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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

THE IMPACT OF HOPE ON THE RELATIONSHIP BETWEEN
SOCIOECONOMIC CONTEXT AND CAREER
EXPLORATION

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

Hunter Christian Vincente Montoya

College of Education and Behavioral Sciences
Department of Applied Psychology and Counselor Education
Counseling Psychology

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This Dissertation by: Hunter Christian Vincente Montoya

Entitled: *The Impact of Hope on the Relationship between Socioeconomic Context and Career Exploration*

has been approved as meeting the requirement for the Degree of Doctor of Philosophy in the College of Education and Behavioral Sciences in the Department of Applied Psychology and Counselor Education, Program of Counseling Psychology

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ABSTRACT

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Economic instability in the United States has significant mental health implications for populations who experience limited occupational autonomy. Literature has demonstrated that career exploration plays an important role in positive occupational outcomes, and research has begun to establish a relationship between hope and career exploration. Hope has been further associated with myriad positive outcomes in the fields of career development and counseling psychology. The purpose of this study was to examine the relationships between socioeconomic status, hope, and career exploration as guided by Social Cognitive Career Theory, and to ascertain whether hope may moderate between socioeconomic status and career exploration. A hierarchical linear regression was utilized to address research questions using data provided by a sample of 372 undergraduate students across the United States. Findings supported a significant relationship between hope and career exploration but did not find a moderation effect. Implications for theory, research, and clinical implication are discussed.

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qualities from you, Mom. I continue to perceive your influence as I grow, as I change, and as I *become*, and I could not be more grateful. I love you.

As I hope is made clear, I am naught but the sum of my relationships. This document, much like my *personhood*, is, therefore, born of the trust, love, and support that I have been privileged to receive over these many years. Thank you Moorea, Kathy, Jenny, Krista, Sabah, Cori, and to the many women who have cultivated me, poured into me with love, and challenged me to grow. I could not possibly be me without you, and nor would I want to be.

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CHAPTER I

INTRODUCTION

In this chapter, I provide a brief overview of the literature and the importance of this study. The theoretical framework will be introduced. The rationale for this study will be provided along with the research questions that guided the design and implementation of the study.

Background

An individual's occupation impacts the ways that they experience their communities (Y. Chen et al., 2020), derive a sense of purpose, and cultivate a sense of psychological well-being (Durkheim, 1897; Muller et al., 2020). However, as a result of job restructuring, rapid advances in technology, and globalization in recent decades, the present career environment is characterized by flux and constant change, with an increasing demand for self-directedness and adaptability (Hänggli & Hirschi, 2018). Further, as of the writing of this chapter, the world has experienced dramatic shifts resulting from the COVID-19 pandemic. As policymakers introduced contingency planning to manage adversities to major economies, institutions, and public well-being, businesses have experienced subsequent disruptions including shutdowns, online transitions, supply shortages, demand fluctuations, and production closures (Shirahmadi et al., 2020). These changes, particularly within the context of COVID-19-related deaths and bereavement, have had substantial impacts on global economies, including dramatic increases in the unemployment rate worldwide (Kawohl & Nordt, 2020) as well as changes in income (e.g., Qian & Fan, 2020), hiring rates, work-family conflicts (e.g., Frank et al., 2021), absteneism

(e.g., Van Der Feltz-Cornelis et al., 2020), and psychological impairment (e.g., Breen et al., 2021). These significant changes to the occupational landscape have led to an atmosphere of general uncertainty, where individuals must navigate significant ambiguity around job security, income, and professional development opportunities (Parolin et al., 2020), the well-documented stresses of which are associated with anxiety, depression, powerlessness, and suicide (e.g., Kawohl & Nordt, 2020; Khudaykulov et al., 2022). These changes have made career pursuits less predictable and less structured, and the process by which individuals explore the occupational landscape to make relevant career decisions may be more critical than ever (H. Chen et al., 2022). Consistent with the Social Cognitive Career Theory framework, populations who experience limited occupational autonomy, such as socioeconomically disadvantaged individuals and first-generation college students (FGCS; Poleshuck & Green, 2008), may be disproportionately affected by changes in the occupational landscape that require increased self-directedness (S. D. Brown & Lent, 2019).

Existing inequalities have placed individuals and groups in unequal social positions, where the pandemic-related changes have disproportionately impacted vulnerable populations far more harshly than those with structural or contextual advantages (Kristal & Yaish, 2020; Qian & Fan, 2020). For example, even after the financial distributions of the CARES Act (e.g., \$600 per week unemployment supplement, etc.), the monthly poverty rate increased in the United States during 2020; this includes an increase in *deep* poverty, defined as having monthly income lower than half the monthly poverty threshold, with particularly acute increases for Black and Hispanic individuals as well as for children (Parolin et al., 2020). Pandemic-related changes have also included closures of universities and schools as well as shifts towards remote learning platforms (Tarkar, 2020). While these platforms have included a host of benefits, they have also been

affected by structural inequities that include the inability of low-income schools to access online education solutions, lack of at-home supervision or support, and lack of economic resources to purchase online learning devices and maintain required internet connectivity (Miyah et al., 2022). Consequently, factors contributing to successful career development outcomes have a significant impact at the individual level with disproportionate impacts in accordance with structural and social inequities.

The increasingly challenging experience of attaining meaningful work may have far-reaching implications for mental health and well-being (Muller et al., 2020). The completion of a college degree is associated with financial security and social mobility, including increased positive occupational outcomes, increased likelihood of full-time employment, and higher earnings (Witteveen & Attewell, 2017), while fewer jobs, fewer benefits, and lower wages have contributed to the existential challenges facing those without a bachelor's degree who seek to earn a family wage (Cherlin, 2014; Qian & Fan, 2020; Sasson & Hayward, 2019). These trends, overall, suggest that contemporary challenges around sustaining working-class jobs may contribute to increasing rates of mortality by suicide and drug poisoning (Case & Deaton, 2015; Kawohl & Nordt, 2020; Masters et al., 2017) and correlate with the increasing numbers of degree-seeking adults that have plateaued since 2014 (Muller et al., 2021).

However, beyond the acquisition of a college degree, another major factor associated with positive occupational outcomes is an individual's understanding of both themselves and the occupational environment with which they intend to interact (e.g., H. Chen et al., 2022; Werbel, 2000). Such an understanding is generally afforded by purposive orientation of thoughts and behaviors that facilitate access to new information about jobs, organizations, and the occupational landscape, a process conceptualized in career development literature as *career*

exploration (Jiang et al., 2019; Stumpf et al., 1983). This process of career exploration may be particularly germane to young adults who face school-to-work transitions and are likely to make significant financial investments in their future careers (e.g., pursuing higher education; Lent & Brown, 2013). A forward-thinking, career-oriented perspective is often fundamental to success, as the focus of many college students is what they want to pursue after graduation; many graduates still find themselves unprepared for job searches, or for graduate school, upon completion of their degrees (Bubic, 2014; Chuang et al., 2009; Komarraju et al., 2014; Roscoe & Strapp, 2009; E. Thompson & Feldman, 2010).

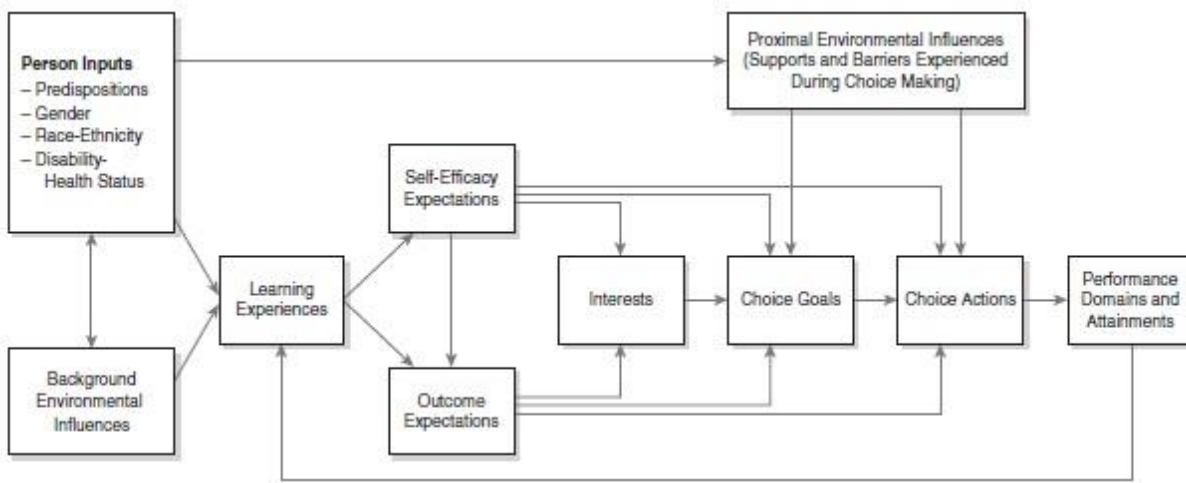
In recent years, researchers have examined the role of individual differences and antecedents in the career exploration of young adults (Jiang et al., 2019). Recent research in the fields of management and vocational psychology has found that hope may be a factor that is critical for vocational pursuits, including career exploration, and particularly in a career environment that is characterized as dynamic and uncertain (Hirschi et al., 2015). However, while hope has been identified as a construct that is conceptually consistent with multiple facets of Bandura's Social Cognitive Theory (Snyder et al., 1991) and has been studied in the context of career development (e.g., Luthans, 2002), no known study to date has examined the relationship between hope and career exploration as guided by the framework of Social Cognitive Career Theory.

Social Cognitive Career Theory

An individual's occupation or career has far-reaching implications for their identity, well-being, and sense of worth (Super, 1955). Thus, career development has continued to be an important area of study in the field of psychology, producing multiple important theories of career development. One primary theory that arose in the 1990s and continues to produce

meaningful research is Social Cognitive Career Theory (SCCT; Lent et al., 1994), which is predicated around the notion that self-efficacy, outcome expectations, and goals all interact to shape and influence career choice.

Rooted in Bandura's (1977, 1986) Social Cognitive Theory, SCCT maintains that personal factors (e.g., predispositions, gender, race, etc.) and background environmental influences (e.g., socioeconomic status, social/familial support, etc.) primarily set the stage for an individual's learning experiences. These learning experiences are, therefore, unique to each individual; they shape our beliefs around our own capabilities (e.g., self-efficacy expectations) as well as our beliefs around the predicted outcomes of our endeavors (e.g., outcome expectations), both of which serve as an individual's primary guides in the development of their career. High levels of self-efficacy and positive outcome expectations lead to increased interest in specific areas, which then translate into career-specific goals based on interest. Within the SCCT framework, the development of goals is essential, as they facilitate the development of motivation and provide direction for an individual's energy and subsequent career-related actions, such as career exploration behaviors (see Figure 1.1). Career exploration is, therefore, a central construct within SCCT and most career development models (S. D. Brown & Lent, 2019; Jiang et al., 2019; Lent et al., 1994). As can be seen in Figure 1.1, the development of goals and actions is further impacted by the presence of proximal environmental influences, including supports (e.g., access to scholarship funding) and barriers (e.g., discrimination).

Figure 1.1*The Directional Framework of the Social Cognitive Career Theory*

The SCCT framework may be best illustrated with an example: Larry. Larry's personal factors (i.e., person inputs) include being a White, heterosexual, teenage male, raised in an upper-middle class home. The background environmental factors associated with Larry's personal factors, thus, *may* include exposure to adults with fulfilling or high-income careers, support and encouragement from caregivers and important others, and regular access to informational resources. These personal factors and background environmental factors work to shape Larry's learning experiences, such as watching his father take steps to succeed in his career or experiencing his own success in mathematics at school. He may further experience proximal support as his teachers encourage him to apply for scholarships to attend university. These learning experiences shape Larry's self-efficacy beliefs (e.g., *I am really good at math*) and outcome expectations (e.g., *if I work hard, I will succeed like my dad did*). These self-efficacy beliefs and outcome expectations then serve to influence interests (*I like math because I am good at it*), goals (*I want to become an accountant after I graduate*), and ultimately actions (*I'm going to seek information about how to become an accountant*). Specific career-relevant

actions, such as researching the requirements to establish a career as an accountant, are considered career exploration behaviors. Thus, Larry appears to have the support system and resources necessary to pursue accounting while experiencing limited barriers in this process.

Need for This Study

Research has shown that high school students engage in more career exploration than elementary school students, and that young adults continue to further engage in more career exploration than high school students as career-related decisions become more pertinent to their present circumstances (Lent & Brown, 2013). However, research has indicated that those with limited income and socioeconomic mobility experience significant personal and contextual barriers in their career development (S. D. Brown & Lent, 2019; Poleshuck & Green, 2008). As a result of increasing structural inequities and resource inequalities, many individuals and communities do not have the option to make decisions based on their interests or simply do not have the resources to explore vocational interests (Blustein et al., 2019; S. D. Brown & Lent, 2019; Shirahmadi et al., 2020). To address this, SCCT research has primarily explored social identity variables such as race, gender, sexual orientation, and SES through their influence as person inputs and association with specific supports and barriers (Flores et al., 2017; Lent et al., 2017). For instance, many first-generation college students (FGCS) come from lower-income households, experience insecurities around academic fit (Pratt et al., 2019) and lack parental support for their academic and occupational ambitions (Atherton, 2014), which impact their career development as contextual barriers (Lent et al., 2000). However, Flores et al. (2017) asserted that an alternate conceptualization of socioeconomic status (SES) at the level of a distal background contextual factor within the SCCT framework may provide researchers with an opportunity to explore the macrosystemic effects of income inequality and classism on career

development. Further, career exploration researchers have called for a more thorough examination of individual characteristics and contextual factors in order to develop a more comprehensive understanding of their myriad effects on one's ability to explore interests (Jiang et al., 2019), and one such factor may be hope (Hirschi et al., 2015).

Hope researchers have postulated that emerging adults who have higher levels of hope find it easier to explore career options and reflect on satisfactory career goals relative to lower hope individuals, as hope encompasses the capacity to envision multiple pathways to these goals and the belief in one's ability to achieve them. As such, Snyder conceptualized hope as a capacity that functions similarly to the combined, reciprocal effects of self-efficacy beliefs and outcomes expectations as conceived by Bandura (Bandura, 1986; Snyder et al., 1991). Despite hope's association with myriad positive occupational outcomes (e.g., Luthans et al., 2015), only one study to date has directly examined the empirical relationship between hope and career exploration. Hirschi et al. (2015) found that hope explained the variance in career exploration beyond the effects of generalized self-efficacy beliefs and perceived social support in Swiss adolescents and undergraduate students, though this study was devoid of theoretical guidance. However, despite the conceptual fit between hope and Bandura's (1986) Social Cognitive Theory (Snyder et al., 1991), as well as the presence of hope as a foundational resource in career development literature (e.g., Luthans et al., 2015), no study to date has established the utility of SCCT in the conceptual guidance of hope research and no study has explored the relationship between hope and career exploration in a sample of U.S. university students.

Undergraduate students may be in a stage of young adulthood where important antecedent and developmental factors culminate in highly essential career exploration experiences (Lent & Brown, 2013). By examining the relationship between levels of hope and

levels of career exploration in university undergraduate students, we can develop a preliminary understanding of important cognitive factors that impact career exploration at a crucial junction in the lives of young adults. As hope is a factor that can be cultivated and developed, it may have functional utility in career development that transcends important personal and contextual factors such as social class. For instance, hope has long been identified as a foundational factor for successful psychotherapeutic outcomes (Wampold & Imel, 2015). The development and identification of the components of hope (e.g., agency beliefs) are important staples of strength-based psychotherapies, such as solution-focused brief therapy (SFBT; de Shazer et al., 1986). With this understanding, findings may have utility for career counselors and clinicians in developing interventions that promote positive and fruitful career exploration for clients in need.

Purpose

The purpose of this study was to examine the relationship between hope and career exploration, with the intention of exploring hope's ability to explain variance in career exploration behaviors beyond the potential influence of such factors as socioeconomic status and FGCS status. Therefore, two identity factors related to career development were also explored in the present study: socioeconomic status and first-generation college student status. The uniqueness of this study lies in the use of SCCT to identify the extent to which the factors of socioeconomic status, first-generation college student status, and the construct of hope may account for variance in career exploration behaviors among college students.

The development and manifestation of career exploration behaviors in college students were conceptualized through Social Cognitive Career Theory. SCCT postulates that person inputs and learning experiences, such as those associated with socioeconomic status and first-generation college student status, directly influence outcome expectations and self-efficacy

beliefs, which then directly influence the development of interests, goals, and actions. Similar to these outcome expectations and self-efficacy beliefs, an individual's level of hope is affected both by dispositional factors (i.e., person inputs) and learning experiences associated with background contextual affordances. Thus, similar to self-efficacy beliefs and outcome expectations, an individual's level of hope may be expected to directly influence the development of their interests, goals, and actions. In this way, an individual's level of hope may represent the implicit meaning made from their learning experiences, which holds subsequent implications for career exploration as envisioned through the SCCT framework. Supports and barriers were not directly examined in this study; socioeconomic status was positioned as a distal background contextual affordance in this study to explore its ability to account for possible macrosystemic effects of income inequality.

Thus, this study aimed to examine the relationship between hope and career exploration with explicit consideration of the differential experiences that are afforded by socioeconomic status and first-generation college student status identities. This was ultimately achieved through the use of a non-experimental, cross-sectional, correlational research design. Survey data was collected from a diverse sample of college students to explore the presented constructs and their relationships.

Research Questions

- Q1 Is career exploration significantly associated with socioeconomic status, first-generation college student status, and hope in undergraduate students?
- Q2 Do levels of hope explain levels of career exploration after controlling for first-generation status, socioeconomic status, and demographic variables in undergraduate students?
- Q3 Does hope act as a moderating variable between socioeconomic status and career exploration in university students?

Definition of Terms

Career Exploration: Purposive behavior or cognitions regarding occupations, jobs, and organizations; it is the gathering of internal and external information relevant to the progress of one's career (Stumpf et al., 1983).

First-Generation College Student (FGCS): College students whose parents have either attained no college education or have not completed a bachelor's degree. (Ishitani, 2006).

Hope: "A cognitive set that is based on a reciprocally-derived sense of successful (a) agency (goal-directed energy) and (b) pathways (planning to meet goals)," (Snyder et al., 1991, p. 571).

Socioeconomic Status (SES): A measure, metric, or indicator of a person or family's economic and social position in relation to others.

Limitations

Several limitations were present within the study. A salient limitation includes the overall composition of the sample. This sample was largely unable to generalize nationwide due to the imbalanced representation within the demographics. The sample skewed largely in favor of White, female college students, failing to match National Center for Education (2020) data regarding race and gender demographics. The ability of this study to generalize findings is, therefore, limited.

This study may further include methodological limitations with respect to measurement. This study primarily utilized self-report measures. While these measures are commonplace in psychological research, they may introduce limitations regarding validity and reliability. Participants may inaccurately report their experiences for a number of reasons, including but not limited to misunderstanding the items, poor insight into one's own experience, and social

desirability pressures (Heppner et al., 2016). Further measurement limitations may be related to construct validity, such as the use of self-reported measurement of income to represent socioeconomic status. While this measure was chosen with intention, it may fail to capture important elements of the construct relevant to this study.

A final, primary limitation of this study may include its overall design. This study used a non-experimental, cross-sectional, correlational design. While the design of this study may be sufficient for the purposes of establishing the existence of important relationships in the data, its ability to infer causality or underlying structure is inherently limited by the lack of manipulation or structural analyses.

Summary

This chapter included a discussion of the increasing challenges of the occupational landscape as well as the importance of career exploration and hope. Career exploration has been shown to play an important role in positive occupational outcomes (e.g., H. Chen et al., 2022), and may be particularly germane to individuals experiencing income inequality as well as college students facing school-to-work transitions. Hope has been associated with positive career outcomes (e.g., Luthans et al., 2015) as well as successful psychotherapeutic outcomes (Wampold & Imel, 2015). Social Cognitive Career Theory provides a meaningful framework through which to conceptualize the potential relationships between these variables.

This study draws from substantial extant literature as well as guidance from Social Cognitive Career Theory. I contend that one's sense of hope may have an impact on subsequent career exploration pursuits with particular respect to socioeconomic context, and further that SCCT may provide a meaningful framework through which to guide the examination of hope within current and future career development research. The purpose of this study was, therefore,

to examine the relationships between socioeconomic status, hope, and career exploration, and to ascertain whether hope can--and to what extent does--act as a moderator between socioeconomic status and career exploration. It was my intention that the results of this study may further illuminate the importance and impact of hope-related interventions for counseling psychologists, career counselors, and mental health professionals who work with emerging adult populations. If it is the case that hope may facilitate career exploration and moderate macrosystemic impacts of socioeconomic status, it may expand the understanding of our ability to foster personal empowerment through hope development in clinical settings and beyond. Given the foundational importance of hope in therapeutic change, the results of this study may help consolidate a clinical conceptualization of hope that can be applied to a number of commonly used evidence-based treatments as well as establish the way that hope development may promote social justice through mechanisms of empowerment and social mobility.

CHAPTER II

REVIEW OF LITERATURE

This chapter provides a review of the Social Cognitive Career Theory (Lent et al., 1994; Lent et al., 2000) and the literature pertaining to the two primary constructs under investigation, hope and career exploration. Further, this chapter provides a review of their relationship with the individual and contextual factors of socioeconomic status and first-generation college student status. The relationships between hope and career exploration, with particular respect to these individual and contextual factors, have not been previously investigated under the lens of SCCT.

Social Cognitive Career Theory

Social Cognitive Career Theory (SCCT; Lent et al., 1994) provides a theoretical framework through which to conceptualize career behaviors, outcomes, and interventions, and has been a dominant career development model for researchers and practitioners for nearly 30 years (Flores et al., 2017). Social Cognitive Career Theory's (SCC) roots lie deeply in Bandura's (1986) Social Cognitive Theory, which prioritizes the relationships between personal factors, environmental contexts, and behaviors in an individual's social cognitive development. Bandura posited that these domains interact reciprocally to influence one another and also influence the internal development of motivation and important self-efficacy beliefs. Self-efficacy beliefs refer to a person's level of confidence in his or her ability to successfully perform a behavior, and outcome expectations refer to the anticipated consequences of a person's behavior. Bandura, thus, asserted that both were influenced by different types of social learning experiences (i.e., performance that are highly dependent on the interactions between personal factors and

environmental contexts (Bandura, 1986; Lent et al., 1994). For example, recall the previous vignette of Larry, whose belief in his ability to succeed as an accountant resulted from a combination of personal factors, a variety of learning experiences at home and at school, and interaction with contextual supports and barriers.

Through this social cognitive lens, Lent et al.'s (1994) Social Cognitive Career Theory structurally delineates how personal factors, contextual affordances, and sociocognitive variables interact to influence the development of self-efficacy and outcome expectations relevant to career development (S. D. Brown & Lent, 2019). These self-efficacy beliefs and outcome expectations are fundamental to the development of an individual's career-relevant interests, goals, and actions (such as career exploration behaviors) as one navigates their external environment. As illustrated in Figure 1.1, SCCT utilizes a cognitive constructivist approach to individual career development and indicates a developmental process where each concept builds upon the one before it. Importantly, SCCT's emphasis on social cognition (i.e., the interactive relationship between the person and the environment) asserts that individuals have a proactive role in shaping their environments as well as reacting to environmental stimuli, including an individualized interpretation of potential barriers (Lent et al., 2000; Tate et al., 2015).

Self-Efficacy and Outcome Expectations

As stated previously, an individual's personal factors and background contextual affordances (e.g., socioeconomic status and access to resources, respectively) directly influence an individual's learning experiences. For instance, SCCT posits that demographic and identity factors, such as gender (S. D. Brown & Lent, 2019) and socioeconomic status (Flores et al., 2017), constitute person inputs that have a direct relationship with their learning experiences, such that individuals of differing genders or socioeconomic status may receive different

information or messages about career options. For example, a person raised in a low-income community in rural Kansas and a person raised in a middle-class suburb of southern California may subsequently have different learning experiences around what they are good at, what types of skills are relevant to their lives, and what types of jobs may be available to them. These dynamic learning experiences then directly influence the development of self-efficacy beliefs and outcome expectations (Lent et al., 1994).

Self-efficacy is not only one of the essential elements of Social Cognitive Career Theory; in psychological research, self-efficacy is a construct that is associated with myriad positive psychological outcomes, from career exploration behaviors to emotional stability (e.g., Judge & Bono, 2001; Judge et al., 2003). Self-efficacy has been associated with numerous qualities that contribute to success, such as conscientiousness, goal-setting, and goal commitment (e.g., Erez & Judge, 2001; Milam et al., 2019). Generally speaking, self-efficacy beliefs refer to a person's level of confidence in their ability to successfully perform a behavior (Bandura, 1997; Lent et al., 1994). Bandura (1986) asserted that the most strongly facilitative level of self-efficacy would just exceed an individual's current skill level by encouraging them to pursue challenges that foster further growth in skills and efficacy. Conversely, Bandura asserted that self-efficacy beliefs can be maladaptive if they are unrealistically higher or lower than one's current skill level. For example, a person's confidence in their skills at basketball (i.e., self-efficacy beliefs) may lead them to challenge and play against more skilled players, which may serve to help this person improve their basketball skills and further lead to increased self-efficacy beliefs. However, if this person's confidence in their basketball skills was unrealistically low, they may not seek to challenge more skilled players and, therefore, may be less likely to experience their own improvement. Alternatively, if this person's confidence in their basketball skills was

unrealistically high, they may seek to challenge other players who are far more skilled than themselves and may experience subsequent discouragement from severe loss, which may lead to diminished self-efficacy beliefs.

Outcome expectations, on the other hand, refer to the anticipated consequences of a person's behavior (Lent et al., 1994). Bandura's (1986) Social Cognitive Theory posits that an individual's choice to act is predicated both on their beliefs about their ability to perform as well as their expectations about the outcomes of their behavior. However, the strength or influence of one's outcome expectations is predicated not only on the nature of the anticipated outcome but is also dependent on the relative value that is attributed to the anticipated outcome. For example, a person may have positive outcome expectations around being able to acquire a real estate license and succeed as a realtor. However, if this person has a passion for music and is interested in a career in the music industry, the positive outcome expectations around real estate may not provide a particularly strong influence on the career choices they make. Individual values are ascertained during one's development through learning experiences and continue to influence the construction of an individual's career-related interests, goals, and actions (S. D. Brown & Lent, 2019; Lent et al., 1994).

As shown in Figure 1.1, career-relevant interests are conceptualized as the product of both self-efficacy and outcome expectations (S. D. Brown & Lent, 2019). Throughout development, individuals tend to gravitate towards, and develop interests in, activities where they feel most efficacious and expect the strongest positive outcomes (Lent et al., 1994). Spawned from self-efficacy beliefs and outcome expectations, these career-relevant interests foster and facilitate the development of career-relevant goals, which can be understood as intentions to engage in a particular activity (e.g., pursuing career-oriented pathways) or achieve a

certain level of performance. Goals are developmentally significant, as they help an individual organize and guide their subsequent actions and behaviors in their areas of interest. An individual's success or failure in accomplishing personal goals provides important information that can reciprocally strengthen or weaken self-efficacy beliefs and outcome expectations, helping individuals revise and confirm their decisions and processes. Goals can be greatly impactful by helping sustain behavior in the presence of barriers and in the absence of support.

Supports and Barriers

Social Cognitive Career Theory (SCCT) posits that there are other factors that can either increase or decrease an individual's ability to make decisions or direct actions based on their interests (Lent et al., 2000). As visualized in Figure 1.1, these environmental influences include differential levels of support (e.g., financial, educational, or familial support), barriers (e.g., lack of education, inadequate finances, familial pressures, or discrimination), and available opportunities. Interests tend to be most impactful under supportive conditions that allow individuals to pursue them, and yet many individuals do not have the opportunity to follow their interests as a result of contextual barriers (S. D. Brown & Lent, 2019; Flores et al., 2017). Individuals may find themselves constrained by educational limitations, economic needs, or familial pressures, all of which are common barriers experienced by first-generation college students (Pratt et al., 2019); in such scenarios, one may need to compromise on the pursuit of their interests in favor of pathways guided by such pragmatics as opportunity availability (e.g., "what jobs can I find with only a high school diploma and that are nearby to my sick parents?"), self-efficacy beliefs (e.g., "I may hate working for the family business, but I know how to do it well enough ...") and outcome expectations (e.g., "I don't enjoy working in insurance, but it's secure and it keeps the lights on").

Social Cognitive Career Theory (SCCT) and Socioeconomic Status

Social class has an inextricable link to career development. Social class influences one's preparation for, and entrance into, the labor market (Diemer & Ali, 2009), while access to work and the resources it provides are essential components of social mobility within the United States (Fouad & Fitzpatrick, 2009). Thus, those with higher socioeconomic status (SES) may have different career development experiences than individuals with low SES, likely due to differential access to personal, interpersonal, and systemic resources (Diemer & Ali, 2009; Pratt et al., 2019). For instance, higher SES graduates have been found to be more likely to attain a job after graduation and receive a higher salary, both initially as well as 4 and 10 years later (Witteveen & Attewell, 2017).

Specifically, individuals from low socioeconomic backgrounds may lack essential role models, encouragement from important figures, and access to resources with which to gather vocational information, resulting in contextual barriers that inhibit the development of accurate or complex educational and occupational aspirations (M. T. Brown, 2000). Further, recent but limited research in counseling psychology has identified experiences of classism as a contextual barrier (Sampson, 2016; M. N. Thompson, 2013; M. N. Thompson & Subich, 2013). Classism was found to be associated with numerous negative outcomes, such as mental health symptoms (e.g., depression, anxiety, stress; M. N. Thompson & Subich, 2013), lower life and academic satisfaction (Allan et al., 2016), lower coping efficacy and outcome expectations for obtaining a college education (M. N. Thompson, 2013), and lower levels of work hope (Juntunen & Wettersten, 2006), all of which have implications for career development.

In a comprehensive meta-analysis examining SCCT research related to social class, Flores et al. (2017) found support for the direct impacts of SES-related person inputs and background contextual factors on the development of self-efficacy beliefs and outcome expectations for low-income samples. Consistent with the SCCT model, their findings identified the importance of perceived barriers and social support from multiple domains (e.g., parents, peers, teachers) in the development of self-efficacy and outcome expectations. However, in their review, Flores et al. (2017) found that the conceptualization and operationalization of SES in extant research has been limited and inconsistent, noting that all but one of the SCCT studies that included social class as a variable within the model conceptualized SES as a person input. The authors assert that this engenders significant limitations in its ability to capture contextual experiences (e.g., classism), and that one way to better understand the scope of impact of SES in future SCCT research may be to explore SES as conceptualized from a macrosystemic perspective.

Flores et al. (2017) argued that a macrosystemic perspective of SES provides the flexibility to account for multiple environmental factors that influence career development at different levels of economic security. That is, when conceptualized at the level of a background contextual affordance, SES provides a platform through which to explore the macrosystemic influences of social class, including fundamental sociocultural experiences of classism, on career development via learning experiences that impact subsequent self-efficacy beliefs. For instance, researchers have noted that career-related cognitions are impacted by experiences of downward classism resulting from the protestant work ethic and meritocratic social judgment (Ali et al., 2013), from social class constructions within the U.S. Capitalistic system (Liu et al., 2004; M. N. Thompson, 2013), and through the “pedagogy of poverty” within the public educational system

(Haberman, 2010). Thus, future SCCT research may be well-positioned to explore SES as a background contextual variable to understand macrosystemic and sociocultural effects on learning experiences as well as self-efficacy, outcome expectations, and goal mechanisms such as career exploration.

Career Exploration

Career exploration behaviors are an example of choice actions that flow from self-efficacy beliefs, outcome expectations, and proximal environmental influences (see Figure 1.1; S. D. Brown & Lent, 2019). Career exploration refers to purposive behavior or cognitions regarding occupations, jobs, and organizations; essentially, it is the gathering of information relevant to the progress of one's career (Zikic & Klehe, 2006). This includes cognitions and behaviors related to career development, such as *where* one explores, *how* one explores, *how much* one explores, and *what* one explores. Individuals explore the environment as well as the self, considering different occupations, fields, or aspects of vocation. Career exploration, thus, refers to a wide variety of cognitions and behaviors, such as simply thinking about one's own job-relevant skill levels or experiences, considering what jobs or fields may be personally attainable or fulfilling, searching the internet for job-related information or opportunities, initiating conversations with knowledgeable individuals, or pursuing job shadowing or internship opportunities. Flum and Blustein (2000) asserted that career exploration provides cognitive and affective building blocks for autonomy and self-construction, which endow individuals with agency in the face of increasingly daunting work-based challenges. Career exploration is, thus, understood to be an adaptive mechanism of personal agency that fosters career adaptability (Hirschi, 2009; Savickas, 2002, 2013) and has been shown to facilitate the development of relevant career plans (e.g., Zikic & Klehe, 2006), the ability to manage unforeseen occupational

changes (e.g., Zikic & Hall, 2009), the ability to deal with diverse life transitions (Savickas, 1997), and the pursuit of a meaningful work life (Blustein, 1997). For example, by taking inventory of one's own career-relevant skills and experience, and considering their applicability to different fields of interest, an individual may experience increased confidence in the face of such adversities as restructuring or layoffs at their place of work. Specific to college students, career exploration has been found to increase mental health, their sense of belongingness (Bubic, 2014), satisfaction with their majors (Soria & Stebleton, 2013), and overall persistence in college (Littlepage, 2012).

However, the frequency of exploratory behaviors and the amount of information acquired by individuals may vary. During the process of career exploration, individuals consider different occupational fields and career environments, and place varying degrees of focus, value, and interest on their career objectives (Jiang et al., 2019). A wide body of research has demonstrated that personal characteristics (e.g., personality factors or identity variables) and the environment (e.g., social support or the occupational landscape) motivate meaningful career exploration, which, thus, influences career outcomes that have far-reaching implications for well-being and identity development (e.g., Cheung & Jin, 2016; Fan et al., 2012; Lent et al., 2017; Nauta, 2007; Zikic & Klehe, 2006).

Individual Antecedents

Consistent with SCCT, numerous personal and environmental antecedent factors have been found to drive career exploration in young adults. Personality traits that have been shown to influence and trigger career exploration behaviors include openness to experience and agreeableness (Li et al., 2015), positive beliefs about one's future career (Guan et al., 2017; Porfeli et al., 2012), hope (Hirschi et al., 2015), self-esteem (Cai et al., 2015), and self-efficacy

(Jiang et al., 2019). Beyond personality characteristics and beliefs, research regarding the impacts of psychological states and demographic variables on career exploration in early adulthood has been limited. Regarding the influence on person-environment relationships on career exploration, Sawitri and Dewi (2015) found that college students' perceptions of their academic fit, as well as the perceived congruence between their parents' and their own career expectations predicted increases in career exploration. Further, anxiety about the social environment has been found to hinder career exploration (Hardin et al., 2006). Importantly, SCCT posits that exploratory behaviors ultimately arise from a combination of individual factors, contextual factors, and the interaction between them (Lent et al., 2000).

Contextual Influences

Beyond the individual, a fair amount of research has also examined contextual supports and barriers that influence career exploration. For instance, while those in emerging adulthood appear to rely less on social support than adolescents, social support from educators has been found to predict career exploration behaviors (Cheung & Arnold, 2010), emphasizing the essential impact that career-oriented interventions and exposure may have on young adults and college students. Caring and supportive climates have been associated with strengthened career exploration (Bartley & Robitschek, 2000), and environments that involve tasks and promote skill-building have been further associated with increases in career exploration and occupational engagement (Poux & Fry, 2015). Conversely, barriers around interpersonal contexts can hinder exploratory behavior. For example, Guan et al. (2015) found that parental interference in their children's career development was negatively associated with career exploration and reduced autonomy.

Overall, more research needs to be completed to determine the nuanced role of contextual factors in facilitating career exploration in young adults (Jiang et al., 2019). This may be particularly germane under the lens of SCCT, which emphasizes the importance of the relationship between individual and contextual factors in the process of meaning-making and learning experiences (Lent et al., 2000). Extant research has identified a positive relationship between SES and career planning behaviors for low-income youth (Ali et al., 2005), and burgeoning research using Life History Theory has identified a relationship between SES and career exploration that is mediated by perceived resource scarcity in Chinese undergraduates (Hu et al., 2022). Thus, while little research to date has directly and quantitatively explored the relationship between SES and career exploration, conceptual guidance from SCCT and extant literature indicates that a positive relationship may exist between the two.

Outcomes

A growing body of research suggests that career exploration is associated with numerous positive career- and identity-related outcomes in young adults. For example, as one might expect, career exploration has long been positively associated with young adults' awareness of themselves and of the occupational landscape (Blustein, 1989; Cheung & Arnold, 2014). These increases in knowledge and information that result from exploratory pursuits have been associated with increases in employability (Forstenlechner et al., 2014; Praskova et al., 2015), which functions as an essential coping resource during career development (Fugate et al., 2004). Career exploration has also been found to reciprocally increase career decision self-efficacy and confidence (Cheung & Arnold, 2014; Cheung & Jin, 2016; Lent et al., 2016; Lent et al., 2017) which are central constructs in career development and help individuals make career-related

decisions that have far-reaching career implications for occupational success and personal well-being.

Career exploration behaviors may also help young adults build competencies, ascertain knowledge, and foster important career-related capabilities (Flum & Blustein, 2000; Zikic & Hall, 2009). Guan et al. (2015) found that higher levels of career exploration in Chinese undergraduate students predicted increased levels of career adaptability, influencing their capacities to self-regulate. Importantly, this suggests that career exploration may facilitate individuals' motivation to obtain helpful resources and identify personal competencies, thereby increasing their ability to effectively cope with change and adapt to complications in their work environments (Savickas, 2002; Strauss et al., 2012).

Foundational research has also established that career exploration helps individuals clarify their interests, elucidate and establish future career paths, and construct a sense of self (Flum & Blustein, 2000; Savickas, 2002). For example, career exploration has been found to predict a clearer professional identity in young adults (Praskova et al., 2015) and has been positively correlated with identity achievement in college students (Lucas & Hunt, 2002). Lucas and Hunt subsequently asserted that those who engage in career exploration are able to more meaningfully define themselves and maintain their identity in a vocational setting, indicating that career exploration may assist in defining and constructing a stable sense of identity.

Literature further suggests that career exploration can foster young adults' development of attitudes and behaviors that can benefit their careers. For example, when examining university students in the United Arab Emirates, Forstenlechner et al. (2014) found that career exploration influenced attitudes, expectations, and preferences towards potential employers. More specifically, authors found that with increases in career exploration, young adults were more

willing to work in the private sector. Importantly, Werbel (2000) also found that pre-employment career exploration contributed to increased job satisfaction during early employment of young adults during career transitions from university to work.

Moderators of Career Exploration in Young Adults

While the body of literature is currently limited, research has begun to examine some individual and contextual factors that influence the relationships between career exploration and its antecedents and outcomes. Known moderators of the relationship between antecedents and career exploration primarily include personality factors and perceptions of the self (Jiang et al., 2019). For instance, Hardin et al. (2006) found that social anxiety was likely to cause withdrawal from environmental exploration in men with lower levels of independence, and Cai et al. (2015) found that self-esteem had a stronger impact on career exploration in students with higher levels of proactive personality. Consistent with SCCT (Lent et al., 2000), this suggests that personality characteristics may increase or decrease the impact of psychological states on career exploration (Jiang et al., 2019).

To date, only limited research has examined the moderating roles of contextual factors on the relationship between antecedents and career exploration. Guan et al. (2015) found that university students' career exploration was meaningfully influenced by career-related behaviors and involvement of their parents. Specifically, researchers found that parental interference (e.g., attempting to control their children's career behaviors and decisions) was more likely to hinder students' career exploration behaviors, while parental support and encouragement were more likely to promote and foster students' career exploration behaviors. More burgeoning research has found perceived resource scarcity to mediate the relationship between perceived SES and career exploration behaviors, indicating that those students who perceived more available time

and job opportunities were more likely to spend time engaged in activities that may maximize future career success (Hu et al., 2022). Given the general dearth of research in examining moderating variables and career exploration, Jiang et al. (2019) have called upon researchers to examine the effects of individual characteristics (e.g., personal factors) and contextual factors on career exploration, as career theories (e.g., SCCT) emphasize the importance of personal and contextual variables in the development of career-related attitudes and behaviors, such as career exploration. One such factor may be hope (Hirschi et al., 2015).

Hope

The concept of hope has deep roots in human history, culture, and mythology. In Hesiod's story of Zeus and Prometheus from 700 BC, Pandora opened the fabled box that released all manners of evil unto the world, from plagues and illness to greed and despair. Within the box, however, also dwelled an unreleased spirit of healing, named *Elpis*, or hope (Grund & Brock, 2019; Schlegel & Weinfield, 2006). For thousands of years, humans have recognized the power of hope in healing afflictions and in strengthening them to bear experiences of great suffering, loss, and pain (Magaletta & Oliver., 1999). In contemporary research, for instance, hope has been identified as fundamental to psychotherapeutic success (Wampold & Imel, 2015) and has been incorporated into strength-based psychotherapies, such as solution-focused brief therapy (SFBT; de Shazer et al., 1986).

Within contemporary social science, hope has been conceptualized multiple ways, including as basic trust (Erikson, 1950), a conditioned response (Mowrer, 1960), goal-related expectations (Stotland, 1969), and spiritual attachment (Pruyser, 1987). However, hope has experienced its most significant foothold within the field of positive psychology. Snyder et al. (1991) reintroduced hope into academic psychology and operationalized it as a cognitive

construct, defining hope as a “cognitive set that is based on a reciprocally-derived sense of successful (a) agency (goal-directed energy) and (b) pathways (planning to meet goals)” (p. 571). As such, hope encompasses two major cognitive components: personal agency and perceived pathways, which function jointly to achieve goals.

Personal agency entails the belief in one’s ability to take action and maintain action in order to reach intended goals; that is, agency is the component related to willpower, motivation, and determination in hope theory (Snyder, 2002). Agency thinking reflects the desire to initiate movement towards a goal, the tenacity and mental energy to continue moving towards it once in motion, and continued effort using a pathway through all stages of the goal pursuit (Yotsidi et al., 2018). Individuals with high hope embrace agency-laden self-talk phrases such as “I am not going to be stopped,” or “I can do this” (Snyder et al., 1998). Agency thinking is, thus, important in all goal-direct thinking processes, but becomes uniquely significant in the face of barriers, where agency thinking can help individuals channel the necessary motivation towards effective alternative pathways (Snyder, 1994).

Pathways thinking, on the other hand, refers to the belief in one’s ability to generate and derive successful pathways, even when faced with obstacles, to meet intended goals (Snyder, 2002). This is generally characterized by the ability to create *several* alternatives or plans to achieve a goal should the path towards a goal be blocked (Yotsidi et al., 2018). Pathways thinking becomes increasingly defined and precise as individuals move closer to their goals become nearer to obtaining or achieving them. Thus, individuals high in hope are more likely to use planful thinking as they anticipate obstructions in the paths toward goals, and actively determine multiple pathways to circumvent obstacles and achieve their goals (Snyder, 2002). Further, individuals with high hope have been found to be more decisive and confident about the

creation of possible routes possible routes toward their goals, and particularly regarding career-related goals (Woodbury, 1999; Yotsidi et al., 2018).

Importantly, and relevant to this study, Snyder et al. (1991) noted significant similarities and convergent validity between the two components of hope and Bandura's self-efficacy and outcome expectations. However, what differentiates hope from Bandura's model is the necessary joint interaction of the two; as such, hope is understood to be the sum of the reciprocal action of self-efficacy beliefs and outcome expectations to the extent that focusing on either type of expectancy will lessen the predictive impact of the cognitive set. Thus, Snyder et al.'s (1991) conceptualization of hope can be understood as encompassing both willpower and waypower, where this necessary duality of agency and pathways thinking individuates hope from other positive psychological resource capacities (e.g., self-efficacy, optimism, etc.). As pathways and agency thinking interact, an individual's emotions further contribute to this process. Snyder (2002) asserted that as the pursuit of goals progresses, individuals likely encounter stressors which, if of sufficient magnitude, may jeopardize hopeful thinking. Individuals low in hope are particularly vulnerable to succumbing to these stressors and, therefore, being diverted from the pursuit of their goals. Snyder et al. (1991) asserted that, alternatively, individuals high in hope are likely to perceive the stressor as a challenge that may catalyze the generation of alternate pathways and the direction of agentic energy towards a new pathway. Importantly, when experiencing negative emotions as a result of failure to attain goals, Snyder (2002) found that individuals with high hope were more able than their low-hope counterparts to use feedback to alter and improve their strategies when encountering similar situations in the future. In this vein, Michael (2000) found that low-hope thinking was consistent with rumination and self-doubt rather than using feedback diagnostically to improve future efforts. Only in recent years have the

academic and occupational landscapes sought to explore hope with empirical or scientific interest. As will be explored below, the findings of hope-related literature have continued to demonstrate a strong conceptual fit with dominant learning and career development theories, such as Social Cognitive Career Theory.

Hope and Social-Emotional Development

In recent decades, researchers have examined hope in multiple contexts and suggest that hope is positively associated with multiple indicators of healthy life adjustment, such as beliefs about the self, quality of life, and feeling states (Suldo et al., 2008). Research has established positive and significant relationships between hope and such constructs as personal adjustment (e.g., Chang & DeSimone, 2001), self-worth (e.g., Curry et al., 1997), and well-being and life satisfaction (Marques et al., 2009). In a comprehensive meta-analysis, Marques et al. (2017) found that hope has been positively and significantly related to measures of global self-worth ($r = .43$), positive affect ($r = .37$), coping ($r = .26$), optimism and satisfaction ($r = .55$), and goal-directed thinking ($r = .38$). Importantly, researchers have found these person inputs to be “assets” that are associated with academic success (Yotsidi et al., 2018).

Hope has also been shown to be inversely correlated with indicators of poor adjustment. For instance, researchers have found negative, significant relationships between hope and such factors as depression (e.g., Snyder et al., 1991), negative affect (e.g., Snyder et al., 1997), both internalizing and externalizing behavior problems (e.g., Valle et al., 2004), and psychological distress (Gilman et al., 2006). In their meta-analysis, Marques et al. (2017) affirmed the negative and significant relationships between hope and depression ($r = -.39$) and negative affect ($r = -.26$), which are understood as “liabilities” that are negatively associated with academic success.

Hope and Contextual Factors

While literature around the contextual antecedents of hope is largely limited, research has identified hope's relationship with numerous contextual factors. The development of hope in children is heavily influenced by the way that key adult figures communicate, establish goals, view challenges, and approach problems (Marques et al., 2011). Thus, an individual's level of hope is, therefore, heavily related to their context throughout development and across the lifespan (Snyder et al., 1996).

Meaningful early research has identified that hope appears to be unrelated to family structure or living situation (Santos, 2012). However, hope has been found to be positively associated with parental educational level and employment status (Marques et al., 2017; Santos, 2012) such that students with unemployed parents demonstrated significantly lower levels of hope than students with one or neither parents unemployed (Santos, 2012). Literature has also indicated that there may be no significant relationship to socioeconomic status; as research has posited that hope is constructed upon a foundation of contingency thinking that it is often catalyzed in a social context (Snyder, 1994; Snyder et al., 1997), this may highlight the importance of social context and modeling from caregivers in the provision of dynamic learning experiences that serve to foster hope.

In an examination of the relationship between hope and racial/ethnic identity, researchers found that Caucasian individuals reported fewer systemic barriers (e.g., prejudice or oppression) in their lives than individuals with marginalized racial identities. However, despite the existence of more contextual barriers, older literature has shown that individuals with marginalized racial/ethnic identities have reported higher levels of hope (e.g., McDermott et al., 1997; Munoz-Dunbar, 1993) and higher levels of agency thinking than Caucasian individuals (Chang & Banks,

2007). The literature around these relationships may, therefore, benefit from further empirical attention and examination.

Hope and Academic Outcomes

A college degree and university education can be important stepping stones in the career development process for adults of all ages (S. D. Brown & Lent, 2019). Specifically, contemporary literature has identified the benefits of completing a college degree to include diverse skill advancement, personal life quality enhancement, personal integrity development, graduate school preparedness, and vocation and employment preparedness (R. Y. Chan, 2016).

The academic correlates of hope have been demonstrated in multiple domains (Marques et al., 2017). For instance, hope has been significantly related to achievement test scores as early as grade school (Snyder et al., 1997), and continues throughout academic development. When measuring by grade point average (GPA), higher levels of hope are associated with increased academic performance in elementary school students (e.g., Snyder et al., 1997), junior high school students (e.g., Worrell & Hale, 2001), high school students (e.g., Marques et al., 2014), and university students (e.g., Buckelew et al., 2008). Beyond GPA, the predictive power of hope has been established both for grades and graduation status, beyond the effects of entrance exam scores (Marques et al., 2017), prior grades (e.g., Day et al., 2010), personality and self-esteem (Day et al., 2010; Snyder et al., 2002), and intelligence (e.g., Day et al., 2010). Longitudinally, hope was found to further predict the number of semesters in which students were enrolled (Gallagher et al., 2017). In a primary meta-analysis by Marques et al. (2017), the magnitude of the relationship between hope and academic outcomes in extant literature was found to be moderate, suggesting that hope was a significant predictor of academic achievement outcomes.

According to hope theory (e.g., Marques et al., 2014; Snyder, 1994), hope is catalyzed when students are enthusiastic about the future, choose to pursue clearly identified goals through multiple pathways, and refresh their agency along the way. Contextually, students appear to be able to access their motivational resource capacities (e.g., hope) when educators tap into student excitement by fostering a future-oriented curriculum or environment (Destin & Oyserman, 2010). Further, as may be anticipated by Bandura's (1977) social learning theory, higher levels of teacher support are associated with higher levels of hope in students (Hui & Sun, 2010), indicating that quality time and personal connection with important adult figures may provide fundamental building blocks for the social contexts that catalyze hopeful thinking (Marques et al., 2017). Hope's predictive utility with academic success, therefore, underscores the importance of this cognitive resource capacity for students of all ages. This is particularly relevant for university students who are not only preparing for important school-to-work transitions, but who are already investing in their future careers through the pursuit of, and engagement in, higher education.

Hope and Career Development

Similar to hope's established relationships with positive adjustment factors and academic outcomes, hope has been found to be an important resource capacity for occupational outcomes. For instance, hope has been associated with employee job satisfaction, performance, creativity, adaptability, self-efficacy, and feelings of well-being (Yotsidi et al., 2018) across numerous occupations in both service and manufacturing industries (e.g., Luthans et al., 2007). Additionally, hope was found to have a direct effect on university students' proactive career behaviors, and an indirect effect on job satisfaction through the mechanism of career decidedness (Badran & Youssef-Morgan, 2015; Hirschi, 2014).

Of important note is that within career and management fields, extensive work continues to be done on higher-order, state-like construct of positive psychological capital (i.e., PsyCap), which is comprised of the shared variances of hope, self-efficacy, optimism, and resilience (Avey et al., 2010). While these constructs have conceptual similarities, they have each been demonstrated to possess independent construct validity (Luthans et al., 2007), and, thus, these four PsyCap constructs have shown both convergent and discriminant validity, lending merit to their uses both independently and as a composite, second-order construct. PsyCap has been shown to be positively correlated with desirable employee attitudes, such as job satisfaction (Luthans et al., 2007) and organizational commitment (Luthans et al., 2008), as well as job performance (Avey et al., 2011), which has been, to date, the most researched outcome variable in the study of PsyCap. Ultimately, higher PsyCap levels should increase the motivation for intentional, goal-oriented behavior toward successfully accomplishing tasks and leading to greater performance relative to those lower in PsyCap. Even within PsyCap, Luthans (2002) has described hope as the heart and most unique capacity within positive organizational behavior.

Hope appears to be significantly related to positive affectivity in the workplace (Yotsidi et al., 2018). In a vocational training program, Valero et al. (2015) found that hope was negatively related to turnover intentions and positively related to job performance, with autonomous goals and positive affect experiences playing a mediating role. Hope has been found to predict job performance in hotel employees indirectly through work engagement (Karatepe, 2014), and hope within PsyCap was found to predict job performance in nurses, increasing retention and effectiveness at work (Sun et al., 2012). PsyCap has also been found to be associated with task focus and thriving in the workplaces, which have led to increased job performance (Paterson et al., 2013), as well as with enhanced safety climate in the workplace

among air traffic controllers (Bergheim et al., 2013), among whom safety climate plays an important role.

Hope appears to be significantly related to work factors beyond positive affectivity, as well. For example, Malinowski and Lim (2015) found that mindfulness increased employees' levels of hope, while also predicting work engagement and well-being *through* hope. Specifically, mindfulness increased work engagement by increasing hope, optimism, and positive affect (i.e., some components of PsyCap) which functioned to enhance work engagement. Employees' hope has further been found to be positively related to task adaptivity (Strauss et al., 2014), as well as to predict creativity (Rego et al., 2012). Relevant to the development of hope in the workplace, Rego et al. (2014) found that positive affect predicted levels of hope in employees.

When considered in conjunction with hope's relationship with academic outcomes, it appears that hope, as a cognitive process that combines pathways and agency thinking (or planning-related thoughts and motivation-related thoughts), lays at the heart of the goal-pursuit process (Feldman & Kubota, 2015), consistent with Social Cognitive Career Theory (S. D. Brown & Lent, 2019). Thus, being successful in academic and occupational pursuits requires the combination of pathways and agency thinking that is captured by the construct of hope. Given the ways that college student performance can be an indicator of their future job performance (Hirschi et al., 2015), these occupational findings indicate that the agency component of hope may be an essential variable for subsequent occupational achievement (Sung et al., 2011). These findings supported Snyder et al.'s (2002) postulations that career preparation was an essential developmental tasks that allowed students to experience greater well-being in their careers.

Hope in the Context of Social Cognitive Career Theory

The goal of this study is not to structurally insert hope into the model of Social Cognitive Career Theory, but to use SCCT to guide a conceptual understanding of hope's potential role in career development, namely career exploration. Social Cognitive Career Theory (SCCT) postulates that person inputs and learning experiences directly influence outcome expectations and self-efficacy beliefs, which then directly influence the development of interests, goals, and actions. Similar to these outcome expectations and self-efficacy beliefs, and as outlined in the preceding review of literature, an individual's level of hope is affected both by dispositional factors (i.e., person inputs) and learning experiences associated with background contextual affordances. Thus, similar to the cognitive variables of self-efficacy beliefs and outcome expectations, an individual's level of hope may directly influence the development of their interests, goals, and actions.

The conceptual guidance of SCCT in the present study may be best illustrated by another examination of our vignette regarding Larry's career development. Recall that Larry's personal factors (i.e., person inputs) include being a White, heterosexual, teenage male, raised in an upper-middle class home. The background environmental factors associated with Larry's personal factors, thus, *may* include exposure to adults with fulfilling or high-income careers, support and encouragement from caregivers and important others, and regular access to informational resources. These personal factors and background environmental factors work to shape Larry's learning experiences, such as receiving supportive encouragement around his personal endeavors or experiencing his own success in mathematics at school. These learning experiences shape Larry's hope, in terms of both his sense of agency beliefs (e.g., *I do well on my math tests when I study with intention*) and pathways thinking (e.g., *I have many people and*

resources from whom I can seek help if I struggle with certain math concepts). These components of Larry's sense of hope may then serve to influence interests (*I like math because I have been successful at it*), goals (*I want to become an accountant after I graduate*), and ultimately actions (*I'm going to seek information about how to become an accountant*). Thus, Larry's thoughts and behaviors pertinent to career exploration (e.g., *I might enjoy a career as an accountant* and *I'm going to seek information about how to become an accountant*) may have been highly impacted by the development of his sense of hope. Alternatively, Larry's sense of hope may *diminish* as a result of encountering barriers or performance failures (Snyder et al., 1996). In this way, an individual's level of hope may represent the implicit meaning made from their learning experiences, which holds subsequent implications for career exploration as envisioned through the SCCT framework. While this study will not structurally examine the pathway(s) between hope and career exploration (e.g., through the possible development of interests and goals or reciprocal learning processes), this example is used to illustrate the conceptual guidance of SCCT in the design of the study.

First-Generation College Students

An important demographic of students and subsequent members of the workforce within the United States includes first-generation college students (FGCS), a social identity and person input whose definitions vary, but generally refers to students whose parents have either attained no college education or have not attained a bachelor's degree (Ishitani, 2006). In the 2015-16 academic year, FGCS accounted for 56% of undergraduate students in the United States, including 24% who were the first in their families to attend college and 32.0% who had parents who had gained some college experience without completing a bachelor's degree (RTI International, 2019). While FGCS have received the attention of academic and career

development researchers over recent decades, limited research has quantitatively examined the relationship between FGCS status and career exploration within the SCCT framework.

First-Generation College Students and Academic Success

Research has established that, relative to their continuing-generation counterparts, FGCS face unique challenges that are evident in their diminished outcomes (Pratt et al., 2019). For instance, despite comprising the majority of college students in the United States, previous research has found that nearly 90% of enrolled FGCS failed to graduate within 6 years (Saenz et al., 2007), 75.3% failed to earn a degree after 4 years (DeAngelo et al., 2011), and FGCS were overall 71% more likely to leave college in their first year relative to continuing-gen students after controlling for race, gender, family income, and high school GPA (Ishitani, 2003). Regarding background contextual affordances and consistent with SCCT, Atherton (2014) identified that FGCS are consistently less prepared than their peers upon entrance to college as a result of demographic characteristics such as income and family size. Emotionally, FGCS have reported feeling increased fears of failure (e.g., Bui, 2002; Pratt et al., 2019) and further reported feeling less engaged with the college lifestyle and more disconnected from common university social structures than their continuing-gen peers (Covarrubias & Fryberg, 2015; Lowery-Hart & Pacheco, 2011). Research has further established that cognitive and psychosocial variables, such as motivation and persistence towards the completion of their degree, disproportionately affect FGCS in their pursuit of higher education (Pascarella et al., 2004). As a result, FGCS have been found to take more remedial courses which have been found to slow progress towards graduation (Gibbons & Woodside, 2014).

Research has established that one of the most salient barriers to academic success and, therefore, to subsequent occupational success, within FGCS is financial insecurity (Pratt et al.,

2019) as a result of this group of students commonly coming from lower income families (National Center for Education Statistics, 2020; Nunez & Cuccaro-Alamin, 1998). For instance, Pratt et al. (2019) found that financial concerns were a powerful predictor of retention between freshman and sophomore year. FGCS reported stronger concern about finances, expecting to maintain higher rates of employment throughout their tenure at college. Meaningfully, these higher rates of employment for FGCS led to reduced engagement in college-related activities and reduced feelings of connection with their peers. FGCS further expressed more difficulty making new friends, fitting into the campus environment, and performing well academically (Covarrubias & Fryberg, 2015; Pratt et al., 2019). These findings are consistent with past literature regarding the relationship between financial burden, lack of social integration, and academic success. For instance, FGCS have been found to be more likely to hold down both part-time and full-time employment during college (e.g., Martinez et al., 2009), and have reported that financial challenges may be *likely* or *very likely* to force their attrition for over 50% of FGCS (Eitel & Martin, 2009). The need to work, in order to satisfy institutional costs and continuously-increasing costs of attendance, has been further found to hinder integration into campus social life (e.g., Lohfink & Paulsen, 2005). The increased work responsibilities of FGCS likely contribute to reduced involvement in extracurricular activities, athletic engagement, volunteer activities, and even non-academic interactions with peers (Pascarella et al., 2004; Pratt et al., 2019).

These implications are particularly meaningful because, consistent with SCCT, research has identified that these very factors (e.g., involvement in diverse activities and engagement with peers) predict college success (Pratt et al., 2019). Thus, meaningful financial barriers often preclude FGCS' ability to establish the kinds of socioemotional supports that help engender

success in personal and academic endeavors. The influence of socioeconomic context may, therefore, serve to disproportionately inhibit the development of important capacities for success in the subsequent careers of FGCS (Demetriou et al., 2017).

Given their relative lack of preparation for college (Atherton, 2014), it may come as no surprise that FGCS may suffer from a subsequent lack of academic confidence in their ability to succeed in college (Pratt et al., 2019; Prospero & Vohra-Gupta, 2007). First-Generation College Students have been found to choose less academically rigorous coursework (Lohfink & Paulsen, 2005) and are less likely to enter science, technology, engineering, or mathematics fields (STEM; Dika & D'Amico, 2016). Unsurprisingly, though increasingly relevant to the framework introduced in hope literature, Pratt et al. (2019) went on to find that FGCS reported greater doubt in their ability to succeed in life relative to non-FGCS, anticipated more difficulty performing well academically, and were less likely to believe that they had accomplished long-term goals despite feeling like they worked harder than other students during high school. The authors did not include the construct of hope in their analysis, and yet their findings appear to meaningfully articulate the experiences of FGCS within its framework. For instance, FGCS often experience a more diminished belief in their capacity to meet their goals, to create successful pathways towards those goals (e.g., avoiding STEM fields and potentially compromising on ultimate career goals), and to ultimately succeed in life, all of which may be understood within the construct of hope.

First-Generation College Students and Career Development

First-Generation College Student status is not defined by social class or income, but it is largely associated with low SES due to limitations on parental earning potential as a result of minimal educational attainment (Pratt et al., 2019; Tate et al., 2015). First-generation college

students comprise the majority of college students in the United States (RTI International, 2019), and while a fair amount of research has been devoted to the career development of FGCS utilizing the framework of SCCT (Hartley, 2009; Sampson, 2016; Saraceno, 2019; Tate et al., 2015; M. N. Thompson & Phillips, 2013), very little research has quantitatively examined the career exploration of FGCS (Jiang et al., 2019). However, extant research regarding the career development of FGCS has identified a number of influential contextual factors.

For example, findings from Allan et al. (2016) offered preliminary support for the impact of classism on outcomes for FGCS. The authors found that identifying as FGCS predicted both institutionalized and interpersonal classism, which were subsequently found to negatively predict life satisfaction and academic satisfaction. In a study utilizing path analysis to identify supports and barriers, Sampson (2016) found that social status, parental support, role model influence, and experiences with classism were particularly germane to the career development of FGCS. Relevant to the contextual challenges experienced by those of low SES, Sampson found that experiences with classism were associated with lower social status, lower career decision self-efficacy, and higher levels of career indecision. Their path analysis revealed that coping efficacy served as a mediator in the relationship between FGCS supports and barriers (i.e., perceived parental support, supportive role model influence, and experiences with classism) and the vocational outcomes of career decision self-efficacy and career indecision. As hope has been associated with the facilitation of coping efficacy (Bell, 2015), this may indicate the potential for hope to mediate or moderate the relationship between contextual factors and experiences of SES/FGCS and subsequent career exploration endeavors.

Some empirical work has focused exclusively on the career development of African American FGCS, as well. Consistent with FGCS findings related to academic success, Owens et

al. (2010) asserted that these students face significant barriers on their career paths, including alienation from peers and the institution as well as a lack of family-of-origin support for their professional pursuits. These may constitute significant barriers to career development, as parental support has been found to be an important moderator for career exploration (Guan et al., 2015). Similarly, Parks-Yancy (2012) found that, compared to their peers, African-American FGCS perceived fewer career options after graduation. They also found that social capital fostered career development, as professional connections to professors and staff led to increased knowledge of, and perceived options for, career opportunities. These findings highlight how both internal factors (e.g., perception and knowledge of career options) and external factors (e.g., social alienation, lack of family support, and lack of social capital) impact the career development of African American FGCS, which may indicate similar experiences for broader FGCS and low SES populations. These findings may further support the notion that while FGCS appear to experience a stronger positive impact when exposed to conditions favorable to academic success (Demetriou et al., 2017), they are also disproportionately negatively affected by contextual barriers and lack of support (e.g., Pratt et al., 2019). Overall, within the broader research base, Toyokawa and DeWald (2020) assert that very few empirical studies have examined FGCS' career-related barriers from the perspective of SCCT. While this study will not structurally examine supports and barriers in career development, it may be among the first to empirically and quantitatively examine the relationship between FGCS and career exploration within the framework of SCCT, laying a subsequent foundation for future research.

Summary

As evidenced by the differential experiences and outcomes of first-generation college students and individuals at different socioeconomic strata, person inputs and background

contextual affordances appear to be powerful predictors of positive career development processes such as academic success and career exploration. According to the framework of Social Cognitive Career Theory, the capacity of hope may develop and function similarly to an individual's self-efficacy beliefs and outcome expectations that result from their contextual learning experiences. As a result, an individual's level of hope may predict their subsequent career development processes, such as career exploration. However, no known research to date has empirically examined the relationship between hope and career exploration with consideration of FGCS status or SES, nor has hope been examined as guided by the framework of SCCT. As a result, this study will examine the relationship between hope and career exploration with explicit consideration of the differential experiences that are afforded by socioeconomic status and first-generation college student status identities.

CHAPTER III

METHODOLOGY

Introduction

The current study used a non-experimental, cross-sectional, correlational research design to examine relationships between hope and career exploration among university undergraduate students. The subsequent measures were used to operationalize the constructs and are supported by empirical research (see Chapter II). Hope was measured using the Hope Scale (Snyder et al., 1991) and career exploration was measured using the Career Exploration Survey (CES; Stumpf et al., 1983). This chapter contains information regarding participants, procedures, measures, research questions and hypotheses, and data analyses that were used in this study.

Participants

By identifying a necessary minimum sample size, power analyses allow researchers to reduce the probability of committing a type II error when conducting statistical analyses, including a hierarchical multiple linear regression analysis (Cohen, 1988; Osborne, 2015). While power analyses are understood as best practice, few research studies report conducting power analyses before collecting data, and few studies meet the acceptable criteria (Faul et al., 2009).

To establish the necessary sample size in order to detect a minimum effect size of .15 (f^2 , moderate) with $\alpha = .05$, power equal to .80, I conducted a power analysis using G*Power (Faul et al., 2009). I determined that, utilizing a hierarchical linear regression with 20 dummy variables from the demographic questionnaire (i.e., age, race, gender, FGCS status; see Chapter IV for explanation of dummy coding procedures), one continuous variable from the demographic

questionnaire (socioeconomic status), one primary explanatory variable (hope), and one dependent variable (career exploration), the minimum required sample size for this study was 217 participants (Faul et al., 2009). To account for any potential nonresponse biases or incomplete responses, I set the minimum sample for data collection at 400 participants, and the survey remained open until the minimum number of individuals was attained. From the total of 403 participant responses gathered, 372 responses were identified as suitable for analysis in this study and are summarized in Table 3.1. Two responses were omitted due to failing instructional manipulation checks, and 29 further responses were omitted from the study due to missing at least one response on any of the measures. Given the small number of items on the measures, any missing data may have a high impact on individual scores and, therefore, was removed to preserve the integrity of the data analysis--which will be further articulated in Chapter IV.

Additionally, inclusion criteria for recruitment included being over 18 years of age and being currently enrolled in undergraduate courses at the university level in the United States. Exclusion criteria only included individuals who do not fluently understand the English language and do not reside within the United States. This was in order to collect responses from as wide a body of undergraduate students as possible, including both traditional and non-traditional university students (National Center for Education Statistics, 2020).

Table 3.1*Summary of Participant Demographics*

Demographic Variables	<i>n</i>	% of sample
Age		
18-25	330	88.7
26-35	32	8.6
36-50	10	2.7
51+	0	0.0
Gender Identity		
Man	66	17.7
Woman	287	77.2
Trans Man	3	0.8
Trans Woman	1	0.3
Nonbinary/gender fluid	13	3.5
Other	1	0.3
Prefer not to answer	1	0.3
Race/Ethnicity		
Asian or of Asian Descent	52	14
Native Hawaiian, Pacific Islander, or of Pacific Islander Descent	1	0.3
Black or of African Descent	31	8.3
Latino/a/x, Hispanic, or of Spanish Descent	23	6.2
Middle Eastern, Arab, or of Arab Descent	4	1.1
Native American, American Indian, or Alaskan Native	0	0.0
White or of European Descent	222	59.7
Multiracial	35	9.4
An ethnicity or race not listed	2	0.5
Prefer not to answer	1	0.3

Table 3.1 (continued)

Demographic Variables	<i>n</i>	% of sample
Annual Household Income Growing Up		
Less than \$15,000	19	5.1
\$15,001 - \$30,000	33	8.9
\$30,001 - \$50,000	59	15.9
\$50,001 - \$75,000	70	18.8
\$75,001 - \$150,000	139	37.4
Over \$150,001	52	14.0
First-Generation College Student		
Yes	148	39.8
No	224	60.2
Sexual Orientation		
Bisexual	80	21.5
Gay	7	1.9
Heterosexual/Straight	244	65.6
Lesbian	14	3.8
Queer	12	3.2
Questioning	6	1.6
Other	5	1.3
Prefer not to answer	4	1.1

Note. *N* = 372.

An internet-based sampling method was used to recruit participants in this study. Prolific (www.prolific.co) is an internet-based crowdsourcing platform that hosts participants for scientific research from numerous countries around the world, therefore, allowing researchers access to several thousands of international participants (Palan & Schitter, 2018). As a high response rate is critical for survey data, the use of crowdsourcing platforms may allow for larger

and more reliable sample sizes to be gathered quickly (Buhrmester et al., 2018; Remler & Van Ryzin, 2015). To date, Prolific claims to provide access to over 130,000 international adult participants, approximately 31% of whom reside within the United States, 54.0% of whom identify as female, and 61% of whom identify as non-students.

The use of internet-based crowdsourcing platforms both to recruit participants and to collect data has now become relatively commonplace (Stewart et al., 2017), and Prolific has been successfully used to recruit participants for research in a wide range of academic fields, including economics (Marreiros et al., 2017), food science (Simmonds et al., 2018), music cognition (Armitage & Eerola, 2020), and psychology (Callan et al., 2016). A unique aspect of Prolific is that it seeks to establish a form of minimum wage for participants' time, compensating users at a rate of £5.00 per hour. This unique dimension allows researchers to obtain estimates for the cost of their surveys by calculating the required number of participants, the estimated length of the survey, and the desired representativeness of the sample; the overall cost of this study was \$600. Prolific automatically provides participants with a 24-character ID code, which cannot be traced back to the participant's identifying information by the researcher; it merely allows the researcher to know if a unique ID has been found more than once (indicating multiple responses from a single participant). This ID is recorded and kept securely to monitor the integrity of the data. Further, this ID code is used to approve participant responses after the survey has been completed, allowing the participant to receive compensation through Prolific. All of the user data is stored in a secure server as designated by industry approved technology, and it cannot be viewed by Prolific. Additionally, Prolific does not share any data from the studies it hosts on its platform (Luke, 2020).

Procedures

Approval from the university's Institutional Review Board (IRB) was obtained (see Appendix A). Following IRB approval, participants were recruited through the use of Prolific (www.prolific.co). This platform was used specifically for recruitment purposes, as a hub where individuals have enrolled to participate in research and receive notification when they are eligible to participate in specific studies. Within the Prolific platform, participants were then provided access to a Qualtrics (www.qualtrics.com) link that contained a comprehensive cover letter (see Appendix B) which included informed consent information, including reiterated information about the purpose of the study, financial incentive, potential risks and benefits of participation, confidentiality procedures, and voluntary participation. It also included contact information for the researcher, research advisor, and the university IRB.

After voluntarily agreeing to participate, participants were directed to the introduction page of the study, which informed the participant that in order to ensure careful reading of the questions, instructional manipulation checks (Curran, 2015) were being used to monitor whether each question was read and answered with integrity (see Appendix C). Participants were then directed to the next page and presented with the study survey. The Career Exploration Survey (Appendix D) and Hope Scale (Appendix E) were adapted for web use and presented in a random order for each participant in order to reduce potential response order effects. Demographic items traditionally remained at the end of the survey due to the potentially sensitive nature of items around income and socioeconomic status. The demographic information was not used to identify any participants involved in the study. The final page of the survey included a "thank you for your participation" message. This page also included a hyperlink that

directed users back to Prolific to confirm their completion of the study, which allowed the participants to be compensated by Prolific.

Data collection occurred during January of 2022 and was completed within 24 hours. Survey responses were stored on Qualtrics' secure servers. Survey responses were then downloaded to a password-protected computer and imported into IBM SPSS software (v23.0) for analysis.

Instrumentation

Hope

Hope was measured with Snyder et al.'s (1991) Hope Scale. The Hope Scale was selected as the measure of hope for this study because of its unique adherence to a social-cognitive conceptualization of hope, as well as its widespread use in vocational literature. The scale is comprised of 12 items, where four items measure the *agency* dimension, four items measure the *pathways* dimension, and four items are filler (and are subsequently excluded from analysis). Scores are measured on a Likert-type scale, with each item response option ranging from 1 (“*definitely false*”) to 8 (“*definitely true*”). These scores are summed, resulting in a total overall score range between 8 (minimum) and 64 (maximum) for overall Hope which was primarily utilized in this study, as well as a range of 4 (minimum) to 32 (maximum) for each of the *agency* and *pathways* subscales. Sample items for the *agency* subscale include “I energetically pursue my goals,” and “I meet the goals that I set for myself.” Sample items for the *pathways* subscale include, “I can think of many ways to get out of a jam,” and “I can think of many ways to get the things in life that are most important to me.”

Factor analyses using 3,600 Midwest University students indicated that *agency* items loaded onto factor 1 at .71-.77, and *pathways* items loaded onto factor 2 at .63-.80, indicating

support for the bi-dimensional factor structure of the measure (Snyder et al., 1991). Items accounted for up to 62% of the variance, surpassing Gorsuch's (1990) standard that common variances of 40%-50% reflect a factor structure of substantial impact for self-report scales.

The reliability of scores from the measure has been supported among North American university samples (e.g., Feldman & Snyder, 2005; Snyder et al., 1991) as well as international university samples (e.g., Badran & Youssef-Morgan, 2015; Hirschi et al., 2015), with internal consistency (e.g., Cronbach's alpha) estimates ranging from .75 to .95 for total scores. Scores based on the scale have also demonstrated strong convergent validity with self-efficacy ($r = .59$), optimism ($r = .55$), general well-being ($r = .60$), and state negative affect ($r = -.47$ to $-.50$) as well as concurrent validity with state self-esteem ($r = .68-.75$) and state positive affect ($r = .55-.65$) among North American university students (Feldman & Snyder, 2005; Snyder et al., 1991).

Career Exploration

Career exploration was measured using the Environmental Exploration and Self-Exploration subscales of Stumpf et al.'s (1983) Career Exploration Survey (CES). The CES was selected as the measure of career exploration for this study because of its widespread use as the dominant measure of career exploration and its validated use in numerous populations. The Environmental Exploration and Self-Exploration subscales were selected for the purpose of brevity (reducing a 59-item instrument to 11 items total) and for their representative relevance to the construct of overall career exploration. Further, of the 31 empirical studies that have used the CES since 2000, 25 have focused on these two sub-dimensions. The items on these subscales total 11 items (six items measuring *environment exploration* and five items measuring *self-exploration*), and scores are measured on a Likert-type scale, with each item response option ranging from 1 (*little*) to 5 (*a great deal*). These item response scores are summed, resulting in a

total overall score range of 11 (minimum) to 55 (maximum) for overall Career Exploration which was primarily utilized for this study; this total score includes a range of 6 (minimum) to 30 (maximum) for the *environmental exploration* subscale and between 5 (minimum) and 25 (maximum) for the *self-exploration* subscale. Sample items for the *environmental exploration* subscale include, “to what extent have you sought information on specific areas of career interest in the last 3 months?” and “to what extent have you investigated career possibilities in the last 3 months?” Sample items for the *self-exploration* subscale include, “to what extent have you reflected on how your past integrates with your future career in the last 3 months?” and “to what extent have you contemplated your past in the last 3 months?”

Factor analyses using 223 undergraduate and graduate students from a large, northeastern American university confirmed the factor structure of two dimensions (Stumpf et al., 1983), and studies using undergraduate students at multiple North American universities reported coefficient alphas of between .83-.88 for *self-exploration* and between .68-.91 for *environmental exploration* (Hardin et al., 2006; Lent et al., 2016; Stumpf et al., 1983). Scores based on the measure have further demonstrated both construct and concurrent validity with undergraduate university students (Lent et al., 2016; Stumpf et al., 1983; Werbel, 2000).

Demographic Questionnaire

The survey included demographic items that measured other variables of interest. Variables gathered from the questionnaire include age and life stage, socioeconomic status, gender, and first-generation college student status (Jiang et al., 2019; see Appendix F). These variables were statistically controlled, via inclusion, in order to reduce their threat to internal validity. Age was categorized in brackets based on life stage (18-25, 26-35, 36-50, and 51+; Jiang et al., 2019; Stumpf et al., 1983). Gender was coded categorically (e.g., male/man,

female/woman, non-binary, prefer not to say). First-generation status was coded categorically and dichotomously for participants whose parents have not completed a four-year degree or above (e.g., *What is the highest level of education attained by your parents?* High school diploma or below, Some college/no degree, Associate's degree, Bachelor's degree, Graduate/Professional degree or above). Socioeconomic status was examined through a resource-based measure of income and coded categorically in brackets (e.g., *To the best of your knowledge, which of the following best describes your annual household income growing up?* Less than \$15,000, \$15,001-\$30,000, \$30,001-\$50,000, \$50,001-\$75,000, \$75,001-\$150,000, \$150,001+) corresponding with poverty, working class, lower middle class, middle class, upper middle class, and upper class (American Psychological Association, 2015; Meggitt, 2019). Instead of subjective measures of socioeconomic status (e.g., perceived socioeconomic status), an objective measure of SES was selected to examine the real-world effects of resource-based income equality (Flores et al., 2017).

Research Questions and Hypotheses

The following research questions were developed to examine how levels of hope may explain levels of career exploration in college undergraduate students.

- Q1 Is career exploration significantly associated with socioeconomic status, first-generation college student status, and hope in undergraduate students?
- H1 A significant association exists between socioeconomic status and career exploration; I predicted that there will be a significant, positive correlation between socioeconomic status and career exploration in undergraduate university students.
- H2 A significant association exists between first-generation college student status and career exploration; I predicted that there will be a significant, negative correlation between FGCS status and career exploration in undergraduate university students.

- H3 A significant association exists between hope and career exploration; I predicted that there will be a significant, positive correlation between hope and career exploration in undergraduate university students.
- Q2 Do levels of hope explain levels of career exploration after controlling for first-generation status, socioeconomic status, and demographic variables in undergraduate students?
- H4 I predicted that hope will explain variance in career exploration beyond socioeconomic status and first-generation college student status in undergraduate university students.
- Q3 Does hope act as a moderating variable between socioeconomic status and career exploration in university students?
- H5 I predicted that hope will moderate SES and career exploration, such that as levels of hope increase, the strength of the relationship between socioeconomic status and levels of career exploration will decrease.

Data Analysis

After online data collection was completed, data were cleaned, coded, and entered into IBM SPSS software (v23.0) for analysis. When missing data occurs in small amounts that appear to be random, it is considered appropriate to delete such cases (Tabachnick & Fidell, 2013), though missing data from web-based surveys is considered relatively commonplace (Manfreda et al., 2008). Given the brief number of items on each scale, the importance of demographic variables for statistical inclusion, and the sufficient size of the captured sample, participant responses missing one or more items from any of these measures were omitted from data analysis. Further, the Prolific platform included the use of specific ID codes to account for, and protect against, possible duplicate responses.

I first examined frequencies to understand the nature of the sample in terms of demographic information, a summary of which can be found in Table 3.1. I created composite scores for hope and career exploration, and descriptive analyses were utilized to examine means, standard deviations, skew, and kurtosis. Descriptive analyses were also used to visually examine

graphs, such as histograms and normal probability plots, and determine the distributional characteristics of the data. Reliability analyses, based on Cronbach's alpha, were conducted on Hope Scale items and Career Exploration Scale items with this sample.

Following descriptive statistics, I conducted a hierarchical multiple regression (Cohen et al., 2003). Hierarchical regressions are useful ways to examine whether continuous variables of interest explain a statistically significant amount of variance in the dependent variable after accounting for all other variables. Thus, this analysis was conducted in order to examine the relationship between hope and career exploration beyond the influence of demographic variables, including socioeconomic status and first-generation college student status, and to further test for moderator effects. The first step in the hierarchical regression included entering dummy variables representing age, race/ethnicity, and gender identity as explanatory variables (IVs) and career exploration as the outcome variable (DV). At the second step, dummy variables representing SES and FCGS status were entered into the model as sociocontextual explanatory variables with career exploration as the outcome variable. At the third step, hope was input with career exploration as the outcome variable. At the fourth step, SES scores were multiplied by hope scores in order to create product variables needed to conduct tests of moderator effects. These product variables were entered into the model as explanatory variables with career exploration as the outcome variable.

Before analyzing the regression models, I examined the data to assess for any violations of assumptions. The assumptions of hierarchical multiple regressions to be statistically addressed include linearity, homoscedasticity, multicollinearity, outliers, and normality (Heppner et al., 2016). To test for both linearity and homoscedasticity, visual inspection of residual scatterplots, partial regression plots, and plot of studentized residuals versus unstandardized predicted values

was conducted. To test for multicollinearity, variance inflation factor (VIF) values, tolerance, and correlations were assessed. To test for outliers, studentized residuals and casewise diagnostics were examined (Fox, 1991). To test for normality, descriptive statistics were analyzed for skew and kurtosis values and the distribution was examined visually. No assumptions were violated--this is further articulated in Chapter IV. I then proceeded to analyze the regression models.

The R^2 and R^2 change (ΔR^2) coefficients were examined to ascertain how much variance, or explanatory power, each variable added to the model at each step of the hierarchical regression. The ΔR^2 value was examined to identify whether one model is a better fit for the data relative to previous models (Fox, 2016). Additionally, the F statistic was used to determine whether the R^2 and ΔR^2 values were statistically significant at each step of the analysis.

While there is a large list of potential threats to internal validity, many of them have been precluded through the non-experimental design of this study. Threats to internal validity, such as the potential effects of socioeconomic status, were controlled statistically through inclusion. Other threats also include the subjectivity introduced by self-report measures. Fortunately, the content of the items is intended to be non-stigmatizing, which ideally may reduce various response biases (Heppner et al., 2016).

A primary threat to external validity in this study is sampling bias. Specifically, my study may have suffered from selection bias through the use of undergraduate students who use the Prolific web service, as well as from volunteer bias via participant self-selection into the study. These may have introduced bias by reducing homogeneity between the sample and the target population. While a nationally representative sample was sought in order to minimize the

potential effects of sampling bias and reduce threats to external validity (Heppner et al., 2016), a nationally representative sample was not captured in this study.

Summary

The current study used a non-experimental, cross-sectional, correlational research design with non-probability sampling through the use of Prolific. To collect data, this study utilized the self-report measures of Snyder's Hope Scale (Snyder et al., 1996), the Career Exploration Scale (CES; Stumpf et al., 1983), and a demographic questionnaire. Guided by the framework of the Social Cognitive Career Theory (S. D. Brown & Lent, 2019), the purpose of this study was to examine relationships between hope and career exploration among university undergraduate students, beyond the potential effects of first-generation college student status and socioeconomic status. Within this chapter, information regarding participants, procedures, measures, research questions and hypotheses, and data analyses were clarified.

CHAPTER IV

RESULTS

This nonexperimental study intended to examine relationships between hope and career exploration among university undergraduate students, beyond the potential effects of first-generation college student status and socioeconomic status. International Business Machines Corporation (IBM) SPSS software was used to conduct all statistical analyses. The results of this study are described in the chapter below, including information regarding the reliability of the scales as well as the assumptions and hierarchical regression analysis used to answer the research questions.

Descriptive Statistics and Preliminary Analyses

The data were organized and cleaned for analysis. The mean, standard deviation, range, skewness, kurtosis, and Cronbach's alpha (α) of all measures are listed below in Table 4.1. The internal consistency for both hope and career exploration measures for the study sample was moderate ($\alpha \geq .82$) and consistent with extent literature regarding the reliability of both measures (e.g., Lent et al., 2016; Snyder et al., 1991). The adequate reliability of all measures within the sample is shown to be above the recommended minimally acceptable level of .70 for research purposes (Remler & Van Ryzin, 2015). The high Cronbach alpha levels indicate that the instruments used to measure variables in this study demonstrated high internal consistency, satisfying hierarchical regression assumptions that the included measures do not contain excessive measurement error.

Table 4.1*Descriptive Summary of the Hope Scale and Career Exploration Survey.*

	Hope Scale	Career Exploration Survey
Mean (<i>SD</i>)	23.1 (3.49)	31.94 (8.54)
Range	12 - 32	13 - 55
Skewness	-0.148	0.157
Kurtosis	0.147	-0.376
α	0.82	0.88

Note. N = 382

Assumptions

The data demonstrated independence of residuals, as assessed by a Durbin-Watson statistic of 1.962, where a value of approximately 2 indicates no correlation between residuals (Draper & Smith, 1998). To test for normality, visual inspections of the histogram, P-P Plot, and Q-Q Plot for standardized residuals were conducted and indicated a normal distribution of the data. Descriptive statistics were further examined to analyze skew and kurtosis. The values for skewness ranged from -.257 (hope's agency component) to .157 (career exploration), and the values for kurtosis ranged from -.376 (career exploration) to .609 (hope's pathway component), overall indicating that the data were distributed fairly symmetrically.

A visual inspection of the residual scatterplot was conducted to test for collective variable linearity, where the data appeared to demonstrate linearity. Partial regression plots were visually inspected to test for linearity between the dependent variable and each continuous independent variable, where the data appeared to demonstrate linearity. Homoscedasticity was also found, as

assessed by visual inspection of the plot of studentized residuals versus unstandardized predicted values.

In order to test for multicollinearity of the independent variables within the model, variance inflation factor (VIF) values, tolerance, and correlations were assessed. The VIF values in this model ranged from 1.334 (socioeconomic status) to 1.689 (hope's agency dimension) and no tolerances approached 0.1 or below. Correlations among all continuous variables were computed and interpreted, and no correlations approached or exceeded 0.7. Together, these analyses indicated that multicollinearity was not found in the data. A common issue within hierarchical regression analyses is the inclusion of the interaction term (e.g., SES x hope) in the final step of the analysis. The interaction term is multicollinear with the existing independent terms that already exist in the model from the previous step, as commonly found within regression analyses (Cohen et al., 2003). As the VIF values were considered to be low or within normal parameters before the final step, little evidence was shown that any substantial impact of a predictor had an effect on the variance of other predictors. This indicates that multicollinearity did not have an effect on the results from these data.

The data were further inspected for unusual points, including outliers, high leverage points, and highly influential points. An examination of casewise diagnostics and studentized deleted residuals determined that there were no standardized residuals greater than +/- 3 standard deviations, indicating that no outliers were found in the data. An examination of leverage values determined that there were no leverage values above the "safe" value of 0.2 (Fox, 1991). An examination of Cook's Distance values determined that there were no highly influential points (as indicated by a value greater than 1.0; Cook & Weisberg, 1982).

Data Analysis

To address hypotheses, a hierarchical multiple regression (Cohen et al., 2003) was conducted. Hierarchical regressions are useful ways to examine whether continuous variables of interest explain a statistically significant amount of variance in the dependent variable after accounting for all other variables. This analysis was conducted to examine the relationship between hope and career exploration beyond the influence of demographic variables and socioeconomic status/first-generation college student status, and to further test for moderator effects. Specifically, a four-step hierarchical regression analysis was used to examine the additional variance accounted for by each step.

The first step in the hierarchical regression included entering demographic variables as explanatory variables (i.e., independent variables) and career exploration as the outcome variable (i.e., dependent variable). Because certain demographic variables were categorical in nature (e.g., age, race/ethnicity, gender identity, FGCS status), the process of *dummy coding* was employed to reflect the nature of the question and hypothesis based on previous literature (Hardy, 1993). For the variable of age, those participants who endorsed “18-25 years” were used as the reference group in the model and coded as “1”, where all other responses (e.g., “26-35 years”, “36-50 years”, “51+ years”) were coded as “0.” For race/ethnicity, “White or of European Descent” was the reference group and coded as “1” while all other responses were coded as “0.” For gender identity, “Female/Woman” was the reference group and coded as “1” while all other responses were coded as “0.”

At the second step, SES and FGCS status were input as explanatory variables with career exploration as the outcome variable. Regarding FGCS status, multiple responses were combined for dummy coding. Those reporting their parents’ highest attained level of education being “High

school diploma or below,” Some college, no degree,” or “Associate’s degree” were the reference group and coded as “1” while all other responses were coded as “0.” At the third step, hope was input as the explanatory variable with career exploration as the outcome variable. At the fourth and final step, socioeconomic status was multiplied by total hope scores in order to create product variables needed to conduct tests of moderator effects, which were input as explanatory variables with career exploration as the outcome variable. This analysis was utilized to examine which explanatory variables explained variance in career exploration overall, as well as how much of the variance could be explained at each subsequent step throughout the regression. This research used the statistical significance levels of $p < .05$ and $p < .01$ to examine if all of the steps of the regression were significant. Including a stringent cutoff value of .01 strengthens the evidence to reject the null hypothesis that there is no statistically significant relationship found within the data. Thus, finding a significant result with the use of these p -values demonstrates that there exists an exceedingly small probability that the results were found due to chance.

Research Question 1

Research Question 1 examined career exploration’s relationship with socioeconomic status (SES), first-generation college student (FGCS) status, and hope in the present sample. Research Question 1, therefore, encompassed three corresponding hypotheses. For these three hypotheses (H1, H2, H3), a Pearson correlation analysis was conducted to examine career exploration’s correlations with SES (H1), FGCS status (H2), and hope (H3), the results of which are summarized in Table 4.2 and described below. This analysis used a p values of .05 and .01 to determine if the results were statistically significant.

Table 4.2

Correlations Between Socioeconomic Status, First-Generation College Student Status, Hope, and Career Exploration

	Correlation				
	Socioeconomic Status	First Generation Status	Hope	(Agency)	(Pathways)
Career Exploration	-.059	.099*	.359**	.321**	.321**

Note. $N = 372$. * Correlation is significant at the 0.05 level (2-tailed). ** Correlation is significant at the 0.01 level (2-tailed).

The first hypothesis (H1), which predicted a significant, positive correlation between socioeconomic status and career exploration, was not supported ($r = -0.059$, $p = 0.252$). The results from this analysis did not provide evidence of a statistically significant relationship; we, therefore, fail to reject the null hypothesis, indicating that no significant relationship between socioeconomic status and career exploration was found in the data. The data from this sample showed that individuals of varying socioeconomic backgrounds do not differ in their levels of career exploration. Although the hypothesis was not supported within this analysis, further investigation into the relationship between SES and career exploration may be warranted.

The second hypothesis (H2), which predicted a significant, negative correlation between FGCS status and career exploration, was partially supported ($r = .099$, $p = .049$). The results from this analysis provided evidence of a statistically significant relationship between FGCS status and career exploration; we, therefore, rejected the null hypothesis, indicating that a significant relationship between FGCS status and career exploration was found in the data. However, the predicted negative direction of the relationship was not supported; the analysis revealed a weak, positive relationship which indicates that individuals who identify as first-

generation college students are slightly more likely to engage in career exploration behaviors than those who do not.

The third hypothesis (H3), which predicted a significant, positive correlation between hope and career exploration, was fully supported ($r = .359, p < .0005$). The results from this analysis provided evidence of a statistically significant relationship between hope and career exploration; we, therefore, rejected the null hypothesis, indicating that a significant relationship between hope and career exploration was found in the data. Commensurate with extant literature (e.g., Hirschi et al., 2015), the analysis revealed a moderate, positive relationship which suggests that individuals with higher levels of hope are more likely to engage in career exploration behaviors than those who do not.

Research Question 2

Research Question 2 examined the variance in career exploration explained by participants' levels of hope after accounting for the potential variance explained by demographic variables, socioeconomic status (SES), and first-generation college student (FGCS) status. Research Question 2, therefore, encompassed one corresponding hypothesis (H4), which predicted that hope would explain variance in career exploration beyond age, race, gender, SES, and FCGS. To test this hypothesis, a hierarchical linear regression analysis was conducted, the results of which are summarized in Table 4.3 and described below. This analysis used p values of .05 and .01 to determine whether results were statistically significant.

Table 4.3

Hierarchical Linear Regression Predicting Career Exploration from Demographic Variables, Socioeconomic Status, First-Generation College Student Status, and Hope.

Variable	Career Exploration							
	Step 1		Step 2		Step 3		Step 4	
	B	β	B	β	B	β	B	β
Constant	33.47**		32.53**		13.03**		12.85	
Gender	-.77	-.03	-.72	-.03	-.58	-.026	-.54	-.02
Race	.39	.02	.43	.02	-.33	-.019	-.25	-.02
Age	-1.84	-.07	-.98	-.04	-1.72	-.064	-1.51	-.06
SES			-3.32**	-.15	-3.15**	-.145	-3.19**	-.15
FGCS			1.95*	.11	2.11*	.121	1.95*	.11
Hope					.89**	.370	.93**	.38
Hope x SES						-.01	-.05	
R^2	.054		.22		.22		.22	
F	.81		10.48**		12.13**		10.48**	
ΔR^2	.054		.001		.107		.001	
ΔF	1.23		.30		21.77**		.30	

Note. $N = 372$. * $p < .05$, ** $p < .001$; Total $R^2 = .22$

In step 1 of the regression model, the demographic variables (age, race, gender) were placed into the model. This step was not found to be statistically significant, $R^2 = .054$, $F(3, 368) = 1.233$, $p = .245$, and, therefore, suggested that these particular demographic characteristics did not play a meaningful role in explaining career exploration within this sample. In step 2 of the regression analysis, SES and FGCS were placed into the model. This step was found to be statistically significant, $R^2 = .113$, $F(2, 366) = 3.586$, $p = .002$. This provides evidence that SES

and FGCS factors played a role in explaining levels of career exploration within this sample. Specifically, the addition of these variables appeared to predict 11.3% of the variance in this sample. In step 3 of the regression analysis, hope was placed into the model and was found to be statistically significant, $R^2 = .220$, $\Delta R^2 = .107$, $F(1, 365)$, $p < .0005$. The fourth hypothesis (H4), which predicted that hope would explain variance in career exploration beyond demographic variables (i.e., age, race, and gender), SES, and FGCS factors, were, therefore, fully supported. Specifically, these variables in combination accounted for 22.0% of the variance in career exploration within this sample, with hope having accounted for an additional 10.7% of variance from the previous step. R^2 for the overall model was 22.0% with an adjusted R^2 of 16.3%, a small effect size according to Cohen (1988). These findings were commensurate with extant literature regarding the relationship between hope and career exploration (e.g., Hirschi et al., 2015).

Research question 3

Research Question 3 examined the potential moderating effect of hope on the relationships between SES and career exploration. This analysis used a p value of .05 to determine if the results were statistically significant. Results of the hierarchical linear regression and correlation analyses are summarized below.

Research Question 3 explored the potential moderating effect of hope on the relationship between SES and career exploration. Research Question 3, therefore, encompassed one corresponding hypothesis (H5), which predicted that hope will moderate SES and career exploration, such that as levels of hope increase, the strength of the relationship between socioeconomic status and levels of career exploration will decrease. This hypothesis was tested in the fourth step of the hierarchical linear regression model, the results of which are summarized

in Table 4.3 and described below. This analysis used p values of .05 and .01 to determine whether results were statistically significant.

In step 4 of the hierarchical linear regression analysis, SES scores were multiplied by hope scores in order to create the interaction term, which was input into the model as the explanatory variable with career exploration as the outcome variable. The data provided from this sample did not support the hypothesis that hope would act as a moderating variable in the relationship between SES and career exploration ($\beta = -.045, p = .434$). Thus, H5, which predicted that the strength of the relationship between SES and career exploration would decrease as hope increased, was unsupported, $\Delta R^2 = .001, F(1, 364) = .303, p = .582$. As can be seen in Table 4.3, the ΔR^2 value indicates that only 0.1% of the variance in career exploration was uniquely explained by the interaction effect of hope and socioeconomic status. However, as the product variable was not statistically significant, the data suggests that there exists no moderating effect of hope for the relationship between SES and career exploration. Importantly, as reported in Table 4.1, the data did not reveal a statistically significant relationship between SES and career exploration in this sample, and it, therefore, follows that there may be no existing relationship for hope to moderate.

Summary

The analyses used within SPSS to test hypotheses and answer research questions included a correlation analysis (RQ1: H1, H2, H3) and a hierarchical linear regression (RQ2: H4; RQ3: H5). Prior to conducting the analyses, their respective assumptions were tested and met. Correlation analysis results revealed no significant relationship between SES and career exploration, a weak, positive relationship between FGCS status and career exploration, and a moderate, positive relationship between hope and career exploration. Thus, H1 was unsupported,

H2 was partially supported, and H3 was fully supported. The demographic variables that were controlled via statistical inclusion in the regression analysis included age, race, and gender. These variables were found to be statistically insignificant in the model. Regression results showed that SES and FGCS were statistically significant additions to the model, accounting for a total of 11.3% of variance in career exploration at the second step. The inclusion of hope in the regression model accounted for an increased 10.7% of variance, bringing total variance of career exploration explained in this sample to 22.0% in this sample, and subsequently supporting H4. In the final step of the regression, moderation analysis did not support the hypothesis (H5) that hope may act as a moderator in the relationship between SES and career exploration.

CHAPTER V

DISCUSSION AND CONCLUSIONS

The purpose of this study was to examine the relationship between hope and career exploration, with the intention of exploring hope's ability to explain variance in career exploration behaviors beyond the potential influence of such factors as socioeconomic status and FGCS status. These findings highlight potential targets for intervention on the part of counseling psychologists, career counselors, and academic counselors to facilitate career exploration and foster hope during times of economic uncertainty. These interventions may have particular benefit for subgroups who hold marginalized identities and who experience disproportionate effects of income inequality.

Discussion of Results

As this study sought to examine the included variables within the context of university students in the United States, understanding the sample's demographic characteristics and its ability to generalize nationwide is important. This study consisted of a total of 372 participants, which were found to be largely non-representative of the university student population of the United States as indicated by age, gender, and race/ethnicity. The breakdown of sample demographics can be found in Table 3.1 and divergence from the target population is discussed further in the limitations section. Sample data were used in a hierarchical linear regression analysis to address the three research questions.

Research Question 1

- Q1 Is career exploration significantly associated with socioeconomic status, first-generation college student status, and hope in undergraduate students?

Limited evidence exists regarding socioeconomic variables and their direct association with career exploration, as the empirical investigation of these variables within the framework of SCCT most often explores these relationships indirectly, such as through supports and barriers associated with SES. The overall impact of SES on structural variables (e.g., self-efficacy, outcome expectations, interests, etc.) within SCCT literature is also mixed and inconsistent. Extent literature has, however, identified differential academic and occupational outcomes related to socioeconomic context, as discussed in Chapter II. This study, therefore, sought to explore possible macrosystemic trends related to socioeconomic context and career exploration by placing SES in the structural position of a background environmental influence. The development and investigation of the hypotheses were, therefore, guided by extent literature and Social Cognitive Career Theory (Lent et al., 2000). Recall the hypotheses for RQ1:

- H1 A significant association exists between socioeconomic status and career exploration; I predicted that there will be a significant, positive correlation between socioeconomic status and career exploration in undergraduate university students.
- H2 A significant association exists between first-generation college student status and career exploration; I predicted that there will be a significant, negative correlation between FGCS status and career exploration in undergraduate university students.
- H3 A significant association exists between hope and career exploration; I predicted that there will be a significant, positive correlation between hope and career exploration in undergraduate university students.

Socioeconomic Status

Hypothesis 1 predicted a significant, positive relationship between socioeconomic status and career exploration. Hypothesis 1 was rejected in lieu of the null hypothesis, as this analysis

did not provide evidence that there existed a statistically significant relationship between socioeconomic status and career exploration within this sample. This finding appears to contribute to the overall mixed literature around the impacts of SES. It appears to be at odds with some extant research, such as that by Hu et al. (2022) who found a positive relationship between perceived SES and career exploration, while commensurate with other research, such as that of Ali et al. (2005) who found that objective SES was not a significant predictor of self-efficacy or outcome expectations (known predictors of career exploration). Structurally, Lent et al. (2000) asserted that contextual factors (e.g., SES) play multiple roles in the structural framework of SCCT, both impacting the learning experiences that shape interests and choices (as distal background environmental influences) as well as impacting the opportunity structure within which career plans are implemented (through proximal environmental influences). This study sought to examine the impact of SES when placed in the former position of the framework, as a distal background environmental influence, to explore the extent to which socioeconomic context may predict career exploration through learning experiences and, therefore, explore broad trends related to social class. Results indicated that, as analyzed in this position, SES did not provide meaningful explanatory power for career exploration behaviors. Theoretical implications will be described in the next section.

First-Generation College Student Status

Hypothesis 2 predicted a significant, negative relationship between first-generation college student (FGCS) status and career exploration. The results of this analysis revealed a weak, positive relationship between FGCS status and career exploration within this sample. Important to the context of this study, FGCS status is commonly associated with lower income families (National Center for Education Statistics, 2020; Pratt et al., 2019) and was explored in

the present study as a factor related to socioeconomic context. Similar to SES, this study sought to examine the impact of FGCS status when placed in the former position of the framework to explore the extent to which socioeconomic context may predict career exploration through influence on learning experiences. The results of this analysis indicated that first-generation college students were slightly more likely to engage in career exploration behaviors than continuing-generation college students within this sample.

The extant literature regarding the career exploration pursuits of FGCS has been largely qualitative in nature, and Tate et al. (2015) noted that the majority of FGCS research focuses on deficits relative to their peers. The predicted direction of the relationship between FGCS and career exploration in this study (H2) was, notably, informed by this same deficit model. Importantly, the findings of this analysis may speak, instead, to the strengths specific to FGCS students within this sample. As previously noted, Lent et al., (2000) held that the impact of a particular contextual factor on choice behavior often depends on one's appraisal and response to it, and Tate et al. (2015) found that FGCS participants saw themselves as more adaptable, self-reliant, motivated, and appreciative of opportunities. Thus, while researchers have identified the importance of proximal variables (e.g., social status, parental support) and found that FGCS encounter more contextual barriers (e.g., institutionalized and interpersonal classism, limited professional networks), researchers further assert that a strengths-based model may understand FGCS who encounter such barriers (e.g., lack of parental support) to possess adaptable strengths such as self-reliance that make differential meaning of these barriers (Tate et al., 2015). As detailed in previous chapters, individual variables that have been shown to influence career exploration behaviors include openness to experience and agreeableness (Li et al., 2015), positive beliefs about one's future career (Guan et al., 2017; Porfeli et al., 2012), hope (Hirschi et

al., 2015), self-esteem (Cai et al., 2015), and self-efficacy (Jiang et al., 2019). While this study did not examine the personal variables or internal resources that FGCS may utilize to interpret their contextual supports and barriers, findings from this analysis may be among the first to identify the possible impact of FGCS' compensatory strengths on career exploration through quantitative inquiry. Career development fields may benefit from further investigation the relationship between FGCS status and career exploration with regard to the development of individual antecedents that interpret contextual experiences and predict career exploration behaviors through the guidance of the SCCT framework.

Hope

Hypothesis 3 predicted a significant, positive relationship between hope and career exploration. This hypothesis was fully supported, as the analysis provided evidence that there existed a statistically significant relationship of moderate strength between hope and career exploration within this sample ($r = .359, p < .0005$). Commensurate with Hirschi et al.'s (2015) study of Swiss university students ($r = .23, p < .01$), this finding supports the notion that emerging adults with higher levels of hope are more able to explore career options and reflect upon career goals relative to those with lower levels of hope. Given that hope encompasses the ability to envision multiple pathways towards important goals as well as the confidence and agency to achieve them (Snyder et al., 1991), these results appear to be meaningfully commensurate with the robust extant research asserting that self-efficacy beliefs, outcome expectations, and the assumption of one's own agency predict career-related goals and exploratory behaviors (C. C. Chan, 2018; Jiang et al., 2019; Lent et al., 2017). The findings of this hypothesis, therefore, appeared to confirm one of the foundational assumptions underlying this investigation, which was not only that hope may predict career exploration behaviors, but

that hope may be an important resource capacity that can be empirically conceptualized and, therefore, further investigated, as guided the framework of SCCT.

Research Question 2

- Q2 Do levels of hope explain levels of career exploration after controlling for first-generation status, socioeconomic status, and demographic variables in undergraduate students?

Limited evidence exists overall for the quantitative relationship between hope and career exploration. Hirschi et al. (2015) found that hope accounted for incremental variance in career exploration beyond generalized self-efficacy beliefs and social support in Swiss university students. Building upon this research, and instead of the factors of self-efficacy beliefs and social support, this study aimed to investigate the variance in career exploration explained by hope beyond that of demographic factors (i.e., person inputs) and socioeconomic context (i.e., distal background contextual affordances). The development of the subsequent hypothesis was, therefore, guided by past literature as well as Social Cognitive Career Theory. Recall the hypothesis for RQ2:

- H4 I predicted that hope will explain variance in career exploration beyond socioeconomic status and first-generation college student status in undergraduate university students.

The fourth hypothesis (H4) was fully supported. The regression analysis provided evidence that hope accounted for an additional 10.7% of variance in career exploration beyond demographic variables (i.e., age, race, and gender) and socioeconomic context (i.e., SES and FGCS status), all of which explained a combined total of 22.0% of the variance within this sample. These findings appear to be commensurate with extant literature, as Hirschi et al. (2015) found that self-efficacy beliefs, social support, and hope together explained a similar 23% of variance in career exploration within their sample. The structure of this regression was designed

with the expectation that, beyond the highly variable supports and barriers, there would be foundational experiences associated with broad identity (i.e., age, race, gender) and distal contextual (i.e., SES, FGCS status) variables that would lead to significant relationships with career exploration upon which the additional utility of hope could be examined. However, within the framework of SCCT, it is perhaps unsurprising that demographic variables and socioeconomic context (as operationalized in this study) may have been *too* broad of variables to independently provide meaningful explanatory power for career exploration (per H1 and H2 results) while hope, born specifically of learning experiences, provided much more explanatory power (per H3 and H4 results). These findings continue to support the SCCT framework by highlighting how an individual's interpretation of events (e.g., learning experiences) is fundamental to the relationship between person inputs/background contextual affordances and choice actions.

Research Question 3

Q3 Does hope act as a moderating variable between socioeconomic status and career exploration in university students?

A preponderance of literature identifies diminished outcomes associated with socioeconomic adversity (see Chapter II). As previously expressed, the structure of this regression was informed by the expectation that there would be foundational experiences associated with broad identity (e.g., age, race, gender) and distal contextual (e.g., SES, FGCS status) variables that would ultimately lead to significant relationships with actions (e.g., career exploration) and outcomes. Conceptual guidance from SCCT and hope literature suggested that hope may be an internal resource that moderates between contextual experiences afforded by SES and the development of interests, goals, and actions. The development of the subsequent

hypothesis was, therefore, guided by past literature as well as Social Cognitive Career Theory.

Recall the hypothesis for RQ3:

- H5 I predicted that hope will moderate SES and career exploration, such that as levels of hope increase, the strength of the relationship between socioeconomic status and levels of career exploration will decrease.

This hypothesis was unsupported, as the regression analysis did not provide evidence that there existed any moderating effect of hope on the relationship between SES and career exploration in this sample. Importantly, the data did not reveal a statistically significant relationship between SES and career exploration for hope to moderate. SES was selected to represent socioeconomic context in the moderation analysis due to its presence in the literature as a factor associated with diminished outcomes. In the present study, it appears to have been either too broad of a contextual variable to provide meaningful explanatory power, poorly operationalized to the extent that the factor was not adequately captured, structurally misplaced in the analytical framework (e.g., as a distal background contextual variable rather than to account for proximal environmental influences), or, likely, a combination of the three. This is further addressed in the limitations of this study.

Implications

Theoretical and Research Implications

This study was guided by the framework of Social Cognitive Career Theory. As described in previous chapters, SCCT structurally delineates how personal factors, distal background contextual affordances, and sociocognitive variables interact to influence the development of self-efficacy and outcome expectations relevant to career development (S. D. Brown & Lent, 2019). These self-efficacy beliefs and outcome expectations are fundamental to the development of an individual's career-relevant interests, goals, and actions (such as career

exploration behaviors), which are also impacted by contextual supports and barriers. Recall that Snyder conceptualized hope as a cognitive set comprised of a reciprocally-derived sense of agency and pathways thinking, noting strong conceptual similarities to self-efficacy and outcome expectations while delineating that hope represents the necessary joint interaction of the two. However, the goal of this study was not to structurally insert hope into the model of Social Cognitive Career Theory through structural equation modeling, but to use SCCT to guide a conceptual understanding of hope's role in career development, namely career exploration, with respect to socioeconomic status.

The primary theoretical finding of the first hypothesis was that SES, as placed within this position of the analytical framework, could not predict career exploration. As noted previously, Lent et al. (2000) asserted that contextual factors (e.g., SES) play multiple roles in the structural framework of SCCT, both as distal background environmental influences as well as proximal environmental influences. The placement of SES in this study was intended to account for trends related to SES as a distal background environmental influence, as a preponderance of literature identifies the macrosystemic influence of SES (e.g., Flores et al., 2017) while providing limited evidence of a direct relationship between socioeconomic context and career exploration. Importantly, the guiding theory of this study also held that the impact of a particular contextual factor on choice behavior often depended on one's appraisal and response to it (Lent et al., 2000).

The lack of relationship found in this data, therefore, appeared to be theoretically consistent with the notion that a person's phenomenological role as the interpreter of contextual experiences may moderate the impact of adversities or resource limitations (Lent et al., 2000). Thus, broad conclusions about the impact of SES on career exploration within this sample could

not be drawn, possibly emphasizing and affirming two important elements of the SCCT framework. The first of which was the importance of person inputs (e.g., openness, attributional style) and meaning-making processes on learning experiences when SES was examined as a distal background environmental influence. The findings of this study appeared to corroborate the structural assertion that learning experiences did not emerge from background environmental influences alone but were the effect of an inseparable combination of environmental influences and personal or socioemotional factors, the latter of which this study did not capture. This may speak to the importance of exploring SES as a subjective variable (e.g., Ali et al., 2005; Liu et al., 2004) in order to capture subjective worldview. As a result, this study did not appear to find any direct relationship between SES and career exploration. The second element affirmed in this finding may be the importance that SCCT places upon proximal environmental influences (e.g., availability of jobs, access to financial support, parental agreement/expectations) on the development of interests, goals, and actions (Sawitri et al., 2021). This emphasizes the importance of the placement of SES within the analytic framework of the study, suggesting that the impact of SES on career exploration may be differentially examined when SES is placed in the position of a proximal environmental influence, where the relationship may be impacted by the affordance of proximal supports and barriers. However, to the point of Flores et al. (2017), there is a need to explore SES as a background contextual influence, and the lack of relationship found between SES and career exploration in this study may reflect a failure to capture the macrosystemic and sociocultural impacts of social class. Future researchers may benefit from an alternative operationalization of SES that captures experiences of classism, such as measures for work attitudes (Ali et al., 2013), class-related discrimination (M. N. Thompson, 2013), and pedagogy of poverty within educational settings (Flores et al., 2017).

To quantitatively explore the broad implications of SES identified in extant literature, future research may further benefit from a more robust operationalization of SES to capture the context of resource-based income inequality at the macrosystemic level. Further, future research may benefit from exploring the relationship between these variables with SES placed in the position of proximal environmental influences, thereby accounting for broad trends in supports and barriers that are afforded by socioeconomic context or income inequality. Alternatively, while this study did not find quantitative differences in career exploration as an effect of SES, it did not explore qualitative differences. This study, therefore, could not extrapolate or conclude that there were no differences in career exploration as an effect of SES; it concluded merely that no quantitative differences were found in this sample. There certainly existed the possibility that career exploration looked qualitatively different in accordance with SES strata, which may have significant implications for social mobility and, therefore, warrants continued investigation.

The primary finding of the second hypothesis was that first-generation college students were slightly more likely to engage in career exploration than continuing-generation college students. This study, therefore, contributed to our understanding of how SCCT may be applied to the career development process of FGCS and may reinforce the importance of exploring the relationship between personal and contextual influences. Structurally, FGCS status can be understood both as a person input and as a distal background contextual factor, as it is a personal identity factor that is also tied specifically to a contextual environment (i.e., college) and subject to contextual influence; it may, therefore, be more likely to predict learning experiences (which subsequently inform the development of interests, goals, and actions) than singular person inputs (e.g., race) or background contextual factors (e.g., SES) could in isolation. As a variable associated with one's identity as well as one's context, it may also predict certain proximal

environmental influences (e.g., family influence, limited professional network) that further impact the development of interests, goals, and actions. Importantly, while the relationship found in this sample between FGCS status and career exploration was marginal, the finding may indicate important group differences around the interplay and impact of supports and barriers between FGCS and continuing-gen students.

For instance, the increased career exploration of FGCS in this sample may indicate important meaning-making processes given the abundance of literature identifying the increased barriers experienced by FGCS relative to continuing-generation students. In line with Tate et al.'s (2015) strength-based lens and Lent et al.'s (2000) emphasis on the *perception* of barriers, these findings could indicate strengths held by FGCS that either lead to an increased ability to circumvent the increased barriers that have been robustly identified in the literature, or could suggest a theoretically-consistent, individualized interpretation of barriers (e.g., Lent et al., 2000; Swanson & Woitke, 1997) that leads to differential impact on interests, goals, and actions (e.g., metabolizing experiences into motivation instead of inhibition). These findings may, therefore, underscore Lent et al.'s (2000) assertion of the importance of coping efficacy, dispositional affect, and outcome expectations in the interpretation of perceived barriers, as well as provide consistency with research indicating that the impacts of supports and barriers differ significantly between first-gen and continuing-gen students (e.g., Pratt et al., 2019; Raque-Bogdan & Lucas, 2016; Sampson, 2016). Importantly, Ives and Castillo-Montoya (2020) noted that 75.0% of the studies found in their review of FGCS literature adopted an assimilationist and normative conceptualization that contributes to a deficit- and normative perspective by comparing their performance to that of their continuing-generation peers. As a result, researchers may be less likely to meaningfully conceptualize FGCS through the lens of their unique experiences and

strengths. Through its explicit emphasis on the interplay between person and environment, the framework of SCCT may, therefore, be a helpful guide to researchers in the exploration of the nuanced internal and external experiences of FGCS from a culturally expansive and strengths-based perspective that centralizes the lived experiences of minoritized students.

The primary findings of the third and fourth hypotheses were that hope was positively related to career exploration within this sample and that hope explained increased variance in career exploration after controlling for demographic variables and socioeconomic context. As the second study of its kind and the first to examine hope's relationship with career exploration in a United States sample that I have been able to identify, this study furthers the understanding of hope's utility within broader career development literature with particular respect to Social Cognitive Career Theory. As detailed previously, SCCT postulates that person inputs and learning experiences directly influence outcome expectations and self-efficacy beliefs, which then directly influence the development of interests, goals, and actions. Similar to these outcome expectations and self-efficacy beliefs, an individual's level of hope is affected by learning experiences that are in many ways informed by dispositional factors (i.e., person inputs) and distal background contextual affordances. Thus, consistent with the theoretical model, the findings of this analysis suggest that an individual's level of hope appears to be a learned capacity that has significant impacts on the development of choice actions, such as career exploration, and may, therefore, be meaningfully conceptualized using the framework of SCCT and its associated body of literature. Importantly, this study did not structurally examine the intermediary processes that exist between hope and career exploration, such as the development of interests or goals, the impacts of proximal environmental influences, or the influence of performance feedback. Given that this study provides the first empirical confirmation of a

significant relationship between hope and career exploration in a sample of U.S. university students, future research may be well-positioned to investigate the structure of this relationship with a more robust consideration of the many elements comprising the framework of SCCT.

For example, this study examined the relationship between hope and career exploration behaviors, and Lent et al. (2017) found that self-efficacy beliefs and outcome expectations jointly predicted career exploration goals, which precede actions. Using the conceptual foundation explored in this study, hope researchers may have an opportunity to use SCCT guidance to explore the extent to which hope predicts exploration goals. Beyond the causal relationship established between self-efficacy beliefs and career exploration, empirical research has also found a relationship in the other direction, where career exploration increases career decision self-efficacy or confidence in young adults (e.g., Cheung & Arnold, 2014; Lent et al., 2017). Consistent with SCCT, this indicates that the outcomes or attainments resulting from career-related actions reciprocally serve as important learning experiences that inform self-efficacy beliefs and outcome expectations. Given the theoretically-consistent results of this study, empirical findings that hope is impacted by performance outcomes (Snyder et al., 1996), and the strong conceptual relationship between hope, self-efficacy, and outcome expectations, it conceptually follows that career exploration behaviors may afford reciprocal learning experiences that increase hope in young adults. Thus, the correlational nature of the relationship between hope and career exploration found in this study may limit causal inference or the ability to make conclusions about directionality, and the SCCT framework suggests that this relationship may be bidirectional. The structural elements of hope within the SCCT framework may, therefore, benefit from further empirical inquiry.

Having begun to establish the ability of SCCT to conceptually guide the empirical study of hope, future career researchers may be well-positioned to explore the relationships between hope and other variables of interest through hope's relationship with supports and barriers, as well. One of the fundamental characteristics of hope is its influence on one's ability to successfully navigate barriers and obstacles through agency thinking and pathways generation (Snyder et al., 1991). Given that the perception of barriers is an individualized process (e.g., Lent et al., 2017), that group differences have been shown between FGCS and continuing-generation students (e.g., Toyokawa & DeWald, 2020), and the presence of complex barriers associated with socioeconomic context (e.g., M. T. Brown, 2000), SCCT offers a framework with robust literature that may provide meaningful guidance through which to explore the development of hope and its ability to help emerging adults navigate socioeconomic adversities to establish fulfilling careers.

Practice Implications

Among the body of research identifying the importance of hope for clinical application, this study identifies further clinical implications for hope that apply both to career counselors and mental health professionals as a whole. Findings of this study imply that, within the applied fields of clinical and counseling psychology, fostering hope through therapeutic intervention may have impacts that extend beyond the regulation of mood and the management of immediate mental health concerns. Specifically, the findings of this study suggest that hope, as a non-career-specific resource based on agency and fostered through learning experiences, may predict career exploration behaviors in emerging adults, which is associated with myriad positive outcomes in one's career development (e.g., Yotsidi et al., 2018). Thus, therapeutic interventions that target hope, such as by fostering agency and pathways thinking, may, therefore, provide

clients with internal resources that empower them to engage with their internal and external environments in ways that catalyze a cascade of well-being in multiple domains.

Hope has been extensively described as one of the common factors responsible for therapeutic change (e.g., Wampold & Imel, 2015), and may play a significant role in a number of evidence-based therapeutic approaches that have emerged in recent decades, including, but not limited to, solution-focused brief therapy (SFBT), motivational interviewing (MI), and acceptance and commitment therapy (ACT). For example, SFBT, as introduced by de Shazer and In Soo Kim in the 1980s (De Jong, 2019; de Shazer et al., 1986), has arisen as a therapeutic approach that appears to speak the language of hope. Unlike problem-solving approaches, with which it is often misconstrued (Blundo et al., 2014), Solution-focused brief therapy is comprised of a set of theoretical and ethical principles that operationalize a strengths-based perspective by viewing the client as the expert, allowing the client to direct the content, exploring their own role in positive change (Blundo, 2009). This approach principally honors each client's unique way of thinking and, therefore, fosters true agency thinking, by placing deliberate trust in the client as they reinterpret their experiences of success and change to include their own very fundamental role. SFBT further engenders pathways thinking by exploring the client's goals or intended outcomes (e.g., visualization, the Miracle Question) and identifying agentic steps towards their goals (e.g., compliments, SFBT scaling questions; Blundo et al., 2014). Through this self-recognition and exploration, clients emerge with an increased sense of agency and ability to generate solutions (e.g., pathways), consistent with hope theory.

Motivational Interviewing originated in the addictions field in the 1980s as a strengths-based alternative to dominant, confrontational approaches of the time (Manthey et al., 2011). Miller and Rollnick (2002) identified MI as a client-centered method for facilitating motivation

by exploring and resolving ambivalence. Often misrepresented in the field through the use of component techniques without an understanding its context (Miller & Rollnick, 2002), the spirit of MI integrates three components: collaboration, evocation, and autonomy (Manthey et al., 2011). MI utilizes a collaborative therapeutic relationship that prioritizes the client's expertise and perspectives, seeks to evoke motivation by drawing on the client's own perceptions, goals, and values, and affirms the client's capacity for self-direction. In this way, the therapeutic process helps clients increasingly generate agency and empowerment as they establish their own goals and self-generate the pathways and subsequent motivation to meet them, consistent with the tenets of hope theory (Snyder et al., 1991).

A third example of therapies that may facilitate hope is ACT, a third-wave behavioral therapy introduced by Steve Hayes in 1986 (Hayes et al., 2006). Acceptance and Commitment Therapy (ACT) aims to help clients create a meaningful life by using mindfulness techniques to bring attention to the present moment and respond flexibly to 'unwanted private experiences' that include challenging thoughts and emotions. ACT interventions, therefore, orient around two main processes: developing acceptance over unwanted private experiences and committed action towards living a valued life (Harris, 2006). Through a broad host of interventions that orient around the client's own internal experiences, values, and sense of meaning, therapeutic treatment aims to help clients facilitate agency over challenging internal experiences (e.g., tolerance for challenging emotions, defusion from distressing thoughts) and committed action towards their goals (e.g., values clarification, goal-setting, effective action). In these ways, clients emerge with an increased ability to autonomously generate and move towards goals that are guided by their own values, consistent with the tenets of hope theory (Snyder et al., 1991).

I assert that an important strength of these therapeutic orientations is their intentional centering of the client's own values and goals rather than ascribing "normative" values or conceptualizing through a lens of manualized meaning-making. Lent et al. (2017) and others (Buchanan et al., 2021) noted that learning experiences and meaning-making are not a one-size-fits-all process, suggesting that interventions aiming to foster hope must be tailored to the values and adaptive strengths of each client. A curious, adaptive approach may allow clinicians the flexibility to be culturally responsive and foster hope by allowing the client's values and innate qualities to guide the therapeutic process. Relevant to the findings of this study, FGCS literature suggests the presence of qualitative differences between FGCS and continuing-generation students (Tate et al., 2015), indicating an important opportunity for culturally-responsive counseling within university counseling centers that historically utilize brief therapy models.

Within the realm of school and career counseling, it appears relevant that interventions or programming designed to facilitate career exploration may likely contribute to the development of hope. Effective career exploration interventions may include not only one-on-one career counseling that explores a student's values, goals, and strengths, but also may include the provision of broad learning experiences (e.g., exposure to diverse role models), opportunities for interaction (e.g., role plays or hands-on tasks), or assessments that provide feedback on strengths (e.g., inventories and assessments). Ideally, these interventions may foster a sense of hope that allows clients to take emotional risks, be curious, and *explore*. The recent shift towards remote learning platforms has included the use of interactive educational tools, such as platforms for the creation of skills development courses and programs (Tarkar, 2020). These provide meaningful opportunities to foster engagement and self-exploratory learning that may support the entry of

young graduates into the labor market and help avoid unemployment and the associated psychological distress (Miyah et al., 2022).

In university settings, the relationship between hope and career exploration may further indicate the importance of a strong relationship between college counseling centers and campus career development centers (e.g., “Career Services” or “Career Center”). Career development centers help students access the skills and resources necessary to succeed in the workforce. They may offer a number of services that facilitate career exploration, such as the arrangement of job shadowing and internship opportunities, the provision of workshops or seminars, the organization of alumni and professional networking information, the dissemination of informational resources, the facilitation of career fairs and events, and the development of peer mentoring programs. Services offered by career development centers may facilitate career exploration in a way that provides students with hope, and mental health providers may facilitate the development of hope in a way that provides students with agency and motivation to engage in career exploration. Thus, these common campus resources may be mutually beneficial and may speak to the potential importance of establishing a strong relationship in order to best serve students. This may be achieved in a number of ways, include a strong referral network, integrated workshop programming, coordinated outreach initiatives, embedding providers on-site within either department, and through data sharing and collaborative program evaluation. By fostering a strong relationship and engaging in joint initiatives, career development services and counseling centers can create a cohesive and supportive environment that addresses students’ career and mental health needs.

Overall, the results of this study provided possible suggestions for implementing intervention programming aimed at improving career development as well as mental health and

well-being. This research contributed to extant base of literature in terms of tailoring positive psychological interventions to help foster agency and adaptability in the face of uncertainty. Findings of this study were, therefore, germane both to the fields of career development as well as positive psychology.

Limitations and Recommendations for Future Study

A contextual limitation of this study may include the COVID-19 pandemic, proximal to which the data for this study was collected. The world has experienced significant changes pervading many aspects of daily life since the start of the pandemic. At the time of data collection, participants may have experienced two years of existential challenges including isolation, economic uncertainty, and unprecedented changes to the structure of otherwise predictable domains (e.g., work, school, relationships), the effects of which may specifically impact the development of hope and the career exploration. Thus, the generalizability of the results of this study may subsequently be limited by the cultural context during which it was conducted (i.e., within a Western, industrialized nation currently experiencing the impacts of changes posed by global pandemic pressures and capitalism). Importantly, given the brief window of time in which data was collected, the data is unlikely to have been biased by historical effects.

A further significant limitation of this study is the composition of the sample, which is largely unable to generalize nationwide due to imbalanced representation within the demographics. Using National Center for Education Statistics (2020) as a reference point, this study's racial or ethnic composition identified 59.7% White or European descent (relative to census data showing 52.8% identifying as White), 8.3% as Black or of African descent (relative to 13.0% identifying as Black), 6.2% Latino/a/x, Hispanic, or of Spanish descent (relative to

21.8% identifying as Hispanic), 14.0% Asian or of Asian descent (relative to 7.2% identifying as Asian), 0.3% Native Hawaiian, Pacific Islander, or of Pacific Islander descent (relative to 0.3% identifying as Pacific Islander), 0.0% Native American, American Indian, or Alaskan Native (relative to 0.7%), 1.1% Middle Eastern or Arab (relative to an unlisted percentage), and 9.4% multiracial (relative to 4.3%). In terms of gender, 77.2% of participants identified as women while 17.7% identified as men, diverging significantly from census data that reports 58% women and 41.9% men. Overall, the sample demographics demonstrate a divergence from those of NCES data, indicating that the sample is not as representative of the target population (i.e. nationwide university students); the limited diversity of identities captured in this sample may limit the ability to compare groups or generalize findings with any statistical meaning or significance. However, the inclusion of demographic variables in this study was designed not to draw conclusions regarding group comparisons, but simply to control for variability. More specifically, however, the captured sample consisted primarily of women (77%) and participants who identified as white (59.7%), with the next largest racial or ethnic groups including participants who identified as Asian or of Asian Descent (14%), Black or of African Descent (8.3%), and Latino/a/x, Hispanic, or of Spanish Descent (6.2%) for a combined total of only 28.5%. The data and findings of this study, therefore, likely overrepresented the experiences of white-identified and women-identified participants.

Importantly, this study may, therefore, actively contribute to known inequities in psychological research related to race and gender (Buchanan et al., 2021) given the present sample composed largely of white, female college students. While findings of this study may, therefore, be generalizable only to this sample, it may realistically contribute to ongoing biases in the field in a number of ways, including citation metrics and generalized implications that

reinforce whiteness as normative (Buchanan et al., 2021; Held, 2020). I, therefore, urge readers to be highly wary of this study's ability to generalize findings outside of its sample characteristics, and even to be critical of the way that it effectually centers the experience of white participants. I recommend that future researchers seek to explore these variables through methodological designs that are from, and for, "othered" groups and people from marginalized backgrounds in order to help decenter hegemonic narratives and decolonize the processes of scientific inquiry and knowledge generation.

Methodologically, the use of self-report data regarding cognitive and emotional experiences is commonplace, yet is not without several limitations (Heppner et al., 2016). There are a host of reasons why participants may have inaccurately reported their experiences, including misunderstanding the questions and intentional responding in biased ways (Heppner et al., 2016; Remler & Van Ryzin, 2015). Non-stigmatizing items were specifically selected for use in this study to mitigate emotional biases, but it is, therefore, important to be mindful of these limitations when interpreting the data and the results of this study. More specifically to this study was the use of self-report data to capture "objective" information, where participants were asked to estimate or recall their "household income growing up." Participants may have had limited awareness of their household income during their development, may have interpreted "growing up" to refer to different ages of development, and may have experienced a household income that fluctuated between different brackets during these years, any of which may limit internal validity.

Another limitation of this study may be found in the measurement of SES. The objective measure used in this study to represent SES via income may have had a limited ability to capture the lived effects of social class and, therefore, may mean comparatively little without capturing

relative context such as one's local cost of living or experiences of classism. For example, the present, income-based operationalization of SES may have been more effective if data were gathered from a sample within a defined geographic area. Instead, the impact of this measure may have been diminished by recruiting a nationwide sample where participants' reported income may represent relatively little without associated context. It may have been helpful to use more robust or contextual measures of income, such as Pell grant eligibility, zip code, or number of earners in the home. Future research may benefit from thoughtful and intentional operationalization of SES factors to more comprehensively capture such background contextual influences within the framework of SCCT. It may also have been beneficial to measure subjective experience to capture potential effects of social class and SES-related experiences germane to hope and career exploration given the subjectivity and individuation of learning experiences, despite the intention of this study to examine effects of objective income disparity.

What may be the most important limitation of the study is the overall design and structure of analysis. This study used correlational design and hierarchical regression analyses merely to establish the existence of relationships between primary variables. While the theoretical guidance of SCCT provides a conceptual framework through which to consider the directionality of the findings, the correlational nature of the design precludes the ability to make empirical inferences about causality or direction within these relationships. Further, the design itself provides little insight into the possible existence and impact of confounding variables. Thus, while this study may have succeeded in establishing the existence of these relationships in a U.S. sample, the literature may stand to benefit greatly from a more thorough examination of these relationships in order to investigate the theoretical assumptions that underpin the present investigation. For example, researchers may be able to investigate relevant causal pathways through structural

equation modeling, longitudinal analyses, and quasi- or experimental designs that provide more robust control of variables and more nuanced perspective through which to examine relationships.

Conclusion

The purpose of this study was to contribute to previous literature and examine the role that hope may play in the relationship between socioeconomic context and career exploration when controlling for the demographic variables of gender, age, and race. Although these constructs have been examined under different contexts, they have yet to be explored together under the contextual framework of Social Cognitive Career Theory. Therefore, a goal of this study was to address this gap in the literature by illustrating the conceptual unity between hope theory and SCCT, providing a framework for future hope research while investigating important dimensions of socioeconomics in the United States. This study was conducted using a hierarchical regression analysis and sampled a population of emerging adult university students throughout the United States. Contrary to some extant research, this study did not provide evidence of a direct relationship between SES and career exploration. However, the results of this study did demonstrate a positive relationship between first-generation college student status and career exploration, supporting strengths-based FGCS literature. Additionally, this study demonstrated that hope was positively associated with career exploration and explained variance beyond demographic variables, SES, and FGCS status, commensurate with previous literature. Lastly, the results of this study did not provide evidence that hope acts as a moderating variable on the relationship between SES and career exploration, as there was no identified relationship to moderate. This study may have useful implications for future research, as well as clinical implications for counseling psychologists and academic or career counselors who seek possible

intervention strategies for clients whose presenting concerns include career development challenges.

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APPENDIX A
INSTITUTIONAL REVIEW BOARD APPROVAL



Date: 12/17/2021

Principal Investigator: Hunter Montoya

Committee Action: **RB EXEMPT DETERMINATION – New Protocol**

Action Date: 12/17/2021

Protocol Number: 2111032426

Protocol Title: The Impact of Hope on the Relationship between Socioeconomic Context and Career Exploration

Expiration Date:

The University of Northern Colorado Institutional Review Board has reviewed your protocol and determined your project to be exempt under 45 CFR 46.104(d)(7)(2) for research involving

Category 2 (2018): EDUCATIONAL TESTS, SURVEYS, INTERVIEWS, OR OBSERVATIONS OF PUBLIC BEHAVIOR. Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or (iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by 45 CFR 46.111(a)(7).

You may begin conducting your research as outlined in your protocol. Your study does not require further review from the IRB, unless changes need to be made to your approved protocol.

As the Principal Investigator (PI), you are still responsible for contacting the UNC IRB office if and when:



- You wish to deviate from the described protocol and would like to formally submit a modification request. Prior IRB approval must be obtained before any changes can be implemented (except to eliminate an immediate hazard to research participants).
- You make changes to the research personnel working on this study (add or drop research staff on this protocol).
- At the end of the study or before you leave The University of Northern Colorado and are no longer a student or employee, to request your protocol be closed. *You cannot continue to reference UNC on any documents (including the informed consent form) or conduct the study under the auspices of UNC if you are no longer a student/employee of this university.
- You have received or have been made aware of any complaints, problems, or adverse events that are related or possibly related to participation in the research.

If you have any questions, please contact the Research Compliance Manager, Nicole Morse, at 970-351-1910 or via e-mail at nicole_morse@unco.edu. Additional information concerning the requirements for the protection of human subjects may be found at the Office of Human Research Protection website - <http://hhs.gov/ohrp/> and <https://www.unco.edu/research/research-integrity-and-compliance/institutional-review-board/>.

Sincerely,

A handwritten signature in black ink that reads "Nicole Morse".

Nicole Morse
Research Compliance Manager

University of Northern Colorado: FWA00000784

APPENDIX B
INFORMED CONSENT



Institutional Review Board

CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH
University of Northern Colorado

Project Title: The Impact of Hope on the Relationship between Socioeconomic Context and Career Exploration

Researcher: Hunter Montoya, B.A., mont9146@bears.unco.edu

Research Advisor: Kenneth Parnell, Ph.D., LP, Assistant Professor of Applied Psychology and Counselor Education kenneth.parnell@unco.edu

Purpose and Description

The primary purpose of this study is to examine the relationships between hope, socioeconomic context, and career exploration.

Participation

As a participant in this research, you will be asked to complete an anonymous, web-based questionnaire. The questionnaire will take approximately 5-10 minutes to complete. In order to participate, you must be over the age of 18 and be currently enrolled in undergraduate courses. Questionnaire responses will be submitted and stored via the Qualtrics platform. Anonymous data will be downloaded and stored on the researcher's password protected computer. To ensure participant anonymity, researchers will seek to collect no identifying information and participant information will be protected by the Prolific research platform.

Risks and Discomforts

Potential risks from participation in this study are minimal. The nature of the questions are not expected to be disruptive to your emotional well-being, health, or social or occupational functioning. If you feel uncomfortable or do not wish to answer a particular question, you have the right to decline to respond and are welcome to discontinue at any time. Should you experience any discomfort, at the end of the survey you will be provided contact information for psychological and emergency services that you may use to seek support.

Benefits

Your participation will be financially compensated through the Prolific research platform in accordance with the time it takes to complete the survey. Other possible benefits may include increased self-awareness of one's own level of hope and intentionality around career exploration pursuits.

For the purposes of confidentiality, your responses will be kept confidential to everyone but the researchers in this study. All steps towards confidentiality will be taken, and in no way will any identifying information be collected or shared. Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled.

Having read the above and having had an opportunity to ask any questions, please communicate your consent by clicking "By clicking here, I affirm that I am at least 18 years of age and voluntarily agree to participate" if you would like to participate in this research. You may keep this form for future reference. If you have any concerns about your selection or treatment as a research participant, please contact Nicole Morse, Office of Research & Sponsored Programs, University of Northern Colorado, Greeley, CO; 970-351-1910; nicole.morse@unco.edu.

APPENDIX C

INSTRUCTIONAL MANIPULATION CHECK PROMPT

INSTRUCTIONAL MANIPULATION CHECK PROMPT

Read each item carefully. This question is designed to assess the extent to which you are attempting to answer the survey questions honestly. Using the scale below, please select the response specifically indicated by each item.

1 = Strongly Disagree **2** = Somewhat Agree **3** = Neither Agree nor Disagree **4** = Somewhat Agree
5 = Strongly Agree

- ___ 1. Please select *Somewhat Agree*
- ___ 2. Choose *Strongly Disagree*
- ___ 3. Please mark “Neither Agree nor Disagree”
- ___ 4. Select the *Strongly Agree* option
- ___ 5. Check the box indicating “Somewhat Disagree”

APPENDIX D
CAREER EXPLORATION SURVEY

CAREER EXPLORATION SURVEY (CES)

Directions: Read each item carefully. Please use the scale shown below to answer the following questions.

1 = Little **2** = Somewhat **3** = A moderate amount **4** = A substantial amount **5** = A tremendous amount

To what extent have you behaved in the following ways over the last 3 months?

- ___ 1. Investigated career possibilities.
- ___ 2. Went to various career orientation programs.
- ___ 3. Obtained information on specific jobs or companies.
- ___ 4. Initiated conversations with knowledgeable individuals in my career area.
- ___ 5. Obtained information on the labor market and general opportunities in my career area.
- ___ 6. Sought information on specific areas of career interest.

To what extent have you done the following in the past 3 months?

- ___ 7. Reflected on how my past integrates with my future career.
- ___ 8. Focused my thoughts on me as a person.
- ___ 9. Contemplated my past.
- ___ 10. Been retrospective in thinking about my career.
- ___ 11. Understood a new relevance of past behavior for my future career.

APPENDIX E

HOPE SCALE

HOPE SCALE

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank before each sentence.

1 = Definitely False 2 = Mostly False 3 = Mostly True 4 = Definitely True

- ___ 1. I can think of many ways to get out of a jam.
- ___ 2. I energetically pursue my goals.
- ___ 3. I feel tired most of the time.
- ___ 4. There are lots of ways around any problem.
- ___ 5. I am easily downed in an argument.
- ___ 6. I can think of many ways to get the things in life that are most important to me.
- ___ 7. I worry about my health.
- ___ 8. Even when others get discouraged, I know I can find a way to solve the problem.
- ___ 9. My past experiences have prepared me well for my future.
- ___ 10. I've been pretty successful in life.
- ___ 11. I usually find myself worrying about something.
- ___ 12. I meet the goals that I set for myself.

APPENDIX F
DEMOGRAPHIC QUESTIONNAIRE

DEMOGRAPHIC QUESTIONNAIRE

1. Are you currently enrolled as an undergraduate student?
 - Yes
 - No
 - Prefer not to answer

2. Please specify your year in school:
 - Freshman
 - Sophomore
 - Junior
 - Senior
 - Self-identify (please specify) _____
 - Prefer not to answer

3. What is the highest level of education attained by your parents?
 - High school diploma or below
 - Some college, no degree
 - Associate's degree
 - Bachelor's degree
 - Graduate/professional degree or above
 - Prefer not to answer

4. Are you an international student?
 - Yes
 - No
 - Prefer not to answer

5. What is your gender identity?
 - Male/Man
 - Female/Woman
 - Trans male/ Trans man
 - Trans female/ Trans woman
 - Nonbinary
 - A gender not listed (please specify) _____
 - Prefer not to answer

6. Do you consider your sexual orientation to be:
- Bisexual
 - Gay
 - Heterosexual/straight
 - Lesbian
 - Queer
 - Questioning
 - An orientation not listed (please specify) _____
 - Prefer not to answer
7. Which of the following best describe your racial identity (select all that apply)?
- Asian or of Asian Descent
 - Native Hawaiian, or Pacific Islander
 - Black or African American
 - Latino/a/x or Hispanic
 - Middle Eastern or Arab
 - Native American, American Indian, or Alaskan Native
 - White
 - A race not listed (please specify) _____
 - Prefer not to answer
8. What is your primary nationality or citizenship (e.g., American, Canadian, Ukrainian, Dominican)
- _____
 - Prefer not to answer
9. What is your current age in years?
- 18 - 25 years
 - 26 - 35 years
 - 36 - 50 years
 - 51+ years
 - Prefer not to answer

10. To the best of your knowledge, which of the following best describes your annual household income while growing up?

- Less than \$15,000
- \$15,001 - \$30,000
- \$30,001 - \$50,000
- \$50,001 - \$75,000
- \$75,001 - \$150,000
- \$150,001+
- Prefer not to answer