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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

COLLEGE SEXUAL ASSAULT, CAREER ADAPTABILITY,
AND GRIT: A MODERATION ANALYSIS

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

Patricia Danielle Sparks

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

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This Dissertation by: Patricia Danielle Sparks

Entitled: *College Sexual Assault, Career Adaptability, and Grit: A Moderation Analysis*

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.

Accepted by the Doctoral Committee

Stephen Wright, Ph.D., Research Advisor

Kenneth Parnell, Ph.D., Committee Member

Angela Weingartner, Ph.D., Committee Member

Angela Henderson, Ph.D., Faculty Representative

Date of Dissertation Defense _____

Accepted by the Graduate School

Jeri-Anne Lyons, Ph.D.
Dean of the Graduate School
Associate Vice President for Research

ABSTRACT

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Sexual assault rates are a rising concern, particularly on college campuses. The impacts of being a victim of sexual assault were well documented in the research and spread from academic decline to negative mental health outcomes to career path derailment. Career construction theory suggested a critical developmental time period for young adults where pieces of their environment, past experiences, and personal characteristics informed their career decisions. Career adaptability is a foundational piece of career construction theory that consists of psychosocial, internal resources developmentally related to how a person learns and advances in their career goals. Grit was identified in the research as a character trait studied with academic and career success and conceptually appeared to overlap with career adaptability. The purpose of this study was to investigate the relationship between sexual assault victimization and career adaptability among college undergraduate students as well as what role grit might play in this relationship. This study analyzed the relationship between sexual assault victimization and career adaptability, and whether grit played a moderating role on that relationship. A sample of 292 college undergraduate students participated to address these questions. No significant findings were uncovered to support the potential impacts of sexual assault on career adaptability nor the moderating role of grit. An unexpected finding was discovered supporting a predictive

relationship between grit and career adaptability. Theoretical, practical, and diversity implications were discussed as well as future research directions.

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CHAPTER I

INTRODUCTION TO THE STUDY

Sexual assault on college and university campuses occurs at an alarming rate and can have significant negative impacts on students' career development during college. Understanding how students overcome this adversity and their motivation related to adapting their career development after experiencing sexual assault has been understudied and warranted investigation. According to the Association of American Universities (AAU) Campus Climate Survey on Sexual Assault and Misconduct (Cantor et al., 2015), a recent estimate of nonconsensual sexual contact (i.e., penetration, attempted penetration, sexual touching by force, or inability to consent) was 13% of college students out of a national sample of 181,752 students (over 33 schools) who participated in the survey. Rates for women were 20.4%; rates for transgender, nonbinary, and genderqueer students were 20.3%; and rates for men were 5.1% (Cantor et al., 2020). These reports of nonconsensual sexual contact were an increase from the AAU's previous 2015 survey report (Cantor et al., 2015). The AAU further surveyed college counseling centers to determine the prevalence rates of sexual assault victims presenting for services. According to the 2019 Association for University and College Counseling Center Directors Annual Survey (LeViness et al., 2019), an average of 8.8% of students presented as survivors of sexual assault or misconduct (out of 238 counseling centers across the nation). With anxiety (mean of 60.7%) and depression (mean of 48.6%) reported as the top presenting concerns for students seeking services at their university counseling centers, it is possible these

presenting concerns were mental health effects resulting in the aftermath of sexual assault (Carey et al., 2018; Dworkin et al., 2017; LeViness et al., 2019; Walsh & Bruce, 2014).

The transition to college is already an incredibly stressful experience where many students gain much more responsibility, independence, and freedom. Although exciting for many, this could be coupled with fear, anxiety, and uncertainty of being in new and unfamiliar environments. Many, if not all, new students are naïve and somewhat vulnerable in their attempt to navigate and succeed in their college education and advance into their designated career fields. This vulnerability is further threatened with increasing risk of being a victim of sexual assault.

Sexual Assault Defined

The U.S. Federal Code § 920-Article 120 (2022) defined sexual assault as any person who commits a sexual act upon another person by including, but not limited to, committing the sexual act without the consent of the other person due to threatening, use of physical force, impairment by any drug or similar substance, or when the other person is asleep, unconscious, or unaware the sexual act is occurring. Within this same article, rape is included and defined as a person committing a sexual act upon another person without their consent by using unlawful force against that other person, threatening the person, rendering that other person unconscious, or administering to the other person a drug, intoxicant, or other similar substance to impair their ability to consent. Similarly was the U.S. Federal Code § 51318 (2018) policy on sexual harassment, dating violence, domestic violence, sexual assault, and stalking defines sexual assault as “a forcible or nonforcible sex offense” (n.p.) The legal definitions and law interpretations for sexual assault vary for each state. For example, Colorado Revised Statute § 18-3-402 (2016) described sexual assault as any person who knowingly causes sexual invasion or penetration on a victim including but not limited to the perpetrator “causing submission of the

victim by means of sufficient consequences reasonably calculated to cause submission against the victims' will" (n.p.) This would include physical force, rendering them unconscious, and the victim's inability to consent.

The themes that seemed to be present in the different definitions of the federal and state laws regarding sexual assault included a victims' inability to consent to the sexual acts and the perpetrators using different methods to inflict a sexual act on another person. These themes were consistent with the AAU's (Cantor et al., 2020) survey report on nonconsensual sexual contact by physical force or inability to consent. Various risk factors and effects are associated with experiencing sexual assault.

Sexual Assault Effects

Research survey results reported the risk factors for being a victim of sexual assault included identifying as a woman, transgender, or gender-nonconforming (Cantor et al., 2020; Mellins et al., 2017). The risk of sexual assault victimization is a large barrier for students, particularly women and gender minority students, attending college to pursue their education and career development. Experiencing sexual assault has been shown to have harmful effects on career related attitudes, beliefs, and behaviors, resulting in poor academic performance and underemployment (Potter et al., 2018). Lowered grade point averages (GPAs) throughout the semesters, inability to complete coursework, and failing to attend class due to a lack of feeling safe have been studied for women who were sexually assaulted in college (Jordan et al., 2014; Raymond, 2018).

Survey reports conclude men have a much lower risk of being sexually assaulted. Stigma about being a victim or the wording of survey questions may contribute to underreporting of sexual assault for men (Forsman, 2017; Reitz-Krueger et al., 2017). In fact, one study examined

sexual assault prevalence rates among members of college fraternities, finding that roughly 25% of members ($n = 102$) reported experiencing penetrative sexual assault (Luetke et al., 2020). Men who were victims of sexual assault were also left with poor mental health outcomes such as depression. (Choudhary et al., 2010; Dario & O'Neal, 2018). Although under-researched when it came to surveying sexual assault prevalence and outcomes, transgender college students are at increased risk of being victims of sexual assault including sexual penetration, both attempted and completed, and sexual touching all without consent (Griner et al., 2020). Other studies continued to highlight how experiencing sexual assault greatly increased risk for anxiety, depression, posttraumatic stress disorder (PTSD) and suicidality (Carey et al., 2018; Chang et al., 2015; Dworkin et al., 2017; Walsh & Bruce, 2014), which are potentially more barriers to college success and furthering career development. These mental health impacts from sexual assault victimization affect not only those who identify as male or female but gender minorities as well (Parr, 2020).

Career Development

A major purpose of attending college is for individuals to further their education, explore their career interests, gain knowledge in various career fields of interest, pursue opportunities to strengthen resumes, and prepare them to enter the work force for their desired occupation. When the risk of sexual violence is prevalent among college campuses, this greatly threatens students' sense of safety and hinders their ability to succeed academically and in their career development. Despite this information, research still seemed to be lacking when it came to sexual assault and its effect on career development, particularly for college students, as well as any protective factors.

One area of career development research that has gained recent attention for its growth in adolescents and young adults is career adaptability. Career adaptability was originally defined by Mark Savickas (1997) as “the readiness to cope with the predictable tasks of preparing for and participating in the work role and with the unpredictable adjustments prompted by changes in work and working conditions” (p. 254). Work role and working conditions could certainly be exchanged for the academic and career development roles and conditions of college students. Career adaptability has since taken its place as a foundational piece in Savickas’ career construction theory (CCT; Savickas, 2002, 2005, 2013). Career adaptability is a psychosocial construct that consists of individuals possessing internal, self-regulating resources used to adapt to workplace demands and culture (Savickas & Porfeli, 2012).

Career adaptability has often been studied in college students (i.e., Douglass & Duffy, 2015; Tolentino et al., 2014; Wilkins-Yel et al., 2018) as well as adolescents (Negru-Subtirica & Pop, 2016). Taber and Blankemeyer (2015) found career adaptability to affect proactive skill development in career behaviors and career planning among undergraduate students. These studies suggested these developmental time periods of preparing for future careers are connected with the development and use of the career adaptability resources. College could arguably be a crucial time for students to begin developing and utilizing these career adaptability resources.

Most college undergraduate students are working to explore and identify their career interests, strengthen their academics and involvement in organizations to prepare for their career of interest, and potentially increase their career decision self-efficacy in preparing for their careers. Disruption in this career development process could weaken students’ career adaptability resources and cause long-term negative outcomes for their future (Potter et al., 2018). Researchers have studied how career development is affected by trauma. Strauser et al. (2006)

found that career behaviors, vocational identity, and career thoughts and career decision-making were negatively affected by higher levels of trauma symptoms. More specifically, intrusive trauma symptoms were found to be a significant negative predictor of career adaptability (Prescod & Zeligman, 2018). Sexual assault is absolutely considered a traumatic experience and considering the prevalence rates on college campuses, it should certainly be investigated into how it might affect career adaptability. Gaps in the literature pointed to the need in directly studying the relationship between sexual assault experienced and career adaptability. Additionally, identifying mediating and moderating variables to disrupt the potential relationship between sexual assault and career development was further warranted.

Prescod and Zeligman (2018) investigated the relationship between trauma and career adaptability, and the moderating effect of post traumatic growth (PTG). The authors found both trauma symptoms and PTG were significant predictors of career adaptability. As a result, the positive aspects of PTG appeared to be beneficial by moderating the relationship between trauma experiences (e.g., sexual assault) and career adaptability. Prescod and Zeligman noted that future research should conceptualize trauma in more specific ways, such as assault, when further exploring its relationship with career outcomes. In addition, investigating other variables such as personality characteristics or behavior traits could not only expand the research on the area of sexual assault and career adaptability but further the ways for counseling psychologists or mental health providers to help survivors cope with their trauma symptoms while helping them continue in their career development and goals.

Grit

One characterological trait that has been growing in research as it potentially relates to academic and career success is the concept of grit. Defined as “perseverance and passion for

long-term goals” (Duckworth et al., 2007, p. 1087), grit has much less to do with talent and more of a persistent work ethic and interest in accomplishing a long-term goal (Duckworth, 2016).

People with higher levels of grit continue pursuing tasks or goals despite encountering adversity (Lucas et al., 2015). A review of the literature did not find grit has been studied specifically with sexual assault or trauma; however, one study did look at grit as a moderator for suicidal ideation and behavior in participants who experienced trauma (Marie et al., 2019). Although Marie et al.’s (2019) study found grit did not moderate the relationship between trauma events and suicidal ideation, grit did moderate the relationship between PTSD symptoms and suicidal ideation by showing higher levels of grit buffered the severity of suicidal ideation for those with symptoms of PTSD. Another study found grit moderated the relationship between negative life events specifically for college students and suicidal ideation and self-harm behaviors (Blalock et al., 2015). Specifically, Blalock et al. (2015) provided results that showed those with low levels of grit had a stronger relationship between negative life events and suicidal ideation.

Posttraumatic stress disorder and suicidal ideation have been found to be a result of experiencing sexual assault (Dworkin et al., 2017; Parr, 2020) and it is possible grit might also serve as a moderating variable when examining sexual assault with other variables such as career adaptability. One study examined the relationship specifically between career adaptability and grit. Gregor et al. (2021) reported that grit had a small but significant positive relationship with career adaptability for a sample of community college students. Gregor et al.’s results suggested higher levels of grit were associated with higher levels of career adaptability. Li et al. (2021) showed similar evidence with a sample of Chinese college students.

Compelling data reported the prevalence rates of sexual assault on college campuses leading to copious amounts of negative outcomes because of victimization. Career adaptability

consists of adaptive skills students develop that are at risk of being negatively affected or poorly developed if sexual assault has occurred. Grit is a possible protective factor for individuals' career adaptability when experiencing sexual assault because of its potential moderating effect on negative mental health outcomes, which were found to be results of experiencing sexual assault (Blalock et al., 2015; Marie et al., 2019). There was a need to examine the constructs of sexual assault victimization, career adaptability, and grit within a unified study to understand if grit might act as a buffer or protect an individual's career adaptability if they were subjected to sexual assault victimization.

Statement of the Problem

Sexual assault victimization rates on college campuses are on the rise from 2015 to 2019 (Cantor et al., 2015, 2020) and likely underreported for different gender identities. As a result, there was a great need to better understand the extent of damages sexual assault has toward college students. Research showed mental health is negatively impacted and we know some of the negative effects on academics and career development are harmed by trauma (Parr, 2020; Strauser et al., 2006; Wadsworth et al., 2020). Research also showed the effects of sexual assault remained throughout college and well into individuals' careers, putting them at a severe disadvantage (Potter et al., 2018; Wadsworth et al., 2020). However, the research was lacking by specifically examining sexual assault's relationship on undergraduate career adaptability. Career adaptability is important because it consists of self-regulated resources individuals already possess and, if strengthened, could lead to a greater ability to adapt to workplace demands, transitions, or traumas (Savickas, 2005). Career adaptability was also described as developmental and incorporated a contextual perspective. Therefore, college students who are developing these

internal strategies to help them adapt could have this process disrupted due to contextual factors harming them such as being a victim of sexual assault.

Limited protective factors are in place to stop any impact sexual assault has on career development, particularly career adaptability. Future directions given by researchers reporting on the harmful impacts of trauma, more specifically sexual assault, related to a person's career emphasized the need to investigate any variables to potentially disrupt the relationship between sexual assault and career development to prevent further harm. Grit, which is a person's level of perseverance and consistent interest toward a long-term goal (Duckworth et al., 2007), was a possible protective factor to investigate. The phenomenon of grit's relationship with career adaptability was deemed appropriate because both constructs had to do with an individual using self-regulation strategies (internal resources or characterological traits) to adapt and succeed in their career. Therefore, it was imperative to study and better understand the impact sexual assault victimization had among college undergraduate students' career adaptability and if grit might act as a protective moderating factor.

Theoretical Framework

Career construction theory (CCT; Savickas, 2002) was the overarching theoretical framework utilized to structure this study and the following interpretation of its results. Career construction theory is based on a person's ability to construct their career based on past experiences, their vocational personality, and resources to adapt to changing occupational environments (Savickas, 2002). The conceptual framework of CCT consists of four areas that describe a person's ability to construct their career based on their readiness, resources, and responses to their environment (Savickas, 1997, 2005, 2013). These four areas are labeled as adaptivity, adaptability, adapting, and adaptation (Savickas, 2005, 2013; Savickas & Porfeli,

2012). The first area of adaptivity, also known as adaptive readiness, is explained as a willingness to face the complex and unknown problems that inevitably occur in a person's career development path. The second area, adaptability, focuses on resources. This area was previously mentioned as the internal, self-regulating resources a person possesses to adapt and grow in their career. The third and fourth areas, adapting and adaptation, are responses and results that come from the behaviors and outcomes performed by the person during their career journey. Career construction theory believes adaptation to your environment leads to vocational growth (Savickas, 1997, 2005, 2013) and was the focus of this current study.

Career adaptability is a main construct in this theory and four resources (concern, control, curiosity, confidence) are developmentally related to how a person learns and advances in their career goals (Savickas, 2005). Career concern is seen as how future oriented a student is and if their attitudes and behaviors reflect that (Savickas, 2005, 2013). Students who do not have much concern for their future are seen as indifferent and will not progress in their career path (Savickas, 2005, 2013). Career control refers to students identifying what they can do to progress in their career. Students who are not high in career control are seen as experiencing career indecision, which will further hinder their career development (Savickas, 2005, 2013). Students who lack career curiosity are not open to new opportunities and taking chances to learn more about their self-concepts and possible career fits (Savickas, 2005, 2013). Finally, students with lower career confidence might experience career inhibition and be further stuck on progressing in their career (Savickas, 2005, 2013).

Career construction theory further highlights the importance of the context in a person's vocational development such as social barriers that negatively impact the development of their adaptability resources (Savickas, 2002, 2005). The four aforementioned resources that make up

career adaptability are also being developed in college and are affected by context. Traumatic experiences such as sexual assault are context-related events that occur in students' environments and might lead to constructing faulty beliefs and incorporating social barriers for certain career areas. Each resource is potentially threatened and could block student's career adaptability and construction of their career.

Identifying protective factors such as traits that could be examined and used as proactive resources might further contribute to a student's construction of their careers. The CCT stages of adaptive readiness, resources, responses, and results could be protected by enhancing other traits that might potentially buffer any negative impacts resulting from sexual assault victimization. Because grit has to do with using continued effort and maintaining consistent interest toward a long-term goal (e.g., obtaining a college degree), it could function as an additional adaptive piece for overcoming any barriers (Gregor et al., 2021). Grit might further align with the adaptive willingness stage to move forward and face the unpredictable and formidable problems on the path to achieving one's career goals. The adaptive readiness stage provides momentum for utilizing and developing career adaptability resources necessary to respond and get results in exploring and succeeding in your career. Grit might also be an adaptive coping strategy on its own as it consists of perseverance and determination toward goal attainment. Career adaptability is essentially making changes to adjust to new or changing circumstances (Savickas, 1997), which are pieces in working toward attaining a goal.

Rationale for the Study

It is known from surveying colleges on a national level that sexual assault is a rising, prevalent problem (Cantor et al., 2020). There is also evidence to support that sexual assault victimization on college campuses is underreported, even at the high level it is currently being

reported nationally for all gender identities (i.e., 13%; Cantor et al., 2020). Substantial evidence showed that being a victim of sexual assault is harmful to a college undergraduate's mental health, academic work, and career development (e.g., Parr, 2020; Potter et al., 2018; Wadsworth et al., 2020). Negative outcomes on a student's mental health likely impede their academic attainment (Bruffaerts et al., 2018; De Luca et al., 2016) and career development (Potter et al., 2018).

Disruptions from experiencing sexual assault influence students' constructing their academic and career experience from the perspective of CCT, which might weaken their growth in their career adaptability resources and thus make it harder for them to succeed in their career goals. This failure to strengthen adaptability resources and succeed in their career development might result in failing college courses, not graduating, difficulty in job transitions, or succeeding in their career in various ways. Harm as a result from sexual assault victimization could also weaken the first stage of CCT (i.e., adaptive readiness), which means students might no longer be willing to face the unexpected journey of their once desired career development path. Weakening this stage would likely deter students from growth and development of their adaptability resources to succeed and they would likely struggle to reach the stages of adapting and adaptation.

To help survivors of sexual assault, we need to better understand the association sexual assault might have with students' career development, specifically career adaptability. Thus, it was imperative to study what might mitigate the relationship between sexual assault and career adaptability to empower those survivors and help them succeed in their careers. Prior research reported negative impacts on career development from trauma (Strauser et al., 2006) and specifically examined the relationship between career adaptability and trauma (Prescod &

Zeligman, 2018) but research was lacking in specifically examining sexual assault victimization as a specific traumatic experience in how it might affect career adaptability for undergraduate students. However, we do know students might experience a change in their timeline to complete their degree by taking a semester off, registering for fewer classes, or dropping out or not returning to college because of sexual assault (Potter et al., 2018). Further, there was a lack of research on any potential moderating variables that might serve as protective factors for sexual assault victimization and the negative impacts on career adaptability. Grit is a strong possible protective factor and there was a need to investigate its role as a moderator on that relationship. Grit has conceptual similarities to career adaptability in terms of strategies or competencies within oneself to achieve a goal. Previous research also showed a negative relationship between grit and symptoms of trauma that resulted from sexual assault experiences (e.g., PTSD and suicide ideation; Blalock et al., 2015; Marie et al., 2019). This study examined the relationship between sexual assault victimization and career adaptability in addition to the possible protective features of grit with a college undergraduate student sample.

Purpose of the Study

The impacts of sexual assault victimization on college campuses are a growing problem that warrants further attention and investigation. Although the research was limited, it did show evidence on harming career development skills, particularly adaptability skills, necessary for career success (Monteiro et al., 2019; Zacher, 2014). This study aimed to extend the research on sexual assault victimization for college undergraduate students to better understand the impacts and help students reduce any harm it might have on their career adaptability skills during college. In addition, because grit has been associated with positive academic outcomes, career variables, and buffering of mental health concerns, it was a valuable construct to include in reducing the

harm sexual assault might exert on career adaptability. Therefore, the purpose of this study was to investigate the relationship between sexual assault victimization and career adaptability among college undergraduate students as well as what role grit might play in this relationship.

Research Questions and Hypotheses

The following research questions and hypotheses guided this study:

- Q1 To what extent is experiencing sexual assault an explanatory factor of career adaptability in college students?
- H1 The experience of sexual assault is negatively associated with career adaptability. In other words, sexual assault victimization is predicted to hinder an individual's level of career adaptability.
- Q2 To what extent does one's level of grit moderate the relationships between sexual assault victimization and career adaptability?
- H2 The level of grit will moderate the relationship between sexual assault experienced and career adaptability. In other words, an individual who experiences sexual assault may not experience as great of a negative impact in their career adaptability if they also have a higher level of grit

Definition of Terms

Career Adaptability: A person's ability to be able to adapt to their work environment by using four key resources: concern, control, curiosity, and confidence (Savickas & Porfeli, 2012).

Grit: The construct of grit was defined by Duckworth et al. (2007) as "perseverance and passion for long-term goals" (p. 1087). Grit is defined and measured in this study by two factors: continued effort and consistent interest toward a long-term goal.

Sexual Assault: Based on federal law and descriptions from previous research reporting on sexual assault, sexual assault is operationally defined for this study as unwanted sexual conduct or penetration committed upon another person without consent (U.S. Federal Code § 920-Article 120, 2022). The Sexual Experiences Survey (SES; Koss et al., 2007),

which was used to measure sexual assault in this study, further assesses attempted and completed rape by asking behaviorally specific questions regarding unwanted sexual conduct or penetration and the tactics used. This definition was expanded upon by tactics used including verbal threats, physical force, and impairment by any drug or similar substance when the other person was asleep, unconscious, or unaware the sexual act was occurring. The SES further assesses the frequency of these unwanted sexual experiences by asking about the frequency since age 14 and in the last 12 months. Current college sexual assault is defined as reporting these experiences within the past 12 months.

Limitations

The design of this study was nonexperimental and cross-sectional where data were collected through survey measures. Because all the variables were measured through self-report instruments as the sole tool for data collection, there were likely issues with validity and reliability. Potential issues with the use of self-report included misunderstanding the item, poor insight into their own experience, and through the effects of social desirability where the participant might respond in a way to make their experience appear more favorable than it was (Heppner et al., 2016).

Being able to generalize potential results from the study sample was also a major concern. This study specifically focused on undergraduate students in the traditional age range of 18-24. These findings would not be generalizable to non-traditional college students who might attend at a later age nor to people who experienced sexual assault at a time later in life.

Demographics of the sample were critical to obtain as much variety as possible to capture the experience of undergraduate students. To increase generalizability, the study used a nationally representative sample, which is described further in Chapter III.

Although there were many advantages of using Prolific for data collection procedures, there were possible limitations. Since participants were logging on and taking this survey in an uncontrolled environment, it was impossible to know if the participant was in a distraction free space and able to focus for the entire length of the survey. Further, participants signed up for Prolific for the purpose of completing many research studies for financial compensation. These might be individuals who were more skilled in taking surveys compared to others in the population.

Summary

Sexual assault prevalence rates on college campuses are increasing and there is substantial evidence to show how sexual assault impacts mental health, academic achievement, and career development. The risk of being sexually assaulted could potentially threaten a student's career development in many ways, particularly their ability to adapt to new career situations and use of strategies to navigate their career path. Career adaptability is a career developmental aspect that consists of internal resources students utilize and strengthen to adapt and grow in their career goals. College is an essential time for developing these career adaptability resources, which are at risk of being poorly or underdeveloped with the experience of sexual assault. Career construction theory (Savickas, 1997, 2005, 2013) posits that individuals construct their career experience based on their interpretation of their reality, which incorporates past experiences, social roles, and contextual factors. Career construction theory emphasizes the ability to adapt throughout the unpredictable and complex tasks, transitions, and traumas that arise in one's career (Savickas, 2005, 2013). Sexual assault victimization might hinder this adaptability process as there has been a lack of investigation into this relationship.

It was from this concern that grit was a strong candidate to be investigated as a protective factor. Grit could be a personal trait developed from past experiences or even contextual factors (enhancing perseverance and consistent interest) that could be constructed into a person's career reality. The results of this study might help career counselors/mental health providers empower survivors of sexual assault by providing interventions that utilize factors that make up grit so their career adaptability can be strengthened and career goals obtained.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

This chapter provides an in-depth review of previous literature on career construction theory, career adaptability, sexual assault victimization in relation to academic and career development, and grit. It includes examining the constructs independently and then provides a review of previous literature's investigation on construct interactions.

History and Evolution of Career Construction Theory

Career development theories first emerged from the person-environment fit model. Frank Parsons, one of the vocational psychology pioneers, helped guide the evolution of the field as we know it today and started with his seminal book, *Choosing a Vocation*, published in 1909. His work began helping immigrants coming to the United States find jobs using the person-environment fit model (Pope & Sveinsdottir, 2005). His approach assessed what skills and abilities each person possessed and which job environments would best fit based on those skills and abilities (Parsons, 1909). John Holland (1996) was another major contributor to vocational psychology by embracing the person-fit environment and creating codetypes that further matched a persons' skills and abilities to a specific job environment (Nauta, 2013). This need for matching individuals with appropriate jobs was in great demand following historical eras such as the World Wars and the Great Depression to boost the economy and get jobs to as many people as possible (Lent & Brown, 2013). This concept of a career came from having a span of jobs a

person worked throughout their life, gaining skills and experience that prepared them for more jobs in the future (Lent & Brown, 2013).

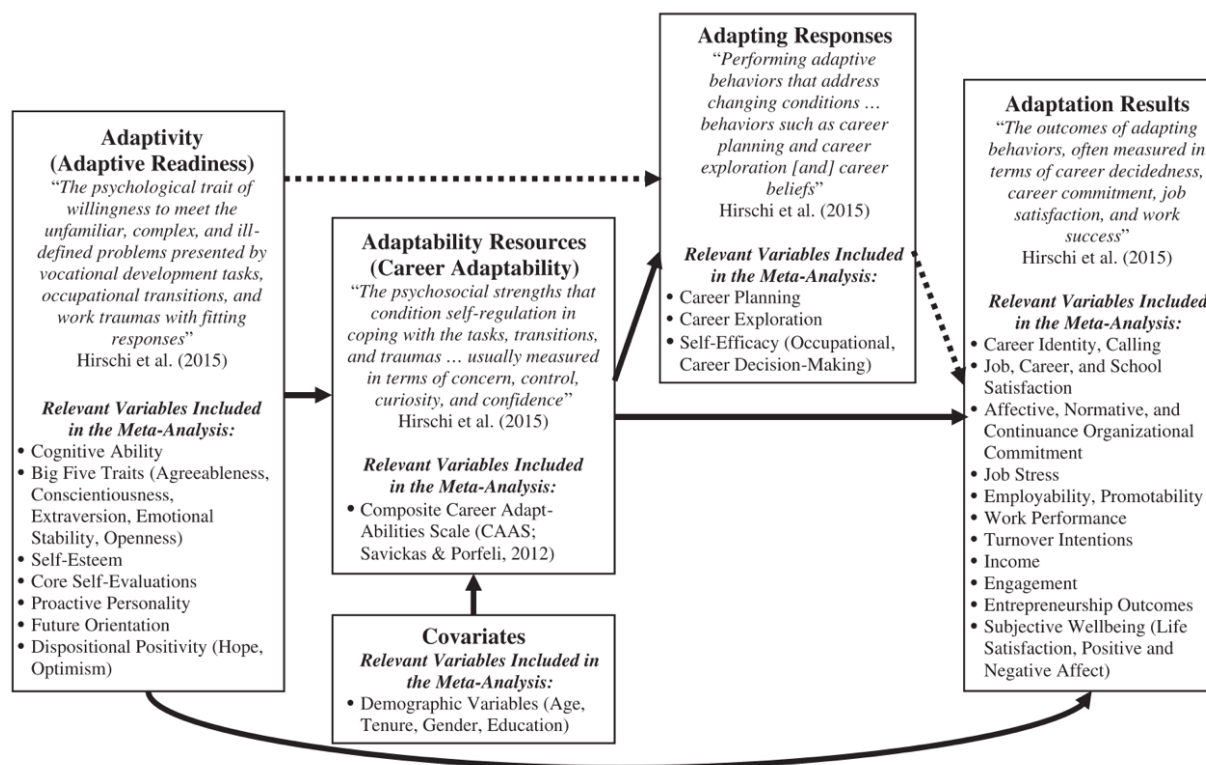
Donald Super (1957) then focused on how individuals moved through a series of jobs, positions, and occupations within a career (Hartung, 2013). Super's original career development theory was crafted to hold the person-environment fit model (pairing individual's skills with fitting careers) while including the developmental aspect of each individual (developing competencies, attitudes, and behaviors to fit their vocation). This theory was expanded upon by incorporating self-concept (beliefs individuals have about themselves) with contextual factors (differing social roles and environments) and how they influenced vocational behavior all within a developmental lens (Hartung, 2013; Super et al., 1996).

More recently, CCT postulated and incorporated social constructivism from Super's (1957) original career development theory (Savickas, 2005). Career construction theory further departed from the original career development propositions in that a person must fit into one job based on their skills that are paired with a designated work environment and, therefore, were able to predict which jobs were best suited for them. Career construction theory theorized that a person constructed their work reality based on their willingness to make changes, utilization of resources to adapt, and adjust according to those results (Savickas, 2005). People integrated social expectations, internal resources or strategies, and environmental expectations to adapt to anticipated and also unexpected work tasks, transitions, and traumas (Savickas & Porfeli, 2012). Therefore, CCT would say we cannot predict an individual's career because individuals construct their careers based on their perceptions, decisions, social influences, environmental influences, social roles, and past experiences (Savickas, 2005).

Career construction theory is unique in that it encompasses this idea of adapting in our careers as we are experiencing them and constructing our interpretation of those perceptions of reality. In CCT, the person and the environment are constantly changing so individuals must adapt in order to succeed (Savickas, 2005). Figure 1 provides a visual created by Rudolph et al. (2017) that displays the framework of CCT.

Figure 1

Framework of Career Construction Theory



Note. Permission to reuse figure was granted by the Journal of Vocational Behavior (see Appendix A). Rudolph, C. W., Lavigne, K. N., & Zacher, H. (2017). Career adaptability: A meta-analysis of relationships with measures of adaptivity, adapting responses, and adaptation results. *Journal of Vocational Behavior*, 98, 17-34

According to CCT, individuals start with a willingness to engage in ambiguous, complex, and unfamiliar problems from vocational developmental tasks, occupational transitions, and

work traumas that require flexibility in how to approach them (Hirschi et al., 2015). For example, individuals pursuing a college degree exert a willingness to start a process that would present them with many uncertainties and difficulties, which would require them to be flexible (i.e., adaptive) in their approaches to succeed (i.e., graduating and getting a desired job). The next phase of CCT discusses adaptability resources, which are known as psychosocial, self-regulated resources individuals internally possess and use to adapt to the myriad of tasks, transitions, and traumas related to their careers (Savickas, 2013). This phase is also known as career adaptability. For example, college might be a time for students to begin accessing these self-regulated, internal resources to address changing conditions that present themselves in the path to completing a degree and starting a desired career. Career adaptability is broken down into four dimensions that encompass these self-regulation strategies (or resources): concern, control, curiosity, and confidence (Savickas, 2013). These resources build on each other and have been studied with college students' career development processes (Gregor et al., 2021; Hirschi et al., 2015; Wilkins-Yel et al., 2018).

The next stage of CCT is adapting responses, which are behaviors as a result of individuals responding to their internal resources and pursuing vocational behaviors further such as career exploration or career planning (Hirschi et al., 2015). The final stage of CCT is adaptation results, which are essentially the outcomes of willingness, internal adaptability, and adapting behaviors that result in career success (Hirschi et al., 2015; Rudolph et al., 2017; Savickas, 2013). This study focused specifically on adaptability resources (career adaptability). The following section explores research on career adaptability and provides evidence for strengthening career adaptability resources, particularly focusing on how it benefits success in college and career outcomes.

Career Adaptability

Adaptability in relation to career development looks at a person's ability to change or alter their behavior based on changing situations (Savickas, 1997). Career adaptability is described as how a person manages to adjust to their workplace environment or career demands using their own internal resources or competencies (Savickas & Porfeli, 2012). The four dimensions (i.e., concern, control, curiosity, and confidence) that make up career adaptability are internal resources that, if strengthened, could be used to guide people through their career journey.

Career concern assesses how future-oriented a person is such as having an attitude that 'what I do today will help me tomorrow in my plans for my future' (Savickas, 2005, 2013). Career control refers to an individual's ability to assess what they have control over now and empowers them to act on what they could do now to prepare for their desired career. A person with high career control would behave like someone who is self-disciplined and has organizational skills to make decisions about their career (Savickas, 2005, 2013). Individuals could then take an explorative stance in becoming curious about the different paths they could take to lead them to differing careers of interest (Savickas, 2005, 2013). Career curiosity is exploratory for people to envision future scenarios they could potentially see themselves in and be open to different possibilities (Savickas, 2005, 2013). From this curiosity exploration, individuals gain experience and build confidence in their path of vocational development, which is similar to career self-efficacy (believing in one's career abilities) and reinforces the person to continue to try new things and pursue more opportunities (Savickas, 2005, 2013).

Career adaptability has been studied in several age groups from adolescents (Negru-Subtirica & Pop, 2016) to older adult groups (Brown et al., 2012; Coetzee & Stoltz, 2015) in

both employed and unemployed samples (Maggiori et al., 2013). This study specifically focused on career adaptability among undergraduate college students. However, it was important to review the findings and relationships of career adaptability across the lifespan to further understand the construct.

Career Adaptability Among Non-College Populations

Career adaptability has often been studied in adult populations with a variety of work-related constructs. Career adaptability resources have been linked to influencing skill development, learning, and job transition for mid-career changes (Brown et al., 2012) as well as predicting work engagement (Rossier et al., 2012). Career adaptability has also been associated with personal and workplace wellbeing (Maggiori et al., 2013). Further, career adaptability was positively associated with employee satisfaction with career opportunities, work-life balance, and training opportunities through employees of an automotive manufacturing company (Coetzee & Stoltz, 2015). These work-related constructs are all important retention factors in a job and provide strong evidence that career adaptability is present for a variety of positive work outcomes.

Spurk et al. (2020) looked at career adaptability and proactive career behaviors in a large group of adults in Germany (mean age = 46). Career adaptability levels were shown to increase with age. However, those with initially high levels of career adaptability were negatively correlated with proactive career behaviors. This was determined to have happened because those participants viewed a situation and were proactive about it instead of reactive. The psychosocial resources might have already been strong so there was not much focus on the career concern stage, which is similar to career proactive behaviors.

Much of the recent research studied other psychosocial constructs to see if any were able to predict career adaptability. Furness (2020) found the construct of mastery goal adoption was predictive of career adaptability in a sample of working adults but only when these participants also felt their supervisor was supporting them in their career autonomy. Career adaptability seemed to be related to situations where individuals viewed challenges and setbacks as opportunities to learn and improve in the workplace.

Career Adaptability Among Undergraduate College Students

Career adaptability has been shown to have a positive relationship with study engagement (Akkermans, et al., 2018), intended academic persistence, and academic satisfaction (Wilkins-Yel et al., 2018) for undergraduate college students. Higher career adaptability scores were further associated with increased self-reported life satisfaction (Akkermans, et al., 2018). Career adaptability might facilitate undergraduate students' ability to develop resources to help them succeed academically and to gain skills and behaviors that help them transition to the job market (Akkermans, et al., 2018). The benefits of increased career adaptability resources were demonstrated in a sample of graduate students in a master's program who were more likely to be employed 18 months after graduating and transitioning into the workforce (Monteiro et al., 2019). This successful transition and retention of employment suggested self-regulating resources were beneficial when it came to adapting and transitioning in the workforce.

Interestingly, there have also been studies on an individual's career adaptability in relation to their interpersonal relationships and attitudes. Shin and Lee (2017) studied the predictive power of attachment, career-choice pessimism, and intrinsic motivation on the career adaptability of a sample of 492 undergraduate students. The authors first found that insecure peer attachment had a significant relationship with predicting career adaptability. This relationship

was further mediated by the roles of career choice pessimism and intrinsic motivation. In other words, because career adaptability consisted of psychosocial resources to adapt, the strength of attachment and peer relationships appeared to be important. Further, intrinsic motivation appeared to be a behavioral characteristic that influenced career adaptability as a mediating variable. A subcomponent of grit is perseverance and might be in the same field as motivation. Jahng and Kim (2019) found evidence that maladaptive perfectionism played a mediating role on the relationship between adult attachment insecurity and career adaptability on a sample of college students. Anxious attachment styles were specifically found to negatively predict career adaptability in a sample of adult workers (Furness, 2020).

Career adaptability clearly plays a role in one's career development and academic achievement whether it is through attitudes, interpersonal interactions, or other career behaviors. Further exploration among undergraduate students would expand the literature and explore its relationship with interpersonal trauma (i.e., sexual assault) and other motivational variables (i.e., grit). The next section explores the literature on how sexual assault has impacted undergraduate students.

Sexual Assault Among College Undergraduate Students

The Obama administration created the White House Task Force to Protect Students from Sexual Assault (2014) to end sexual assault in higher education. The task force highlighted the rising rates of sexual assault occurring on college campuses as a national problem. The executive summary began by stating the statistic that one in five women are sexually assaulted during college (White House Task Force to Protect Students from Sexual Assault, 2014). Other surveys and reviews attempted to measure the prevalence rates of sexual assault occurring during college. It has been difficult to accurately measure rates of sexual assault due to difficulty with an agreed

upon definition, different interpretations, and stigma around reporting (Fisher, 2009; Forsman, 2017; Reitz-Krueger et al., 2017).

A systematic review of studies reporting sexual assault prevalence rates on college campuses was conducted from 2000 to 2015 (Fedina et al., 2018). The most prevalent form of sexual assault on college campuses was found to be unwanted sexual contact including sexual coercion. The next most prevalent form was rape due to incapacitation and then completed for forcible rape. The authors pointed out it was difficult to measure sexual assault as studies often used a broad definition of sexual assault that included forcible attempts or completion of penetration, coerced sexual contact, and overall unwanted sexual contact such as touching.

In terms of how experiencing sexual assault impacted academic performance for college students, studies mostly examined the relationship between sexual assault and GPA and only on samples of women. The outcomes showed that a lower GPA was associated with those who experienced sexual assault in college as compared to those who did not (Jordan et al., 2014; Raymond, 2018). This was due to participants reporting difficulty in completing assignments, completing exams, and simply struggling to attend class (Stermac et al., 2020). Experiencing sexual victimization also led to higher dropout rates even compared to students who experienced physical and verbal assault victimization (Mengo & Black, 2016).

To further understand the lived experiences of survivors of sexual assault, qualitative studies were conducted to provide a rich context to academic and career outcomes. Wadsworth et al. (2020) conducted a grounded theory, qualitative study exploring how sexual assault impacted the occupational wellbeing of a sample of 17 women (mean age = 44). Many participants had completed at least a bachelor's degree. A major theme from the data was the loss of jobs or underemployment as an after effect of being a victim of sexual assault. Other barriers to their

occupational wellbeing that were outcomes associated with their assault included mental health and substance use, workplace bullying, and inflexible attendance policy. The sexual assault had a negative impact on their occupational wellbeing, which led to some women losing their jobs. This was similar to Potter et al. (2018) who interviewed women who were sexually assaulted in college and learned about the long-term impacts on their education and career development. Their findings uncovered participants struggling academically with reduced GPAs, increased absence from classes, and lowered self-esteem in themselves and their academic abilities. Furthermore, the authors found negative repercussions on participants' careers in areas of perceived underachievement, work-force performance, and safety limitations. Lastly, symptoms from mental health diagnoses (e.g., PTSD) as a result of the sexual assault were another barrier to women pursuing their desired careers and also attributed to their underemployment after college.

Further qualitative research using a phenomenological approach explored the meaning of sexual assault to college undergraduate students' daily occupations (Hodge & Privott, 2020). The Hodge and Privott (2020) study sample included women who experienced sexual assault while attending college. However, this study was limited as it only consisted of two participants (ages 22 and 46). Nonetheless, the participants shared difficulties with mental health (increased anxiety, feelings of panic, depression, poor sleep patterns), academics, negative impacts in their social interactions, and negative changes and difficulties in work routines and work attitudes.

One of the major limitations to investigating the impacts of sexual assault on college campuses was that many studies only sampled women. This might be because many of the campus climate surveys continued to report the highest prevalence rates among women and briefly mentioned that sexual assault occurred for men and gender minorities but the rates were much lower. This resulted in most research

studies sampling only cis-gender women, which provided valuable insight into how sexual assault was harmful to academic and career performance for this population. However, it also left individuals of other gender minorities in the dark. In a sample of 387 college men, 109 (27.5% of sample) reported incidence of sexual assault victimization throughout their lifetime, specifically 55 cases of rape (Anderson et al., 2019). Transgender people of color were also at increased risk of experiencing adult sexual assault (Staples & Fuller, 2021). It was, therefore, imperative to be studying the prevalence rates and impacts of sexual assault among all gender identities, particularly in the areas of career development. Sexual assault has a variety of negative academic and career outcomes for undergraduate students. Specifically, the literature demonstrated the negative effects of sexual assault on career adaptability.

Sexual Assault Effects on Career Adaptability

There was a lot of literature on sexual assault impacting college achievement; the closest related studies focused on GPA, attendance, and dropout rates (Jordan et al., 2014; Mengo & Black, 2016; Potter et al., 2018; Raymond, 2018; Stermac et al., 2020). From this research, sexual assault clearly had a negative impact on academic achievement and college success, which could relate to negative impacts on other career constructs. To date, no identified studies have specifically investigated the relationship between sexual assault experience and career adaptability. Prescod and Zeligman (2018) specifically looked at trauma and career adaptability, which showed a negative relationship with the more trauma experienced the lower the scores of career adaptability. The research also highlighted many of the connections between career adaptability and the relationship to academic and career success (Akkermans et al., 2018; Monteiro et al., 2019; Wilkins-Yel et al., 2018). Therefore, it is likely sexual assault might have an impact on career adaptability. A major limitation was simply the lack of studies looking at

specific career-related variables (e.g., career decision self-efficacy, career hope) and the relationship to sexual assault victimization. One of the main objectives of the current research study was to specifically examine the relationship between sexual assault victimization and career adaptability. Additionally, a sample inclusive of all gender identities and sexual orientations was recruited and able to participate.

As much of the career adaptability research utilized methodology to assess for mediating and moderating variables, an additional objective of the current study was to examine the possibility of another latent variable in disrupting the relationship between sexual assault victimization and career adaptability. For instance, the relationship between career adaptability and interpersonal interactions was mediated by intrinsic motivation (Shin & Lee, 2017), which might be considered a form of grit. Therefore, grit might also play an active role in the relationship between sexual assault and career adaptability, which warranted further investigation.

Grit

The construct of grit was described by Duckworth et al. (2007) as building stamina working toward a goal and continuing that path despite encountering adversity, discouragement, and failure. In short, Duckworth et al. defined grit as “perseverance and passion for long-term goals” (p. 1087). People with higher levels of grit exerted more effort during challenging situations even when they were failing (Lucas et al., 2015). This was paired with their continued interest and desire to keep working toward their long-term goal (Duckworth et al., 2007).

Duckworth et al.’s (2007) creation of the grit scales followed the two-factor model: perseverance and consistent interest toward a long-term goal. From both the Grit-Original Scale (Grit-O; Duckworth et al., 2007) and the Short Grit Scale (Grit-S; Duckworth & Quinn, 2009),

there has been a lot of research on the construct of grit. Grit has been associated with higher educational attainment, less career changes, retention rate at West Point Military Academy, and increased undergraduate GPA (Duckworth et al., 2007; Duckworth & Quinn, 2009). This research did not indicate people were more intelligent but that they worked harder toward a goal. This interpretation was further supported by the mediating positive relationship of study time and spelling bee experience between grit and making it to the final round at the Scripps National Spelling Bee (Duckworth et al., 2007; Duckworth & Quinn, 2009).

Other researchers provided mixed reviews on the predictive power of grit. Some found a positive association with academic performance, productivity, engagement, and career preparation behaviors for university students (Bowman et al., 2015; Hodge et al., 2018; Lee & Sohn, 2017). Other authors reported grit was not effective in predicting academic and career performance (Clark & Clark, 2019; Crede et al., 2017). These studies looked at grit from the two-factor construct: consistent interest and persistent effort. These studies further argued that grit might not be its own distinguishable construct and was highly related to similar personality characteristics or non-cognitive constructs (Crede et al., 2017; Duckworth & Quinn, 2009).

Duckworth and Gross (2014) talked about the relationship between self-control and grit. Self-control has to do with regulating attention, emotion, and behavior as one encounters situations throughout their life but not necessarily focused on a long-term goal. Grit always comes back to the maintained focus on long-term goals that could be maintained despite a lapse in self-control. An example to support this point came from Duckworth et al.'s (2007) study on retention rates at West Point Military Academy and the National Spelling Bee in that grit was able to successfully predict these retention rates while controlling for self-control. However, self-control was not able to successfully predict these retention rates while controlling for grit.

Examining the longitudinal impacts of grit is another area of exploring this construct. In a sample of sixth through ninth graders in Finland, grit was measured in relation to academic achievement and engagement during each school year starting in sixth grade and ending as the sample reached ninth grade (Tang et al., 2019). The results from Tang et al. (2019) showed that the persistent effort subscale measured during eighth grade was associated with school achievement and engagement at the ninth-grade level after controlling students' conscientiousness, academic persistence, prior achievement and engagement, gender, and socioeconomic status. Measuring goal commitment at the sixth-grade level was able to predict the level of grit. The perseverance of effort subscale was able to mediate the relationship between goal commitment on engagement. Promising data supported the perseverance subconstruct of grit in a longitudinal sample of adolescents.

Grit might not necessarily be something that could be taught as phenomena such as resilience, post traumatic growth, and personality characteristics are not taught to people in the sense of taking classes to learn skills or tools. These concepts could be developed by the individual over time by examining the pieces that make up these concepts. Duckworth (2016) talked about ways to “grow grit from the inside out” (p. 93) in her book. Subconstructs that make up the concept of grit could be strengthened in differing ways and result in a potential overall increase in gritty behaviors (i.e., perseverance and identifying interests). Duckworth identified interest or passion, practice, purpose, and hope as pieces that contribute to people with high levels of grit. Duckworth stated it was key for people to find areas they found interesting or passionate about to increase their chances of continued perseverance toward their goals. Individuals who practiced or made continuous steps toward their goals further stood out as more gritty and successful individuals when it came to accomplishing their goals. Finding purpose in

what they did and instilling hope were also salient pieces in those with higher levels of grit. Although not the focus of this study, these were all potential pieces that could be utilized by mental health clinicians, career counselors, and psychologists to help individuals grow in their grit if this variable was found to be protective in any way. The next section presents existing literature on the interaction of sexual assault, career adaptability, and grit.

Grit Related to Sexual Assault and Career Adaptability

One study specifically studied the relationship between career adaptability and grit. Gregor et al. (2021) looked at the relationship between career adaptability and grit among a sample of 309 community college students. The authors found grit had a small but significant positive relationship with career adaptability. Gregor et al.'s results suggested higher levels of grit were associated with higher levels of career adaptability. The more persistent effort and continued interest exert toward a long-term goal (e.g., college degree or career), the more internal, self-regulated resources were used to adapt and continue toward a goal. Another study looked at career adaptability and grit in the context of parental communication. Wibowo et al. (2020) examined the relationships between grit and parental communication on the career adaptability of high school students in Indonesia. However, the authors used a regression model that looked at the independent variables (grit and parental communication) simultaneously so the results did not include just the effect grit had on career adaptability but the effect grit and parental communication had on career adaptability. The authors' results concluded that both grit and parental communication simultaneously accounted for a significant portion of the variance in career adaptability.

Experiencing sexual assault is likely harmful to the development and use of career adaptability resources because it was shown in the literature that sexual assault was related to

many negative outcomes for academics, career development, and mental health (Carey et al., 2018; Chang et al., 2015; Dworkin et al., 2017; Jordan et al., 2014; Parr, 2020; Potter et al., 2018; Raymond, 2018; Walsh & Bruce, 2014). The lens of CCT identified experiencing sexual assault as a contextual factor, social barrier, and past experience, which were all incorporated into undergraduates' construction of their career reality and were harmful in their career development.

Not only have researchers called for further investigation on sexual assault's impact on career adaptability but also to identify mediating or moderating variables that might safeguard any negative impact from experiencing sexual assault. Preliminary evidence pointed to a positive association among grit and academic and career success (Bowman et al., 2015; Duckworth et al., 2007; Hodge et al., 2018; Lee & Sohn, 2017) as a buffer to negative mental health outcomes resulting from sexual assault (Blalock et al., 2015; Marie et al., 2019) and should further be investigated as a moderator variable. Grit might be an adaptive coping strategy on its own or fall within the CCT stage of willingness to adapt and move forward despite the uncertainty and challenges ahead, which is a prequel for the career adaptability stage. If grit is found to have a moderating effect on the relationship between sexual assault and career adaptability, this could potentially lead to effective interventions to empower survivors and support success in their careers. To move forward with this investigation, it was important to consider how each variable is operationally defined and measured.

Frequently Used Measures

Career Adaptability Measures

The scale originally created to measure career adaptability was the Career Adaptabilities Scale (CAAS; Savickas & Porfeli, 2012). This scale initially consisted of 44 items,

broken down into the four subscales for each self-regulation resource: concern, control, curiosity, and confidence. Each subscale consisted of 11 items to make up the 44-item total. This initial scale was administered to both students and working adults in 13 different countries (Belgium, Brazil, China, France, Iceland, Italy, Korea, the Netherlands, Portugal, South Africa, Switzerland, Taiwan, and the United States). Since the four self-regulating resources were hierarchical in making up career adaptability, all of the data were pooled together and a hierarchical confirmatory factor analysis was performed. This analysis reduced the original 11 items per subscale to six items, which resulted in 24 items total. The 24 remaining items all consisted of factor loadings that were statistically significant at $\alpha = 0.01$ (Savickas & Porfeli, 2012). The new, reduced scale became the CAAS-International form. The CAAS-International consisted of the core 24 items that defined career adaptability. Each country could then add additional constructs or subscales that might be unique to that country. The reported total reliability for the CAAS-International was .92 for a sample of 278 participants from each country, and each subscale score was as follows: concern (.83), control (.74), curiosity (.79), and confidence (.85; Savickas & Porfeli, 2012).

Porfeli and Savickas (2012) continued to develop the USA form of the CAAS to address its validity. The Career Adapt-Abilities Scale-USA Form (CAAS-USA Form) was given to 460 10th and 12th grade U.S. students. The CAAS-USA form consisted of the 24 items broken down into six items per subscale (concern, control, curiosity, and confidence), and a seventh item was added to each subscale for a total of 28 items. Analysis showed that adding a seventh item to each subscale did not improve the internal consistency of the factor structure so it was removed. From this sample, the four subscales correlated from .82 to .88 to the adaptability total score. To provide support for validity, evidence for concurrent validity was provided by also using the

Vocational Identity Status Assessment (VISA; Porfeli et al., 2011) among the same sample participants. The VISA was broken down into six subscales that measured vocational progress (commitment making, commitment identification, in-depth exploration, in-breadth exploration, commitment flexibility, and commitment self-doubt). The CAAS-USA Form scores were correlated with the VISA scores and five of the six correlations were significant at $\alpha = 0.01$ (Porfeli & Savickas, 2012). The new 24-item CAAS USA form has also been referred to as CAAS 2.0 (Savickas & Porfeli, 2012).

Maggiore et al. (2017) developed a brief 12-item version of the CAAS 2.0 called the Career Adapt-Abilities Scale–Short Form (CAAS-SF). This measure was piloted on a sample of 2,800 adults from Switzerland (mean age = 42). Since participants spoke both German and French, German and French versions of the CAAS-SF were used, which showed strong internal reliability scores of .94 and .92, respectively, with this sample. Maggiore et al. were able to provide comparable evidence of the CAAS-SF meeting the four-factor fit with the 12-item scale. Despite this development of the CAAS-SF, all the studies cited throughout this chapter continued to use the 24-item CAAS 2.0, particularly with samples of college students, with the exception of Furness (2020). Furness used the CAAS-SF with a sample of adult workers and reported a strong internal consistency reliability of .89.

Zacher (2014) provided evidence of the CAAS 2.0's incremental validity. Zacher studied the predictive power of career adaptability on career satisfaction and self-rated career performance as compared to the Big Five personality traits (extraversion, conscientiousness, neuroticism, agreeableness, and openness to experience) and core self-evaluations (a person's fundamental evaluations of themselves). Career adaptability was found to be more positively

able to predict career satisfaction and self-related career performance over the Big Five and core self-evaluations in the sample of employees from Australia (mean age of 46).

Previous research provided the most support, not only on use but with internal consistency, content, and incremental validity to the CAAS 2.0. From the perspective of the current study, the CAAS 2.0 was the best to assess career adaptability among the sample of college undergraduate students. This replicated previous research and had the most potential to capture this latent variable.

Sexual Assault Measures

Defining sexual assault has been difficult for researchers because there is often a subjective interpretation when asking about sexual assault, rape, or other unwanted sexual contact (e.g., sexual coercion; Fedina et al., 2018; Fisher, 2009; Koss et al., 2007). This is also because legal definitions and law interpretations for sexual assault vary upon each state so there does not seem to be a consensus. The most widely used measure is the Sexual Experiences Survey (SES; Koss & Oros, 1982).

The SES was first created to measure incidents of rape and sexual assault in the United States and the original sample used university students (Koss & Oros, 1982). The survey was originally 12 yes/no questions asking about sexual intercourse with varying degrees of coercion, threat, and physical force (Koss & Oros, 1982). Two different versions were made for men and women where the woman's version asked about sexual victimization and the man's version asked about sexual aggression. Test-retest reliability and internal consistency of the original SES were supported by samples from college women (Koss & Gidycz, 1985). Major revisions came to the SES to better capture the prevalence rates and tactics of unwanted sexual experiences.

Several different versions were created from the original SES: the SES Long Form Perpetration (SES-LFP), SES Long Form Victimization (SES-LFV), SES Short Form Perpetration (SES-SFP), and the SES Short Form Victimization (SES-SFV; Koss et al., 2007). The long forms of the SES included additional questions on noncontact misdemeanor sex crimes and additional behaviorally specific questions involving alcohol and drugs, which might be of interest to those in criminology and substance use (Koss et al., 2007). The SES short forms were modeled off the original SES and are widely used in research studies. These short forms of the SES replaced the original yes/no answer format and now ask respondents to rate the frequency of their experience. Respondents are asked about the frequency of the experiences twice—in the last 12 months and since age 14.

Strengths of using the SES pointed to clear definitions of attempted and completed rape that were consistent with legal statutes and included a spectrum of other unwanted sexual experiences (Koss et al., 2007). However, this measure avoided using legal terms such as “rape” because previous research commented on these terms being misunderstood by the respondents, which led to the inaccuracy of the definition (Fisher, 2009). Instead, the items included behaviorally specific questions addressing seven different types of nonconsensual, unwanted sexual contact and five different tactics used to compel victims (Koss et al., 2007). Item level scoring was used to give prevalence rate estimations and ordinal level scoring was also used to place respondents into mutually exclusive categories along the spectrum of unwanted sexual contact (Davis et al., 2014; Koss et al., 2007).

Weaknesses included needing to change the gendered language, which was done by Koss et al. (2007). The original versions of the SES indicated a heterosexist bias and revisions now use gender neutral language (e.g., instead of “A man fondled, kissed, or rubbed up against the private

areas of my body,” it now states, “Someone fondled, kissed, or rubbed up against the private areas of my body...”). However, the current SES is limited in being able to assess same-sex victimization or inclusive of all gender identities (Koss et al., 2007). For example, some of the questions state “A man put his penis into my vagina, or someone inserted fingers or objects without my consent.” Not all individual who identify as a male have penises, which further excludes woman-identified individuals of being perpetrators by inserting fingers or objects without consent. Research has further continued to fail in assessing sexual assault victimization in gender identities other than women by using the SES-SFV form for just women and the SES-SFP form for just men (Johnson et al., 2017).

Although it is the most widely used measure to assess for unwanted sexual experiences (particularly sexual assault), there is criticism on the validity of using the SES-SFV (Anderson et al., 2019). In a sample of 397 college men, the SES-SFV identified 109 cases (27.5%) of overall sexual victimization in comparison to the Revised Conflict Tactics Scales—Sexual Coercion (CTS2), which assessed for sexual violence among intimate partner relationships and identified 164 cases (41.3%) of sexual victimization (Anderson et al., 2019). However, the SES-SFV identified more cases of rape and the CTS2 identified more cases of sexual coercion (Anderson et al., 2019). This provided an example of the difficulty in accurately capturing all experiences of unwanted sexual assault in a single measure. The distinction of each measure should be considered when designing studies to measure unwanted sexual experiences. Perhaps designing studies to measure sexual assault and other unwanted sexual experiences (i.e., sexual coercion, sexual harassment) should be conducted separately.

Evidence supporting the validity of the SES-SFV was provided by Canan et al. (2020) when comparing survey responses to qualitative data conducted among a sample of lesbian,

bisexual, and heterosexual women. All reported non-consensual behavior and perpetration tactics asked on the SES-SFV were found in the qualitative data. Additionally, lesbian and bisexual women experienced the perpetration rates at the same rate as heterosexual women (Canan et al., 2020), supporting the argument for conducting research on all gender and sexual identities.

As sexual assault could result in negative mental health outcomes such as PTSD, depression, substance abuse, and anxiety disorders (Parr, 2020; Potter et al., 2018; Wadsworth et al., 2020), researchers looked to measures to assess convergent validity for the SES. Measures of current PTSD symptoms (PTSD Symptom Scale—Self-Report), depression symptoms (Center for Epidemiologic Studies Depression Scale), hazardous drinking (Alcohol Use Disorders Identification Test), and the SES-SFV were assessed on a group of college students; 28.4% of 1,263 college students at a large university reported some history of unwanted sexual experiences with women reporting higher rates than men (Littleton et al., 2019). There were significant correlations between a history of sexual assault and all three outcomes, showing strong evidence that those who reported a history of sexual assault further scored higher on measures of PTSD, depression, and hazardous drinking (Littleton et al., 2019).

Grit Measures

The Grit-Original Scale (Grit-O) was created and validated by Duckworth et al. (2007) because their work on defining the construct of grit was not captured in their review of other scales such as passion or career ambition. Duckworth et al. interviewed high achieving people such as lawyers, academics, and other professionals to understand their attitudes and behaviors toward their success. They generated 27 initial items to capture the construct of grit that were not meant to capture a specific time in life but rather be valid for both adolescents and adults. Questions targeted the two subconstructs of sustained effort (e.g., “I finish whatever I begin”)

and consistency in interest (e.g., a reverse coded item: “My interests change from year to year”). The scale was further refined reviewing redundancy, internal consistency reliability coefficients, reviewing for appropriate vocabulary, and exploratory factor analysis. The final scale consisted of 12 items that participants answered on a 5-point Likert scale from 1 (*not at all like me*) to 5 (*very much like me*).

As cited previously, the Grit-O scale (Duckworth et al., 2007) has been given to diverse populations to validate the scale and further study the construct of grit. Duckworth et al. alone gave the Grit-O to adults (mean age = 45), undergraduate students, freshman from West Point Military Academy, and Scripps National Spelling Bee finalists (ages 7 to 15).

The Grit-S was created after further examination of the two-factor structure of the original grit scale and how the factors interrelated in predicting the other (Duckworth & Quinn, 2009). Items were taken from the Grit-O measure that showed promising predictive validity among the four samples used in the Duckworth et al. (2007) study. The results concluded the effective use for an eight-item scale. A confirmatory factor analysis was then conducted among a separate sample of adults to further examine the two-factor structure of the Grit-S measure. Goodness-of-fit indices indicated the Grit-S fit the data better than the Grit-O scale (Duckworth & Quinn, 2009).

A meta-analysis by Crede et al. (2017) argued that grit highly correlated with several personality traits, specifically conscientiousness. The authors argued that grit is perhaps a subcategory of the conscientiousness construct. The Grit-S measure, the Grit-O measure, and the Big Five Personality dimensions were examined among the sample of West Point students and spelling bee finalists to look for predictive validity for educational attainment and career changes. Conscientiousness showed the strongest correlation ($r = .77$) with the Grit-S measure.

Logistic regression was used to examine the predictive relationship between grit and educational attainment and career changes while controlling for conscientiousness and all the other Big Five personality dimensions. The results showed that higher grit in individuals had more educational attainment of same age peers and less career changes (Duckworth & Quinn, 2009).

Duckworth et al. (2007) pointed out a limitation in measuring grit was using solely a self-report questionnaire and having participants reflect on their experience. During recruitment efforts, participants filled out the Grit-S measure and further elected a friend or family member to complete an informant version of the Grit-S (Duckworth & Quinn, 2009). The informant versions of the Grit-S were identical to the Grit-S with the exception that first-person pronouns were replaced with third person pronouns to indicate answering their view of the other person. The informant versions provided strong internal consistency estimates similar to the self-report Grit-S by family members peers, and self (.84, .83, and .83, respectively). Medium to large correlations were found among the Grit-S self-report version and the Grit-S informant version (.45 and .47; Duckworth & Quinn, 2009). The Grit-S further showed evidence of strong test-retest reliability among a sample of middle school and high school students over a one-year time frame ($r = .68, p < .001$) and did not differ between gender identities (Duckworth & Quinn, 2009). Finally, efforts toward producing predictive validity of the Grit-S were conducted. The Grit-S measure was given to a new additional sample from West Point Military Academy, which showed higher grit scores were more predictive of freshman completing their summer training program as compared to the Whole Candidate Score from West Point. Similarly, the new sample of National Spelling Bee finalists who scored high on the Grit-S were more likely to advance to further rounds in the competition (Duckworth & Quinn, 2009).

Summary

Career construction theory was outlined as an appropriate framework because it not only consists of career adaptability as a foundational piece but incorporates sexual assault as a social and environmental experience that constructs the career reality of college students. Grit could further be incorporated into student's social constructivism as a potential intervention if found to have an impact on the relationship between sexual assault victimization and career adaptability. A thorough review of each variable of interest occurred independently as well as a discussion of the relationships among the variables. A discussion of the surveys used to measure each variable was presented as well as arguments for their strong psychometric properties. Many studies investigated different aspects of each of the constructs and the lack of research on the specific relationships the variables had among each other. What was of primary interest for the current study was the relationship between sexual assault victimization and career adaptability and the potential moderating role grit might hold. Further research is needed in these areas and to include samples that are gender diverse and not solely focused on women.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this study was to investigate the relationship between sexual assault victimization and career adaptability among college undergraduate students as well as what role grit might play in this relationship. This chapter contains information on participants, procedures, measures, research questions and hypotheses, and data analysis procedures used in this study. The current study utilized a nonexperimental and cross-sectional design where data were collected through survey measures. Participants were recruited through the Prolific (2021) crowdsourcing tool and completed the following surveys via an online survey software (Qualtrics) to operationalize the constructs: the SES-SFV (Koss et al., 2007), the CAAS (Savickas & Porfeli, 2012), the Grit-S (Duckworth & Quinn, 2009), and a demographics questionnaire. Data analysis consisted of hierarchical linear regression (HLR) to first examine the relationship between sexual assault victimization and career adaptability. This was followed by assessing the moderating role of grit on the relationship between sexual assault experienced and career adaptability using HLR analysis.

Participants

The following inclusion criteria were put in place to recruit participants: participants were between the ages of 18 and 24 years old, U.S. citizens (per Prolific criteria), and currently enrolled in an undergraduate degree program (e.g., Bachelor of Arts/Bachelor of Science). For the current study, the necessary sample size to find statistical significance was calculated using

G*Power 3.1.9.3 software (Faul et al., 2009). Within the F test family, the statistical test utilized to detect grit as a moderator variable was a multiple regression analysis: fixed model, R^2 deviation from zero. The sample size was further calculated using the parameters of a medium effect size of Cohen's f^2 (.15), an alpha error probability of .05, statistical power set at .80, five explanatory variables (including four dummy variables from the SES-SFV), a set of nine dummy variables from the demographic questionnaire (classification in program, parent's level of education), and three continuous variables from the demographic questionnaire (age, current GPA, and number of clubs/organizations involved in). According to G power, this required a minimum sample size of 146 participants. Prolific required a minimum sample size of 300 participants to obtain a representative sample size within the United States so the minimum sample size was set at 300 participants. The survey remained open until the minimum number of participants was met.

Prolific

Crowdsourcing platforms are an emerging setup to gather large amounts of data from designated samples of participants, particularly the social sciences (Bader & Keuschnigg, 2018; Peer et al., 2017). Prolific (2021) is a crowdsourcing platform that was designed specifically for researchers. What is unique about Prolific is it can provide a nationally representative sample for a survey research design study. To accomplish a nationally representative sample, Prolific takes three demographic categories (age, gender, and ethnicity) and stratifies these categories across the sample. The proportions of age ranges, gender identities, and ethnicity identities are in parity of the same demographic categories reported from the U.S. Census to the best of Prolific's ability. Because of the need to match proportions of those demographics to the U.S. population,

Prolific requires a minimum sample size of 300 participants to obtain a nationally representative sample.

Prolific (2021) indicated their web service prevents any user from completing a survey more than once. When participants sign up for Prolific, they provide demographic information (e.g., age, gender, etc.) so researchers can set up filters for their study, which then are only available to already registered participants who meet designated demographic criteria. Participants are also able to answer additional questions about themselves (e.g., education, interests/hobbies, language, etc.), which makes them eligible to participate in more studies where researchers require pre-screening questions. Since participants fill out this information before being given their options to participate in any research studies, it is likely they cannot participate in a survey in which their demographics do not match. Researchers can set inclusion and exclusion criteria this way (Palan & Schitter, 2018). To maintain the integrity of each user profile, users must verify their identity by providing an email address, phone number, and a driver's license or passport; this personal contact information and photo identification prevent users from signing up for multiple accounts and falsifying demographic information.

Since Prolific (2021) was designed specifically for researchers, there was a foundational basis of ethical treatment to its participants. Once participants complete the study, they are compensated for their time afterward through the Prolific website. Researchers pay a fee to Prolific to use the platform and recruit participants to complete their surveys. Prolific keeps some of this fee and uses the other portion to pay participants. Prolific requires a fixed minimum payment of \$6.50 per hour to participants and researchers have the choice to increase the incentive. I increased the incentive to \$20.59 per hour. Prolific automatically calculated this price based on the length of the survey. The mean completion time for participants in this study was

6.7 minutes, which provided them with approximately \$2.30 in compensation. As each participant completes a survey, the researchers must then accept or reject each completed survey. A researcher might reject a survey if participants failed an attention check or they did not feel the survey was completed fully and honestly. If rejected, the participant would not receive payment. Prolific provides guidelines and encourages fairness and compassion when deciding to accept or reject a survey. The researcher must have a sound reason (e.g., completed the survey exceptionally quick, skipped crucial items, failed attention checks) for rejecting participants and participants are allowed to object through Prolific if they feel the rejection was unfair (Palan & Schitter, 2018). Not only would participants not receive payment if their survey submission was rejected but the more rejections participants received, the more this impacted their user profile. Researchers are able to filter through participants who do not have a high acceptance of survey scores and only offer their study to users with higher acceptance rates. Prolific gives participants the option to discontinue their participation in a survey and not have their acceptance rate score impacted. Participants are given the options to either have the survey time out or return their submission, meaning they communicated they did not want the researcher to use their data. Either of these options did no harm to the participant's profile rating on Prolific (Palan & Schitter, 2018).

A strength of using Prolific was being able to obtain a sample size with enough participants of all gender identities. Most research on sexual assault focused mainly on majority women samples. Due to stigma and underreporting, this method of recruitment helped shed light on the sexual assault experiences and career development on not only women but men and other gender minority individuals.

Overview of Sample

As Prolific (2021) determined the cap of participants to be 300, the survey discontinued after three days and all data were collected at 300 participant responses. Eight participants submitted incomplete survey responses and were removed from the analysis, leaving a total sample size of 292 individuals. Among these 292 participants, there were seven cases of missing data among the CAAS. Each of these participants omitted one answer out of the 24 total items. An additional two participants omitted answers to one question on the Grit-S. If a very small amount (i.e., less than 5%) of data was missing in a random pattern, deleting them was not always warranted (Tabachnick & Fidell, 2013). Since one item was missing from these nine participants, mean substitution was used to complete the participants' survey responses. Missing data are not uncommon, particularly in web-based surveys (Manfreda et al., 2008), and the omitted item was likely an error of filling out the survey and simply missing one answer. Therefore, I did not find it warranted to delete the entire response set (i.e., listwise deletion) of this variable. Therefore, the total number of participants for the analysis was 292.

The sample consisted of 134 women (46.2%), 137 men (47.2%), and 19 gender minority identities (6.5%). The majority of the sample identified as White (58.3%) and heterosexual (63.8%). All participants were currently in undergraduate programs: 98 participants (33.8%) were in their third year, 90 participants (30.8%) were in their fourth year, 48 participants (16.4%) were in their second year, 43 participants (14.7%) were in their first year, and 11 participants (3.8%) reported they were in their fifth year or higher. Table 1 provides further details of the participant sample demographics.

Table 1*Demographic Characteristics of Participants*

Variable	<i>n</i>	%
Gender Identity		
Woman	135	46.2
Man	138	47.3
Trans Woman	1	0.3
Trans Man	3	1.0
Nonbinary	15	5.1
Sexual Orientation		
Bisexual/Pansexual	74	25.3
Gay	12	4.1
Heterosexual/Straight	186	63.7
Lesbian	14	4.8
Questioning	1	0.3
Asexual	5	1.7
Racial/Ethnic Identity		
American Indian or Alaska Native	1	0.3
Asian or Asian American	57	19.5
Black, African American, African-Caribbean	10	3.4
Latino/Hispanic	35	12.0
Middle Eastern or Arab American	3	1.0
Multiethnic/Biracial	14	4.8
Native Hawaiian or Pacific Islander	1	0.3
White/Caucasian	171	58.6
Year in School		
1 st year	43	14.7
2 nd year	48	16.4
3 rd year	100	34.2
4 th year	90	30.8
5 th year or more	11	3.8
Undergraduate degree online only		
Yes	20	6.8
No	272	93.1
Declared a major?		
Yes	272	93.2
No	20	6.8

Table 1 Continued

Variable	<i>n</i>	%
Parents Highest Level of Education		
Less than high school diploma	11	3.8
High school diploma/GED	30	10.3
Some college	48	16.4
Associates degree	15	5.1
Bachelor's degree	101	34.6
Master's degree	60	20.5
Doctorate	27	9.2
First Generation College Student		
Yes	76	26.0
No	216	74.0
Number of Clubs/Organizations Involved In		
0	109	37.3
1-2	126	43.1
3-4	48	16.4
5-6	9	3.1
Fraternity or Sorority involvement		
Yes	29	9.9
No	258	89.0
Currently applying	3	1.0
How many weeks have you attended counseling since assault?		
0	58	19.9
1-10	9	2.9
11-30	4	1.2
31 +	11	3.6
	Range	<i>M</i> ± <i>SD</i>
Age (years)	18-24	20.66 ± 1.53
Current GPA	1.8-4.5	3.51 ± 0.47

Note. *N* = 292.

Procedure

Prior to beginning recruitment and data collection, the study was approved by the University of Northern Colorado's Institutional Review Board. Upon Institutional Review Board approval (see Appendix B), participants were recruited through the Prolific (2021) platform.

Since Prolific is a crowdsourcing platform meant to provide anyone a way to sign up and participate in research studies, all users who answered the demographic questions of age range (between 18-24), U.S. residents, and currently enrolled undergraduate students had this study presented to them on their Prolific user page as an option to participate. A brief description of the study was listed on Prolific that participants who were eligible could read and decide whether or not to participate (see Appendix C). Interested participants were rerouted from the Prolific website to a Qualtrics survey hosted by my university. Upon entering the Qualtrics survey website, participants were provided with the informed consent page (see Appendix D), which gave further information about the purpose of the study, emphasis of the anonymity, and contact information for the primary investigator.

At the end of the informed consent page, participants were given two options: “Yes, I understand and wish to participate” or “No, I do not wish to participate.” By clicking “no,” participants were automatically directed to the closure page of the study and no data were collected. By clicking “yes,” participants were brought to the next Qualtrics page for more information on the directions for answering the survey questions (see Appendix E). The participants were then asked to complete four surveys: the SES-SFV (Koss et al., 2007; see Appendices F and G [permission to use]), the CAAS (Savickas & Porfeli, 2012; see Appendices H and I [permission to use]), the Grit-S (Duckworth & Quinn, 2009; see Appendices J and K [permission to use]), and the demographic questionnaire (see Appendix L). The first three surveys were randomized as to decrease any priming or order effects (Heppner et al., 2016) and the demographic questionnaire was always presented last. The final page of the Qualtrics survey contained a “thank you” statement for participants at the completion of the survey and a hyperlink for Prolific users to select and indicate their completion of the study. This link further

allowed Prolific to compensate participants for completing the study. The final page also included national mental health and sexual assault resources (see Appendix M).

Prolific assigned participants a unique 24-character identification (ID) that was used specifically for the purposes of tracking participants' completed answers to accept or reject their submission in order to receive payment. I only used this ID number for that purpose. As soon as the data were exported from Qualtrics to a password protected Excel file, these ID numbers were deleted. These data were stored on the primary researcher's password protected personal laptop and uploaded to SPSS (SPSS Version 28.0 [IBM Corp., 2021]) for data analysis.

Instruments

An online survey, powered by Qualtrics, was used to administer, and collect data. This survey consisted of the SES-SFV (Koss et al., 2007), the CAAS (Savickas & Porfeli, 2012), the Grit-S (Duckworth & Quinn, 2009), and a demographic questionnaire I developed.

Sexual Experiences Survey

To measure sexual assault experienced, the SES-SFV (Koss et al., 2007) was used that asked behaviorally specific questions on unwanted sexual experiences. This 35-item scale was designed to measure unwanted sexual experiences including unwanted sexual contact, sexual coercion, attempted rape, and rape (Koss et al., 2007). This measure further avoided using legal terms such as "rape" because previous research commented on these terms being misunderstood by the respondents, which led to the inaccuracy of the definition (Fisher, 2009). The scale is composed of seven categories of behavioral descriptions regarding unwanted sexual experiences and each of the seven categories consists of five tactic questions (i.e., behaviors used by the perpetrators to force sexual acts against consent) totaling to 35 items. Participants read each of the 35 items and responded to them in terms of frequency since (a) the age of 14 and (b) in the

past 12 months (0, 1, 2, 3+). The numeric values based on the frequency of occurrence indicated the number of times participants had experienced each of these unwanted sexual experiences. The SES-SFV scale scoring directions used ordinal scoring to place respondents into mutually exclusive categories based on their frequency of occurrence and most severe experience. The categories consist of non-victim, sexual contact, sexual coercion, attempted rape, and rape. An example item that operationalized an attempted rape experience was “Even though it did not happen, a man TRIED to put his penis into my vagina, or someone tried to stick in fingers or objects without my consent by...” and an example tactic question included “...using force, for example holding me down with their body weight, pinning my arms, or having a weapon.”

Johnson et al. (2017) provided a sample of 443 women participants recruited from an undergraduate psychology pool. Cronbach’s alpha reported .92 based on this sample for the internal consistency reliability of items from the SES-SVF between “since age 14” and “in the past 12 months.” Although this was a strong alpha coefficient level based on this sample, it should be noted that Koss et al. (2007) advised against calculating internal consistency reliability of the SES because the survey was measuring behaviors experienced and not latent variables. Johnson et al. further looked at test-retest reliability of the SES-SVF as the participant sample completed this measure on two separate dates two weeks apart. The authors investigated exact match rates based on the five level (non-victim, sexual contact, sexual coercion, attempted rape, rape) categorical scoring given on the two separate survey administration dates. Regarding the test-retest reliability, 70% of participants had an exact match for unwanted sexual experiences since the age of 14. Seventy-three percent of participants had exact matches for unwanted sexual experiences in the past 12 months. Construct validity was also addressed in this study by comparing SES-SVF responses with other variables associated with victimization (i.e.,

dissociation, anxiety, depression, sleep disturbances, past sexual abuse). The SES-SVF items reporting sexual assault history were predictive of trauma symptoms measured by the Trauma Symptom Checklist-40 (Briere & Runtz, 1989).

Career Adapt-Abilities Scale

Career adaptability is defined as a person's ability to be able to adapt to their work environments by using four key internal resources: concern, control, curiosity, and confidence (Savickas & Porfeli, 2012). Career adaptability was measured using the Career Adapt-Abilities Scale (CAAS; Savickas & Porfeli, 2012); this 24-item scale was designed to measure a person's self-regulated resources for managing current and anticipated tasks, transitions, and traumas in their work role. The scale is equally divided into four subscales that represent four self-regulated resources that make up career adaptability: concern (e.g., "Preparing for the future"), control (e.g., "Making decisions by myself"), curiosity (e.g., "Observing different ways of doing things"), and confidence (e.g., "Working up to my ability"). The scale asks respondents to rate how strongly they have developed different strengths related to their careers on a 5-point Likert-type scale ranging from 1 (*not strong*) to 5 (*strongest*). Scores could range from 24 to 120 for the total score with higher scores indicating greater overall career adaptability. The scores ranged from 6 to 30 for each of the four subscales. This scale could either be used as a total score or divided into the four subscales representing the four aforementioned resources.

In creating the CAAS to be used on international samples, Savickas and Porfeli (2012) reported internal consistency reliability of their sample of 460 tenth and 11th grade students to be .92 for the total score and a range of .74 to .85 for the subscale scores. Another recent study using the CAAS on a sample of university students reported good internal consistency with alphas ranging from .78 to .85 (Wilkins-Yel et al., 2018). Further, a confirmatory factor analysis

was performed on the CAAS with this sample and the four adaptability dimensions (concern, control curiosity, and confidence) reported factor loadings ranging from .84 to .93, indicating strong evidence of construct validity (Wilkins-Yel et al., 2018). A previous study using the CAAS with a sample of 330 university students reported a similar internal consistency reliability to be .93 (range of .82 to .87 for subscale scores; Douglass & Duffy, 2015). Another study with a sample of 555 undergraduate university students reported .94 for internal consistency reliability and .84 to .89 for subscale scores (Tolentino et al., 2014). The current study's Cronbach's alpha coefficient from a sample of 292 undergraduate student participants was 0.94 for the total score. For the subscale of concern (items 1-6), the Cronbach's alpha was .86; for the subscale of control (items 7-12), the Cronbach's alpha was .85; for the subscale of curiosity (items 13-18), the Cronbach's alpha was .85; and for the subscale of confidence (items 19-24), the Cronbach's alpha was .89.

Evidence for concurrent validity was provided by using the VISA (Porfeli & Savickas, 2012) among a sample of four hundred and sixty 10th and 11th grade students (mean age = 16). The VISA is broken down into six subscales that measure vocational progress (commitment making, commitment identification, in-depth exploration, in-breadth exploration, commitment flexibility, and commitment self-doubt). The CAAS-USA form scores were correlated with the VISA scores and five of the six correlations were significant at $p < .01$ (Porfeli & Savickas, 2012). The new 24-item CAAS USA form has also been referred to as the CAAS 2.0 (Savickas & Porfeli, 2012).

Short Grit Scale

Grit is defined as passion and perseverance for a longer-term goal (Duckworth et al., 2007) and also phrased as having consistent interest and persistent effort toward a long-term goal. This variable was measured using the Short Grit Scale (Grit-S; Duckworth & Quinn, 2009). This measure has eight items made up of two subscales: persistent effort (e.g., “I finish whatever I begin”) and consistent interest (e.g., “I often set a goal but later chose to pursue a different one”) toward a longer-term goal. Each subscale consists of four items. Respondents are asked to rate items on a 5-point Likert-type scale ranging from 1 (*not like me at all*) to 5 (*very much like me*). A total grit score is calculated by averaging the items by the total number of items. This allows for a maximum score of 5 (extremely gritty) and a minimum score of 1 (not at all gritty). Therefore, higher scores indicate higher levels of grit. Additionally, the two subcategories of consistent interest and persistent effort can be scored separately as they each use four items of the 8 items total.

The Grit-S was used on samples of participants from West Point Military Academy, contestants at the 2005 National Spelling Bee (age 10-15 years old), and Ivy League undergraduate students (Duckworth et al., 2007; Duckworth & Quinn, 2009). For West Point’s 2008 and 2010 class of students, the internal consistency reliability ranged from .73 to .76 for the total grit score, .60 to .65 for scores on persistence of effort subscale, and .73 to .74 for scores on the consistency of interest subscale. For the 2005 National Spelling Bee contestants, the internal consistency reliability score for total grit was .80, .65 for the subscale of persistence of effort, and .76 for consistency of interest. For the Ivy League undergraduate student sample, the internal consistency reliability score was .83 for total grit, .78 for persistence of effort, and .79 for consistency of interest (Duckworth et al., 2007). Confirmatory factor analysis also supported the

two-factor structure of grit; however, the sample on which the confirmatory factor analysis was based consisted of adults ages 25 and older (Duckworth & Quinn, 2009). Gregor et al. (2021) further used the Grit-S on their sample of 300 community college students and reported an internal consistency reliability estimate of .72. Lucas et al. (2015) similarly reported an alpha of .73 for internal consistency reliability on their sample of 426 undergraduate students. The current study Cronbach's alpha coefficient from a sample of 292 undergraduate student participants for the total score was .79. The subscale of consistent interest had a Cronbach's alpha coefficient of .80 and the subscale of persistent effort had a .82.

Evidence for predictive validity of the Grit-S was measured with the retention rate of West Point Military Academy students after their first summer. Additional research provided predictive validity by measuring the Grit-S with educational and career attainment. Higher grit individuals had more educational attainment of same age peers and less career changes (Duckworth & Quinn, 2009).

Demographic Questionnaire

The demographic questionnaire (see Appendix L) consisted of 17 items developed by the researcher. The items in the demographic questionnaire included age, gender identity, sexual orientation, race/ethnicity, classification in school, online program status, current GPA, declared or undeclared major, parental education level, first generational student status, student clubs/organization involvement, fraternity/sorority involvement, if sexual assault was experienced whether it occurred on a college campus, and whether the sexual assault was committed by a same-sex or opposite sex person. All of the demographic variables were measured as categorical except for age, GPA, and number of clubs/organizations involvement.

Research Questions and Hypotheses

The following research questions and hypotheses guided this study:

- Q1 To what extent is experiencing sexual assault an explanatory factor of career adaptability in college students?
- H1 The experience of sexual assault is negatively associated with career adaptability. In other words, sexual assault victimization is predicted to hinder an individual's level of career adaptability.
- Q2 To what extent does one's level of grit moderate the relationships between sexual assault victimization and career adaptability?
- H2 The level of grit will moderate the relationship between sexual assault experienced and career adaptability. In other words, an individual who experiences sexual assault may not experience as great of a negative impact in their career adaptability if they also have a higher level of grit

Research Design

The study was a non-experimental cross-sectional research design. I used multiple hierarchical regression as described by Hayes (2018) to examine the moderating effects grit had on the relationship between sexual assault victimization and career adaptability. Gender identity, sexual orientation, race/ethnicity, first-generation status, declared major, on-line status, and fraternity/sorority involvement were collected for descriptive purposes. The explanatory variables for this study were sexual assault experienced and grit, and the dependent variable for this study was career adaptability. Since the independent variable of sexual assault experienced measured by the SES-SFV was categorical, four dummy variables were created from the five SES-SFV categories. Demographic variables controlled for included age, college year in program, parent's level of education, current GPA, and clubs/organization involvement. Dummy variables were created for classification in program and parent's level of education to be applied to the HLR model.

The sample was collected using Prolific to survey individuals who experienced a spectrum of unwanted sexual experiences using the SES-SFV. Prolific had the option of a pre-screener question asking about crime incidents including a sexual element. This option would have given a sample of participants who all experienced sexual assault. However, as mentioned by Fisher (2009), there were challenges in asking participants directly if they experienced sexual assault and assuming it was a criminal incident. Not all participants who experienced sexual assault might believe their experience was in fact assault or would consider it a criminal incident. This could lead to a skewed sample of participants who only fall in the rape category on the SES-SFV and miss surveying individuals who experienced other unwanted sexual contact such as coercion or attempted rape.

Data Analysis

The data were first organized and uploaded to the software Statistical Package for the Social Sciences Version 28.0 (SPSS; IBM Corp., 2021). Descriptive statistics were gathered on each of the measures including frequencies, means, standard deviations, ranges, and outliers. Also assessed were skewness and kurtosis for the continuous variables (CAAS and Grit-S) by first visually examining the data through histograms and boxplots (Tabachnick & Fidell, 2013). The standardized scores for skewness and kurtosis were also provided in SPSS and given a value of 0 for normal distribution. Cutoff scores of +/- 1 would indicate the distribution was not normal, scores of +/- 7 indicated extreme skewness, and +/- 2 indicated extreme kurtosis (Kim, 2013). Internal consistency reliability coefficients using Cronbach's alpha were calculated for scores on the CAAS and Grit-S to determine the reliability of the sample (Remler & Van Ryzin, 2015). Pearson's correlations were computed to see the sample's relationship with each of the identified constructs from the measures (Remler & Van Ryzin, 2015). Nine dummy variables

were created to account for the categorical demographic questions (classification in program, parent's level of education), and three continuous variables from the demographic questionnaire (age, current GPA, and number of clubs/organizations involved in) and used for analysis (Remler & Van Ryzin, 2015). Four additional dummy variables were created from the SES-SFV (frequencies reported in the last 12 months) as respondents were grouped into five categories: no history, unwanted sexual contact, sexual coercion, attempted rape, and rape.

To use a linear regression model, the data first met the following assumptions regarding linearity, no multicollinearity, normality, homoscedasticity, independent errors of estimation, and measurement without error (Hayes, 2018; Tabachnick & Fidell, 2013). To determine the assumption of linearity, meaning the relationship between the explanatory variables and dependent variables was a linear one, the SES-SFV dummy variables, CAAS, and Grit-S scores were visually assessed through a scatterplot. To determine multicollinearity, the variance inflation factor was examined and below 10, which did not present evidence for extreme multicollinearity. Next, the residuals from the regression model must be normally distributed (Hayes, 2018). This was assessed visually by looking at histograms of the residuals and using the Shapiro-Wilk Test of normality of residuals for each measure (with a p -value greater than .05, representing a normal distribution; Shapiro & Wilk, 1965). The values provided for skewness and kurtosis by SPSS further determined normality as scores were less than +/- 1. Then the observations must show equal variance (homoscedasticity). The test for constant variance was the Breusch-Pagan as the null hypothesis stated the variance was constant (Breusch & Pagan, 1979). There must also be independence of observations, meaning all measurement responses are not dependent on what other respondents have answered (Hayes, 2018). A scatterplot was examined between the residuals and predicted values. Finally, to determine if the variables were

being measured without error, internal consistency reliability estimates were calculated for the CAAS and Grit-S scales. Koss et al. (2007) advised against calculating internal consistency reliability for the SES-SFV because the survey was measuring behaviors and not latent variables. However, Johnson et al. (2017) reported a high Cronbach's alpha (i.e., $\alpha = .92$) of the SES-SFV for a large sample of undergraduate women. The internal consistency reliability coefficient of the SES-SFV for this study was .82. High internal consistency supported that the scores within this study measured the variables of interest without excessive error.

Hierarchical linear regression was conducted ($\alpha = .05$) by adding the explanatory variables to the model to see how much variance (R^2) in career adaptability (based on CAAS scores) was accounted for by viewing the change in R^2 (Tabachnick & Fidell, 2013). At step 1, the demographic variables of age, current GPA, number of clubs/organizations involved in, and dummy variables (classification in program, parent's level of education) were added to the model. At step 2, the four dummy variables of the sexual experiences categories were entered into the model to see how much variance was accounted for by assessing the change in R^2 from the career adaptability scores. As these first two steps addressed the first research questions, step 3 included adding grit to the model before proceeding with the moderation analysis. To further examine a moderation affect (following Hayes, 2018) from the levels of grit, product variables were created that represented the interaction between the explanatory variables (sexual experiences measured by the SES-SFV) and the moderator (Grit-S). This was done by multiplying each of the four dummy variables from the SES-SFV by the Grit-S total score. Finally, at step 4, the product variables were entered. If a set of product variables (an interaction between sexual experiences and grit) showed statistical significance, evidence of a moderating

effect on the explanatory variables (sexual experiences) and outcome variable (career adaptability) relationship would have been present.

If a significant interaction was found, an additional analysis would have been conducted to determine the magnitude of the moderation of grit (Hayes, 2018). This would have been performed using a simple slope test (Aiken & West, 1991). Since grit was a continuous variable, this meant that at differing levels of grit, any value selected would then be able to predict the relationship between sexual assault victimization and career adaptability. A simple slope test would look at the interaction effect of grit on sexual experiences dummy variables by plotting separate regression lines one standard deviation above and below the mean of the predictor (sexual experiences; Aiken & West, 1991), which could be done visually in SPSS. If a moderation existed, the outcome of career adaptability based on the explanatory variable of sexual experiences at a specific value of level of grit would be measurable.

Summary

This study was a non-experimental, cross-sectional survey research design using nonprobability convenience sampling. Participants were recruited through the research-specific, crowdsourcing platform known as Prolific. Survey measures used included the SES-SFV (Koss et al., 2007), the CAAS (Savickas & Porfeli, 2012), the Grit-S (Duckworth & Quinn, 2009), and a demographic questionnaire. Multiple hierarchical regression was used to answer the research questions of sexual assault victimization's potential effect on career adaptability and whether grit presented a moderating effect on that relationship.

CHAPTER IV

RESULTS

The purpose of this study was to investigate the relationship between sexual assault victimization and career adaptability among college undergraduate students as well as what role grit might play in this relationship. This chapter presents the data analysis procedures and results exploring the potential role of grit moderating the relationship between sexual assault experienced and career adaptability among undergraduate students. The results of this study are described below and SPSS Version 28.0 (IBM Corp., 2021) was utilized for all statistical analyses. Information regarding the reliability of the scales, descriptive statistics, and HLR analysis were used to answer the research questions.

Descriptive Statistics and Preliminary Analyses

The data were organized and cleaned in preparation for analyses. The SES-SFV data were scored using the nonredundant ordinal scoring method from Koss et al. (2007, 2008). Based on the items reported by each participant, they were placed only once into the category of their most severe experience: nonvictim, sexual contact, sexual coercion, attempted rape, and rape.

The majority of the sample (221 participants; 76.2%) reported they did not experience any of the SES-SFV (Koss et al., 2007) unwanted sexual experiences in the past 12 months. The next most reported category (with 24 participants; 8.2%) included items that placed them in the rape category according to the SES-SFV in the past 12 months. An item participants reported that placed them in this category included “A man put his penis into my vagina, or someone inserted fingers or objects without my consent by: Taking advantage of me when I was too drunk

or out of it to stop what was happening.” The next most category (with 19 participants; 6.6%) contained items that placed them in the sexual coercion category according to the SES-SFV in the past 12 months. An item participants reported that placed them in this category included “A man put his penis into my vagina, or someone inserted fingers or objects without my consent by: Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn’t want to.”

The next reported category (with 16 participants; 5.5%) reported they experienced SES-SFV questions that categorized their experience as sexual contact in the past 12 months. An item participants reported that placed them in this category included “Someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch or butt) or removed some of my clothes without my consent (but did not attempt sexual penetration) by: Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn’t want to.” The lowest category (with 12 participants; 4.1%) contained items that placed them in the attempted rape category according to the SES-SFV in the past 12 months. An item participants reported that placed them in the category included “Even though it did not happen, someone TRIED to have oral sex with me, or make me have oral sex with them without my consent by: Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.”

The data were also viewed in the frequencies of how often each different tactic was reported. The most frequently reported tactics by perpetrator in rank order were as follows: (a) Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn’t want to; (b) Taking advantage of me when I was too drunk or out of it to stop what was happening; (c) Telling lies, threatening to end the relationship,

threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to; (d) Using force, for example holding me down with their body weight, pinning my arms, or having a weapon, and (e) Threatening to physically harm me or someone close to me.

The means, standard deviations, and ranges of the CAAS and Grit-S are listed below in Table 2. There was no difference in CAAS scores based on the gender identities of the participants. However, men tended to have higher Grit-S scores (mean of 4.5) as compared to women (mean of 3.1).

Table 2

Descriptive Summary of the Career Adapt-Abilities Scale and Short Grit Scale

Scales	<i>M</i>	<i>SD</i>	Range
Career Adapt-Abilities Scale	80.44	16.86	28-120
Short Grit Scale	3.05	.64	1.13-4.63

Note. $N = 292$.

Data Analysis

Assumptions

To determine normality of the data, Shapiro-Wilk Test, values for skewness and kurtosis, and visual inspection of p-p plots were conducted on the CAAS and Grit-S. The values for skewness ranged from -0.18 (Grit-S) to -0.28 (CAAS) and the values for kurtosis ranged from 0.102 (Grit-S) to 0.23 (CAAS). These values all fell within the $|1|$ range providing evidence for normality (Kim, 2013). This evidence for normality was further supported by visually examining the standardized residual histogram and p-p plot. The Shapiro-Wilk Test of normality required

the residuals of this measure to have a p -value greater than .05 to suggest a normal distribution (Shapiro & Wilk, 1965). A significance level of .034 was reported, which was less than .05. Thus, it was concluded to reject the null hypothesis as this presented evidence that the data were not normally distributed. However, some researchers suggested the Shapiro-Wilk Test of normality was better suited for smaller samples ($N < 50$) and might be more sensitive to larger sample sizes (Ghasemi & Zahediasl, 2012; Razali & Wah, 2011).

Homoscedasticity was determined by visually examining the residual scatterplots, which did not present with any patterns and appeared scattered. Additionally, the Breusch-Pagan test for constant variance provided a p -value greater than .05, which indicated evidence that the variance was constant. The scatterplot between the residuals and predicted values additionally provided evidence of independence of observations. Further, because of the design of this research study, participants answered surveys independently. The different measures within the survey were presented at random to decrease the likelihood of any priming effects on the results. The responses of each participant were not dependent on what other respondents answered.

Measurement without error was done by calculating internal consistency reliability for the CAAS (.94) and Grit-S (.79), which both showed good internal consistency reliability coefficients. Generally, it is not advised to calculate internal consistency reliability for the SES-SFV because Koss et al. (2007) reported this scale was measuring behaviors experienced and not latent variables. Previous studies still calculated internal consistency reliability (e.g., Johnson et al., 2017) to support evidence for measurement without error. I calculated the internal consistency reliability coefficient for the SES-SFV for this sample and the reported Cronbach's alpha was .83, which was evidence for measurement without error.

To test for multicollinearity, the variance inflation factor (VIF) values were assessed. The VIF values for this model were consistently low (well below the cutoff of 10). Including the interactions (e.g., SES categories x Grit) can commonly show multicollinearity in the model because the existing predictor variables already existed from previous steps of the regression analysis (Hayes, 2018). However, since the VIF values in the initial steps of the regression model were low and within normal parameters, there was little evidence that multicollinearity had any effect on the results from this data set. A correlation between the CAAS and Grit-S was also computed (see Table 3). Although there was evidence for a moderate correlation, the Pearson's coefficient of .402 did not suggest a strong correlation.

Table 3

Pearson Correlations Among Career Adapt-Abilities Scale (CAAS), Short Grit Scale (Grit-S), Continuous Demographic Variables, and Frequency Scoring of the Sexual Experiences Survey-Short Form Victimization (SES-SFV)

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.
1. CAAS Total	1.00															
2. CAAS Concern	.827**	1.00														
3. CAAS Control	.873**	.648**	1.00													
4. CAAS Curiosity	.833**	.543**	.619**	1.00												
5. CAAS Confidence	.902**	.647**	.742**	.704**	1.00											
6. Grit-S Total	.402**	.319**	.416**	.222**	.422**	1.00										
7. Grit-S Interest	.008	.011	.064	-.095	.040	.803**	1.00									
8. Grit-S Effort	.642**	.500**	.604**	.455**	.641**	.794**	.277**	1.00								
9. GPA	.084	.108	.055	.003	.116*	.244**	.184**	.210**	1.00							
10. Age	-.045	-.120*	-.021	-.006	-.006	.029	.048	-.005	-.157**	1.00						
11. # Clubs	.142*	.155*	.109	.109	.112	.139*	.097	.212**	.220**	.143*	1.00					
12. SES Total Frequency	-.036	-.077	-.005	-.018	-.033	-.010	.077	-.067	-.021	.074	.057	1.00				
13. SES Contact Frequency	.004	-.021	.003	.013	-.006	.020	.083	-.018	.035	.019	.141	.838**	1.00			
14. SES Coercion Frequency	-.019	-.073	.019	.003	-.021	-.022	.049	-.068	-.070	.079	-.013	.926**	.656**	1.00		
15. SES Attempted Frequency	-.070	-.098	-.045	-.043	-.064	-.036	.065	-.096	.002	.054	.060	.941**	.747**	.830**	1.00	
16. SES Rape Frequency	-.037	-.069	-.004	-.044	-.064	.026	.098	-.036	-.006	.108	.071	.854**	.704**	.692**	.756**	1.00

$N = 292$. Frequency scoring of the SES-SFV was not included in the hierarchical linear regression.

** Correlation was significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Regression Analyses

A hierarchical linear regression was then conducted to assess the explanatory power of the SES categories and demographic variables (age, current GPA, number of clubs/organizations involved in, classification in program, and parent's level of education) on career adaptability for undergraduate college students in the United States. Regressions were computed with and without controlling for demographic variables (age, current GPA, number of clubs/organizations involved in, classification in program, and parent's level of education) to test whether there was an effect of unwanted sexual experiences on career adaptability. The strength and significance of analyses differed very little with and without controlling for demographic variables. For categorical variables (the SES categories, classification in program, and parent's level of education), dummy variables were created to be applied to the HLR model.

In step 1 of the regression model, the demographic variables of age, current GPA, number of clubs/organizations involved in, and dummy variables for classification in program and parent's level of education were added to the model. The change in R^2 was .041, which was not significant as these variables only accounted for 4.1% of the variance in the CAAS scores. At step 2, the four dummy variables for the SES categories (contact, coercion, attempted, and rape) were added to the model. The change in R^2 was .015, which was not significant as they only accounted for 1.5% of the variance in CAAS scores.

In step 3, total scores for the Grit-S were added to the model, which was an initial step before proceeding with the moderation analysis. The change in R^2 was .147, which was significant as these scores accounted for 14.7% of the variance in CAAS scores.

Product variables were created that represented the interaction between each of the SES-SVF categories and the Grit-S scores. This was done by multiplying each of the four dummy

variables from the SES-SFV categories (contact, coercion, attempted, and rape) by the Grit-S total score. Finally, at step 4, the product variables were entered into the model. The change in R^2 was .004, which was not significant as the product variables only accounted for 0.4% of the variance in CAAS scores. Therefore, there was no evidence of a moderation effect.

Although grit did not play a moderating role, the results did present a significant finding of grit influencing career adaptability. Total grit scores alone accounted for a significant amount of variance (14.7%, $p < .001$) in the CAAS scores even after accounting for all prior variables and steps in the model. This indicated a significant relationship between an individual's level of grit and career adaptability. The VIF further indicated no evidence for a multicollinear relationship. Table 4 presents the Pearson correlations between the subscales of the CAAS and Grit-S, which show several significant positive correlations.

Table 4

Hierarchical Linear Regression Results for Model Explaining Demographic Variables, Sexual Experiences Survey-Short Form Victimization Categories, and Grit

Explanatory Variable	ΔR^2	F change	B	SE B	β	t-value	p-value
Step 1	.041	.919					
Age			-.274	.947	-.025	-.289	.772
GPA			1.984	2.283	.055	.869	.386
Clubs/organizations			1.416	.775	.115	1.828	.069
Program classification 1			-1.349	3.742	-.030	-.360	.719
Program classification 2			-2.7	3.668	-.076	-.736	.462
Program classification 3			-.39	4.242	-.011	-.092	.927
Program classification 4			-.169	7.085	-.002	-.024	.981
Parent Education High School			2.195	6.041	.040	.363	.717
Parent Education Some College			4.913	5.728	.108	.858	.392
Parent Education Associate's			-4.579	6.804	-.060	-.673	.502
Parent Education Bachelor's			.816	5.439	.023	.150	.881
Parent Education Master's			1.933	5.628	.046	.343	.732
Parent Education Doctorate			1.015	6.147	.018	.165	.869
Step 2	.015	1.083					
SES contact			6.251	3.982	.098	1.570	.118
SES coercion			6.469	4.180	.093	1.548	.123
SES attempted			.051	5.318	.001	.010	.992
SES rape			2.165	3.753	.035	.577	.565
Step 3	.147**	49.721**					
Grit			10.522	1.517	.398	6.936	<.001
Step 4	.004	0.362					
Contact x grit			-5.069	6.608	-.253	-.767	.444
Coercion x grit			12.842	6.972	.582	1.842	.067
Attempted x grit			3.335	7.854	.108	.425	.671
Rape x grit			-2.235	6.249	-.112	-.358	.721

Note. N= 292. ** $p < .001$.

Research Question 1 and Hypothesis 1

Research question 1 examined to what extent experiencing sexual assault explained a significant amount of the variance in career adaptability scores after accounting for the designated demographic variables (age, current GPA, number of clubs/organizations involved in, classification in program, and parent's level of education). In other words, an analysis was run to determine if there was evidence to show the more severe unwanted sexual experiences would account for a significant amount of variance in the CAAS scores. Steps 1 and 2 of the regression

model were set up to perform this outcome. A total of 5.6% of the variance in CAAS scores was accounted for, which was not significant evidence to suggest unwanted sexual experiences impacted career adaptability levels. Therefore, the first hypothesis was not supported by the findings.

Research Question 2 and Hypothesis 2

Research question 2 examined to what extent one's level of grit moderated the relationship between sexual assault experienced and career adaptability scores. In other words, the analysis was set up to provide evidence that individuals who reported unwanted sexual experiences might not show as large of a negative impact on their career adaptability if they also had higher levels of grit. The product variables in the final step of the analysis represented the interaction between SES and grit. The total variance accounted for once these product variables were added was 0.4%, which was not significant evidence to suggest a moderation effect. Thus, the second hypothesis was not supported.

Post Hoc Analyses

Davis et al. (2014) presented different ways to score and report answers on the SES-SFV that were not all accounted for in the original scoring directions from Koss et al. (2007). The options included placing participants in either redundant or non-redundant categories based on the items they reported. This study used the non-redundant category scoring method by placing each participant in the most severe category according to specific items they reported. A third option was reporting the frequency of each type of sexual assault outcome and giving each participant a numerical "score" of overall unwanted sexual experiences.

As the initial results were not significant using the non-redundant category option and creating dummy variables for each of the SES categories to be used in hierarchical linear

regression, post hoc analyses were done using the frequency score option. Each of the 292 participants was assigned a total SES-SFV score based on the frequency of items they reported. This did not provide significantly different results when used in the same four-step HLR model. One of the assumptions of using linear regression was independence of observation. The SES-SFV asked behaviorally specific questions about unwanted sexual experiences that consisted of events that were not necessarily independent of each other. A participant could have responded to questions about unwanted sexual experiences from a single event that placed them into more than one category. Therefore, there was no way of knowing whether participant responses for frequency of unwanted sexual experiences were double counted for the same unwanted sexual incident.

Another option of examining the data of the SES-SFV was to continue with the frequency scoring option. This provided each participant with a “score” in the five categories (nonvictim, contact, coercion, attempted rape, rape). Then an analysis of variance (ANOVA) was conducted to determine if any group differences between the SES categories and their career adaptability scores were significant. However, the same barrier with the assumption of independence of observation was present for the ANOVA. A participant’s response to questions about unwanted sexual experiences from a single event could place them into multiple categories. The SES-SFV was not designed to separate these experiences by differing events. The ANOVA did not present any significant differences between these categories and career adaptability scores.

Summary

Hierarchical linear regression through SPSS was used to answer the two research questions. Regression results showed the demographic variables of age, current GPA, number of clubs/organizations involved in, and dummy variables for classification in program and parent’s

level of education, as well as the SES-SFV categories (contact, coercion, attempted, and rape) were not statistically significant. A surprising finding was the significant portion of variance grit accounted for in career adaptability. The evidence from the model did not support either of the hypotheses that sexual assault victimization predicted a hindering of one's level of career adaptability or that grit played a moderating role in this relationship.

CHAPTER V

DISCUSSION

The purpose of this study was to investigate the relationship between sexual assault victimization and career adaptability among college undergraduate students as well as what role grit might play in this relationship. Recent surveys reported increased rates of sexual assault for college students (Cantor et al., 2015, 2020). The typical college age range (18-24) is a crucial developmental time incorporating many contextual factors. The effects of sexual assault have been shown to remain throughout college and well into individuals' careers, putting them at a significant disadvantage in completing their education and continuing in their career opportunities (Potter et al., 2018; Wadsworth et al., 2020). From the lens of career construction theory, experiencing sexual assault could greatly disrupt students' construction of their academic and career experiences, which might weaken growth in their career adaptability resources and thus make it harder for them to succeed in their career goals. Career adaptability leads to a greater ability to adapt to workplace demands, transitions, or traumas (Savickas, 2005), and is important for college students to begin strengthening by utilizing the four internal resources that make up career adaptability. Gaps in the research identified a need to study more specific types of trauma, such as sexual assault, and how it related to a person's career adaptability.

As there are limited protective factors known to disrupt the impacts of sexual assault on career development, there was an additional need to investigate any variables to potentially disrupt the relationship between sexual assault and career adaptability to prevent further harm. In the current study, grit was investigated as a potential moderator because of its conceptual

similarities to career adaptability and previous research showing a negative relationship between grit and symptoms of trauma (e.g., PTSD and suicide ideation) that resulted from sexual assault experiences (Blalock et al., 2015; Marie et al., 2019). Hierarchical linear regression was the method conducted to determine the moderating effects grit had on the relationship between sexual assault victimization and career adaptability.

Overall Findings

The first research question focused specifically on the extent to which experiencing sexual assault was an explanatory factor of career adaptability in a sample of college students. It was hypothesized that the more severe experiences of unwanted sexual contact would account for a significantly greater amount of variance in career adaptability scores of college students. However, the results from this study did not support this hypothesis. Both the demographic variables and the SES categories only accounted for a small and non-significant amount of variance for the career adaptability scores of college students. This non-significant finding might have resulted from the way sexual assault was measured. The SES-SFV (Koss et al., 2007) is considered the gold standard for measuring sexual assault victimization. However, as the scale states, it measures unwanted sexual experiences broadly defined and then places participants into pre-determined categories. A major strength of this scale was the way it was designed by only asking behaviorally specific questions that addressed pre-determined definitions of unwanted sexual experiences and never actually used the terms of ‘rape’ or ‘sexual assault.’ This design was to avoid subjective interpretations by participants who took the survey (Koss et al., 2007).

It was possible those who experienced unwanted sexual experiences in the past 12 months had other protective factors in place so their career adaptability was not directly impacted. For example, 24 participants who reported being sexually assaulted reported going to

counseling since the assault. Attending counseling could have provided a positive outcome in protecting their mental health, academic performance, or other developmental factors that could lead to influencing their career adaptability resources.

The second research question addressed the relationship between sexual assault experienced and career adaptability in also examining a potential moderation effect, specifically for one's level of grit. It was hypothesized that individuals who experienced sexual assault might not have experienced a negative impact on their career adaptability if they also had higher levels of grit. However, the results from this study did not support grit as a moderator on the relationship between sexual assault experienced and career adaptability levels.

While testing grit as a moderating variable, an unexpected finding was uncovered in the significant relationship between grit and career adaptability. Grit alone accounted for a significant amount of variance in career adaptability levels, and results did not provide evidence for any multicollinear effects. Both constructs of grit and career adaptability described individuals using self-regulation strategies (internal resources or characterological traits) to adapt and succeed in their career. These constructs differed in terms of where they fit within a person's life. Career adaptability was specifically for adjusting, adapting, and navigating a person's vocation. Grit could also help contribute toward vocational growth but was much broader in working toward any long-term goal (e.g., achieving other skills or goals that might be non-career related). This finding provided potential evidence that these two constructs might inform each other.

In reviewing the descriptive statistics, something of interest was looking at the frequency of the tactics used by perpetrators as reported by participants on the SES-SFV when they experienced sexual assault. Of the 71 participants who reported experiencing some type of

unwanted sexual experience, the most frequently reported tactics/methods used by perpetrators were (a) showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to (31%); (b) taking advantage of me when I was too drunk or out of it to stop what was happening (28%); (c) telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to (18%); (d) using force, for example holding me down with their body weight, pinning my arms, or having a weapon and (15%); and (e) threatening to physically harm me or someone close to me (8%).

The frequency of this study's reported SES categories in the past 12 months was similar to Johnson et al. (2017) who only had a sample of women completing the SES-SFV. The categories in Johnson et al.'s study from greatest to least were no history, completed rape, sexual coercion, sexual contact, and then attempted rape. But it is important to note this was an all-women sample. Anderson et al. (2019) collected SES-SFV data on all college men and found nonvictim was again the highest category of reported frequency. They did not separate attempted or completed rape and instead reported this as the second most reported category followed by the categories of contact and coercion. The current study consisted of a sample of both genders (46.6% women, 47.2% men) and gender minorities (6.5%), which added to the literature by similarly reporting the following categories according to most frequent: nonvictim, rape, attempted rape, sexual coercion sexual contact, and attempted rape.

Theoretical Implications

Career construction theory (CCT; Savickas, 2005) was used as the theoretical lens for this present study. The CCT postulated that individuals construct their careers based on their perceptions, decisions, social influences, environmental influences, social roles, and past

experiences (Savickas, 2005). Career adaptability is also a main construct in CCT with the overarching belief that adaptation to your environment leads to vocational growth (Savickas, 1997, 2005, 2013). This study focused on environmental influences and past experiences when suggesting sexual assault victimization contributed to an individual constructing their career path based on their reality. The study phrased this as how would sexual assault victimization potentially disrupt one's career growth if it were to hinder their ability to adapt? I selected those pieces within this social constructionism framework but additional questions could be posed. What if the other factors were also incorporated in this construction that protected the individual's adaptability from being harmed? Sexual assault experienced was likely harmful but what if there were more strengthening experiences not measured? It is possible more happened to nurture and fuel the adaptability resources.

Along these same lines, it is important to discuss how grit's significant relationship with career adaptability fit in with CCT. The conceptual framework of CCT consists of a person's ability to construct their career reality based on their readiness, resources, and responses to their environment (Savickas, 1997, 2005, 2013). Since grit is considered a characterological trait that develops over time, could grit act as an internal resource or a response to the environment that helps strengthen the adaptability? Duckworth et al.'s (2007) description of grit being persistence and passion toward a long-term goal might work in parallel with an individual's adapting and striving toward their long-term career goal. Grit could function as an additional adaptive piece for overcoming barriers, thus being incorporated into the constructing of one's career reality. The significant finding between grit and career adaptability might suggest college students with perseverance and consistent effort were better able to adapt to the unpredictable tasks,

transitions, and traumas brought on by their work environment (in this case, their college environment).

Research Implications

This study was initially designed as a moderator analysis to view what sort of effect grit had on the relationship between sexual assault and career adaptability. Prior research supported positive relationships between grit and academic and career success (Bowman et al., 2015; Duckworth et al., 2007; Hodge et al., 2018; Lee & Sohn, 2017). Additionally, two recent studies specifically examined the relationship between grit and career adaptability in a sample of community college students (Gregor et al., 2021) and in a sample of Chinese college students (Li et al., 2021). Both studies supported higher levels of grit predicted higher levels of career adaptability. Grit has not been studied specifically with sexual assault victimization but there was evidence of grit moderating the relationship between PTSD symptoms and suicidal ideation (Marie et al., 2019) and negative life events (Blalock et al., 2015), which were all potential outcomes of experiencing sexual assault (Dworkin et al., 2017; Parr, 2020).

Given the results for the research questions were not significant, it is worth considering possible changes in the research design. For example, structural equation modeling might provide additional information related to how each variable related to one another. The current hierarchical linear regression analysis used consisted of four steps adding several variables at once to the model to determine how much variance was accounted for. Structural equation modeling could offer unique insights on the variance of each variable simultaneously.

Although there was a sample of 292 participants, only 71 participants reported items on the SES-SFV, which were then used in the hierarchical linear regression model to address the first research questions. Perhaps a larger sample of participants who reported unwanted sexual

experiences in the past 12 months would increase the power of this analysis in determining if the SES categories accounted for a significant portion of variance in career adaptability scores.

Future studies could investigate further by only sampling those who experienced some type of sexual assault as compared to a sample along the spectrum of non-victim, contact, coercion, attempted rape, and rape.

Another option would be to consider study designs that expanded further on grit and career adaptability. Longitudinal studies measuring grit and career adaptability at an adolescent or young adult stage and then measuring again at a later time could address different measurable time periods of this relationship. This could inform whether grit and career adaptability were developmentally in tandem and allow for investigation of other factors that might impact these constructs.

A few studies looked specifically at career adaptability and trauma (Prescod & Zeligman, 2018; Strauser et al., 2006) but more research needs to be done to determine if there is warranted evidence of specific types of trauma harming career adaptability. Since career adaptability is viewed in a developmental and contextual lens, how might trauma hinder this? Future research designs could also take a strengths-based approach and study different variables that might reinforce or protect career adaptability.

Practical Implications

Consistent with national statistics (Cantor et al., 2020; LeViness et al., 2019), approximately 25% of the current study's sample of college students experienced some form of sexual assault in the last 12 months. Thirty-six participants reported experiencing rape or attempted rape and 35 additional participants reported experiencing unwanted sexual contact or coercion in the past 12 months. Sexual assault is still occurring and previous research provided

plenty of evidence of the many areas harmed as a result (e.g., Bruffaerts et al., 2018; De Luca et al., 2016; Parr, 2020; Potter et al., 2018; Wadsworth et al., 2020). Our attention as researchers, counseling psychologists, and advocates must remain focused on not only how we can support victims but on how we can prevent perpetrators from assaulting in the first place. The tactics reported by perpetrators highlighted substance use and intimate partner violence behaviors as fuel for sexual violence and harm. These tactics provided directions to be targeted by further research and intervention to decrease risk of harm that could have long-term effects on victims.

Counseling psychologists could work to implement these research findings into how they could inform college campus officials and students. For example, outreach programs targeting unhealthy or unsafe relationship behaviors and risks of substance use could be presented to students during orientations and throughout the academic year to educate the population. Additionally, college officials in areas such as victim advocates, campus housing, and Greek life could be informed of this information and work to incorporate safety measures to protect students as well as prevent perpetrators from acting out harm. Essentially, counseling psychologists need to work to incorporate a trauma-informed lens throughout colleges and universities.

The significant relationship between grit and career adaptability posed the question of could one's level of grit be improved to foster career adaptability development? Grit is not something concrete that can be taught to people in the sense of taking classes to learn skills or tools. It is a characterological trait that could be developed by the individual over time by focusing on the subconstructs. Duckworth (2016) identified interest or passion, practice, purpose, and hope as concepts that contributed to levels of grit. These potential pieces could be utilized by counseling and vocational psychologists to help individuals enhance their grit, which could

perhaps foster their career adaptability as well. For example, instilling hope is a counseling intervention that could connect to Duckworth's discussion on how hope could contribute to grit. Duckworth highlighted the importance of finding goals of interest, purpose, and true passion that would likely lead toward continued perseverance to achieving these goals. Therefore, despite the adversities faced, key pieces within grit (i.e., passion, practice, purpose, hope) might also foster the development of the internal psychosocial resources that make up career adaptability. These concepts could additionally be utilized by professors or mentors to help college students explore their interests and learn more about their career options.

Diversity Implications

A major goal related to this study's sample was to include a more gender diverse sample and not to repeat the norm of only recruiting and studying individuals who identify as women. Prior research often focused on this demographic because of surveys reporting they were the highest group at risk of sexual assault victimization. As mentioned earlier, other gender identities are not immune to sexual assault victimization and their underreported results are likely due to stigma and lack of effort on researchers' part to purposely sample from these populations. A strength of this study was the diversity in gender identities in the sample consisting of 46% women and 47% men. This allowed for equal focus on both men and women's surveying of unwanted sexual experiences. Participants who identified as women still reported the highest rates of sexual assault victimization at 67% as compared to participants identifying as men at 28%. The sample only contained approximately 6.4% of participants identifying as trans or nonbinary. This highlighted the next step for researchers to focus on examining the sexual assault victimization of gender minorities as well as including men while studying this topic.

This study's sample also consisted of approximately 58% of individuals identifying as White for their racial/ethnic identity. Although this was still over half of the sample, representation from racial/ethnic minorities accounted for over 40% of the sample. Regarding those who reported experiencing sexual assault, 55% identified as White. The current study's sample was at least progress in the right direction for psychology studies to increase minority identities in their samples. Future recruitment strategies for psychological research need increased focus on ways to diversify samples of participants. For example, the American Psychological Association's (2021) recent letter of apology to the community of Black psychologists cited the many decades of psychological research done that harmed minorities. This spoke to the need of turning our focus to the quality of the methods section instead of ignoring the often poorly diversified sample of participants and generalizing results to all, which consequently informs our psychological practice.

Limitations and Directions for Future Research

As with all research, this study was not without limitations. A big challenge was accurately measuring sexual assault victimization and fitting the collected data into the analysis. This study's operational definition of sexual assault only captured experiences in the last 12 months. Future studies might increase this brief historical time period to see if examining sexual assault experiences during a larger time frame might make a difference in results. It is also worth considering any potential protective factors that were not measured such as social support or mentorship (Brown, 2019; Grocott et al., 2023). Demographic items were identified and added first to the model but did not show any significance in relation to the variance in career adaptability. Other variables could be additionally measured such as types of external support or other characterological traits such as resiliency or conscientiousness (Crede et al., 2017) already

acting as a buffer for potential harm from sexual assault. Future researchers should continue to identify variables that might be strong candidates fitting these criteria.

Another possible limitation was participants surveyed in the current study were only college students. According to the U.S. Department of Justice, Bureau of Statistics (2013, 2014), young adults ages 18-34 years old are at the highest risk of being victims of sexual assault, particularly women ages 18-24 (Cantor et al., 2020). College women in this age range are three times more likely to be victims of sexual assault as compared to women in general. Non-college women (again ages 18-24) are four times more likely to be victims of sexual assault as compared to women in general. College men ages 18-24 are five times more likely to be victims of sexual assault as compared to non-college men in this same age range. Future directions for researchers would be to replicate this study recruiting non-college students in the age range of 18-24 to see if any impacts of sexual assault had a significant relationship on levels of career adaptability and/or grit. A strength of the current study sample was using Prolific to gain a nationally represented sample (based on age, gender, and ethnicity) but for only current undergraduate students. All genders should be continually included in future study samples.

Sampling participants through Prolific provided a nationally representative sample based on ethnicity and gender for U.S. citizens within the age limitation of 18-24 years old. A limitation might have been trying to capture sexual assault within a specific time frame (past 12 months while in undergraduate program). There might have been demographic differences related to assault based on identity such as adolescent men or Black women experiencing assault at earlier times in their life (Cavazos-Rehg et al., 2009; Kann et al., 2018) and, therefore, would not be captured within the college time frame.

Additionally, it was difficult to measure sexual assault for reasons of consensus of definition, stigma, and subjectivity in responses. Qualitative studies have produced rich data on the impacts of sexual assault on mental health, academics, and many areas of career development (Hodge & Privott, 2020; Potter et al., 2018; Wadsworth et al., 2020). These studies provided evidence of harm through robust details of small samples sizes. Studies are lacking in surveying the impacts of sexual assault on large samples.

The SES-SFV was a well-developed, and frequently used, scale in addressing the subjectivity in responses of participants by intentionally using behaviorally specific questions and avoiding terms such as “rape” or “assault” (Fisher, 2009; Koss et al., 2007). This scale was further developed to be able to assess the frequency of sexual assault experienced for quantitative studies across large sample sizes. An additional strength of this scale was identifying different tactics used by perpetrators for each of the questions on unwanted sexual experiences to gather further information. An area of further development of the SES would be the scoring. The original scoring from Koss et al. (2007) provided the redundant and nonredundant categories to be able to identify different unwanted sexual experience groups by severity of experiences. This was a potential barrier to statistical methods such as a moderation analysis that required continuous variables. Davis et al. (2014) attempted to provide alternative ways to score the SES-SFV. One alternative option of frequency scoring allowed for the SES to be a continuous variable. However, these publications did not go into detail on how this scoring was done so more clarity is needed for other researchers to duplicate. These alternative scoring options were not easily communicated. Better articulation of alternative scoring might provide additional guidance to researchers when conducting various types of quantitative studies.

No other published scales with strong psychometric properties were uncovered as an alternative to use to specifically measure sexual assault. Other scales measured attitudes toward rape and relationship conflict but not degrees of sexual victimization. The Sexual Pressure Scale for Women-Revised (Jones & Gulick, 2009) asked participants if they had been pressured into sexual situations that might be unwanted but this scale was lacking in measuring multiple aspects of sexual assault. To help get a more accurate classification of the construct, further scale development procedures (e.g., item response theory) might be beneficial in future development by improving measurement precision and item discrimination when measuring sexual assault.

Conclusion

It is most unfortunate that rates of sexual assault are prevalent and have evidence of increasing victimization, particularly for college aged students (Cantor et al., 2015, 2020). This young adult developmental time frame is crucial for many areas of career development. Past research uncovered several areas of harm that came from sexual assault including mental health, academics, and career development (e.g., Parr, 2020; Potter et al., 2018; Wadsworth et al., 2020). Career adaptability was identified specifically by CCT, highlighting its role from a developmental and contextual lens, and previous research focused on adolescent and young adult populations. The research questions were posed as to what extent sexual assault victimization might potentially harm career adaptability and what variables were in place that could buffer this interaction. The characterological trait of grit was a candidate as a moderating variable to investigate to what extent it might buffer the relationship between sexual assault victimization and career adaptability. Hierarchical linear regression was performed to carry out this moderation analysis. Results did not provide significance for either of the research questions. However, an unexpected finding showed a significant relationship between grit and career

adaptability. Implications from this study suggest future research to better understand how grit and career adaptability might inform each other. It is equally imperative research moves forward to better study rates of sexual assault victimization, works toward prevention, and identifies protective factors.

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Principal Investigator: Patricia Sparks

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

Action Date: 02/02/2022

Protocol Number: 2110030360

Protocol Title: College Sexual Assault, Career Adaptability, And Grit: A Moderation Analysis

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)(702) 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,

Nicole Morse
Research Compliance Manager

University of Northern Colorado: FWA00000784

APPENDIX C
STUDY DESCRIPTION ON PROLIFIC

Prolific Title and Description

Title: Undergraduate Sexual Assault, Career Adaptability, and Grit

Description: In this study, you will be asked to fill out three short surveys about unwanted sexual experiences, career adaptability, and grit. You will also be asked to fill out a survey on demographic characteristics.

APPENDIX D
INFORMED CONSENT



UNIVERSITY OF
**NORTHERN
COLORADO**

Institutional Review Board

CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH
University of Northern Colorado

Project Title: College Sexual Assault, Career Adaptability, And Grit: A Moderation Analysis

Researcher: Patricia Sparks, M.S., spar6649@bears.unco.edu

Research Advisor: Stephen Wright, Ph.D., LP, Professor of Applied Psychology and Counselor Education stephen.wright@unco.edu

Purpose and Description

The purpose of this study is to investigate the relationship between sexual assault victimization and career adaptability among college undergraduate students as well as what role grit may play in this relationship. You must be between the ages of 18-24 years of age to participate in this survey and currently be enrolled in an undergraduate program. The survey will take about 10 minutes to complete. You will be asked to complete questions regarding demographic information, experiences of unwanted sexual contact, career adaptability, and grit. With the exception of your Prolific ID, you will not have to provide identifying information. All Prolific IDs will be held confidential and will not be able to be linked back to any individual.

Risks and Discomforts

Potential risks in this project are minimal. Questions regarding unwanted sexual experiences may make you upset or feel uncomfortable. The disclosure from participants is not expected to be disruptive to their 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 answer. If at any point your participation produces discomfort beyond acceptable limits, you are welcome to discontinue at your discretion.

Benefits

You will be compensated through your Prolific account. Additionally, your responses may help us understand the relationship among unwanted sexual experiences, career adaptability, and grit among the undergraduate student population.

Privacy/Confidentiality

Your response to the survey is anonymous which means no names will appear or be used on research documents or be used in presentations or publications. The research team will not know that any information you provided came from you, nor even whether you participated in the study.

Please be aware, while we make every effort to safeguard your data once received from the online survey/data gathering company (Qualtrics), given the nature of online surveys, as with

anything involving the Internet, we can never guarantee the confidentiality of the data while still on the survey/data gathering company's servers, or while in route to either them or us. It is also possible the raw data collected for research purposes may be used for marketing or reporting purposes by the survey/data gathering company after the research is concluded, depending on the company's Terms of Service and Privacy policies.

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 a loss of benefits to which you are otherwise entitled. Having read the above and have had an opportunity to ask any questions, please sign below if you would like to participate in this research. You may print this form for future reference. If you have any concerns about your selection or treatment as a research participant, please contact Nicole Morse, Research Compliance Manager, Office of Sponsored Programs, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-1910.

Thank you in advance for your assistance with this important project.

Sincerely,
Patricia Sparks, M.S.
E-MAIL: spar6649@bears.unco.edu

Selecting "Yes" below acts as an *electronic signature* and it indicates that you voluntarily agree to participate in this study, and that you have read the above information about the study. Clicking yes will take you to the survey. Clicking no will exit the survey.

Yes, I would like to participate in this study

No, I do not want to participate in this study

APPENDIX E

INSTRUCTIONAL MANIPULATION CHECK PROMPT

Instructional Manipulation Check Prompt

Within this study, you will be given an instructional question check to show that you have read the questions carefully. If you fail the instructional question check, your survey will not be approved.

APPENDIX F

SEXUAL EXPERIENCES SURVEY SHORT FORM-
VICTIMIZATION (SES-SFV)

The following questions concern sexual experiences that you may have had that were unwanted. We know that these are personal questions, so we do not ask your name or other identifying information. Your information is completely confidential. We hope that this helps you to feel comfortable answering each question honestly. Place a check mark in the box showing the number of times each experience has happened to you. If several experiences occurred on the same occasion—for example, if one night someone told you some lies and had sex with you when you were drunk, you would check both boxes a and c. “The past 12 months” refers to the past year going back from today. “Since age 14” refers to your life starting on your 14th birthday and stopping one year ago from today.

APPENDIX G

PERMISSION TO USE THE SEXUAL EXPERIENCES
SURVEY SHORT FORM-VICTIMIZATION

From: Sparks, Patricia <spar6649@bears.unco.edu>
Sent: Wednesday, July 7, 2021 8:49 AM
To: Koss, Mary P - (mpk) <mpk@arizona.edu>
Subject: Permission to use SES-SFV

Hello Dr. Koss,

My name is Patty Sparks and I am a third-year doctoral student in the Counseling Psychology program at the University of Northern Colorado. I am currently working on my dissertation which is looking at the association between sexual assault and its impact on career adaptability among undergraduate students.

I am writing to ask permission to use the Sexual Experiences Survey Short Form-Victimization (SES-SFV) in my work. I see your 2007 publication has this form in the Appendix. My data collection will take place on the electronic survey format, Qualtrics. May I use the SES-SFV? Additionally, I'm hoping I could receive email verification since it is general practice for UNC dissertations to include copies of granted permission to use the chosen measures.

Thank you for your time and consideration. I look forward to your response.

Best,
 Patty

From: Koss, Mary P - (mpk) <mpk@arizona.edu>
Date: Wednesday, July 7, 2021 at 1:03 PM
To: Sparks, Patricia <spar6649@bears.unco.edu>
Subject: RE: Permission to use SES-SFV

I am very happy to have you use it. FYI: . I wish I could give it to you, but we are currently revising the SES and have an entirely new version coming out for 2022. It is going to more resemble the long form. In addition to unwanted exposure of genitals and masturbation, there are a lot of cybersex exploitation. We have also added a new section on made to perform. It is a collaboration of 15 people doing the revisions and our sexuality experts tell us there is more of this going on including male to male, male to female, and female to female scenarios. To be inclusive, we don't want to miss instances where the same tactics, such as taking advantage of incapacitation from drink or drugs, are used to make someone perform sex on you, their coerce or manipulate you to sex where eventually you just give in even through you are not expressing freely given consent, or actual threat of harm is involved. Now you are ahead of the field in knowing what is in the SES pipeline. Let me know if you want the short-form Spanish or if you prefer to start fresh with your own translators and cultural milieu. Please ask me in about 6 months or so and I am hoping we can share a final version of the SES-R2022. There will be no long and short form difference in the future. Investigators can select if they don't want to administer cybersex, they can omit that section. If they don't want made to perform, they can eliminate that section as well. What will be left is a modernized SES as it is today. The new survey is designed for administration on mobile phones, so we are changing with the times.

I wish you success. Let me know if you need anything else.

Mary
 Mary P. Koss
 Regents' Professor, Public Health
 University of Arizona
 1295 N. Martin Avenue
 Tucson, Arizona 85724
 Office: 520-626-3998
 e-mail: mpk@u.arizona.edu

APPENDIX H
CAREER ADAPT-ABILITIES SCALE 2.0

Different people use different strength to build their careers. No one is good at everything, each of us emphasizes some strengths more than others. Please rate how strongly you have developed each of the following abilities using the scale below.

- 5 = Strongest
 4 = Very Strong
 3 = Strong
 2 = Somewhat strong
 1 = Not strong

STRENGTHS

	5	4	3	2	1
Thinking about what my future will be like	—	—	—	—	—
Realizing that today's choices shape my future	—	—	—	—	—
Preparing for the future	—	—	—	—	—
Becoming aware of the educational and vocational choices that I must make	—	—	—	—	—
Planning how to achieve my goals	—	—	—	—	—
Concerned about my career	—	—	—	—	—
Keeping upbeat	—	—	—	—	—
Making decisions by myself	—	—	—	—	—
Taking responsibility for my actions	—	—	—	—	—
Sticking up for my beliefs	—	—	—	—	—
Counting on myself	—	—	—	—	—
Doing what's right for me	—	—	—	—	—
Exploring my surroundings	—	—	—	—	—
Looking for opportunities to grow as a person	—	—	—	—	—
Investigating options before making a choice	—	—	—	—	—
Observing different ways of doing things	—	—	—	—	—
Probing deeply into questions I have	—	—	—	—	—
Becoming curious about new opportunities	—	—	—	—	—
Performing tasks efficiently	—	—	—	—	—
Taking care to do things well	—	—	—	—	—
Learning new skills	—	—	—	—	—
Working up to my ability	—	—	—	—	—
Overcoming obstacles	—	—	—	—	—
Solving problems	—	—	—	—	—

APPENDIX I

PERMISSION TO USE CAREER ADAPT-ABILITIES
SCALE 2.0

From: Sparks, Patricia <spar6649@bears.unco.edu>
Sent: Wednesday, July 7, 2021 8:52 AM
To: msavicka@kent.edu <msavicka@kent.edu>
Subject: Permission to use CAAS 2.0

Hello Dr. Savickas,

My name is Patty Sparks and I am a third-year doctoral student in the Counseling Psychology program at the University of Northern Colorado. I am currently working on my dissertation which is looking at the association between sexual assault and its impact on career adaptability among undergraduate students.

I am writing to ask permission to use the Career Adapt-Abilities Scale (CAAS 2.0) in my work. I see your 2012 publication has this form in the Appendix. My data collection will take place on the electronic survey format, Qualtrics. May I use the CAAS 2.0? Additionally, I'm hoping I could receive email verification since it is general practice for UNC dissertations to include copies of granted permission to use the chosen measures.

Thank you for your time and consideration. I look forward to your response.
Best,
Patty

From: Mark Savickas <ms@neomed.edu>
Date: Wednesday, July 7, 2021 at 9:01 AM
To: Sparks, Patricia <spar6649@bears.unco.edu>
Subject: Re: Permission to use CAAS 2.0

Dear Colleague:
permission to use the CAAS as you see fit granted. See attachments for useful info.
Mark Savickas

APPENDIX J
SHORT GRIT SCALE

Here are a number of statements that may or may not apply to you. There are no right or wrong answers, so just answer honestly, considering how you compare to most people.

1. New ideas and projects sometimes distract me from previous ones.
2. Setbacks don't discourage me. I don't give up easily.
3. I have been obsessed with a certain idea or project for a short time but later lost interest.
4. I am a hard worker.
5. I often set a goal but later choose to pursue a different one.
6. I have difficulty maintaining my focus on projects that take more than a few months to complete
7. I finish whatever I begin.
8. I am diligent.

- Very much like me
- Mostly like me
- Somewhat like me
- Not much like me
- Not at all like me

Scoring:

1. For questions 2, 4, 7 and 8 assign the following points:

- 5 = Very much like me
- 4 = Mostly like me
- 3 = Somewhat like me
- 2 = Not much like me
- 1 = Not like me at all

2. For questions 1, 3, 5 and 6 assign the following points:

- 1 = Very much like me
- 2 = Mostly like me
- 3 = Somewhat like me
- 4 = Not much like me
- 5 = Not like me at al

Add up all the points and divide by 8. The maximum score on this scale is 5 (extremely gritty), and the lowest score on this scale is 1 (not at all gritty).

APPENDIX K
PERMISSION TO USE SHORT GRIT SCALE

From: Sparks, Patricia <spar6649@bears.unco.edu>
Sent: Wednesday, July 7, 2021 8:56 AM
To: aduckworth@characterlab.org
Subject: Permission to use Grit-S

Hello Dr. Duckworth,

My name is Patty Sparks and I am a third-year doctoral student in the Counseling Psychology program at the University of Northern Colorado. I am currently working on my dissertation which is looking at the association between sexual assault and its impact on career adaptability among undergraduate students and whether grit plays a moderating role in that relationship.

I am writing to ask permission to use the Short Grit Scale (Grit-S) in my work. I see your scales are available online. My data collection will take place on the electronic survey format, Qualtrics. May I use the Grit-S? Additionally, I'm hoping I could receive email verification since it is general practice for UNC dissertations to include copies of granted permission to use the chosen measures.

Thank you for your time and consideration. I look forward to your response.

Best,
 Patty

From: Catriona O'Rourke <corourke@characterlab.org>
Date: Wednesday, July 7, 2021 at 2:33 PM
To: Sparks, Patricia <spar6649@bears.unco.edu>
Subject: Re: Permission to use Grit-S

Hi Patricia,

By way of quick introduction, my name is Cat and I am Angela's executive assistant. I hope you are keeping well! Thank you for your inquiry.

All researchers and educators are welcome to use the scales Dr. Duckworth developed for non-commercial purposes. See her personal [website](#) for details.

There are no restrictions for non-commercial uses for research, translation into other languages, or education as long as the work is cited properly. Note that these scales are copyrighted and therefore cannot be published or used for commercial purposes or wide public distribution. Journalists and book authors should not reproduce these scales nor any part of them.

On a cautionary note, these scales were originally designed to assess individual differences rather than subtle within-individual changes in behavior over time. Thus, it's uncertain whether they are valid indicators of pre- to post-change as a consequence of interventions. Generally, she also discourages the use of self-report scales in high-stakes settings where faking is a concern (e.g., admissions or hiring decisions). Please see the article [Measurement Matters](#) for more information.

With grit and gratitude,

Cat

Catriona O'Rourke
Executive Assistant
Character Lab
www.characterlab.org

APPENDIX L
DEMOGRAPHIC QUESTIONNAIRE

Demographic Questionnaire

What is your age? Please write in _____

Which gender identity do you consider yourself to be?

- a. Man
- b. Woman
- c. Transgender man
- d. Transgender woman
- e. Gender Non-binary

Which sexual orientation do you most consider yourself to be?

- a. Heterosexual/Straight
- b. Lesbian
- c. Gay
- d. Bisexual/Pansexual
- e. Questioning

How would you describe your ethnic identity?

1. American Indian or Alaska Native
2. Asian or Asian American
3. Black, African American, or African–Caribbean
4. Latino/Hispanic
5. Middle Eastern or Arab American
6. Native Hawaiian or Pacific Islander
7. White/Caucasian
8. Multiethnic/Biracial

What is your current classification in your undergraduate program?

- a. 1st year
- b. 2nd year
- c. 3rd year
- d. 4th year
- e. 5th year or more

Is your undergraduate degree online only?

- a. Yes
- b. No

What is your current GPA? Please write in _____

Have you declared a major?

- a. Yes
- b. No

What is your parent's highest level of education?

- a. Less than high school diploma or GED
- b. High school diploma/ GED
- c. some college
- d. Associates
- e. Bachelor's degree
- f. Master's degree
- g. Doctorate
- h. Don't know

Are you a first-generation college student (i.e., neither parent completed college)?

- a. Yes
- b. No

How many clubs or organizations associated with your university or education are you involved in? (If none, put zero). _____

Are you involved with any fraternity or sorority?

- a. Yes
- b. No
- c. Currently applying

Have you experienced sexual assault?

- a. Yes
- b. No

If you experienced sexual assault, did this occur while attending college?

- a. Yes
- b. No
- c. Unsure

If you experienced sexual assault, did this happen by a same-sex or opposite-sex person?

- a. same-sex
- b. opposite-sex person
- c. both
- d. Unsure

If you experienced sexual assault, how much is the person that assaulted you part of your daily life? Rate on scale 1-10 (1 = not at all, 10 = daily).

1 2 3 4 5 6 7 8 9 10

If you experienced sexual assault, have you been in counseling since the assault? Please estimate how long in weeks: _____

If you experienced sexual assault, were you under the influence of any substances (e.g., alcohol or drugs) during the assault?

- a. Yes
- b. No
- c. Unsure

APPENDIX M
DEBRIEFING STATEMENT

**Debriefing Statement
Thank You Page and Resources**

You have completed the study. Thank you for your participation. Please click the link below to inform Prolific that you have completed the study:

[<http://\(completed study URL\)>](http://(completed study URL))

If you feel that you would like to talk to someone further about your experiences with unwanted sexual experiences or sexual assault, below are a list of national resources for you to contact.

National Sexual Assault Hotline: Confidential 24/7 Support

800-656-4673

Chat online at online.rainn.org

National Domestic Violence Hotline:

800-799-SAFE

Substance Abuse and Mental Health Services Administration (SAMHSA)'s National

Helpline: 1-800-662-4357

Psychology Today: Locate a mental health professional in your area

<https://www.psychologytoday.com/>

Thank you again for your participation.