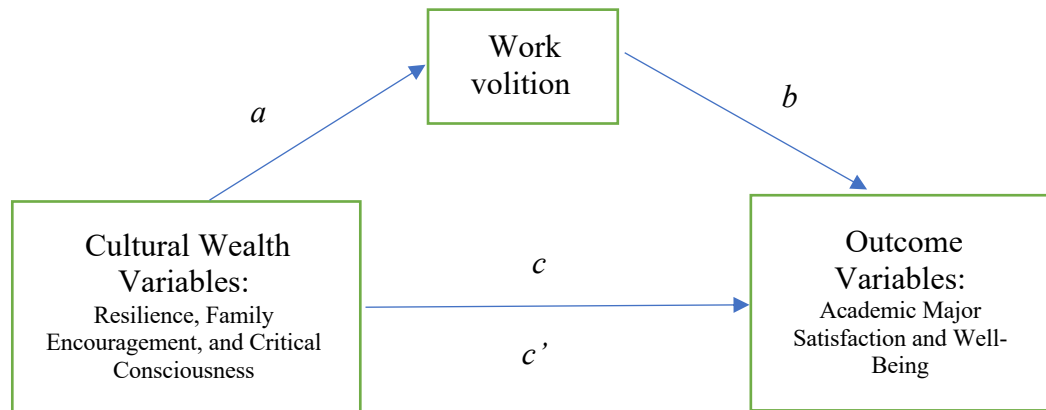
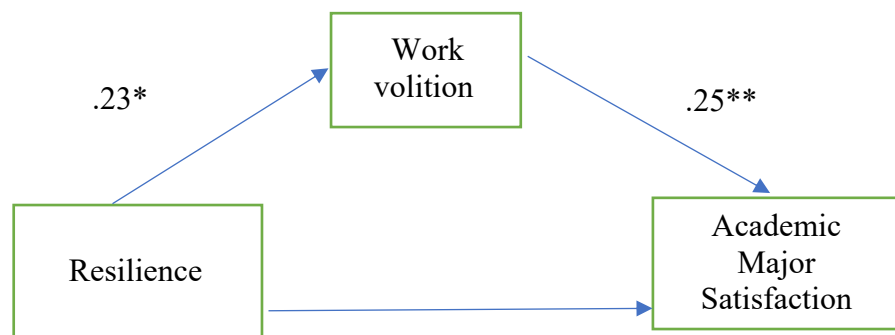


Figure 3. Simple mediation. Note: *a* is the effect of independent variables on work volition; *b* is the effect of work volition on outcome variables; *c'* is the direct effect of the independent variables on the outcome variables; and *c* is the indirect effect of the independent variables on the outcome variables.

### Model 1



\*\*Direct effect,  $B = .30, p < .01$

\*Indirect effect,  $B = .06, 95\% \text{ CI } [.0080, .1296]$

Figure 4. Model 1.

\* $p < .05$ , \*\* $p < .01$

In support of Hypotheses 3 and 4, results (see Figure 2 above) showed that participants with higher levels of resilience reported higher levels of work volition ( $B = .23, t(128) = 2.20, p < .05$ ) and higher levels of work volition were in turn related to greater academic major satisfaction ( $B = .25, t(128) = 3.08, p < .01$ ). The direct effect of resilience was significant ( $B = .30, t(128) = 2.94, p < .01$ ). Approximately 15% of the variance in academic major satisfaction was accounted for by the predictors ( $R^2 = .15$ ,

$F(2, 127) = 11.22, p < .001$ ). In support of Hypothesis 5, the 95% confidence interval showed the indirect effect from resilience to academic major satisfaction through work volition was significant,  $B = .06, 95\% \text{ CI } [.0080, .1296]$ .

**Model 2**

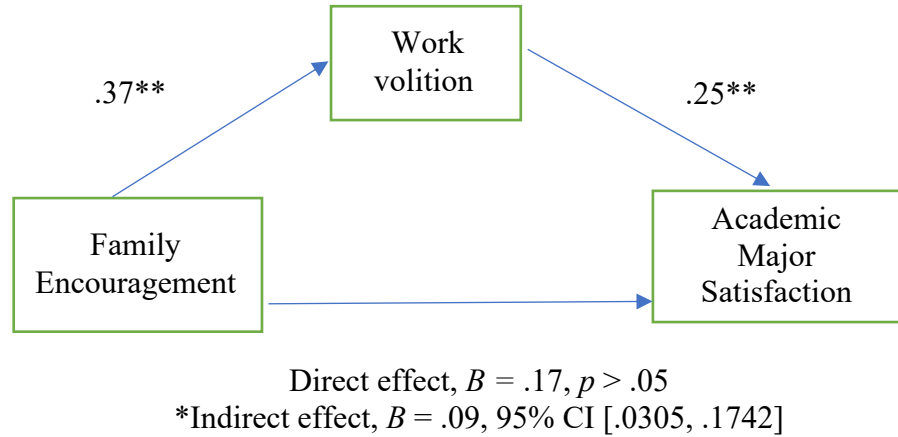
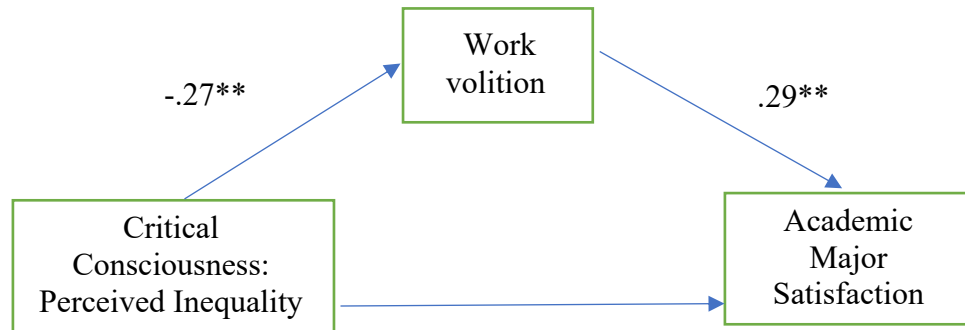


Figure 5. Model 2.  
\* $p < .05$ , \*\* $p < .01$

In support of Hypotheses 3 and 4, (see Figure 3 above) participants with higher levels of family encouragement reported higher levels of work volition ( $B = .37, t(128) = 3.87, p < .001$ ) and higher levels of work volition were in turn related to greater academic major satisfaction ( $B = .25, t(128) = 2.87, p < .01$ ). The direct effect of family encouragement was not significant ( $B = .17, t(128) = 1.75, p > .05$ ). Approximately 11% of the variance in academic major satisfaction was accounted for by the predictors ( $R^2 = .11, F(2, 127) = 8.13, p < .001$ ). In support of Hypothesis 5, the 95% confidence interval showed the indirect effect from family encouragement to academic major satisfaction through work volition was significant,  $B = .09, 95\% \text{ CI } [.0305, .1742]$ .

### Model 3



Direct effect,  $B = -.04, p > .05$

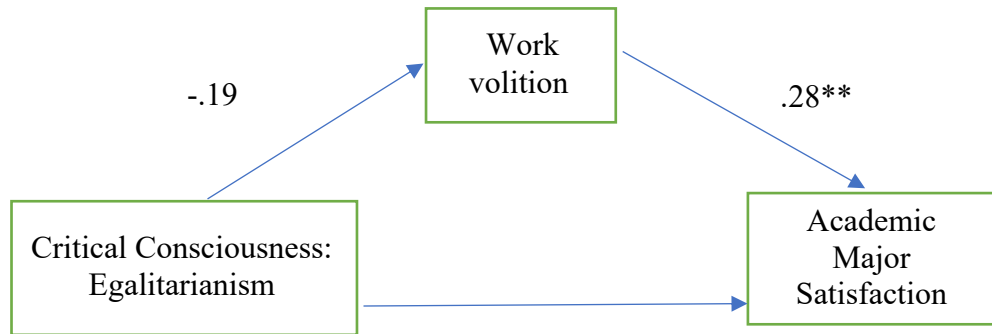
\*Indirect effect,  $B = -.08, 95\% \text{ CI } [-.1518, -.0244]$

Figure 6. Model 3.

\* $p < .05$ , \*\* $p < .01$

Results (see Figure 4 above) showed that participants with higher levels of critical consciousness related to perceived inequality reported lower levels of work volition ( $B = -.27, t(128) = -3.82, p < .001$ ) and higher levels of work volition were in turn related to greater academic major satisfaction ( $B = .29, t(128) = 3.25, p < .01$ ). The direct effect of critical consciousness (perceived inequality) was not significant ( $B = -.04, t(128) = -.50, p > .05$ ). These results do not support Hypothesis 3, but do offer support for Hypothesis 4. Approximately 9% of the variance in academic major satisfaction was accounted for by the predictors ( $R^2 = .09, F(2, 127) = 6.59, p < .01$ ). In support of Hypothesis 5, the 95% confidence interval showed the indirect effect from critical consciousness (perceived inequality) to academic major satisfaction through work volition was significant,  $B = -.08, 95\% \text{ CI } [-.1518, -.0244]$ .

#### Model 4



Direct effect,  $B = -.17, p > .05$

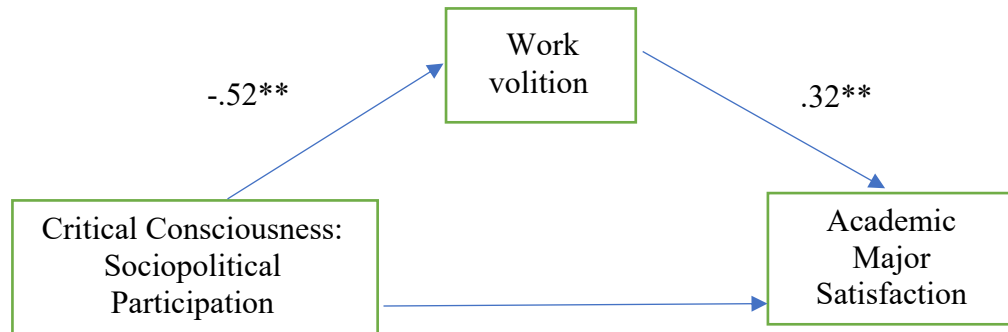
\*Indirect effect,  $B = -.05, 95\% \text{ CI } [-.1238, -.0043]$

Figure 7. Model 4.

\* $p < .05$ , \*\* $p < .01$

Results (see Figure 5 above) showed that participants with higher levels of critical consciousness related to egalitarianism reported lower levels of work volition ( $B = -.19, t(128) = -1.85, p > .05$ ) and higher levels of work volition were in turn related to greater academic major satisfaction ( $B = .28, t(128) = 3.31, p < .01$ ). The direct effect of critical consciousness (egalitarianism) was not significant ( $B = -.17, t(128) = -1.71, p > .05$ ). These results do not support Hypothesis 3, but do offer support for Hypothesis 4. Approximately 11% of the variance in academic major satisfaction was accounted for by the predictors ( $R^2 = .1126, F(2, 127) = 8.05, p < .001$ ). In support of Hypothesis 5, the 95% confidence interval showed the indirect effect from critical consciousness (egalitarianism) to academic major satisfaction through work volition was significant,  $B = -.05, 95\% \text{ CI } [-.1238, -.0043]$ .

### Model 5



Direct effect,  $B = .07, p > .05$

\*Indirect effect,  $B = -.16, 95\% \text{ CI } [-.2977, -.0618]$

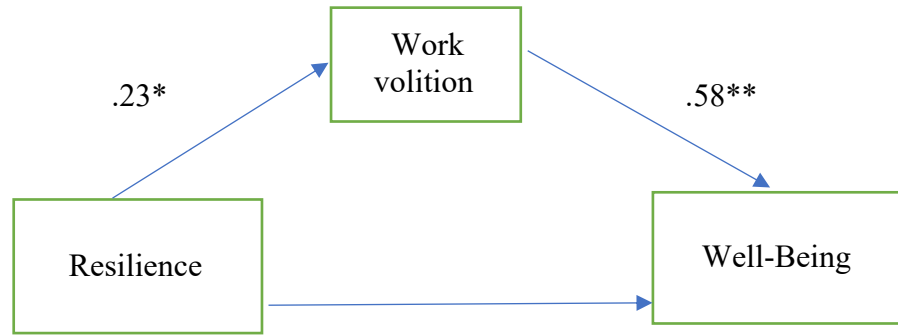
Figure 8. Model 5.

\* $p < .05$ , \*\* $p < .01$

Results (see Figure 6 above) showed that participants with higher levels of critical consciousness related to sociopolitical participation reported lower levels of work volition ( $B = -.52, t(128) = -4.07, p < .001$ ) and higher levels of work volition were in turn related to greater academic major satisfaction ( $B = .32, t(128) = 3.55, p < .001$ ). The direct effect of critical consciousness (sociopolitical participation) was not significant ( $B = .07, t(128) = .50, p > .05$ ). These results do not support Hypothesis 3, but do offer support for Hypothesis 4. Approximately 9% of the variance in academic major satisfaction was accounted for by the predictors ( $R^2 = .09, F(2, 127) = 6.60, p < .01$ ). In support of Hypothesis 5, the 95% confidence interval showed the indirect effect from critical consciousness (sociopolitical participation) to academic major satisfaction through work volition was significant,  $B = -.16, 95\% \text{ CI } [-.2977, -.0618]$ .



### Model 6



\*Direct effect,  $B = .32, p < .05$

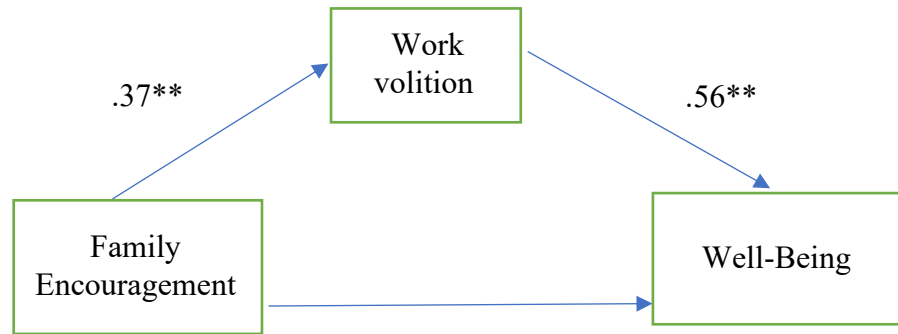
\*Indirect effect,  $B = -.14, 95\% \text{ CI } [.0222, .2644]$

Figure 9. Model 6.

\* $p < .05$ , \*\* $p < .01$

In support of Hypotheses 3 and 4, results (see Figure 7 above) showed that participants with higher levels resilience reported higher levels of work volition ( $B = .23, t(128) = 2.20, p < .05$ ), and higher levels of work volition were in turn related to greater well-being ( $B = .58, t(128) = 5.35, p < .001$ ). The direct effect of resilience was significant ( $B = .32, t(128) = 2.43, p < .05$ ). Approximately 24% of the variance in well-being was accounted for by the predictors ( $R^2 = .24, F(2, 127) = 20.56, p < .001$ ). In support of Hypothesis 5, the 95% confidence interval showed the indirect effect from resilience to well-being through work volition was significant,  $B = .14, 95\% \text{ CI } [.0222, .2644]$ .

### Model 7



Direct effect,  $B = .25, p > .05$

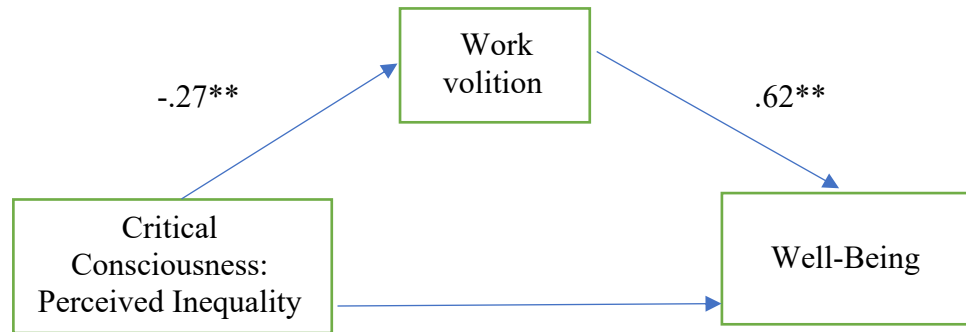
\*Indirect effect,  $B = .21, 95\% \text{ CI } [.0857, .3518]$

Figure 10. Model 7.

\* $p < .05$ , \*\* $p < .01$

In support of Hypotheses 3 and 4, results (see Figure 8 above) showed that participants with higher levels family encouragement reported higher levels of work volition ( $B = .37, t(128) = 3.87, p < .001$ ), and higher levels of work volition were in turn related to greater well-being ( $B = .56, t(128) = 4.93, p < .001$ ). The direct effect of family encouragement was not significant ( $B = .25, t(128) = 1.97, p > .05$ ). Approximately 23% of the variance in well-being was accounted for by the predictors ( $R^2 = .23, F(2, 127) = 19.26, p < .001$ ). In support of Hypothesis 5, the 95% confidence interval showed the indirect effect from family encouragement to well-being through work volition was significant,  $B = .21, 95\% \text{ CI } [.0857, .3518]$ .

## Model 8



Direct effect,  $B = -.02, p > .05$

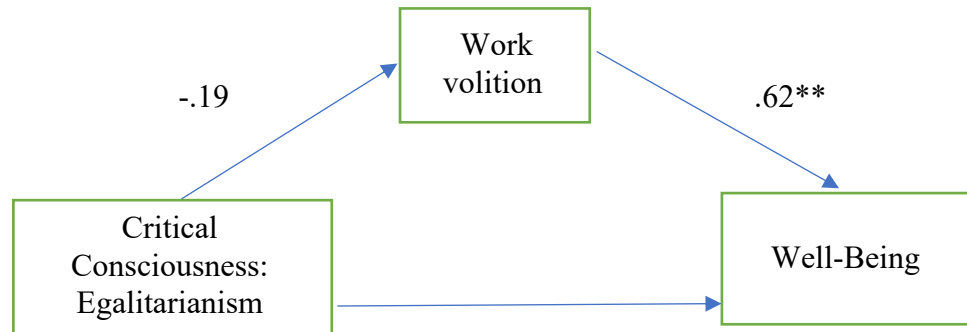
\*Indirect effect,  $B = -.17, 95\% \text{ CI } [-.2966, -.0628]$

Figure 11. Model 8.

\* $p < .05$ , \*\* $p < .01$

Results (see Figure 9 above) showed that participants with higher levels critical consciousness related to perceived inequality reported lower levels of work volition ( $B = -.27, t(128) = -3.82, p < .001$ ), and higher levels of work volition were in turn related to greater well-being ( $B = .62, t(128) = 5.42, p < .001$ ). The direct effect of critical consciousness (perceived inequality) was not significant ( $B = -.02, t(128) = -.22, p > .05$ ). These results do not support Hypothesis 3, but do offer support for Hypothesis 4. Approximately 21% of the variance in well-being was accounted for by the predictors ( $R^2 = .21, F(2, 127) = 16.84, p < .001$ ). In support of Hypothesis 5, the 95% confidence interval showed the indirect effect from critical consciousness (perceived inequality) to well-being through work volition was significant,  $B = -.17, 95\% \text{ CI } [-.2966, -.0628]$ .

### Model 9



Direct effect,  $B = -.11, p > .05$

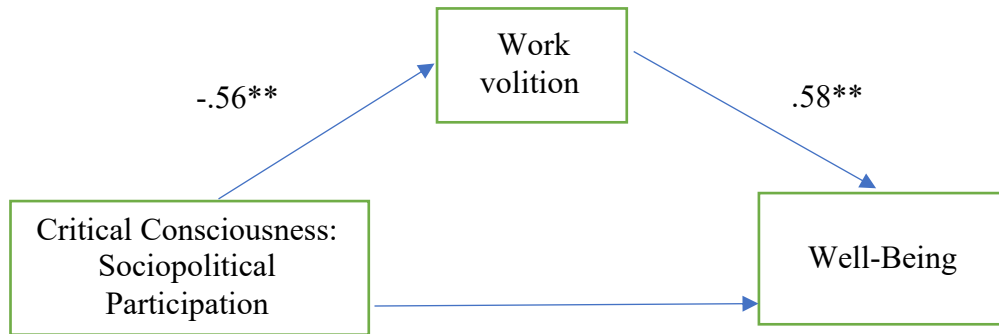
\*Indirect effect,  $B = -.12, 95\% \text{ CI } [-.2480, -.0128]$

Figure 12. Model 9.

\* $p < .05$ , \*\* $p < .01$

Results (see Figure 10 above) showed that participants with higher levels critical consciousness related to beliefs in egalitarianism reported lower levels of work volition ( $B = -.19, t(128) = -1.85, p > .05$ ), however this was nonsignificant. Higher levels of work volition were in turn related to greater well-being ( $B = .62, t(128) = 5.60, p < .001$ ). The direct effect of critical consciousness related to egalitarianism was not significant ( $B = -.11, t(128) = -.84, p > .05$ ). These results do not support Hypothesis 3, but do offer support for Hypothesis 4. Approximately 21% of the variance in well-being was accounted for by the predictors ( $R^2 = .21, F(2, 127) = 17.25, p < .001$ ). In support of Hypothesis 5, the 95% confidence interval showed the indirect effect from critical consciousness (egalitarianism) to well-being through work volition was significant,  $B = -.12, 95\% \text{ CI } [-.2480, -.0128]$ .

### Model 10



Direct effect,  $B = -.22, p > .05$

\*Indirect effect,  $B = -.30, 95\% \text{ CI } [-.5270, -.1260]$

Figure 13. Model 10.

\* $p < .05$ , \*\* $p < .01$

Results (see Figure 6 above) showed that participants with higher levels of critical consciousness related to sociopolitical participation reported lower levels of work volition ( $B = -.56, t(128) = -4.07, p < .001$ ), and higher levels of work volition were in turn related to greater well-being ( $B = .58, t(128) = 5.07, p < .001$ ). The direct effect of critical consciousness (sociopolitical participation) was not significant ( $B = -.22, t(128) = -1.25, p > .05$ ). These results do not support Hypothesis 3, but do offer support for Hypothesis 4. Approximately 22% of the variance in well-being was accounted for by the predictors ( $R^2 = .22, F(2, 127) = 17.80, p < .001$ ). In support of Hypothesis 5, the 95% confidence interval showed the indirect effect from critical consciousness (sociopolitical participation) to well-being through work volition was significant,  $B = -.30, 95\% \text{ CI } [-.5270, -.1260]$ .

## CHAPTER FIVE:

### DISCUSSION

The purpose of this study was to better understand relations between cultural wealth variables, work volition, and several outcome variables for FGCS. This chapter includes a discussion of the key findings, connections to theory, limitations, implications, and areas for future research.

Before exploring the results of this study, exploring how QuantCrit was ultimately integrated into the methods, results, and discussion of this research is critical to ensure they have aligned with the values of social justice. QuantCrit is an integration of critical race theory (CRT) and quantitative research methodology which provides guidance to those using quantitative methods for social justice aims (Garcia, López, & Vélez, 2018). As quantitative methods have long been used as a tool of oppression, using them to promote social justice requires intentional decisions that take the history and assumptions of the methods into account. Just because this topic is based in social justice and is strengths-based, does not mean the methods themselves are value-free.

QuantCrit researchers have identified and defined several guiding tenets to assist in this goal. First is the acknowledgement of the centrality of racism within our society. Racism is engrained and built into our systems and is difficult to quantify. Second, “numbers are not neutral”, and it is critical to question how they may contribute to a deficit-based view or analysis that promotes the interests of white people (Garcia, López,

& Vélez, 2018, p. 151). Third, the use of distinct categories is not natural, and the units of analysis should be carefully examined and evaluated. Fourth, data and numbers should be amplified and informed by the voices and experiences of marginalized communities. To rely on the data to “speak for itself” removes a key component of understanding the experiential knowledge of the participants in the study (p. 151). Lastly, it is important to recognize that “statistical analyses have no inherent value”, however they can still contribute to the fight for social justice (p. 151). These guiding principles provide the foundation to fully explore how this study ultimately aligned with QuantCrit values and approaches.

First, the literature review of this study critiques and explores the ways in which research with FGCS has historically promoted a deficit-based view of this diverse group of students, especially quantitative research. The goal of this study was to promote a strengths-based view of FGCS founded in their strengths as opposed to deficits, and this goal framed the interpretation and discussion of the results. The use of Yosso’s (2005) community cultural wealth model as a foundational theory to this research also helped to dismantle the view of FGCS being deficient of cultural capital. Instead, the focus is on how FGCS bring their own unique forms of capital to institutions of higher education. As previous research seemed to use data without consideration of their impact or value, this research aimed to, and I believe was successful in, rely on the data as a means to propel a strengths-based narrative that placed the onus on institutions to better support students, as opposed to students being the ones responsible for their difficulties. The data were used in this study solely as a means to measure how FGCS cultural wealth contributes to positive outcomes.

Further, as discussed later in this chapter, recommendations from the data are entirely focused on what institutions and individuals who work with FGCS can do to best support them, rather than placing the responsibility on FGCS to continually navigate systems which are not built to support them. Although this study did not incorporate qualitative data from FGCS themselves, the variables explored and recommendations made are grounded in the qualitative research done by past researchers. While their voices are not heard in the results, they are heard in the foundation of the literature on this topic, in the analysis of the data, and in the recommendations. It would be deeply valuable to take this research further by incorporating qualitative data on the same topics, and I make this recommendation later in this chapter. Finally, while statistical analyses hold no inherent value, in this study they are used purposefully to promote a strengths-based narrative of FGCS and their cultural wealth. Using the “master’s tools” in this way aligns with the tenets of QuantCrit and social justice as it repurposes the methods previously used for oppression as a means for promoting strengths, cultural wealth, success, and well-being (Cokley & Awad, 2013). By grounding this study in these principles, I hope that this study is successful in promoting social justice and a strengths-based perspective of FGCS while simultaneously helping to dismantle the deficit-based view in the literature.

### **Results and Discussion of Research Questions**

This chapter discusses findings related to the following research questions: (a) what is the association between cultural wealth variables, work volition, and outcome variables? (b) do cultural wealth variables predict outcomes for FGCS?, (c) do cultural wealth variables predict work volition for FGCS? (d) does work volition predict



outcomes for FGCS?, and (e) does work volition explain the relationship between cultural wealth variables and outcomes for FGCS?

### **Associations of Cultural Wealth, Work Volition, and Outcomes**

The hypothesis that significant, positive correlations would be observed between cultural wealth variables and work volition, well-being, academic persistence, and major choice satisfaction was partially supported in this study. Significant, positive correlations were observed between resilience and work volition, academic major satisfaction, and well-being. Similarly, significant positive correlations were observed between family encouragement and work volition, academic major satisfaction, and well-being. As hypothesized, FGCS with higher levels of resilience and family encouragement also reported increased work volition, academic major satisfaction, and well-being.

The hypothesis that cultural wealth variables would be significant, positive predictors of well-being, academic persistence, and academic major satisfaction was partially supported by the findings of this study. Resilience was shown to be a significant, positive predictor of well-being and academic major satisfaction. Other variables' direct effects on outcome variables were not statistically significant. This suggests that resilience may have its own unique relationship to well-being and academic major satisfaction for FGCS.

When considering potential barriers that FGCS may encounter, it makes sense that resilience in overcoming barriers would be correlated with well-being, satisfaction in their major, and perception of their ability to make career and academic choices in spite of structural constraints. As FGCS exhibit higher levels of resilience in confronting barriers, they are better able to maintain their well-being, including hope for the future.

This may help explain the correlation with work volition, as FGCS with higher levels of resilience may feel more capable of making career choices in spite of barriers. In a way, work volition acts as an extension of resilience related solely to academic and career choices. This study expands previous research in this area by establishing a connection between resilience and work volition in a sample of FGCS. Family encouragement has been shown to be a significant factor in promoting resilience (Donovan & Johnson, 2005). While such associations were not explored in this study, it may indicate a connection between family encouragement and resilience that supports FGCS's abilities to develop resilience and overcome barriers. As FGCS experience greater family encouragement, they may feel more capable and in control of their academic and career choices, able to navigate barriers, and satisfied personally and academically. Studies have shown not only that FGCS identified family support as a primary reason for their academic success, but that family encouragement promoted their ability to overcome barriers, maintain well-being, and develop strong career and educational aspirations (Gofen, 2009; Brooks, 2015; Bryan & Simmons, 2009; McCarron & Inkelas, 2006). The measures used in this study to assess resilience and family encouragement were not significantly correlated, however it is an area to explore further. It is possible that while there is a lot of evidence of this connection in prior research, the measure used in this study to assess family encouragement was focused on career as opposed to general support from families or support around education. This may have impacted the relationship found in this sample, though more research on the nature of this connection is needed.

Critical consciousness was examined using three subscales of the Critical Consciousness Scale: perceived inequality, egalitarianism, and sociopolitical participation. This study was the first to use this scale with a sample of FGCS, and its results indicate a nuanced relationship that requires more research. Results in this study did not support hypothesis 1. A significant, negative correlation was observed between critical consciousness (perceived inequality) and work volition, but no other significant correlations were observed. This suggests higher levels of critical reflection and analysis of different constraints on educational and career opportunity was associated with lower levels of work volition. This result suggests that FGCS's perceptions of social inequality may be related to a higher level of awareness of one's own work barriers and constraints, and an uncertainty about overcoming them. Perhaps as one's awareness of societal inequities rises, one's sense of self-efficacy in overcoming those inequities and barriers is hindered, and thus work volition is lower. Research has shown some links between social status and work volition, indicating that lower levels of subjective social status predicted lower levels of work volition (Autin, Douglass, Duffy, England, & Allan, 2016).

A significant, negative correlation was observed between critical consciousness (egalitarianism) and academic major satisfaction, but no other significant correlations were observed. This indicates that stronger endorsement of societal equality was associated with lower academic major satisfaction. It is possible this could relate to personal awareness of barriers related to identity factors (e.g. women in STEM) and interactions with FGCS's major choices. While not all FGCS will choose a major where they are underrepresented based on social identities, it is possible that a belief in equality among groups in society highlights inequities within majors. For example, research on

women in STEM fields has shown that gender differences and experiences do impact satisfaction in the major, desire to pursue a STEM major, and interest in pursuing a career in a STEM field (Amelink & Creamer, 2010).

Lastly, significant, negative correlations were observed between critical consciousness (sociopolitical participation) and work volition and well-being. This indicates that higher levels of sociopolitical involvement are associated with lower levels of work volition and well-being. It seems possible that increased involvement in sociopolitical activities may relate to increased awareness of societal inequities, and a greater desire to get involved in order to address systemic oppression. That said, one could be involved in sociopolitical activities and aware of systemic inequities, but involvement does not always mean change, and this could lead to feeling jaded and less hopeful about the ability to effect change. Further, they may also experience hindered confidence in the ability to overcome their own barriers related to academic and career choices as a result, and a decreased sense of well-being. This study is the first to use these scales in assessing critical consciousness and test these associations with a sample of FGCS, and the results indicate there are significant correlations that help provide greater understanding of FGCS experiences. It is important to note that the scale may not have been able to identify the nuances of critical consciousness for FGCS, particularly as the scale was originally normed in high school students. More investigation into this particular scale, as well as the construct of critical consciousness in FGCS, would be helpful to tease out the nuances in this area.

The hypothesis that significant, positive correlations would be observed between work volition and well-being, academic persistence, and well-being was partially

supported in this study. Significant, positive correlations were observed between work volition and well-being and academic major satisfaction. As expected, higher levels of work volition were associated with higher levels of academic major satisfaction and well-being. Similar correlations between work volition, well-being, and academic major satisfaction have been found in a recent study of the critical model with FGCS, indicating additional evidence of the association between work volition and these outcome variables (Duffy et al., 2020). Further, the hypothesis that work volition would be a significant, positive predictor of well-being, academic persistence, and academic major satisfaction was also supported by the findings of this study. Work volition was shown to significantly and positively predict academic major satisfaction and well-being in every regression model. Work volition has been shown to be a predictor of life satisfaction in other research, and it appears that the sense of agency in making career decisions promotes well-being (Buyukgoze-Kavas, Duffy, & Douglass, 2015). This study is one of the first to establish the importance of work volition for FGCS, in addition to the associations between other variables in the study. While self-authorship has been a topic of exploration in research with FGCS (e.g. Jehangir, 2010a; Carpenter & Pena, 2017), self-authorship related to career development and work volition have not been explored before. The results of this study indicate the value of more research in this area to better understand how FGCS experience work volition in relation to their strengths and outcomes.

### **Indirect Effects**

The hypothesis that there would be a significant indirect effect from cultural wealth variables to academic persistence, well-being, and major choice satisfaction

through work volition was partially supported. In all regression models, the indirect effect from cultural wealth variables to well-being and major choice satisfaction through work volition was significant. First, there was a significant indirect effect from resilience to well-being and academic major satisfaction through work volition. The results of this indirect effect showed that FGCS who reported higher levels of resilience also reported higher levels of well-being and academic major satisfaction, and this relationship was explained by work volition. When examining conceptual connections between resilience and work volition, they complement each other well. Resilience is defined as a process of adaptation in the face of adversity and ability to maintain hope for the future. Work volition also speaks to these components in its definition: the “perceived capacity to make occupational choices despite constraints” (Duffy, Diemer, & Jadidian, 2012, p. 292). Both concepts speak to encounters with barriers or adversity, and the ability to overcome those in some way, whether by maintaining a sense of agency in making career decisions, holding onto hope for the future, or being able to recover from a setback.

In fact, research has shown that resilience is associated with having an internal locus of control, which may link resilience to the agency component present in the concept of work volition (Reynolds & Weigland, 2010). It appears that work volition plays a primary role in FGCS’s well-being and major choice satisfaction. Research has shown that work volition has associations with well-being and life satisfaction, and indicated that the sense of agency in career decision-making and increased life meaning are potential causes for this link (Buyukgoze-Kavas, Duffy, & Douglass, 2015). It seems that the importance of agency is important for FGCS—that they are able to navigate constraints and barriers, make decisions that fit in with their values, and thus experience

greater well-being and satisfaction with their choices. Congruent with research on self-authorship, FGCS have been shown to not only develop self-authorship sooner than their continuing-generation peers, but to benefit from environments where they are able to reflect on challenges, integrate identities, and negotiate the competing demands placed on them to make meaningful and values-congruent choices (Carpenter & Pena, 2017; Jehangir, Williams, & Jeske, 2012). The results of this study indicate that the combination of resilience and work volition allow FGCS to effectively navigate challenges and decisions that allow for greater well-being and satisfaction in their major, as they are relying on their values, strengths, and authentic selves to make self-authored decisions.

There was also a significant indirect effect from family encouragement to well-being and academic major satisfaction through work volition. In fact, the indirect effect of family encouragement to well-being through work volition was one of the strongest effects in the model. FGCS who reported higher levels of family encouragement also reported higher levels of well-being and academic major satisfaction, and this relationship was explained by work volition. Research has previously shown that family support is significantly and positively associated with outcomes such as psychological well-being, grades, and persistence in college (Roksa & Kinsley, 2018). Further, qualitative research with FGCS has shown that students overwhelmingly identify family support as a primary facilitator for their academic success, in addition to being a primary support in overcoming challenges and stress associated with college (Gofen, 2009; Brooks, 2015; Bryan & Simmons, 2009). The connection of family encouragement to work volition appears less clear, and research on the topic has not shown significant

correlations between the two variables in adult populations (Fouad, Kim, Ghosh, Chang, & Figueiredo, 2016).

It is possible that FGCS experience the support from their families as a source of strength in overcoming barriers, navigating complex decisions, and making values-congruent decisions. Research has shown Mexican American high school students who reported higher levels of familism were more likely to receive greater support from their family in their educational and career decisions, promoting their educational goals and self-efficacy (Garriott, Raque-Bogdan, Zoma, Mackie-Hernandez, & Lavin, 2017).

Although work volition was not assessed in this study, this research may help explain the association between family encouragement, work volition, well-being, and academic major satisfaction in the present study.

As FGCS receive more support and encouragement from their families in their decisions around education and career, they may feel a greater sense of control and agency in making decisions despite facing barriers or constraints. Yosso (2009) describes familial capital as “cultural knowledges” developed within families incorporates a sense of community well-being, including maintaining connection to community and its resources (p. 79). Within extended families and communities, kin share “lessons of caring, coping, and providing [...] which inform our emotional, moral, educational, and occupational consciousness” (p.79). With this definition in mind, it makes sense that family encouragement may boost students to persist in the face of constraints and feel more confident in doing so. As students are more connected and supported by their families, they feel less alone in dealing with problems and difficulties. Perhaps this explains the powerful indirect effect of family encouragement through work volition to



well-being—greater family support and encouragement allows for greater confidence in navigating challenging decisions and overcoming barriers, thus allowing for FGCS to make decisions that ultimately promote their well-being and satisfaction. It is not about “breaking” with family as previous literature about FGCS has suggested, but rather being boosted by family (London, 1989). Further, as stated previously, the ability to negotiate competing demands, navigate barriers effectively, and make values-congruent choices (e.g. experiencing higher levels of work volition and self-authorship) allows students to feel more satisfied in their major and overall more satisfied in their life (Buyukgoze-Kavas, Duffy, & Douglass, 2015). Family encouragement appears to be a crucial strength for FGCS in promoting this relationship.

Critical consciousness and its indirect effects were also examined and demonstrated a more complex relationship than expected. There was a significant indirect effect from all subscales measuring critical consciousness to well-being and academic major satisfaction through work volition. The results of these indirect effects showed that FGCS who reported higher levels of critical consciousness reported lower levels of work volition, but higher levels of work volition were still related to higher levels of well-being and academic major satisfaction. All indirect effects were negative associations, indicating the effect of critical consciousness through work volition maintained a negative association to well-being and academic major satisfaction, though it varied in size over the analyses conducted. This indicates lower work volition may explain the negative associations between critical consciousness and outcomes assessed in this study.

Typically, one might assume that higher levels of critical consciousness would lead to empowerment, just as Paulo Freire (1973; 1993) originally postulated. He argued

that in increasing oppressed communities' ability to think critically about the inequitable conditions they faced, they could begin to take action to challenge the systemic inequalities they faced. Further, they could become liberated from the constraints they experienced, develop agency in changing the conditions, and make their own choices. It seems that as FGCS in this sample gain knowledge and critically reflect on inequalities, their increased awareness is associated with decreased work volition. Knowing that barriers exist and how pervasive inequalities in society are, FGCS may feel their agency and control over their career and academic decisions hampered. The measure of work volition used in this study may be a proxy for students' perceived barriers, explaining the negative association from critical consciousness to work volition. Rather than feeling empowered and driven to overcome barriers, they may instead feel overwhelmed by them and inefficacious at challenging, overcoming, or dismantling them. This could also help explain the negative effects on academic major satisfaction and well-being. While work volition served as a facilitative pathway from other cultural wealth variables to well-being and academic major satisfaction, its explanatory effects were negative for critical consciousness.

Research on critical consciousness with adolescents has shown similar indications of the nuanced relationships between critical consciousness, academic engagement, and well-being. In a previous study, researchers developed different classes of critical consciousness related to participants' levels of critical reflection, beliefs about fairness, and political efficacy (Godfrey, Burson, Yanisch, Hughes, & Way, 2019). Findings indicated that adolescents who were critically reflective and distrusting of the

government had lower socioemotional and academic well-being, compared to adolescents who were less critically reflective and more trusting of the government.

Godfrey and colleagues (2019) also found that those with higher levels of critical reflection and lower levels of sociopolitical efficacy reported lower well-being. However in this study, sociopolitical participation was similarly negatively associated, at times quite strongly, with work volition, well-being, and academic major satisfaction. It seems that while sociopolitical efficacy may often be a protective factor (e.g. Godfrey et al., 2019), participants in this study may have felt less able to overcome the systemic barriers and effect change, regardless of how involved they were. Being involved does not necessarily indicate one's sense of confidence in being able to work within or enact change within the system. One interesting finding that may provide some guidance in understanding this relationship is the low mean on the sociopolitical action subscale of the Critical Consciousness Scale ( $M = 1.71$ ). This is relatively low compared to the max possible score of 5. Perhaps participants in this study were less socio-politically active and less efficacious in their efforts. In fact, the subscale does not measure efficacy but rather frequency of participation in a variety of activism and political behaviors (e.g. contact a political official, participate on a political campaign, participate in a rally or protest). Even if participants were engaging in these activities, it is not necessarily an indication of their efficacy or sense of agency in creating change. Perhaps the sense of political efficacy is what can translate the awareness and reflection of systemic inequalities into action, and even a greater sense of agency in navigating other types of barriers (e.g. work volition).

While decreased efficacy or agency could be an explanation, participants' outcome expectations may also help to understand these results. Research has examined social justice work from a social-cognitive lens and defined social justice outcome expectations as the "perceived outcomes associated with social justice engagement" (Miller et al., 2009, p. 497). In their study on the topic, they found that social justice outcome expectations acted as a mediator in the relationship between social justice barriers and supports and social justice commitment. In other words, supports and barriers had an indirect effect on social justice commitment through outcome expectations. The authors suggest that when individuals experience greater support, their social justice efficacy is enhanced, leading to more positive expectations about the outcome of their work. This finding may shed light on the results of this study as well. Perhaps FGCS in this study, as a result of their awareness of existing barriers and inequities, held lower outcome expectations, were not as committed to participation in sociopolitical activities, and ultimately felt less confident and efficacious in their ability to navigate barriers. This could help explain why higher levels of critical consciousness was not associated with higher levels of work volition in this sample.

When examining the items of the measures used to measure work volition and critical consciousness more closely, there is some overlap that could indicate both are measuring participants' perceived career or academic barriers, and perhaps a sense of realism around anticipated constraints in the future. This could explain the negative relationship between critical consciousness and work volition. For example, the Critical Consciousness Scale (Critical Reflection: Perceived Inequality) includes questions such as: "Certain racial or ethnic groups have fewer chances to get a good high school

education,” “Poor people have fewer changes to get good jobs,” and “Women have fewer chances to get ahead.” The Work Volition Scale includes items such as: “Due to discrimination, I do not feel I have complete control over my ability to get a job,” “I worry that my life circumstances will prevent me from achieving my long term career goals,” and “I feel total control over my future job choices.” It seems possible that the Critical Consciousness Scale has a good deal of conceptual overlap with work constraints, particularly around barriers that individuals of different identities may experience in their education and work lives. This could explain the strong negative association between the two scales, and ultimately the negative association with well-being and academic major satisfaction. Ultimately, it seems that critical consciousness has a complex relationship with work volition, and would be an area to explore in future research.

### **Implications for Practice and Research**

FGCS are a growing population within the U.S. education system. About one-third of undergraduate students identify as a FGCS, and they represent a diverse cross-section of college-goers (Cataldi, Bennett, & Chen, 2018; Engle & Tinto, 2008).

Research has long delineated the additional hurdles that FGCS face, however more recent research has begun to dismantle this deficit-based perspective and instead promote their strengths (e.g. Demetriou et al., 2017; Jehangir, 2010). This study aimed to provide quantitative evidence for FGCS strengths in the form of cultural wealth, backing for using a new model to understand the experiences of FGCS, and ultimately add to the literature on FGCS from a strengths-based lens. The following implications can provide

direction for future research and practice that will support the success and well-being of FGCS.

There are several major implications from the results of this study. The findings provide initial quantitative support of the link between FGCS cultural wealth variables, work volition, and important personal and academic outcomes. They also show partial support of Garriott's (2020) critical model, and importantly demonstrate the importance of work volition in the experiences of FGCS. These results build off research on the model indicating the predictive value of work volition and sense of belonging on campus for well-being and career choice satisfaction (Duffy et al., 2020).

First, it is clear that greater effort should be dedicated to understanding work volition in FGCS. As work volition explained the relationships between cultural wealth variables and the outcomes in this study, it is critical to find ways of supporting the development of work volition in FGCS but also continue to research and assess its impacts. There are few studies that have examined the presence of work volition in FGCS, let alone its connections to other concepts such as resilience, critical consciousness, and well-being. As discussed, work volition appears to promote well-being and academic major satisfaction and significantly enhances the effects of cultural wealth variables such as resilience and family encouragement. Exploring these relationships in greater depth and with larger samples could generate support for programming and policy that would directly benefit FGCS, in addition to giving direction to those already working with and supporting FGCS every day. Further, given work volition was shown to explain all of the indirect effects in this study, future research on how FGCS develop, experience, and utilize work volition would greatly contribute to our

understanding of how to support FGCS. Additionally, exploring work volition and its relation to salient variables in other samples of FGCS could provide greater evidence of its importance and give ideas for how to promote its development. Qualitative research in particular could provide an in-depth exploration of how FGCS experience work volition and its impact. Ultimately, further research on the nature of work volition and these relationships could help promote the success of FGCS as well as provide additional evidence to its importance.

While research can help explore the relationships and nuances of work volition in FGCS, the evidence indicates that it is a critical factor in promoting positive outcomes for them. Individuals who work directly with FGCS within higher education can use these findings to guide their programming, policies, and means of supporting FGCS at their institutions. Work volition, in Garriott's (2020) critical model, is posited to be one component of career self-authorship, along with career adaptability. Garriott defines career self-authorship as "one's ability to make career decisions that are self-reflective, account for context, and incorporate one's capacity for agency and problem solving in the face of challenges" (2020, p. 87). It seems likely that one means of promoting work volition in FGCS is to also promote their self-authorship. Research has shown that FGCS develop self-authorship earlier than other undergraduate populations as a result of many experiences of having to juggle roles, personal and external values, and make difficult decisions (Carpenter & Peña, 2017). The results indicated that FGCS encountered "catalysts" which encouraged their development of self-authorship, one of which was role modeling or mentorship. Further, research on multicultural living communities (MLC) has demonstrated the importance of a supportive learning environment for FGCS

in which their strengths are promoted and they can be given opportunities to share their cultural capital within systems of higher education (Jehangir, 2010a). In fact, FGCS who participated in an MLC reported personal growth and improved sense of self-authorship, as they were able to navigate and make sense of their identities and experiences to make decisions based on their true selves (Jehangir, Williams, & Jeske, 2012).

These findings point to two concrete ways that self-authorship, and potentially work volition, could be promoted in FGCS: mentorship and MLC such as the one described by Jehangir (2010a). This could also be an area of additional research in understanding the relationship between self-authorship and work volition more clearly. By providing mentorship opportunities to FGCS, they may not only experience improved self-authorship, but also gain a better sense of support and confidence in navigating barriers ahead. Being able to identify with and see themselves in someone farther along in their career could be significant in promoting work volition, and perhaps even resilience. Past research has shown the importance of mentoring for FGCS (e.g. Demetriou et al., 2017; Huerta & Fishman, 2014), though more could be explored in this area to provide support for this intervention. Mentorship could take the form of FGCS being matched with other FGCS farther along in their college experience, with professionals in their field of study, or with university faculty mentors who were FGCS. These mentors could serve as guides for FGCS to better understand and navigate their academic and career journeys. Further, seeing someone like themselves being successful in navigating the many barriers and decision points could provide a sense of hope and resilience that they too can reach that point.



The impact of a MLC for FGCS has already been shown (e.g. Jehangir, Williams, & Jeske, 2012), and would be an excellent opportunity for universities to pursue in support of their FGCS. Further, integrating interventions focused on academic and career development issues may be of particular benefit to FGCS and the development of work volition and career self-authorship. As of now, the impact of MLC's on work volition and other areas of career development have not been explored, and these gaps provide openings for future research and implementation of career-focused interventions for FGCS. These recommendations of mentorship programs and MLC could build on programming efforts already in existence within TRIO and student support services at universities. Existing programs could utilize the results of this study as evidence for promoting FGCS cultural wealth.

Career construction (Savickas, 2005) could offer another option for ways to promote FGCS's self-authorship in their career development. Career construction is an approach to career counseling that incorporates context, meaning-making, values, and subjective decision-making based on one's self-concepts. There is considerable overlap with self-authorship as it addresses one's life experiences, context, and values in making choices that negotiate these competing demands and lead to meaningful and values-congruent career decisions. Career counselors in universities and others who work closely with FGCS in university settings could likely help promote their students' sense of self-authorship by utilizing career construction approaches. Students may feel greater agency in making these decisions as they are based in their values, their context, and their experiences. Further this would also likely increase students' major choice satisfaction as that decision could be facilitated with conversations from a career constructivist lens.

Research has not examined the use of career construction approaches with FGCS in career planning or counseling, and it would be an interesting area to explore in greater depth.

Another important implication of the findings in this study is additional evidence of the complex, nuanced relationship between critical consciousness, work volition, well-being, and academic satisfaction. While this study contributed to past research on the nuanced relationship of critical consciousness and other variables of importance for FGCS, the dearth of research on critical consciousness in FGCS is a significant reason for additional exploration into this field. Specifically, understanding more about how critical consciousness relates to other variables such as work volition and well-being could be particularly important for understanding the different impacts of developing critical consciousness. Further, additional research sociopolitical efficacy could add to the existing critical consciousness literature and perhaps provide insight into the complex impact of critical consciousness for FGCS. For FGCS, it may not be enough to be aware of societal inequities, believe in egalitarianism, or even take action on social and political issues, but rather their sense of their ability to effect meaningful change. Research has shown that FGCS are often able to access opportunities for civic engagement at their universities (Owen, Krell, & McCarron, 2019). In previous research, students reported increased civic engagement as a result of deeper exploration into social and political issues, and they identified support and interaction with role models and mentors as a key component to their evolution in civic engagement (Owen et al., 2019). Students also expressed greater agency in navigating campus and community resources, and a large number endorsed a deep understanding of systemic dynamics (power, privilege,

oppression) and increased civic efficacy (Owen et al., 2019). While this study focused on university involvement and engagement as opposed to political engagement off-campus, it provides an example of what promoting sociopolitical efficacy in FGCS could look like. The use of mentorship programs could be beneficial for FGCS in developing awareness and agency in effecting change. It appears that using the programs which FGCS are already connected with (e.g. TRIO) as a foundation for this learning would be particularly beneficial. Based on research conducted on social justice involvement and outcome expectations, social supports played a large role in promoting efficacy and outcome expectations (Miller et al., 2009). Mentorship and increasing opportunities for FGCS to access support in their endeavors around social justice could greatly improve FGCS's efficacy and outcome expectations in their work.

Further, universities could take on greater ownership of their curriculum around social justice issues. As Braxton and colleagues (2013) suggested, the onus should be on universities to create cultural environments which are supportive and affirming. One way this could be done is by encouraging faculty members to create curricula that integrate more exploration and reflection on identity, power, and privilege. FGCS are able to learn through lived experiences that society is inequitable and unjust for certain students based on their identities. More privileged students do not have to learn this by experience, but should be exposed to information and curricular activities to expand their understanding and empower them to become change agents. It makes sense that FGCS with higher levels of critical consciousness would feel less hopeful about navigating barriers when their experiences are never represented in the classroom, and skills of enacting change are also forgotten. Providing education and experiential learning where all students can

develop more critical reflection and civic engagement skills would not only help FGCS build their toolkit for enacting change themselves, but would also empower non-FGCS to grow and learn by becoming allies and advocates. Exploring and changing the curriculum could be one way to more directly influence students' ability to reflect, engage, and challenge within higher education.

Some authors have also pointed to the value of service-learning as another means of promoting FGCS's sense of community, creating a bridge between their personal culture and their university's culture, and providing a basis for future civic engagement (Taylor, Yochim, & Raykov, 2019). Service learning could be another opportunity to promote FGCS's civic engagement and efficacy, though perhaps through a more circuitous route. Promoting students' civic engagement through service-learning could also be accomplished within the undergraduate curriculum. While often service-learning and civic engagement are often activities dedicated to extracurricular clubs and organizations, finding ways to incorporate these activities into the coursework could be especially useful for FGCS. As FGCS often have other responsibilities off-campus, engagement in extracurricular activities is not always feasible or accessible. Incorporating civic engagement, social justice, and service-learning into the requirements of the curriculum would be one potential way to promote agency, efficacy, and community for FGCS. Further, having them integrated into the coursework allows for direct access to support via the faculty teaching the course.

Ultimately, this study provides additional evidence for taking a strengths-based and individualized approach to understanding the development of FGCS. The findings highlight the unique strengths that FGCS bring into the system of higher education,

adding to previous literature that challenges the dominant, deficit-based perspective held of FGCS. Applying any model to this population does not adequately address or explain their unique and diverse experiences as they navigate education and career decisions. The results of this study provided initial support for Garriott's (2020) critical model and indicate the importance of future research on the validity of this model in understanding FGCS's experiences. As this study was one of first to begin exploring the validity of Garriott's (2020) critical model, additional research on the relationships posited in this model with larger and more diverse samples would contribute greatly to the research on FGCS and help to promote programming and policy efforts within institutions to support FGCS. It could also be interesting to explore how the same variables may relate differently in other sub-populations of FGCS, such as 2-year vs. 4-year colleges, predominantly white institutions vs. minority-serving institutions, or among a wider age range. This could provide further evidence for the use of a FGCS-specific model and potentially help identify unique differences under this umbrella. The more that research can dismantle this narrative, the more that institutions can have backing to provide even greater support to FGCS, such as mentoring and MLC opportunities.

### **Limitations**

There are some limitations to note in this study. First, the recruitment of FGCS from schools with programs dedicated to their support and development may be limiting as the participants are likely connected to additional support at the university. This could lead to a somewhat skewed sample in that these students are receiving more support than FGCS at universities without existing programs. Additionally, I only recruited FGCS currently in college. This limits the ability to compare the results to FGCS who left

higher education, and how they might demonstrate these qualities. Recruiting only current students also has limitations as we cannot examine how these factors may change over time. Current students may have different perceptions of their experience in the various variables measured compared to looking retrospectively at their experience post-graduation or after working in their career for some time. Further, I did not assess potential differences by class rank for current students, but it is likely that subjective reports of the variables measured in this study change over the course of a student's educational journey. A senior FGCS likely has a different perspective than a student who just began their first semester in college. FGCS who have graduated are also likely to have a more nuanced and clear understanding of how these factors impacted them in college and demonstrate a different perspective on their outcomes as well. Future research could be bolstered by expanding research on the critical model with wider populations of FGCS, including former FGCS now working.

Further, the use of a cross-sectional design is also a limitation. First, it prevents the ability to examine how these variables change over time, and these variables are likely to be dynamic over the course of a person's time in college. Being unable to understand the development or dynamics of how these variables change over time limits the findings to being more of a snapshot frozen in time, and thus less generalizable. Additionally, a cross-sectional design cannot prove cause and effect, but solely associations. This presents a limitation as we can only use these results as evidence of an associations of cultural wealth to outcomes, but there is no evidence that having cultural wealth causes these outcomes or that there is a temporal relationship between the two.

These limitations could be areas to address in future research using other research designs to explore how the variables change over time.

As previously mentioned, the academic persistence measure used, the Persistence/Voluntary Dropout Decision Scale, demonstrated poor validity with this sample and had a Cronbach's alpha of only .26 (Pascarella & Terenzini, 1980). Previous studies with diverse samples of undergraduate students using this measure showed adequate internal consistency, evidence of predictive validity, as well as significant correlations with other measures such as GPA, educational self-efficacy, and others (Cadenas, 2016; Robinson Kurpius, et al., 2008). One possible explanation is the limited range of responses on this scale. With a possible range of scores between 1-5, the actual range of responses was slim at only 1.67, with a minimum of 3.33 to 5 in participants. This limited variance could have led to issues with the measure and its utility in this sample.

Another possible explanation is the individual questions were not all tapping into the same constructs, as they had with other samples. When examining the questions in this measure, there seem to be two potential factors: commitment to the particular institution and commitment to staying in college. For example, see the following two items from the measure: (a) It is important to me to graduate from college; and (b) It is likely that I will register at this university next fall. While there has been internal consistency demonstrated in other samples with this measure, it still seems possible that with this particular sample, these items did not tap into the same factors and thus resulted in low internal consistency. A student could easily agree that graduating from college is important to them, but they do not particularly feel a fit with their current university, and

thus respond very differently to the items in the survey. Due to obligations to their family, work, or financial reasons, FGCS may not choose universities based on “fit” but rather based on proximity, cost, and access. Conflating commitment to a particular university with desire to graduate from college is potentially misplaced with this population. This is not a fault of FGCS, but rather a fault with the assumptions and norms of “traditional” students that are blindly applied to all students. Not all students choose their university based on the “fit” they feel, but rather as a result of access and proximity to other obligations. Further, trying to examine this complex process with a few items is likely oversimplified. As QuantCrit researchers argue, the use of statistical analysis with distinct categories and units of measurement are not inherently useful or meaningful, but rather should be carefully assessed and also amplified using qualitative data (Garcia, López, & Vélez, 2018). Although I did not collect qualitative data in this study to provide a deeper understanding of students’ lived experiences related to persistence, this would be one helpful way to better assess these results and generate a FGCS-centered understanding of persistence. Ultimately, it is possible that this measure may not be the most appropriate to use with FGCS, however future research should examine this more directly.

Lastly, while this study was one of the first to test the propositions of Garriott’s (2020) critical model, it only tested a portion of the model. It is still unclear how cultural wealth variables operate with other constructs in the model, such as structural/institutional conditions and social-emotional experiences. Further, the sample was relatively small which limits the generalizability of the results to various sub-populations of FGCS.



## **Conclusion**

The critical cultural wealth model (Garriott, 2020) provides a framework for understanding the unique academic experiences of FGCS. This study provided initial support for the utility of this model in FGCS, including additional backing for taking a strengths-based approach. Results from FGCS in this study demonstrated the importance of resilience, critical consciousness, and family encouragement for work volition, well-being, and academic major satisfaction. Further, findings showed how work volition in particular is a key factor in explaining the relations of FGCS's cultural wealth to academic and psychological outcomes. Additional research in these areas will help expand the understanding of FGCS's experiences and ways to promote their success and well-being. FGCS do bring unique strengths to academic environments, but more could be done to capitalize and build upon these strengths within institutions of higher education. FGCS would likely benefit from programs that provide them mentorship, involve them in MLC, and help develop their sociopolitical efficacy. Further, it is important to acknowledge that the responsibility to support students lies with the institution itself. As Braxton and colleagues (2013) argue, the commitment to student welfare should be the guiding force in policy and programming decisions, yet the burden is nearly always on the student themselves to navigate these complex education systems. If systems of higher education are genuinely engaged in supporting their FGCS, additional steps must be taken to institute policies and programs that enhance their strengths and promote their success, as delineated in this study. Doing so will not only promote FGCS, but also allow them to share their unique knowledge with others.

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## Appendix A

The Brief Resilience Scale (BRS; Dalen, Wiggins, Tooley, Christopher, & Bernard,  
2008)

### Brief Resilience Scale (BRS)

Please respond to each item by marking <u>one box per row</u>		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
BRS 1	I tend to bounce back quickly after hard times	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
BRS 2	I have a hard time making it through stressful events.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
BRS 3	It does not take me long to recover from a stressful event.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
BRS 4	It is hard for me to snap back when something bad happens.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
BRS 5	I usually come through difficult times with little trouble.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
BRS 6	I tend to take a long time to get over set-backs in my life.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

**Scoring:** Add the responses varying from 1-5 for all six items giving a range from 6-30. Divide the total sum by the total number of questions answered.

**My score:** \_\_\_\_\_ item average / 6

## Appendix B

The Career Support Scale (CSS; Binen, Franta, & Thye, 1995; Current version modified from adaptation by Flores & O'Brien, 2002)

1. My primary caregiver(s) support my ideas about careers.
2. My primary caregiver(s) agree with my career goals.
3. My primary caregiver(s) would have different expectations of my career if I was of the opposite sex.
4. My primary caregiver(s) and I often discuss my career plans.
5. My primary caregiver(s) understand how hard it can be to pursue a career.
6. I do not feel support from my primary caregiver(s) for my career plans.
7. My primary caregiver(s) think I'm headed in the right direction in my career goals.
8. I feel encouragement from my primary caregiver(s) to pursue my career goals.
9. My primary caregiver(s) encourage me to try new things and learn from my mistakes.
10. My primary caregiver(s) think I should aim higher in my career goals.

1 = Almost Never

2 = "2"

3 = Sometimes

4 = "4"

5 = Almost Always

## Appendix C

### The Critical Consciousness Scale (CCS; Diemer, Rapa, Park, & Perry; 2017)

#### Critical Consciousness Scale

**Instructions:** Please respond to the following statements by circling how much you agree or disagree with each statement. For each statement, choose “Strongly Disagree,” “Mostly Disagree,” “Slightly Disagree,” “Slightly Agree,” “Mostly Agree,” or “Strongly Agree.”

Strongly Disagree	Mostly Disagree	Slightly Disagree	Slightly Agree	Mostly Agree	Strongly Agree
1	2	3	4	5	6
1. Certain racial or ethnic groups have fewer chances to get a good high school education					
1	2	3	4	5	6
2. Poor children have fewer chances to get a good high school education					
1	2	3	4	5	6
3. Certain racial or ethnic groups have fewer chances to get good jobs					
1	2	3	4	5	6
4. Women have fewer chances to get good jobs					
1	2	3	4	5	6
5. Poor people have fewer chances to get good jobs					
1	2	3	4	5	6
6. Certain racial or ethnic groups have fewer chances to get ahead					
1	2	3	4	5	6
7. Women have fewer chances to get ahead					

1                      2                      3                      4                      5                      6

8. Poor people have fewer chances to get ahead

1                      2                      3                      4                      5                      6

9. It is a good thing that certain groups are at the top and other groups are at the bottom

1                      2                      3                      4                      5                      6

**OVER →**

Strongly Disagree      Mostly Disagree      Slightly Disagree      Slightly Agree      Mostly Agree      Strongly Agree

1                      2                      3                      4                      5                      6

10. It would be good if groups could be equal

1                      2                      3                      4                      5                      6

11. Group equality should be our ideal

1                      2                      3                      4                      5                      6

12. All groups should be given an equal chance in life

1                      2                      3                      4                      5                      6

13. We would have fewer problems if we treated people more equally

1                      2                      3                      4                      5                      6

**Instructions:** Please respond to the following statements by circling how often you were involved in each activity in the last year. For each statement, choose “Never did this,” “Once or twice last year,” “Once every few months,” “At least once a month,” or “At least once a week.”

Never did this      Once or twice last year      Once every few months      At least once a month      At least once a week  
1                      2                      3                      4                      5

14. Participated in a civil rights group or organization

1                      2                      3                      4                      5

15. Participated in a political party, club, or organization

1                      2                      3                      4                      5

16. Wrote a letter to a school or community newspaper or publication about a social or political issue

1                      2                      3                      4                      5

17. Contacted a public official by phone, mail, or email to tell him/her how you felt about a particular social or political issue

1                      2                      3                      4                      5

Never did this	Once or twice last year	Once every few months	At least once a month	At least once a week
1	2	3	4	5

**OVER →**

18. Joined in a protest march, political demonstration, or political meeting

1                      2                      3                      4                      5

19. Worked on a political campaign

1                      2                      3                      4                      5

20. Participated in a discussion about a social or political issue

1                      2                      3                      4                      5

21. Signed an email or written petition about a social or political issue

1                      2                      3                      4                      5

22. Participated in a human rights, gay rights, or women's rights organization or group

1                      2                      3                      4                      5

## Appendix D

### Persistence/Voluntary Dropout Decision Scale: Subscale V: Institutional and Goal Commitments (P/VDDS; Pascarella & Terenzini, 1980)

Strongly Agree					Strongly Disagree
1	2	3	4	5	

1. It is important for me to graduate from college
2. I am confident that I made the right decision in choosing to attend this university
3. It is likely that I will register at this university next fall
4. It is not important to me to graduate from this university
5. I have no idea at all what I want to major in
6. Getting good grades is not important to me

Items 4, 5, and 6 are reverse-coded.



## Appendix E

### Academic Major Satisfaction Scale (AMSS; Nauta, 2007)

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#### AMSS Item

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1. I often wish I hadn't gotten into this major.
  2. I wish I was happier with my choice of an academic major.
  3. I am strongly considering changing to another major.
  4. Overall, I am happy with the major I've chosen.
  5. I feel good about the major I've selected.
  6. I would like to talk to someone about changing my major.
- 

Participants respond on a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). Items 1, 2, 3, and 6 are reverse-coded.

## Appendix F

### Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985)

Below are five statements that you may agree or disagree with. Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

- 7 - Strongly agree
- 6 - Agree
- 5 - Slightly agree
- 4 - Neither agree nor disagree
- 3 - Slightly disagree
- 2 - Disagree
- 1 - Strongly disagree

\_\_\_\_ In most ways my life is close to my ideal.

\_\_\_\_ The conditions of my life are excellent.

\_\_\_\_ I am satisfied with my life.

\_\_\_\_ So far I have gotten the important things I want in life.

\_\_\_\_ If I could live my life over, I would change almost nothing.

- 31 - 35 Extremely satisfied
- 26 - 30 Satisfied
- 21 - 25 Slightly satisfied
- 20 Neutral
- 15 - 19 Slightly dissatisfied
- 10 - 14 Dissatisfied
- 5 - 9 Extremely dissatisfied

## Appendix G

Work Volition Scale—Student Version (WVS—SV; Duffy, Diemer, & Jadidian, 2012)

Please circle one answer to each of the following statements based on this scale:

- 1 = Strongly Disagree
- 2 = Moderately Disagree
- 3 = Slightly Disagree
- 4 = Neutral
- 5 = Slightly Agree
- 6 = Moderately Agree
- 7 = Strongly Agree

1. What I want has little impact on my future job choice (r).
2. In order to provide for my family, I will have to take jobs I do not enjoy (r).
3. Due to discrimination, I do not feel I have complete control over my ability to get a job (r).
4. Due to my financial situation, once I get a job I couldn't change jobs even if I wanted to (r).
5. I feel that my family situation limits the types of jobs I might pursue (r).
6. I worry that my life circumstances will prevent me from achieving my long term career goals (r).
7. Due to my financial situation, I will need to take any job I can find (r).
8. The only thing that matters in choosing a job is to make ends meet (r).
9. I know I won't like my future job, but it will be impossible for me to find a new one (r).
10. I will be able to change jobs if I want to.
11. Discrimination will not affect my ability to choose a job.
12. Once I enter the work world, I will easily find a new job if I want to.
13. I will be able to choose jobs that I want.
14. I will learn how to find my own way in the world of work.
15. I feel total control over my future job choices.
16. I will be able to do the kind of work I want to, despite external barriers.

Total scale: all items

Constraints subscale: 1, 2, 3, 4, 5, 6, 7, 8, 9

Volition subscale: 10, 11, 12, 13, 14, 15, 16

## Appendix E:

### ACKNOWLEDGEMENTS

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