Cross-Sectional Examination of Career Counseling Initiation: Considerations of the Impact of COVID-19

by

Erica L. Stallings

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Approved by

Jamie Carney, Chair, Humana-Germany-Sherman Distinguished Professor of Special Education, Rehabilitation, and Counseling
Malti Tuttle, Associate Professor of Special Education, Rehabilitation, and Counseling
Julie Hill, Assistant Professor of Special Education, Rehabilitation, and Counseling
Chippewa Thomas, Associate Professor of Special Education, Rehabilitation, and Counseling

Abstract

The purpose of the current study was to gain an understanding of the differences related to the capability dimension of readiness for career choice in college students as measured by career thoughts, career state, and occupational choice self-efficacy when initiating career counseling prior to and during COVID-19. Research indicates that students who have dysfunctional career thoughts, lower self-efficacy, and higher career indecision while experiencing high or significant life complexities are at risk of depression, anxiety, and becoming stuck or paralyzed in the career decision making processes (Dierenger et al., 2016; Hayden & Osborn, 2020; Saunders, Peterson et al., 2000; Walker & Peterson, 2012). Additionally, research indicates that the cognitive and an emotion-based processes of career decision making are confounded by negative complexities (Bullock-Yowell et al., 2011b; Hayden & Osborn, 2020; Sampson et al. 2004), as those experienced by many during the COVID-19 pandemic, related to economic concerns, familial and social support, and the job market. This study explored a cross-section of participants who initiated career counseling prior to COVID-19, as well as participants who initiated career counseling during the COVID-19 pandemic utilizing archival data to develop a greater understanding of the implications of two time-periods with differing global complexity factors and the implications on the initiation of career counseling through a Cognitive Information Processing theoretical lens. Implications were developed for counselors, counselor educators, as well as for future research related to career counseling during times of crisis, with an emphasis on readiness for career choice through the relationship between the dimensions of capability and complexity.

Acknowledgments

When I began the doctoral journey, I was not aware that I was embarking on a path that would have several ups and downs, twists, and turns along the way. This process had been described to me as difficult, but my conceptualization of the challenge was far from the reality. After one of the most challenging yet rewarding endeavors of my life, I now find myself at the end of the path. As I reflect on this journey, I think of the Road Not Taken by Robert Frost, and although at times, I thought about what it would be like if I had taken the other path when standing at the fork in the road just prior to beginning the doctoral journey, and here at the end, I can say, "I took the one less traveled by, and that has made all the difference." It is not without great support and encouragement that I find myself here, and it is those who I met along the way that really made all the difference.

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learn from you while now working alongside you as a colleague, collaborator in research and scholarship, and counselor educator.

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Chapter 1

Introduction and Background of the Problem

January 2020 was the beginning of a new year and new decade, as students prepared to return to campus after winter break. Students were preparing to declare their major, participate in experiences to help them solidify occupational options, make decisions about their career goals, or prepare to graduate and were amid job searches and graduate school interviews. Other students were preparing to take the next step in their career after graduating. However, by March, these experiences and plans were dramatically changed. At the time COVID-19 was classified as a global pandemic, the impact on the academic environment was immediate, and institutions quickly transitioned into a temporary online learning environment that then began to feel more permanent as the months of quarantine and shutdowns continued for over a year (Streufert & Blackburn, 2020). Students suddenly found themselves flooded with overwhelming emotions and forced to navigate a new landscape, unable to participate in the experiences, interviews, ceremonies, and career opportunities for which they had planned and imagined (Streufert & Blackburn, 2020). Within this abrupt disruption of life due to COVID-19, students found that there was a need for support as they transitioned to what became the pandemic state of normal, which included learning how to attend classes and work remotely, learning to advocate for health and wellbeing, or searching for employment using nearly 100% online and virtual tools while being physically distant and isolated from friends, classmates, and campus departments and offices that they previously could visit in person (Streufert & Blackburn, 2020).

As students were navigating a new virtual college and university landscape, for some, basic needs were in jeopardy of or currently being unmet due to rapid job loss; the most seen since the Great Depression, as well as a sharp decline in the stock market and economy (Maslow,

1993; O'Keefe and Posner, 2020; Streufert & Blackburn, 2020). In addition, access to technology created constraints to learning and career development resources, as not all students had access to needed assistive technology, internet, web cameras, or other needed technology that were provided to them on their campuses (Streufert & Blackburn, 2020).

With everything students were experiencing concerning changes in their daily lives, school, and career development, the pandemic revealed trends within the world of work that gave more significant pause, such as the disproportionate burden on essential workers across specific demographics, and such as gender, race, and socioeconomic status (Bowleg, 2020; Falco et al., 2020). In occupation types and industries primarily impacted by the pandemic, women and minorities were disproportionately impacted as the demands of caretaking increased as children attended virtual school at home that rolled into summer break without open daycares and camps (Falco et al., 2020). People making 20 dollars an hour or less, ages 18-24, or over the age of 50, were also significantly impacted by layoffs, lack of employment opportunities, no health insurance, and higher rates of housing insecurity (Falco et al., 2020). According to Kalev (2020), periods of unemployment can have a lasting impact, such as lower earning potential and an increased risk of periods of unemployment later in life, particularly for young people or individuals of low socioeconomic status.

As the COVID -19 pandemic continued, some students experienced significant psychological, economic, and personal stress (Fishman & Hiler, 2020; Fishman et al., 2021; Knechtel & Erickson, 2021). Stress experienced was intensified by increasing isolation and the realities attached to increased deaths and economic upheaval, which paralleled increasing physical, psychological, and mental exhaustion as the pandemic continued. Amid this crisis, universities continuously struggled to modify teaching, programs, and services (Knechtel &

Erickson, 2021), including services to assist and support students during the pandemic, such as educational support, counseling, and career counseling services. Provision of career counseling became a critical response by college student career services. With the COVID-19 pandemic, unprecedented complications and uncertainty, along with isolation, lack of access to resources, mixed with threats to one's health, finances, and an economic downturn, created paralyzing anxiety that gave way to questioning career decisions, thus reinforcing the enmeshment of identity, career development and mental health (Bamji & Godfrey, 2020; Falco et al., 2020). Thus, career counseling services became a significant component of helping and supporting students (Augustana, 2020; Streutfert & Blackburn, 2020).

Coupled with this increasing and critical need, college career counseling services were also dealing with the process of quickly and effectively changing how services were provided. Traditionally career services and career counseling have been offered face-to-face, and suddenly practitioners and counselors were working from home, which propelled the need for a change in the medium in which clinical services were delivered. University career services quickly had to evaluate the landscape and provisions for tele-counseling, while ensuring considerations were given to ethical and legal standards (Education Policy & State Higher Education Executive Officers Association, 2021; Johal & Peterson, 2021). New procedures for intakes and referrals were created, as well as safety and security measures established in an effort to maintain HIPAA compliance and establish protocols for crisis situations that may arise during tele-counseling (Barnett & Kolmes, 2016). The way in which students experiencing career indecision accessed career counseling, as well as the mode in which career counseling was delivered, changed at a rate not experienced prior to COVID-19.

Career-Decision Making and Cognitive Information Processing Theory

As noted, during COVID-19, students were impacted on multiple levels, and college career centers and services were changed and modified at a dramatic level to meet these changing needs. This included changing the nature of services, and the format and methods by which services were provided. Career indecision and problem-solving skills became a paramount component of this process when considering the career services students may need during COVID (Augustana, 2020; Bamji & Godfrey, 2020; Falco et al., 2020). In examining these changes, it was critical to consider the models of career counseling that integrate the components of career decision making and problem-solving.

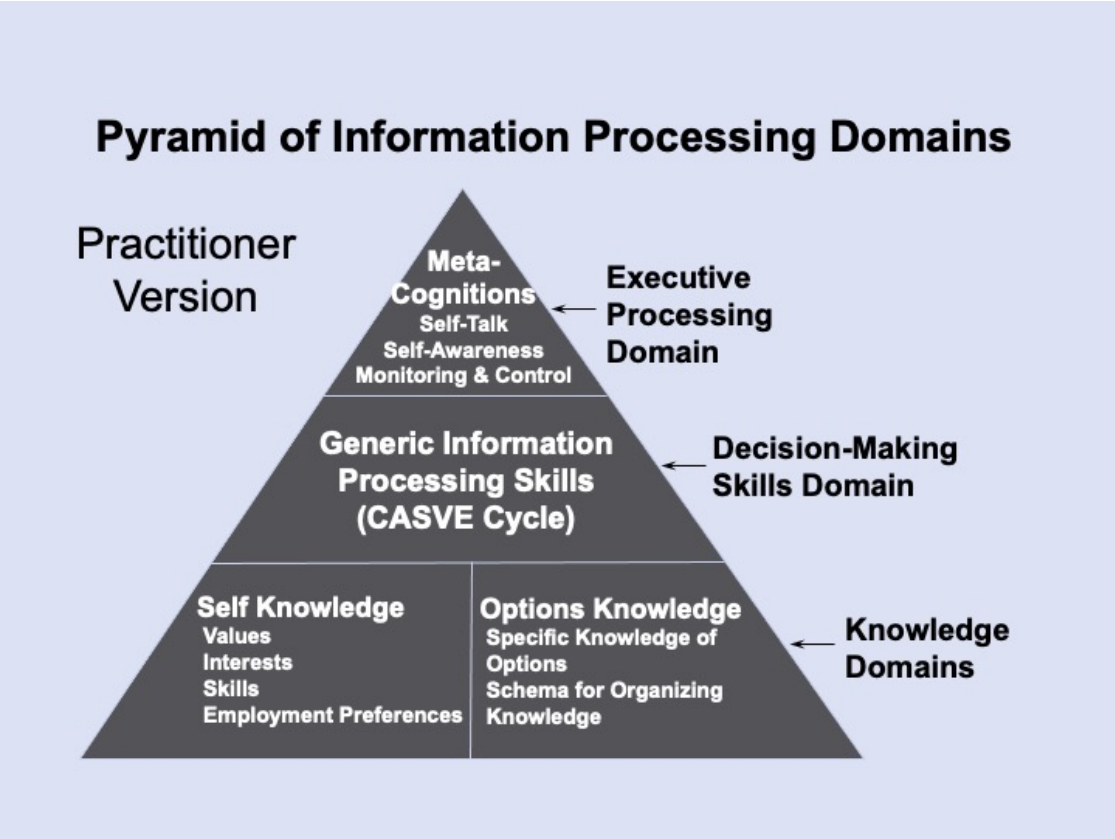
Theoretical models of career counseling provided a foundation for helping students address their career problems and choices when balancing multiple other issues, such as those presented by COVID 19. An appropriate framework was Cognitive Information Processing (CIP) theory, a theoretical model for career development that focuses on expanding information-seeking behavior around career choices and enhanced career decision-making and problem-solving (Sampson et al., 2004). Due to the global economy of the over the past two years and the rapid rate of change in the job market, having tools to aid in career development was essential, as career development encompasses a series of interconnected career decisions across an individual's lifespan (Sampson et al., 2004). CIP assumes that career decision-making is both cognitive and emotion-based, and how an individual thinks about their career problem and decision-making process relates to our emotions, which can motivate or even paralyze a person in the decision-making process (Hayden & Osborn, 2020; Sampson et al., 2004). Additionally, productive career decision-making involves essential knowledge of self and career options, as well as a cognitive process for thinking through and synthesizing knowledge acquired (Sampson

et al., 2004). Career problems occur when there are gaps in knowledge or the cognitive process of decision-making (Sampson et al., 2004).

Within the CIP theory, there are two foundational components for which the theory is built upon, The Pyramid of Information Processing (see Figure 1) and the decision-making process that includes five phases of Communication, Analysis, Synthesis, Valuing, and Execution, known as The CASVE Cycle (see Figure 2) (Sampson et al., 2004). The Pyramid of Information Processing focuses on career information and the three foundational domains or building blocks of knowledge, decision-making skills, and metacognitions or executive processing (Osborn et al., 2020.; Sampson et al. 2004; Peterson et al., 1991; Peterson et al., 2002; Peterson et al., 1996). The knowledge domain at the foundational of the Pyramid of Information Processing consists of two essential components, self-knowledge and occupations knowledge, which consists of schema developed throughout an individual's lived experiences (Peterson et al., 2002; Sampson et al., 2004). According to CIP, self-knowledge, stored in episodic memory (Sampson et al., 2004; Tulving, 1972, 1984), is the awareness of one's values, interests, and skills and is influenced by life experience and cultural factors. Occupational or options knowledge within the knowledge domain of the Pyramid of Information Processing is stored in semantic memory or facts taken in by a person, which creates a schema that organizes the conceptualization of the world in relation to aspects of work, such as education, training, employment, and occupation options (Sampson et al., 2004).

Figure 1

The Pyramid of Information Processing



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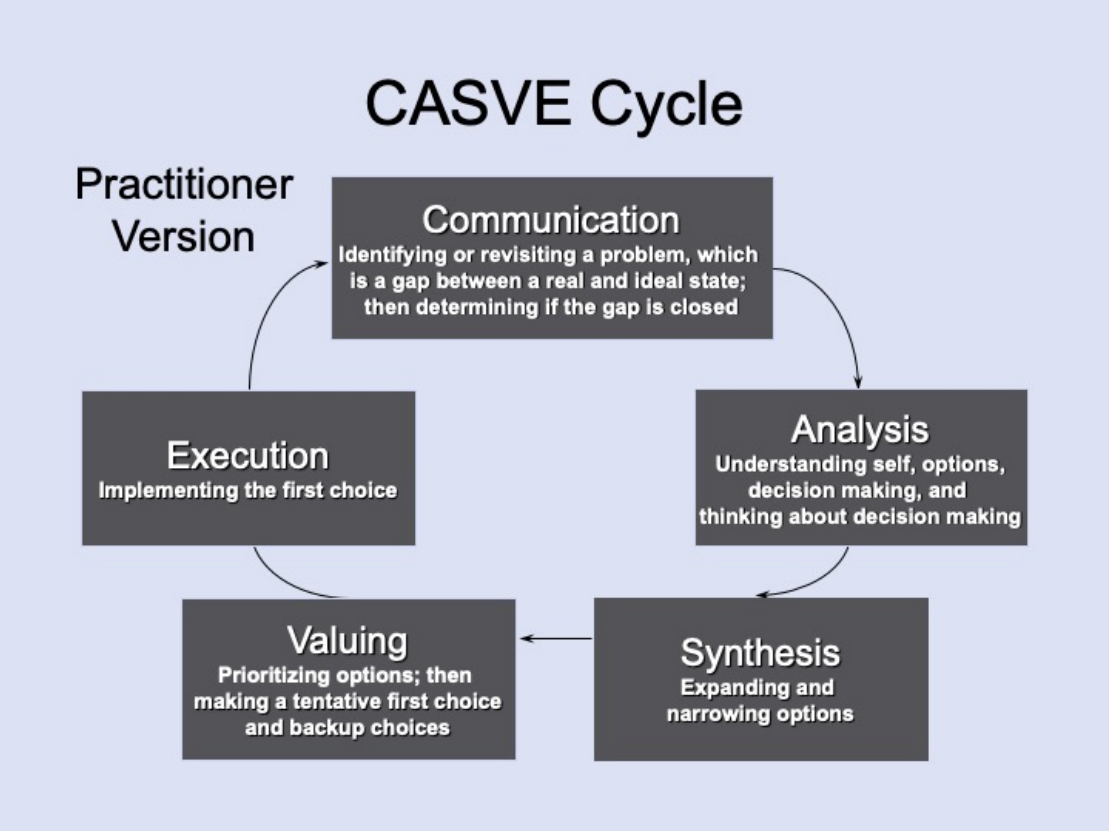
After the knowledge domain, which builds the foundation for the Pyramid of Information Processing, the second or middle domain is decision-making skills which encompasses the general decision-making skills used by an individual to solve a problem or make a decision, as well as the incorporation of the CASVE cycle (Sampson et al., 2004). Within CIP, the CASVE cycle, which is the process of career decision-making, comprises five phases, Communication,

Analysis, Synthesis, Valuing, Execution (Osborn et al., 2020; Sampson et al., 2004). Early in the decision-making process, there is the communication stage, or the awareness of a gap or need to decide that is prompted by internal or external pressures or motivators (Osborn et al., 2020). From the communication stage, a person moves into the analysis stage. They evaluate their interests, values, and skills, also known as self-knowledge, concerning their options, which initially expand potential career possibilities (Osborn et al., 2020). In the synthesis phase, career options or occupational options narrow. Options are more deeply considered regarding self-knowledge, which leads to valuing where a limited list of opportunities that closely align with one's self-knowledge develops. After valuing, a prioritized option materializes, and a person executes the decision. Once a career decision is made, the person enters the communication phase again, evaluating the gap or thinking about their decision and its alignment with their self-knowledge, determining career satisfaction or dissatisfaction (Bullock-Yowell et al., 2011a).

Figure 2

CASVE Cycle



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At the top of the Pyramid of Information Processing is the executive processing domain, which focuses on metacognition, or the cognitive schema or methods used to make a career decision (Sampson et al., 2004). Within the executive processing domain, career thoughts, self-talk, self-awareness, monitoring, and control comprise the critical cognitive factors that impact the decision-making skills and knowledge domains (Sampson et al., 2004). A person with

negative self-talk or dysfunctional career thoughts may experience anxiety, all of which can influence an individual's self-perception or a negative outlook on their interests and skills, thus diminishing their confidence in their ability to make a career decision (Sampson et al., 2004). A lack of confidence in an individual's ability to make a career decision can lead to a lack of motivation to engage in information seeking or career exploration activities (Sampson et al., 2004). However, self-awareness, monitoring, and control can aid in learning to reframe dysfunctional career thoughts and negative self-talk to create more effective career decision-making skills (Sampson et al., 2004).

In relation to CIP Theory and the CASVE cycle is the construct of the career decision state, or "a person's state of being or consciousness during career problem solving and decision making" (Leierer et al., 2017, p. 3), which is related to "certainty, clarity, and satisfaction" (Osborn et al., 2020) of the career decision within the communication phase of the CASVE Cycle (Osborn et al., 2020; Leierer et al., 2017). Career satisfaction is discovered within the communication phase when there is close alignment between self-knowledge and occupational knowledge with little to no presence of negative or dysfunctional career thoughts. Conversely, career dissatisfaction is the misalignment of self-knowledge and occupational knowledge compounded by negative or dysfunctional career thoughts, which leads to career indecision, stagnation, hopelessness, and depression; thus, before engaging in career decision making, it is essential to assess for readiness for career choice, as individuals may need more or less support from a career counselor given their readiness state (Leierer et al., 2016; Bullock-Yowell et al., 2011b). These components have been clearly essential as college career services help students deal with the psychological, personal and career impacts of COVID 19.

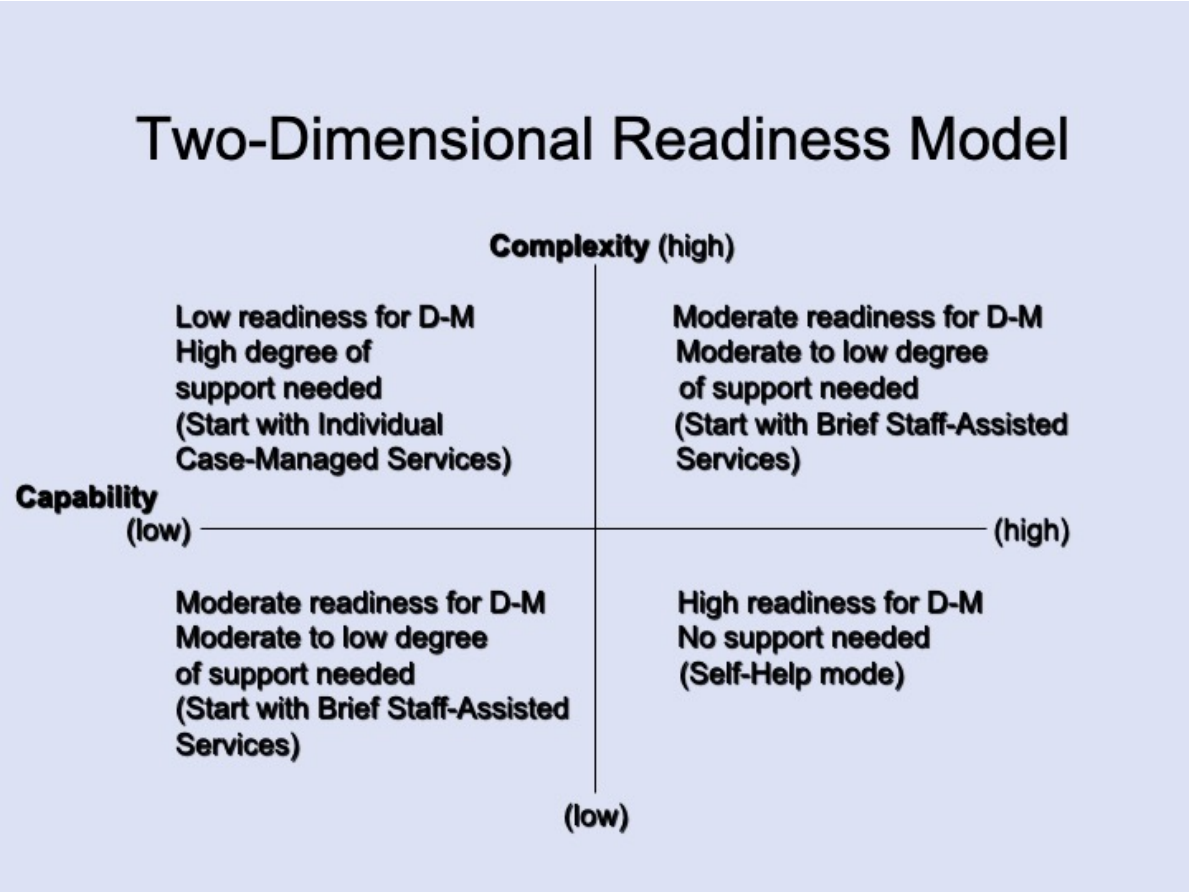
Parallel to these components of career theory, in addressing the impact of COVID-19 on college students and the process of career decision-making it was imperative to consider the theories that also address mental health as it relates to the intersection of career decision-making and mental health (Sampson et al., 2004). Specifically, we know that COVID has led to mental health issues for college students, these include depression and anxiety (Hawes et al., 2021). This anxiety may be reflected in fears about careers and lead to intensified career indecision. It was important to consider that career decision-making is a cognitive process that also involves behaviors and emotions. Cognitive theory in mental health counseling focuses on thoughts and how thoughts affect behaviors and emotions (Beck, 1976). As in Beck's Cognitive Theory, Cognitive Information Processing (CIP) theory in career counseling and career development focuses on career thoughts and their effect on behaviors and emotions (Peterson et al., 1991; Sampson et al., 2004). According to CIP theory, career decisions are choices related to education, occupations, employment, and training that are part of the individual's career development, which is a series of career decisions integrated over an individual's lifespan (Sampson et al., 2004). The need to make a career decision is prompted by a gap between a person's current career state and the career state they desire, which is known as a career problem (Sampson et al., 2004). Although people experience challenges every day, career problems can be complex due to the context of a person's current career situation and their level of readiness to make a career decision.

Within the CIP theory, readiness for career choice "is defined as the capability of an individual to make appropriate career choices while taking into account the complexity of family, social, economic, and organizational factors that influence an individual's career development" (Sampson et al., 2004, p. 65). Readiness for career choice (see Figure 3) is

assessed through two independent dimensions, capability and complexity (Sampson et al., 2004), which looks at an individual's preparation to engage in the effortful career decision-making process (Leierer et al., 2017; Sampson et al., 2000). Of the two dimensions of readiness, "capability is the cognitive and affective capacity for an individual to engage in effective career problem solving and decision making" (Sampson et al., 2004, p. 65). Individuals with a positive affect and a greater cognitive capacity possess a higher level of readiness and are more prepared to engage in career decision-making (Sampson et al., 2004). Whereas an individual with a negative affect, who is dissatisfied with, or lacks clarity in their occupational choices, has a lack of self or occupational knowledge, or lacks confidence in their ability to make an effective career decision. An individual who is uncertain and lacks clarity or clear career goals may demonstrate low capability or lack the motivation and ability to engage in effective exploration of self and occupational options necessary to execute the career decision-making process (Leierer et al., 2017; Sampson et al., 2004). As noted, these uncertainties may only have been heightened during COVID.

Figure 3

Two-Dimensional Readiness Model



Adapted from "Using readiness assessment to improve career services: A cognitive information processing approach," by J. P. Sampson, G. W. Peterson, R. C. Reardon, and J. G. Lenz, 2000, *The Career Development Quarterly*, *49*(2), p. 161. https://doi.org/10.1002/j.2161-0045.2000.tb00556.x. Copyright 2000 by the National Career Development Association. Adapted with permission.

Capability Dimension of Readiness for Career Choice

Career State as an Indicator of Capability

As demonstrated in research**,** a career state or career decision state is not static; rather, it is a momentary state related to an individuals' consciousness regarding their career goals or aspirations and is subjective in nature (Hayden & Osborn, 2020; Leierer et al., 2017). A career decision state can be influenced or impacted by multiple internal and external factors (Hayden & Osborn, 2020; Leierer et al., 2017; Sampson et al., 2004). Career counseling centers during COVID needed to work to provide services that addressed this aspect of career decision-making in light of the factors that would and could influence students' career decision making process. It was critical that when examining this process to be cognizant that career decision-making includes both emotion-based elements, the career state is theorized on a scale ranging from extremely goal-oriented, motivated, "satisfied, and confident" to being paralyzed, "dissatisfied, and uncertain" (Hayden & Osborn, 2020; Leierer et al., 2017, p. 2). Determining an individual's career decision state begins with their ability to specify occupational choice options that they are considering (Leierer et al., 2017; Sampson et al., 2004), or the Occupational Alternatives Question (Zener & Schnuelle, 1972; Modified by Slaney, 1980). An inability to identify possible occupational choice options may indicate a career decision state of undecided or indecisive, both of which indicate a moderate to low capability dimension of readiness for career choice; thus indicating the need for career counseling, as there is a potential gap in a foundational domain of knowledge on the Pyramid of Information Processing (Sampson et al., 2004), as well as a lack of confidence in decision-making skills, in addition to possible

dysfunctional thoughts and mental health concerns (Sampson et al., 2004). During COVID, all of these factors could be critical or play into students' career decision-making as well as the processes used to make these decisions.

Career Thoughts as an Indicator of Capability

When considering the overarching demands and challenges COVID 19 presented to students and the potential impact on career decision-making, it was imperative to discuss how these challenges may have directly influenced the ability to engage in career decision-making. Cognition and the ability to process career information are paramount to career decision-making. Career decision-making is a cognitive process that also involves behaviors and emotions. There are already indications that college students may have experienced high levels of mental health issues during COVID 19 (Education Policy & State Higher Education Executive Officers Association, 2021), all potentially reflected in both their behavior and emotions. Cognitive theory provides a foundation for considering how thoughts affect behaviors and emotions (Beck, 1976), and interjects with the ability to engage in career decision-making. Just as in Beck's Cognitive Theory, Cognitive Information Processing (CIP) theory in career counseling focuses on career thoughts and the effect on behaviors and emotions (Peterson, et al., 1991; Sampson et al., 2004). According to both Cognitive and CIP theories, life stress and career decision is mediated by negative career thoughts or negative thoughts about one's life circumstance (Bullock-Yowell et al., 2011b). Students who expressed or experienced dysfunctional career thoughts regarding a career decision reported feeling paralyzed and avoid making a career decision (Sampson et al., 1996).

CIP theory is a framework that focuses interventions on cognitions (Lustig et al., 2012). According to Bullock-Yowell et al. (2011a), when negative career thoughts are accounted for,

individuals are more certain and satisfied with their career decision, even those under pressure to make a career decision while experiencing a stressful life circumstance, similar to what students experienced during COVID-19. Thus, it was imperative to emphasize the importance of altering negative career thoughts to facilitate positive career-decision making outcomes. If a student develops skills to alter dysfunctional career thoughts early to make a career decision successfully, their career decision making self-efficacy should also increase (Amir & Gati, 2006; Taylor & Betz, 1983). Students with higher career decision-making self-efficacy are more likely to successfully make career decisions, which can mitigate psychological distress, thus emphasizing the importance of early intervention regarding negative career thoughts (Amir & Gati, 2006). Career counselors in college settings can then incorporate skills that help students address their stress and problem-solving skills directly focused on career decision-making. This emphasizes the continued integration of career counselors considering psychological and mental health as critical components of one's ability to engage in career decision-making.

Psychological and Mental Health Considerations of Capability

As previously discussed, career decision-making capability is a process that is directly reflective of an individual's mental health and psychological stress. Specifically, these factors can influence all aspects of an individual's ability to engage in and make effective decisions about their career choices. Understanding these dynamics was imperative when discussing the career indecision process for students during COVID -19, and how career counseling centers effectively addressed these areas during this time. For example, research has noted that powerful affective emotions can accompany the complex nature of the career problem solving and decision-making process due to complexities (Sampson et al., 2004 as cited in Hayden et al., 2016). These may include economic change, variations in and the vast amount of career

information available, and the reconciliation of one's career interests, values, and skills with the opinions of family, friends, and cultural (Hayden et al., 2016). Many of these, especially economic changes and changes in employment options were all components of what students were experiencing in career decision-making during COVID.

Moreover, within the complex process of career development, which encompasses numerous aspects of the human experience, there is a connection between career problems and career decision-making with mental health concerns (Hayden et al., 2016). According to Hayden et al. (2016), it is essential to consider that the etiology of mental health concerns may exist in a career problem instead of in the person, and yet conversely a mental health concern or the presence of psychological symptoms the contributor to a career problem and or state of career indecision (Dierenger et al., 2016; Walker & Peterson, 2012).

For individuals who enter into career counseling, there is a continuum of psychological distress that accompanies the presentation of a career problem (Walker & Peterson, 2012). Of individuals experiencing career indecision, it is more common for these individuals to experience mild to moderate anxiety and depression (Dierenger et al., 2016; Hayden & Osborn, 2020; Saunders, Peterson et al., 2000; Walker & Peterson, 2012). Persons experiencing uncertainty related to self or career, may present with or disclose symptoms of anxiety, which can create a challenging cycle of negative thinking that contributes to stalled career-decision making due to indecision (Apodaca, 2016). According to the American Psychiatric Association (2013), anxiety can manifest with symptoms of rapid heart rate, difficulty breathing, nausea, sweating, difficulty sleeping, the feeling loss of control over a situation or one's environment, and/or an inability to concentrate or make decisions (Apodaca, 2016). Clearly, during COVID-19 these emotional and mental health issues only intensified for students (Fishman et al., 2021). Specifically, the worry

and fear linked to this period of time contributed to an affective state of anxiety and a perceived loss of control over one's environment and emotions, all contributing to increased levels of anxiety (Apodaca, 2016; Hayden & Osborn, 2020).

Moreover, individuals who express impairment with attention and cognitive processing or function, including memory recall and decision-making, often report feeling hopeless and depressed (Dieringer et al., 2016; Walker & Peterson, 2012; Woo & Keeting, 2008), which is consistent with Beck (1976) who noted dysfunctional thoughts and cognitive schema contributed to selecting incongruous responses or behaviors to environmental stimuli in individuals experiencing depression (Walker & Peterson, 2012). Thus, all of these contextual factors around career decision-making are correlated to career thoughts and career decision-making readiness.

Contextual Factors as Indicators of Complexity

Contextual factors such as anxiety, fear, and worry, can all contribute to how college students engage in career decision-making. Specifically, the contextual factors that impact the level of difficulty in processing information needed to make a career decision is the readiness dimension known as complexity (Sampson et al., 2004). Complexity accounts for the elements that negatively or positively impact an individual's self-talk, self-knowledge, occupational knowledge, and approach to career problem solving, such as personal and identity factors, family, social support, the economy and economic circumstances, mental health, physical wellness, and diverse ability (Leierer et al., 2017; Sampson et al., 2004). An individual's state of readiness will vary based on contextual factors or level of complexity. Those with a higher state of readiness have fewer negative complexity factors in coping with solving a career problem or making a career decision (Sampson et al., 2004). In contrast, individuals with greater complexity may be facing encumbering or multiple contextual factors, which increase the difficulty in

problem-solving and career decision making (Sampson et al., 2004). It was not hard to consider how COVID-19 is reflected in these multiple contextual factors, understanding what these factors are and how they may relate was an essential part of considering career decision-making.

Family Factors

Various family factors can impact an individual's readiness for career choice, as individuals responsibilities and stressors related to family vary, with some having fewer or greater family responsibilities or stressors (Sampson et al., 2004). The fewer responsibilities or stressors an individual has to account for or cope with, the less complexity there is regarding the career decision (Sampson et al., 2004). Additionally, family factors can be positive or supportive in the career decision-making process, which may increase resources and support for coping with a career problem and aid in career decision making (Sampson et al., 2004). Conversely, individuals with multiple family roles or multiple stressors stemming from family factors may need additional support or a more robust schema to make an effective career decision, as not all family support is positive in nature. (Sampson et al., 2004). External conflict, or the extent to which negative or dysfunctional career thoughts are associated with input from other and important people in a person's life, can be a negative family factor, and particularly for those from cultural backgrounds where input from the family is greatly valued in the career decision making of a child, spouse, or family member within their immediate sphere (Sampson et al., 2004). In addition to external conflict, greater family responsibilities and stressors can lead to a varying career decision making deferral, or the compromise of an individual to delay making a career decision in an effort to prioritize specific family roles, such as primary caregiver to children, sick, disabled, or aging family members, primary or supportive income provider, or

stepping back or staying in a career state to support the career development of a spouse or partner (Sampson et al., 2004).

There are clear indications that students have faced many of these challenges during COVID. Initially, students during COVID had the challenge of having to move back home during the initial stages of the quarantine. Students reported dealing with the stress and challenges of being back in home environments after having been more independent, and according to the Joint Center for Housing Studies of Harvard University (2021), during the pandemic up to 78% of full-time college students were living with their families at home during COVID-19. During COVID-19, Students reported a wide range of issues and concerns from competing for internet to increased childcare responsibilities for siblings or providing care for dependents of their own due to lack of childcare options, home schooling, or school closings. According to Fishman et al., (2021), approximately 61% of students were concerned about paying tuition and education expenses in December 2020. In addition to educational expenses, 79% were concerned about paying for non-educational related expenses (Fishman et al., 2021), and more specifically, being able to meet basic needs, with 46% of student who responded indicated concern about their ability to afford food and housing past a 30 day time period in August of 2020 (Fishman & Hiler, 2020). Students also reported higher levels of family stress, as well as greater social isolation from friends and peers, increasing their depression and anxiety, with 79% of college students surveyed reporting being concerned about their mental health (Fishman et al., 2021)

Social Factors

Career decision-making for students is often reflective of peer influences and social supports, both experiencing major shifts during COVID 19. Similar to family factors, social

factors can positively or negatively support career decision-making, thus increasing or decreasing complexity (Sampson et al., 2004). Individuals with a significant social network that provides care, mentoring and modeling may have access to additional resources and supportive social factors that aid in the career decision-making process (Sampson et al., 2004). However, individuals without a socially supportive network that provides modeling and mentoring are more likely to have a challenging or complicated career decision-making process, as there may be limits to exposure and knowledge or options related to education, training, occupations, and employment possibilities (Sampson et al., 2004). Despite a multicultural society, some individuals based on intersections of their identity may find societal obstacle within career decision making and career development, as factors such as age, ability, gender, nationality, race, socioeconomic status, race, religion, and sexual orientation, may present social challenges related to implicit bias, societal norms of the majority, and systemic marginalization (Niles & Harris-Bowlsby, 2002; Sampson et al., 2004). It was apparent that if these social factors and supports shifted significantly during COVID 19 then so would the influence and impact on career decision-making.

Economic Factors

One of the areas directly impacted by COVID was jobs and employment. During COVID-19, students graduating were entering a workforce where in a two-month period of time, starting in March 2020, over 38 million unemployment claims were filed (Friedman, 2021). Additionally, of employers surveyed in April 2020, according to the National Association of Colleges and Employers, 4.4% of employers reported revoking full-time job offers that had been made to students prior the pandemic, and of employers surveyed, 22% indicated that they revoked summer internship offers (Friedman, 2021). These issues are extremely relevant when

discussing career decision making and career counseling during this time. As with family and social factors, economic factors can either support or undermine readiness for career choice (Sampson et al., 2004), as they impact the variability or rate of change in the job market, and due to a global economy and rapid change in industries, economic factors and the job market can fluctuate from periods of stability and growth to instability and volatility (Sampson et al., 2004). During times of economic crisis or market volatility such as what we are experiencing with COVID-19, individuals may face more complexity and need more support in gaining occupational or options knowledge necessary to make a career decision (Sampson et al., 2004). Additionally, personal economic factors can support or inhibit career decision-making (Sampson et al., 2004). Adequate or bountiful personal financial factors can provide ease of access to resources, education, training and assist in bridging the gap between one career decision and another within an individual's career development (Sampson et al., 2004). However, individuals with limited financial resources may experience great difficulty securing resources to meet basic needs, such as food, housing, clothing, transportation, healthcare, and childcare (Sampson et al., 2004). In addition to meeting basic needs, persons with limit financial resources may experience additional complexity for career decision-making due to less access to funding for education or training necessary for an occupation choice, which may contribute to negative self-talk and dysfunctional career thoughts (Sampson et al., 2004). There are clear indications that we can expect that these psychological stressors and factors will also be paramount in those experiencing the impact of COVID-19.

Possible Impacts of COVID-19 on Career Decision Making

As noted, when considering the models and theories of career decision-making there are multiple social, psychological, and personal variables that may influence both the process and

capability to engage in the process. In the preliminary discussion of theory, several variables that may have been influenced by COVID-19 where outlined. However, when exploring the impact of the COVID-19 pandemic on college career services and students' career decision-making process, it was imperative to consider two central areas. The first of which was the impact of COVID-19 on the process associated with career decision-making. Additionally, it was essential to consider the changes in provisions and career counseling service delivery. More specifically, the modifications and changes made by colleges and universities to provide career counseling to students who no longer had access to traditional face-to-face services on brick-and-mortar campuses.

As the pandemic continued, the inverse correlation of readiness for career choice within CIP, low capability and high complexity (Sampson et al., 2004) prompted referrals to career counseling for students experiencing career indecision and negative thinking around the factors of capability and complexity, which created a career decision making challenge. As a result of the COVID-19 pandemic, the economy experienced a drastic decline and shift in occupation options and employment possibilities for students (Friedman, 2021). Additionally, students directly impacted by job loss, whether the loss of a part-time job or a parent who experienced sudden job loss, found themselves experiencing greater financial and familial stress, which are complexity factors that can directly contribute to career indecision and lower career decision self-efficacy, which can increase negative thinking.

The difficulty with career indecision due to dysfunctional career thoughts during a time of transition and stress, such as the COVID-19 pandemic, where there was a significant increase in complexity factors, may enhance the likelihood of academic and psychological distress, such as anxiety and depression (Saunders et al., 2000), which in turn could lead to poor academic

performance, social withdraw, as well as attrition in college enrollment (Bullock-Yowell et al., 2011b; Liao & Ji, 2015). According to both Cognitive and CIP theories, life stress and career decision is mediated by negative career thoughts or negative thoughts about one's life circumstance (Bullock-Yowell et al., 2011b). According to Bullock-Yowell et al. (2011b), when negative career thoughts are accounted for, people under pressure to make a career decision while experiencing a stressful life circumstance(s) are more certain and satisfied with their career decision. Consequently, those experiencing negative career thoughts amid life stress disclose or demonstrate more significant career uncertainty and dissatisfaction (Bullock-Yowell et al., 2011b).

Career decisions are a significant part of the development process of adolescents and young adults, and according to Amir & Gati (2006), a pervasive vocational problem amongst individuals is career decision making, which can lead to avoidance, stopping, or abandoning the decision-making process or results in making a career decision that is less than optimal. Being faced with a career decision can be highly stressful, and many students who seek career counseling are experiencing symptoms of depression and anxiety, and some are seeking counseling for their psychological distress in addition to their career decision state. According to Bullock-Yowell et al. (2014), undecidedness experienced by students is typical within the developmental process due to the need to gain more information about oneself and career options necessary to make an informed decision (Salomone, 1982). However, undecidedness should be temporary and not a consistent, constant, or prolonged career decision state (Salomone, 1982; Bullock-Yowell et al., 2014).

Self-efficacy and career decision-making difficulties have been linked to negative career thoughts or dysfunctional career thinking that impedes an individual's ability to make a career

decision (Bullock-Yowell et al., 2014; Osipow, 1999; Vondracek et al., 1990). In a study by Bullock-Yowell et al. (2011a), variance in career decision-making self-efficacy was explained by negative career thoughts and associated with an increase in career indecision (Bullock-Yowell et al., 2014; Kilke, 1997; Saunders et al., 2000). In a study by Saunders et al. (2000), negative career thoughts were positively correlated with career decision-making difficulty, which is consistent with research conducted by Kleiman et al. (2004) and explained 61% of the variance in career indecision (Bullock-Yowell et al., 2014).

Heightened negative career thoughts, similar to what college students may have experienced during COVID-19, can be related to career-decision making difficulty and increased anxiety which can prompt and individual to slow their decision making, stop, or avoid making a career decision (Bullock-Yowell et al., 2014; Fouad et al., 2009; Gati & Amir, 2010; Peterson et al., 1991; Peterson et al., 1996). Moreover, the avoidance of making a career decision, for college students specifically, can have negative consequences, such as an increased financial burden due to prolonged time in college and increased student loan debt or excess credit, which is not covered by financial aid through federal or state grants, in addition to lower self-esteem, and self-efficacy, as well as an increased likelihood of experiencing anxiety and depression (Bullock-Yowell et al., 2014). In considering these potential outcomes of career decision-making avoidance or significant difficulty, the complexity factors experienced by students during the pandemic are compounded particularly those related to increased financial burden. Moreover, during a period heightened stress and isolation there was greater potential for dysfunctional career thoughts that are correlated to anxiety and depression. All of this leads to a greater need for career counseling services that effectively deal with career decision-making while also addressing the challenges of providing these services in a different format and method.

Specifically, in considering these issues it was imperative to also discuss the ways these services were impacted during COVID-19.

Changes to College Career Counseling: Tele-Career Counseling

Due to stay-at-home orders and a move to remote learning after college and university campuses closed brick and mortar facilities, students who once sought resources and support on campus were now lacking proximity and potential access to the resources and support once easily accessed (Knechtel & Erickson, 2021; New America.org, 2021). With this change, access to career counseling once only offered face-to-face was now only accessible virtually or through Tele-Career Counseling, during a time and phenomenon that significantly impacted mental health (Knechtel & Erickson, 2021), as well as cognitive and contextual factors that impact career decision-making. Although forms of distance counseling services have been available for centuries, and video conferencing or tele-counseling has greatly increased in use within clinical practice specifically for the provision of clinical service since the introduction of the internet and advancements in technology of the past three decades (Barnett & Kolmes, 2016; Varghese et al., 2020), compared to traditional face-to-face counseling, there is a dearth of research compared to the technological advances over the past decade and an even greater paucity of research related to virtual or tele-counseling within vocational psychology and career counseling (Varghese et al., 2020). Of the research available for tele-mental health counseling, there was no significant difference between client outcomes or the ability to develop a therapeutic working alliance between counselor and client (Aresteh, 2017). Although there are some additional ethical and legal considerations related to virtual or tele-career counseling services and practice, there was also a positive element related to equity and access (Barnett & Kolmes, 2016; Varghese et al., 2020).

Unlike being face-to-face, where both the client and counselor can see each other's non-verbals entirely, with tele-counseling formats, there may be limits to seeing non-verbals and body language, which can contribute to misunderstanding or misreading a person's affect or emotional state (Barnett & Kolmes, 2016). Additionally, due to the possibility of service interruptions, the client and counselor can get disconnected during sessions; thus, it was imperative at the onset of tele-counseling for a plan to be established in the instance of an interruption or disconnection occurs (Barnett & Kolmes, 2016). As interruptions to technology are possible, guaranteeing confidentiality for tele-counseling was not possible. Nevertheless, it was the ethical and legal responsibility of the counselor to make every effort to provide a secure and private virtual or online space for sessions, including using HIPAA-compliant teleconferencing platforms and forms of communication (Barnett & Kolmes, 2016).

In tele-counseling, the client's environment was not within the counselor's control as it is in a face-to-face session. Thus, it was essential to provide the client with safety measures and best practices for maintaining confidentiality (Barnett & Kolmes, 2016). Along with providing a client with privacy measures, developing a safety plan and completing an emergency contact form with local emergency contacts, and outlining a response protocol in the instance there was a crisis is essential (Barnett & Kolmes, 2016). Regarding crisis response, tele-counseling was appropriate for some but not for all. Before engaging in tele-counseling, counselors need to screen clients, as clients with severe mental illness, those who have fears, phobias, or delusions related to technology, or individuals with active suicidal or homicidal ideation may not be appropriate clients for tele-counseling (Barnett & Kolmes, 2016). While screening clients before tele-counseling, understanding legal implications related to licensure laws and whether or not

states allow for reciprocity to practice across state lines was important (Barnett & Kolmes, 2016).

Although tele-counseling may not be the best form of counseling service delivery for all, it has been demonstrated to be beneficial for clients with anxiety, depression, post-traumatic stress disorder, and other mental health and wellness concerns (Barak et al., 2008; Cowpertwait & Clark, 2013; Knechtel & Erickson, 2021). Additionally, tele-counseling provides access to services for those with limited ability to access counseling services due to disability that limits mobility or ability to travel, lack of proximity, lack of time, lack of providers who specialize in specific counseling practice areas, or lack of transportation (Barnett & Kolmes, 2016; Knechtel & Erickson, 2021; Savickas, 2003; Varghese et al., 2020). During COVID-19, tele-counseling served those who could not access counseling services due to stay-at-home orders and social distance guidelines to ensure their health and wellbeing, as well as the health and wellbeing of others.

When considering the impact of COVID-19, tele-counseling was an essential service delivery medium for college students who were experiencing difficulty with the career decision-making process. Due to campus closings and moving to virtual instruction and student support platforms, students experiencing career indecision, dysfunctional career thoughts, or significant factors that contributed to increased complexity or decreased capability in their career decision state, career counseling was limited to a virtual mode of service delivery through tele-counseling. This limitation to service delivery created a novel and never before experienced circumstance for those seeking career counseling, particularly for students on a traditionally brick and mortar university campus. Thus, it was essential to consider how the changes in service delivery as it

relates to career counseling on college campuses may have impacted the initiation of career counseling services by students.

Purpose of the Study

Through this cross-sectional study, the purpose was to conduct an examination of career thoughts, career state, and occupational choice self-efficacy among college students seeking career counseling. Of specific focus was how these areas, related to career decision making, and specifically career thoughts, career decision state, and occupational choice self-efficacy, compare across students who initiated services prior to COVID-19 and during COVID-19. As noted, career services during this time changed from the provision of counseling services in-person to totally online services. Moreover, during COVID-19 students were also be impacted by the social, economic, psychological, and personal impact of COVID-19. All of these factors directly and indirectly impact their ability and process of engaging in career decision-making.

Significance of the Study

This study sought to directly impact career counselors and career services on college and university campuses, as it investigated cognitive factors related to career decision-making challenges faced by college students during a global health crisis, the COVID-19 pandemic. The global pandemic led to drastic and sharp declines in the economy and available occupational options, as well as impacted contextual factors, thus increasing complexity in the career decision-making process. Corresponding to this, this study also examined the impact of providing services in changing modalities and formats. Specifically, the provision of moving counseling services from direct contact to totally online was examined. Although tele-counseling service delivery has increased as a provision for direct clinical practice (Barnett & Kolmes, 2016; Varghese et al., 2020,) there continues to be a paucity of research that explores

tele-counseling services, and even more so a dearth of research related to the specialty of career counseling provided through tele-counseling. Implications of this study related directly to career counseling during times of novel and global crisis, provisions for tele-career counseling for direct clinical services in career centers at college and universities, and the initiation of career counseling services by students through a cross-sectional comparison of pre-counseling assessments pre and during the COVID -19 pandemic. This exploratory investigation sought to provide information that can inform future practice and research in career services and career counseling. Specifically, this study sought to inform career counseling practitioners in relation to cognitive and emotive trends in assessments related career decision-making during times of economic upheaval and uncertainty that can inform interventions for career counseling, as well as provisions for clinical service delivery. Additionally, the pursued research was intended to inform counselor educators and supervisor on trends related to the impacts of COVID and counseling provisions to assist in the education and training of future counselors to equip them in working with college and university clients experiencing career indecision, dysfunctional career thoughts, or low occupational self-efficacy during times of crisis and uncertainty. Not only was the purpose of this study to inform counselors, counselor educator and supervisor, but also to drive future research related to career counseling and counseling provisions, as there is a paucity of research related to the specialty of career counseling, and even more of a dearth of research related to tele-career counseling, and the use of interventions and client outcomes.

Research Questions

The study presented investigated the following research questions:

1. What are the differences across measures of career decision-making for students who initiated career counseling as compared before COVID-19 and during-COVID-19?

2. What are the differences in college students' career thoughts for students who initiated career counseling; including decision-making confusion, commitment anxiety, and external conflict as compared before COVID-19 and during-COVID-19?
3. What the differences in college students' career state for students who initiated career counseling as compared before COVID-19 and during-COVID-19?
4. What are the differences in college students' occupational choice self-efficacy for students who initiated career counseling as compared before COVID-19 and during-COVID-19?
5. What are the differences across career decision-making indicators when compared across demographic variables for students who initiated career counseling pre-COVID-19 as compared to during COVID-19?

Definition of Terms

***Career Thoughts* –** outcomes of one's thinking about assumptions, attitudes, behaviors, beliefs, feelings, and plans concerning career decision making (Sampson et al., 1999)

***Career State* –** A momentary state of consciousness and cognition, regarding a person's career goals that accounts for cognitive and emotive components on a continuum from being "highly goal-directed, satisfied, and confident" to being paralyzed, "dissatisfied, and confused" (Leierer et al., 2017, p. 2).

Decision Making Confusion – The inability to begin or progress in the career decision-making process due to debilitating emotions in conjunction with insufficient knowledge or understanding of the career decision-making process (Sampson et al., 1996).

Commitment Anxiety – The lack of ability to make a commitment to a specific career related choice, which is associated with generalized anxiety regarding the decision-making process (Sampson et al., 1996, p. 28).

External Conflict – The lack of ability to manage the significance of and individual's own self-knowledge and perceptions with that of the weightiness of opinions from significant or important people with a person's sphere of influence, which results in hesitancy to take responsibility for making a career decision or the career decision-making process (Sampson et al., 1996).

Summary

During the global COVID-19 pandemic, college students experienced increased complexity as businesses and industries closed and the economy took a drastic and swift downturn. College campuses closed and moved to remote learning, and students moved away from the supportive resources on their college campuses and in with family, some of whom were touched by loss due to COVID-19, loss of jobs, income, security, and even loss of loved ones. For students experiencing undecidedness, this complex and stressful period gave way to increased worry about the future and one's career. Thoughts of uncertainty, dysfunctional career thoughts, and self-talk decreased capability, leading to indecisiveness and stagnation in making a career decision. For these students, with traditional face-to-face career counseling not available, they turned to tele-career counseling for support to seek assistance to provide the resources necessary to move forward and the career decision-making process.

Chapter 2

This cross-sectional study focused on career thoughts, career state, and occupational choice self-efficacy. These constructs were examined among college students seeking career counseling services at a university career counseling center. The cross-sectional component included comparing students who sought services the academic year prior to COVID -19 and those who sought services during COVID-19. In this study, career thoughts included consideration of decision-making confusion, commitment anxiety, and external conflict. Career State, also assessed, theoretically encompasses the concepts of career goal certainty, career goal satisfaction, and "clarity and confidence in pursuing" a career goal (Hayden & Osborn, 2020; Leierer et al., 2020, P.2)). Occupational choice self-efficacy was measured across the CIP Domains (Osborn et al., 2020) of self-knowledge, occupational options knowledge, and decision-making processes related to the CASVE cycle. In addition, basic demographic data was collected to describe the sample and compare across the sample groups (pre-COVID-19, during COVID-19) on the assessment measures.

Methodology

For this cross-sectional study, career thoughts, career state, and occupational choice self-efficacy were explored through archival data collected on career counseling clients who initiated career counseling pre and during the COVID-19 pandemic. Basic demographic information such as gender, ethnicity, and age were collected to explore possible differences among sample of 107 students who completed three measures, the Career Thoughts Inventory (Sampson et al., 1996) the Career State Inventory (Leierer et al., 2017), and the Occupational Choice Self-Efficacy Scale (Osborn et al, 2020) upon initiation of career counseling. Additionally, changes pre and post counseling using assessment measures and demographic variables were examined to explore

a possible difference across measures and demographic variables for those initiated in-person career counseling (pre-COVID-19) or virtual, tele-career counseling (during COVID-19).

Research Questions

The study presented investigated the following research questions:

6. What are the differences across measures of career decision-making for students who initiated career counseling as compared before COVID-19 and during-COVID-19?
7. What are the differences in college students' career thoughts for students who initiated career counseling; including decision-making confusion, commitment anxiety, and external conflict as compared before COVID-19 and during-COVID-19?
8. What the differences in college students' career state for students who initiated career counseling as compared before COVID-19 and during-COVID-19?
9. What are the differences in college students' occupational choice self-efficacy for students who initiated career counseling as compared before COVID-19 and during-COVID-19?
10. What are the differences across career decision-making indicators when compared across demographic variables for students who initiated career counseling pre-COVID-19 as compared to during COVID-19?

Participants

The participants for this study were college students who initiated career counseling at a southeastern university career center during the calendar year 2019, prior to the start of the COVID-19 pandemic, and those college students who initiated career counseling after the beginning of the COVID-19 pandemic between May 2020 and May 2021. Due to early or self-termination and changes in the format of counseling delivery from face-to-face to a telehealth

service delivery format, due the need to change counseling provisions as a result of COVID-19, the clients who initiated career counseling between January 2020 and April 30, 2020, are being excluded. To participate in this study, those who initiated counseling must have been at least 18 years of age and a self-reported college student who initiated career counseling within the time parameters set for this study.

Procedures

Upon IRB exemption, as well as with written approval from the FSU Career Center to utilize archival data (Appendix A), participant data was gathered from de-identified archival data-based assent to be included in archival data research, which is included in the informed consent forms for career counseling (Appendix B). During the initiation of career counseling, Demographic, Career State Inventory (Leierer et al., 2017) and the Occupational Choice Self-Efficacy (Osborn et al., 2020) data was collected through HIPAA Qualtrics (Appendix C) and the Career Thoughts Inventory (Sampson et al., 1996) through PARiConnect (Appendix D). Before the researcher accessed the data, the data was de-identified and each client given a participant code to ensure no personally protected or identifiable information was included in the data set. Due to the study's anonymous and archival nature, participants could not withdraw, as their data could not be retracted due to the researcher's inability to identify which data to remove. In addition, the career decision-making assessment measures used in this study were collected prior to counseling, however some participants did not complete all the pre counseling assessments. Based on this, data across the two samples were compared as appropriate by removing participants with an incomplete data set across assessments.

All incomplete data sets were removed prior to data analysis. IRB exemption and information related to archival research were attached to the informed consent document for the

participant's review. Upon receipt of the data sets, the data was examined for exclusion criteria such as incomplete data from participants due to early or self-termination. The data was analyzed using SPSS V22.0 software.

Instrumentation

The participants were asked to complete a brief demographic questionnaire and pre-counseling assessments: The Career State Inventory (CSI) (Leierer et al., 2017), career clarity and confidence questions, and the Career Thoughts Inventory (CTI) (Sampson et al., 1996). To understand and compare the relationship between a person's career state, occupational knowledge, and career thoughts among career counseling clients seeking counseling pre and during the COVID-19 pandemic, participants provided information related to the complexity factors within the demographic questionnaire related to career decision making. Participants in this study completed a series of measures assessing the career decision state, occupational alternatives, career thoughts and constructs of decision-making confusion, commitment anxiety, and external conflict.

Brief Demographic Measure

A demographic survey (Appendix C) utilized at client intake provided data on participants' age, gender, race, current occupation, years of education, current major, and student status or year in college. A text entry was included to capture the expressed presenting issue or challenges that prompted the client to seek career counseling.

Career Thoughts Inventory

The current study utilized the Career Thoughts Inventory (Sampson et al., 1996**)** to understand and compare the presence of dysfunctional career thoughts among college students seeking career counseling and determine the relationship of career state and self-efficacy in

relation to CIP domains among college students seeking counseling prior to and during the COVID-19 pandemic. The CTI (Appendix D), an assessment based on CIP theory, was developed initially to integrate assessment into practice within the delivery of career services interventions (Sampson et al., 1999). The CTI is a 48-item self-administered measure designed to assess dysfunctional thinking in career decision-making (Sampson et al., 1999).

The CTI asks respondents to endorse to the extent they agree or disagree with statements that reflect common dysfunctional thoughts that occur during career problem solving or decision making (Sampson et al., 1999). Responses range from 1 to 4 in Likert form with 1 = Strongly Disagree, and 4 = Strongly Agree. Psychometric data for the CTI indicates very good internal consistency reliability with a coefficient alpha of .97 for the total CTI score, and across the three constructs or subscales, .94 for Decision-Making Confusion (DMC), .91 for Commitment Anxiety (CA), and .81 for External Conflict (EC) (Sampson et al., 1999). According to Sampson et al. (1996), the stability of the CTI when taken by the same person four weeks apart within a population of respondents who are college students for the total CTI 48-items was high ($\underline{r} = .86$) and was high to moderately high for the three construct scales, with .82 for DMC, .79 for CA, and .74 for EC, and indicated a lower correlation for scales or constructs with fewer items. Thus, the DMC construct, having the most items (14), is highly correlated (.93) with the CTI total score (Sampson et al., 1996). Commitment Anxiety (.88) with ten items and EC (.76) with five items are moderately to highly correlated with the CTI total scores. Statements on the Decision-Making Confusion subscale inquire about a respondents' dysfunctional thinking using a Likert scale with statements such as "Choosing an occupation is so complicated, I just can't get started." The Commitment Anxiety subscale asks respondents to respond on the Likert scale to statements such as "There are several fields of study or occupations that fit me, but I can't decide

on the best one." The final subscale, External Conflict, ask respondents to respond on a Likert scale to statements such as "I know what I want, but someone's always putting obstacles in my way."

Career State Inventory

The Career State Inventory (CSI) (Leierer et al., 2017), a brief questionnaire and revision of the Career Decision State Survey (CDSS), possesses an acceptable level of reliability and internal consistency with a Cronbach's alpha of r = .74 and is comprised of five questions that assess the capability component of readiness within the framework of Cognitive Information Processing, and specifically, "one's readiness to engage in career decision making" across goal certainty, career goal satisfaction, clarity and confidence (self-efficacy) in pursuing a career goal (Hayden & Osborn, 2020; Leierer et al., 2017 p. 2).

As suggested for use in the CSI manual, the CSI (Appendix C) was embedded in an intake form, where the data was originally gathered for this study. The CSI comprises aspects of other widely used career assessments to create a short form. The first question, which focuses certainty, of the CSI incorporates the Occupational Alternatives Questions that was initially used in the Self-directed Search, revised by Slaney (1978, 1980), and concurrent validity and test-retest reliability demonstrated in studies cited by Bullock-Yowell et al. (2011b). In the first question, respondents were asked to list the occupations they are considering and then their first-choice occupation or undecided, with a first choice only rendering a score of 1, a first choice and alternative a score of 2, alternatives only a score of 3, and undecided only a score of 4 (Leierer et al., 2017). The second question, which focuses on satisfaction, is the Satisfaction of Choice Scale, which originated with Zener & Shmuelle (1972) and adapted by Holland et al., (1975) and in its current version, the question "How well satisfied are you with your responses to No. 1

above?" has been modified from a six-point scale to a five-point scale by the authors of the CSI with the scale ranging from Very Satisfied (1) to Very Dissatisfied (5) (Leierer et al., 2017). Lastly, the three final questions, Vocational Clarity, includes three true/false items, such as, "Making up my mind about a career has been a long and difficult problem for me" derived from the Holland, Johnston, and Asama (1993) My Vocational Situation with true equaling a score of 1 and false a score of zero for each item (Leierer et al., 2017).

Occupational Choice Self-Efficacy Scale

In this study, occupational choice self-efficacy was measured by the Occupational Choice Self-Efficacy Scale (Osborn et al., 2020), which is comprised of questions related to CIP domain skills and career decision-making self-efficacy pre career counseling assessment measure (Appendix C) that was developed by affiliates of the Florida State University (FSU) Career Center to measure self-efficacy within the domains of the Pyramid of Information Processing (Sampson et al., 2004), a pillar within CIP theory (Hayden & Osborn, 2020). This measure has been used in other studies, and in Osborn et al. (2020) was utilized for pre-test with 202 students and produced a Cronbach's alpha of .82.

The measure contains total six items. The items focus on assessing self-efficacy and career decision-making areas reflective of CIP theory, specifically relating to the CIP domains of self-knowledge, occupational options knowledge, and decision-making process. The CIP Skills related questions consists of three items with responses on a five-point Likert scale from strongly disagree to strongly agree and has been normed on college-aged students (Hayden & Osborn, 2020; Osborn et al., 2020).

In addition to the items pertaining to the CIP theory this assessment also includes three items that focus on affective components of self-efficacy as it relates to one's ability to engage in

career decision-making. This includes questions pertaining to confidence in career decision-making, confidence in making a plan, and monitoring self-talk (Hayden & Osborn, 2020; Osborn et al., 2020). Individuals responded using a five point-Likert scale ranging from poor to excellent.

Data Analysis

Data analysis was performed using SPSS V22.0. Descriptive statistics including demographic information, frequencies, analysis of means, and percentages were used to understand trends within and between sample populations. Statistical measures or *F*-tests to identify variance between groups were utilized. Specifically, multivariate analyses of variance were used for this study, along with assumption testing prior to analysis. Tables and needed charts were utilized to display data analysis findings.

Summary

Within this chapter, the researcher outlined the research study participants, procedures, measures, and data analysis. The research utilized de-identified archival data that consisted of a cross-sample of client's pre counseling assessments who engaged in career counseling at a large university located in the Southeastern United States. Due to the archival data used in this study, the data was anonymous, and participants could not withdraw from the study, as data could not be identified or linked to a specific participant. The assessments and surveys utilized were Brief Demographic Measure, the Career Thoughts Inventory (Sampson et al., 1996), the Career State Inventory (Leierer et al., 2017), and additional Occupational Choice Questions (Osborn et al., 2020) to answer five research questions. Data was analyzed using SPSS V22.0 software for descriptive statistics and Multivariate Analysis of Variance to identify variance between two

cross-sections of participants, as well as the interaction of the cross-section of participants with demographic variables as fixed factors or second independent variables.

Chapter 3: Results

Introduction

The purpose of the present quantitative study was to investigate the variance of clients who initiated career counseling either before or during the COVID-19 pandemic, and specifically considering career decision state, occupational choice self-efficacy, and dysfunctional career thoughts, as measured by the Career State Inventory (CSI, Leierer et al., 2017), Occupational Choice Self-Efficacy Scale (OCSES, Osborn et al., 2020), and the Career Thoughts Inventory (CTI, Sampson et al., 1996), respectively. Additionally, the presented study was interested in variance in clients initiating career counseling prior to or during COVID-19, and their Decision-Making Confusion, Commitment Anxiety, and External conflict as measured as subscales of the CTI (Sampson et al., 1996). For this study, MANOVA was selected as the method of analysis due to having independence of observation, or two participant groups without duplication of participants in either group (Tabacknick & Fidell, 2018). Additionally, within the study there was more than one related dependent variable and one categorical independent variable, the timeframe of career counseling initiation, which represents two time periods of prior to and during COVID-19. Along with the independent variable there are two separate groups of participants, with no participant being in both groups.

Demographics

Of the 168 of the individuals who initiated career counseling prior to and during COVID-19, 107 completed all three of the measures related to the career counseling intake process, including a questionnaire on demographics (see Table 1). From the 107 participants, 67 (62.6%) completed the intake process to initiate career counseling prior to COVID-19 and 40 (37.4%) completed the intake process during COVID-19. Participants ages ranged between 18-47 and

within the following age ranges with 83 (77.6%) between18-24, 9 (8.4%) between 25-29, 6 (5.6%) between 30-34, 3 (2.8%) between 35-39, 4 (3.7%) between 40-44, and 2 (1.9%) between 45-49 years of age. Of the 107 participants all indicated their gender, as either male, female, or non-binary with 69 (64.5%) of the participants indicated they identified as female, 36 (33.6%) of the participants indicated they identified as male, and 2 (1.9%) of the participants indicated they identified as non-binary. 10 (9.3%) indicated their student status as freshmen, 15 (14.0%) indicated their student status as sophomore, 31 (29.0%) indicated their student status as junior, 37 (34.6%) indicated their student status as senior, 14 (13.1%) indicated their student status as a graduate student. Within the participants, 42 (39.3%) identified their race as Black, Indigenous, People of Color (BIPOC), with the full disaggregated racial identities of participants as 1 (0.9%) American Indian/Native American, 4 (3.7%) Asian, 10 (9.3%) Black, 18 (16.8%) Hispanic/Latinx, 65 (60.7%) White, and 9 (8.4%) Multiracial. Participants indicated their relationship status as 1 (0.9%) Cohabitation/Domestic Partner, 2 (1.9%) Divorced, 8 (7.5%) Married, 96 (89.7%) Single.

In addition to traditional demographics, participants were asked to identify the need of accommodations related to a disability, and previous and current mental health counseling. Of the 107 participants, 15 (14.0%) indicated a need or possible need for accommodations due to a disability and 92 (86.0%) no need of accommodations. Seventy-five (70.1%) of participants had previously engaged in mental health counseling and 30 (29.9%) had not previously engaged in mental health counseling. Participants also indicated whether or not they were currently in mental health counseling, and 42 (39.3%) indicated that they were currently engaged in mental health counseling, while 65 (60.7%) indicated they were not currently engaged in mental health counseling.

Table 1

Demographic Information

Characteristic	Identity Group	Prior to COVID-19	During COVID-19	N	Percentage
Initiation of Career Counseling	Initiation Period	67	40	67	62.6%
				40	37.4%
	Total			107	100%
Age	18-24	55	28	83	77.6%
	25-29	6	3	9	8.4%
	30-34	3	3	6	5.6%
	35-39	1	2	3	17.7%
	40-44	2	2	4	4.5%
	45+	0	2	2	98.6%
	Total	67	40	107	100%
Gender	Male	24	12	36	33.6%
	Female	42	27	69	64.5%
	Non-Binary	1	1	2	1.9%
	Total	67	40	107	100%
Student Status	Freshman	6	4	10	9.3%
	Sophomore	10	5	15	14.0%
	Junior	23	8	31	29.0%
	Senior	22	15	37	34.6%
	Graduate	6	8	14	13.1%
	Total	67	40	107	100%
Race	American Indian/Native American	1	0	1	0.9%
	Asian	1	3	4	3.7%
	Black	9	1	10	9.3%
	Hispanic	12	6	18	16.8%
	White	37	28	65	60.7%
	Multiracial	7	2	9	8.4%
	Total	67	40	107	100%
Aggregated Race	BIPOC	30	12	42	39.3%
	White	37	28	65	60.7%
	Total	67	40	107	100%
Accommodation for Disability	Accommodation	9	6	15	14.0%
	No Accommodation	58	34	92	86.0%
	Total	67	40	107	100%
Previously Engaged in Mental Health Counseling	Previous Counseling	41	34	75	70.1%
	No Previous Counseling	26	6	32	29.9%
	Total	67	40	107	100%

Table 1

Demographic Information Continued

Characteristic	Identity Group	Prior to COVID-19	During COVID-19	N	Percentage
Currently Engaged in Mental Health Counseling (MHC)	Currently in MHC	19	23	42	39.9%
	Not in MHC	48	17	65	60.7%
	Total	67	40	107	100%
Relationship Status	Cohabitation/Domestic Partner	0	1	1	0.9%
	Divorced	0	2	2	1.9%
	Married	4	4	8	7.5%
	Single	63	33	96	89.7%
	Total	67	40	107	100%

Reliability Testing

Prior to running a one-way multivariate analysis of variance (MANOVA), the researcher conducted reliability analysis of the independent variable measures. The mean, standard deviation, and reliability statistics are reported in Table 2 for the Career State Inventory (CSI), Occupational Choice Self-Efficacy Scale (OCSES), and Career Thoughts Inventory (CTI), which yielded an α =.521, α =.656, and α =.888, respectively. Additionally, the CTI subscales of Decision-Making Confusion, Commitment Anxiety, and External Conflict yielded α =.869, α =.739, and α =.722. The CSI α = .521, is much lower than α = .74 as cited in Leierer et al. (2017). The low number of items to measure career decision state, as well as a smaller sample size within this study as compared to previous studies using the CSI and OCSES, which each had over 200 participants, may have contributed to a lower Cronbach's alpha. The same issues may also relate to the lower Cronbach's alpha for the OCSES, which barely meets an acceptable level for this study as compared to other studies previously cited.

Table 2

Scale Reliability

Scale	N	Mean	SD	Cronbach's Alpha	Cronbach's Alpha Prior Research
CSI	5	8.52	1.679	.521	.74
OCSES	7	17.09	4.074	.656	.82
CTI (Full Scale)	48	120.28	15.739	.888	.97
CTI-Decision Making Confusion	14	33.67	6.822	.869	.94
CTI-Commitment Anxiety	10	29.06	4.240	.739	.91
CTI-External Conflict	5	10.70	2.982	.722	.81

Testing Assumptions for MANOVA

For the one-way MANOVA, preliminary assumption testing was conducted, including power through G*Power (Faul et al., 2007) for adequate sample size. With calculating a post hoc power analysis for MANOVA global effects with a total sample size of 107, the effect size = .667, Power (1-β)=.99, F=93,103) =2.693. In a piori calculations of power analysis for MANOVA global effects to estimate sample size at an effect size of .667 and a Power (1-β)=.99, was a sample size of 40 per group. Additionally, normality was tested by creating boxplots. There were two univariate outliers as assessed by examination of the boxplots (see Figure 1), which were removed since the dataset was archival and the researcher was unable to check for errors in data entry. Upon removing the univariate outliers and examining the new boxplots (see Figure 1), The assumption of no extreme outliers is tenable, however the assumption of univariate normality or each dependent variable at each level or group of the independent

variable is not tenable according to the results of Shapiro-Wilk tests of normality (see Table 2). Shapiro-Wilks test for levels of the independent variables for both dependent variables indicated that the assumption of normality was tenable for the CTI and OCSES dependent variables for each level or group of the independent variable. However, the assumption of normality for the dependent variable Career State Inventory was not tenable based on Shapiro-Wilks test. However, according to Tabacknick and Fidell (2018), with a sample size of more than 20 per cell, MANOVA is reasonably robust when no extreme outliers effect normality, which was found to be tenable for this study through the evaluation of boxplots.

Figure 4

Boxplots

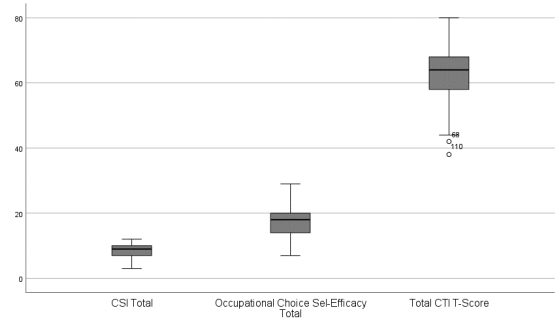
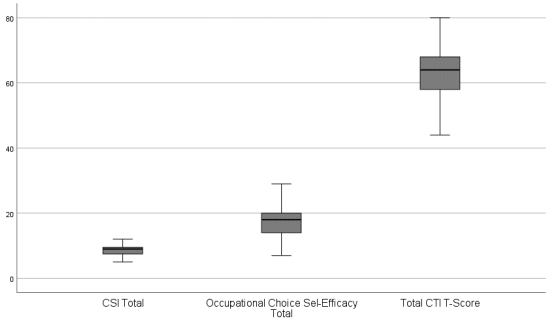
Boxplots with Outliers Identified	Boxplots with Outliers Removed
	

Table 3

Shapiro-Wilk Test of Normality

Variable	Prior to COVID-19			During COVID-19		
	W	df	*P*	W	Df	*p*
CSI	.951	67	.010	.926	40	.012
OCSES	.988	67	.751	.956	40	.123
CTI	.988	67	.749	.964	40	.226

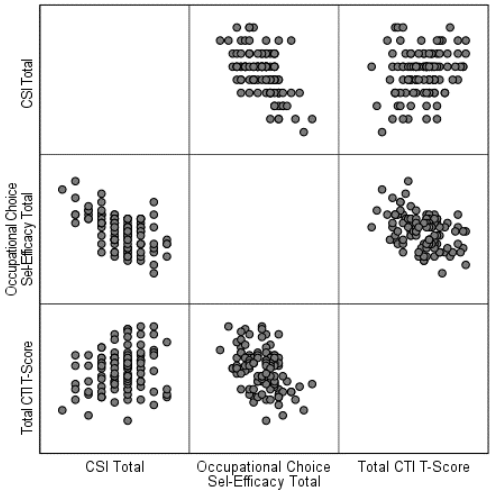
Mahalonbis distance was used to assess the multivariate outliers, one multivariate outlier was determined by exceeding the critical value of 16.27, and the outlier was removed from the dataset, thus establishing a dataset where the critical value of 16.27 was not exceeded with a maximum value equal to 10.63. Linearity is satisfactory per inspection of scatterplots (see Figure 5). Pearson's r was utilized to test for multicollinearity or singularity. The association between the dependent variables CSI and OCSES was significant with a moderate negative correlation, r(3) = -.563x, $p < .001$, the association between CSI and CTI was slightly positively correlated, r(3) = .225, $p \leq .02$, and the association between the CTI and OCSES was moderately negatively correlated, r(3) = -.422, $p < .001$. All correlation coefficients were less than .6 at an $\alpha = .05$; thus, multicollinearity is not a concern (Tabacknick & Fidell, 2018). Singularity is not a concern because there is adequate significance between the three dependent variables. The assumption of the homogeneity of variance-covariance for the three independent variables CSI, OCSES, and CTI was tenable based on the results of the Box's test $M = 1.342$, F (6, 44510.270) = .216, $p = .972$. The results of Levene's test of equality of error provided evidence that the assumption of homogeneity of variance across groups was also tenable for CSI, OCSES, and

CTI, F (1, 105) = .403, p = .527, F (1, 105) = .461, p = .499, and F (1, 105) = .012, p = .911, respectively.

Figure 5

Scatter plots for Linearity

Scatter Plot Matrix for Linearity



Through statistical analysis the following null hypotheses were tested:

1. The initiation of career counseling prior to and during COVID-19 does not statistically significantly differ across career-decision making factors of career state, occupational choice self-efficacy, and dysfunctional career thoughts as measured by the Career State Inventory (CSI, Leierer et al., 2017), the Occupational Choice Self-efficacy scale (OCSE, Osborn et al., 2020), and the Career Thoughts Inventory (CTI, Sampson et al., 1996), respectively.

2. The initiation of career counseling prior to and during COVID-19 do not statistically significantly differ in terms of decision-making confusion, commitment anxiety, external conflict and total dysfunctional career thoughts as measured by the CTI (Sampson et al., 1996).
3. The initiation of career counseling prior to and during COVID-19 would not statistically significantly differ in terms of Career State, as measured by the Career State Inventory (CSI, Leierer et al., 2017).
4. The initiation of career counseling prior to and during COVID-19 would not statistically significantly differ in terms of Occupational choice self-efficacy (OCSE, Osborn et al., 2020).
5. The initiation of career counseling prior to and during COVID-19 do not statistically significantly differ career-decision making factors of career state, occupational choice self-efficacy, and dysfunctional career thoughts as measured by the Career State Inventory (CSI, Leierer et al., 2017), the Occupational Choice Self-efficacy scale (OCSE, Osborn et al., 2020), and the Career Thoughts Inventory (CTI, Sampson et al., 1996), respectively across demographic variables as measured by the CTI (Sampson et al., 1996).

Research Question 1: What are the differences across measures of career decision-making as compared before COVID-19 and during-COVID-19?

In testing the null hypothesis that there is no difference across measures of career decision-making as compared to prior to COVID-19 and during COVID-19, the results of the MANOVA yielded that there was a statistically significant difference between the two groups on the combined dependent variables, of CSI, OCSES, and CTI, Wilks $\Lambda = .915$, F (3.00, 103.00) =

3.196, $p < .027$, partial $\eta^2 = .085$, observed power = .723. Through univariate analyses, one-way ANOVA for each independent variable, CTI, F (1, 105) = 8.848, $p = .004$, partial $\eta^2 = .078$, observed power = .838, CSI, F (1, 105) = .041, $p = .839$, partial $\eta^2 = .000$, observed power = .055, and OSC, ANOVA, F (1, 105) = 2.618, $p = .109$, partial $\eta^2 = .024$, observed power = .361, evidence rejects the null hypothesis that there is no statistically significant difference across measures, as there is a statically significant difference for the CTI. Which is further supported when evaluated the means between independent variable groups (see Table 7).

However, the CTI was the only measure to show statical significance, as the results of the ANOVA for the CSI, F (1, 105) = .041, $p = .839$, partial $\eta^2 = .000$, observed power = .055, and OSC, F (1, 105) = 2.618, $p = .109$, partial $\eta^2 = .024$, observed power = .361 failed to provide evidence of statistical significance. Thus, indicating that neither the CSI nor OCSES accounted for variance of the dependent variable. Further evaluation of the differences in means between those who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19, provide additional support for a lack of statistical significance between groups as related to the CSI and OCSES.

From the analysis across measures, evidence from both the MANOVA and univariate analyses of the independent variables, CSI, OSCES, and CTI, provide evidence that the CTI is the only measure that accounts for variance of the dependent variable, and that elevated CTI T-Scores are the strongest predictor or factor related to the difference between those who initiated career counseling prior to COVID-19 and those initiated career counseling during COVID-19.

Table 4

Descriptive Statistics and Univariate Analysis of Variance

	Prior to COVID-19			During COVID-19				
Measure	Mean	SD	N	Mean	SD	N	*F*	*p*
Career Thoughts Inventory	61.81	7.130	67	66.28	7.861	40	(1,105) = 8.848	.004
Career State Inventory	8.51	1.727	67	8.57	1.551	40	(1,105) = .041	.839
Occupational Choice Self-Efficacy Scale	17.58	4.016	67	16.27	4.089	40	(1,105) = 2.618	.109

α =.05

Research Question 2: What are the differences in college students' career thoughts; including decision-making confusion, commitment anxiety, and external conflict as compared before COVID-19 and during-COVID-19?

The results of the MANOVA yielded that there was a statistically significant difference between the two groups, prior to COVID-19 and During COVID-19, on the combined dependent variables of the CTI subscales (Sampson et al., 1996) , Decision Making Confusion T-Score (DMC), Commitment Anxiety T-Score (CA), and External Conflict T-Score (EC), Wilks Λ = .856, F (3.00, 103.00) = 5.797, $p < .001$, partial η^2 = .144, observed power = .945. Based on the results of the MANOVA, evidence was sufficient to reject the null hypothesis and conclude that clients dysfunctional career thoughts, as measured by the Career Thoughts Inventory (Sampson et al, 1996), significantly differed based on the timeframe in which they initiated career counseling.

For the CTI, the effect size was large. The observed power was .961, indicating that there was an 96.1% probability of a statistically significant difference occurring. The strength of relationship between the timeframe of initiating career counseling and dysfunctional career thoughts was strong. Results demonstrated that there was sufficient evidence to reject the CTI null hypothesis, F (1, 105) = 8.848, p = .004, partial η^2 = .078, observed power = .838, with the Career Thoughts T-Score, as measured by the Career Thoughts Inventory accounting for 7.8% of the variance of the dependent variable. The observed power of .838 indicated that there was 83.8% probability of a statistically significant difference occurring.

Additionally, univariate analysis through one-way analysis of variance for subscales of Decision-Making Confusion (DMC) and Commitment Anxiety (CA) provided evidence to reject the null hypothesis, F (1, 105) = 9.267, p = .003, partial η^2 = .081, observed power = .855 and F (1, 105) = 16.339, p = < .001, partial η^2 = .138, observed power = .980 and that both DMC and CA statistically differed for the two groups of those who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19. Observed power for DMC and CA indicate that there was a probability of 85.5% and 98.0%, respectively, for a statistically significant result with each ANOVA. In addition to evidence to reject the null hypotheses, The strength of relationship between DMC and when career counseling was initiated, accounted for 8.1% of the variance of the dependent variable. The strength of relationship between CA and when career counseling was initiated, accounted for 13.8% of the variance of the dependent variable.

While CTI T-Score, DMC, and CA provided evidence to reject the null hypothesis, the results of the one-way ANOVA for External Conflict (EC), failed to reject the null hypothesis, F (1, 105) = .073, p = .788, partial η^2 = .001, observed power = .058. With an observed power of

.058, there was a 5.8% probability of the difference between groups occurring by chance. Thus, the subscale of EC, as measured by the CTI did not account for the variance of the dependent variable.

Upon evaluating the means, found in the descriptive statistics (see Table 4), between those who initiated career counseling prior to COVID-19 and during COVID-19, provided a greater understanding of the two assessed groups on the CTI subscales. Based on the differences in means for DMC, and CA, with higher means calculated for those who initiated career counseling during COVID-19, there is evidence to support that those who initiated career counseling during COVID-19 presented with elevated dysfunctional thoughts overall, and specifically related to DMC and CA subscales. In evaluating both variance and difference between means, CA was the strongest predictor or factor for those who initiated career counseling during COVID-19 as compared to individuals who initiated career counseling prior to COVID-19.

Table 5

Descriptive Statistics and CTI Univariate Analysis of Variance

	Prior to COVID-19			During COVID-19				
CTI Subscale	Mean	SD	N	Mean	SD	N	*F*	*p*
Decision Making Confusion	61.24	8.419	67	66.68	9.752	40	(1,105) =9.267	.003
Commitment Anxiety	61.10	7.746	67	67.43	7.958	40	(1,105) =16.339	<.001
External Conflict	60.73	12.745	67	61.40	11.862	40	(1,105) =.073	.788

α =.05

Research Question 3: What are the differences in college students career state as compared before COVID-19 and during-COVID-19?

A univariate analysis of the CSI was conducted through a one-way ANOVA. As evident from the results of the one-way ANOVA, F (1, 105) = .041, p = .839, partial η^2 = .000, observed power = .055, there was a failure to reject the null hypothesis. With an observed power of .055, there was a 5.5% probability that the difference between groups occurred by chance. Thus, career decision state, as measured by the CSI did not account for the variance of the dependent variable.

Upon evaluating the means, found in the descriptive statistics (see Table 5), between those who initiated career counseling prior to COVID-19 and during COVID-19, further evidence fails to reject the null hypothesis. Thus, there is evidence that there was no statically significant difference in the career state of those who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19.

Table 6

Descriptive Statistics and CSI Analysis of Variance

	Prior to COVID-19			During COVID-19				
Measure	Mean	SD	N	Mean	SD	N	*F*	*p*
Career State Inventory	8.51	1.727	67	8.57	1.551	40	(1,105) =.041	.839

α =.05

Research Question 4: What are the differences in college students' occupational choice self-efficacy as compared before COVID-19 and during-COVID-19?

To evaluate variance between occupational choice self-efficacy between students who initiated career counseling prior to COVID-19 and during COVID-19, a univariate analysis of the CSI was conducted through a one-way ANOVA. As evident from the results of the one-way ANOVA, F (1, 105) = 2.618, p = .109, partial η^2 = .024, observed power = .361, there was a failure to reject the null hypothesis. With an observed power of .361, there was a 36.1% probability that the difference between groups occurred by chance. Thus, occupational choice self-efficacy, as measured by the OCSES did not account for the variance of the dependent variable.

Upon evaluating the means, found in the descriptive statistics (see Table x), between those who initiated career counseling prior to COVID-19 and during COVID-19, further provided an understanding of the difference of occupational choice self-efficacy between groups, thus supporting a failure to reject the null hypothesis. Thus, there is evidence that there was no statistically significant difference in the occupational choice self-efficacy of those who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19.

Table 7

Descriptive Statistics and OCSES Analysis of Variance

	Prior to COVID-19			During COVID-19				
Measure	Mean	SD	N	MEAN	SD	N	*F*	*p*
Occupational Choice Self-Efficacy Scale	17.58	4.016	67	16.27	4.089	40	(1,150) = 2.618	.109

α =.05

Research Question 5: What are the differences across measures when compared across demographic variables for college students prior to COVID-19 and during COVID-19.

Test the null hypothesis that there were no differences between dependent variable levels or groups, those who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19 across measures when compared across demographic variables, factorial or two-way MANOVAs were run with demographic variables (see Table 3) as fixed factors with the fixed factor of time of counseling initiation. For each demographic category, the identifying groups within each demographic variable was assigned a numeric value that corresponds with or codes the identity group which allowed for demographic categories to be added as a fixed factor or second independent variable when running the MANOVA. From this approach, an understanding of interactions between two independent variables, a demographic variable and time of counseling initiation, accounted for variance of the dependent variables as measured by the CSI, OSCE, AND CTI. Based on the analysis of variance, evidence failed to reject the null hypothesis (see Table 8). From the factorial or two-way MANOVAs, no demographic variable or fixed factor with the time of counseling initiation provided statistically

significant results that accounted for variance of the dependent variables the measured by, CSI, OCSES, and CTI.

Table 8

Multivariate Analysis of Variance Interaction with Demographics

Interaction with Time of Counseling Initiation	Wilk's Λ	*F*	*p*	η^2
Age Range	.911	(12,248.992) = .741.312	.711	.030
Gender	.984	(6,198) = .274	.945	.008
Student Status	.888	(12,28.992) = 1.269	.776	.014
Aggregated Race	.918	(6,198) = 1.445	.199	.042
Race	.871	(12,248.992) = 1.299	.219	.052
Accommodation	.986	(3,101) = .473	.702	.014
Previous Mental Health Counseling	.975	(3,101) =. 863	.681	.015
Current Mental Health Counseling	.958	(3,101) = 1.485	.223	.042
Relationship Status	.958	(3,101) = 1.485	.223	.042

*$\alpha = .05$

Summary

The current study was developed to gain an understanding of the differences in career state, occupational choice self-efficacy, and dysfunctional career thoughts, as measured by the Career State Inventory (CSI, Leierer et al., 2017), Occupational Choice Self-Efficacy Scale (OCSES, Osborn et al., 2020), and Career Thoughts Inventory (CTI, Sampson et al. 1996) between students who initiated career counseling prior to and during COVID-19. Further, this study sought to examine the variance of each measure between groups, as well as the subscales,

Decision Making Confusion, Commitment Anxiety, and External conflict as measured by the CTI. In addition to examining the difference of career decision-making measures, this study sought to examine the difference across demographic variables.

Results from this study indicated that dysfunctional thoughts, as measured by the CTI, accounted for the greatest variance between students who initiated career counseling prior to and during COVID-19. Furthermore, subscales of DMC and CA, also accounted for variance between groups, with Commitment Anxiety being the strongest predictor or factor. From comparing the means of the CTI, DMC, and CA between those who initiated career counseling prior to and during COVID-19, the means comparison provided additional evidence that elevated t-scores on the CTI and subscales of DMC and CA were indicative of those who initiated career counseling during COVID-19, as opposed to those who initiated career counseling prior to COVID-19.

Chapter 4: Discussion

The purpose of this cross-sectional study was to conduct an examination of career thoughts, career state, and occupational choice self-efficacy among college students initiating career counseling. Of specific focus was how these measures compare across students who initiated services prior to COVID-19 and during COVID-19. In addition to variance of measures between the two groups of students who initiated career counseling either prior to or during COVID-19, the study explored dysfunctional career thoughts by exploring the subscales, Decision Making Confusion, Commitment Anxiety, and External Conflict, as measured by the CTI, for possible differences. While analyzing measures and subscales, difference across demographic variables as co-variates across each measure was also explored. Results of the analyses of these measures and across demographic variables will be discussed in this chapter. Additionally, implications for counselors and counselor educators in relation to practice and utilization of assessments of career decision-making, as well as training future counselors in relation to working with and assessing clients during times of global crisis will be discussed in this chapter. Additionally, within this chapter, limitations of the current study, as well as recommendations for future research will be discussed.

Overview

Experiencing career decision-making challenges or periods of undecidedness is not atypical for college students. However, continuous career problems or extreme states of indecision can be compounded by dysfunctional career thoughts that contribute to psychological stress. According to Sampson et al. (2004), dysfunctional thoughts impede the capability of a person to make a career decision, and thus impacting an individual's confidence or self-efficacy related to occupational choice. As described in Bullock-Yowell et al (2011b), college student

dysfunctional career thoughts are elevated when significant complexity factors are present, and life stress and career decision is mediated by negative career thoughts about one's life circumstance. College students express feeling paralyzed, indecisive, or avoid making career decisions when dysfunctional or negative career thoughts are present, according to Sampson et al. (1996), which may prompt students to seek or initiate career counseling. Additionally, of those experiencing career indecision or the presentation of a career problem, it is more common for these individuals to experience mild to moderate anxiety and depression (Dierenger et al., 2016; Hayden & Osborn, 2020; Saunders, Peterson et al., 2000; Walker & Peterson, 2012).

Counselors and counselor educators when working with clients or preparing future counselors, should understand the inverse correlation of readiness for career choice (Sampson et al., 2004), and how complexity factors such as family stress, financial worry, economic uncertainty, and social isolation may impact a person's metacognitions regarding career decisions. When negative thoughts are accounted for, individuals experiencing stress from complexity factors express greater certainty and satisfaction with their career decision and are less likely to become stagnant or avoid the career decision-making process (Bullock-Yowell et al., 2011b). Thus, increasing the importance for counselors and counselor educators to understand how times of crisis, such COVID-19 may influence the career decision-making process. A greater understanding of potential motivating factors for students initiating career counseling under the pressures of global uncertainty, can assist in the conceptualization, treatment planning, and intervention selection process to address dysfunctional thoughts that may be contributing to career indecision, as well as mild to moderate anxiety and depression.

The present study was designed to understand the variance or differences between students who initiated career counseling prior to COVID-19 and those who initiated career

counseling during COVID-19 in relation to their assessed levels of dysfunctional career thoughts, career decision state, and occupational choice self-efficacy. This study sought to provide counselors and counselor educators knowledge of capability factors that differ between groups to support future practice and training within the field of career counseling during times of global crisis.

Discussion of Results

Career decisions are an important part of the development process for college students (Amir & Gati, 2006), yet pervasive career problems can lead to avoidance to stagnation in the decision-making process. During highly stressful times related to complexity factors such as familial concerns, financial worry, economic decline, health and ability challenges, and lack of social support, students who are experiencing psychological distress around their career decision-making may initiate career counseling. According to Cognitive and CIP theories, stress related to complexity factors and career indecision is mediated by dysfunctional or negative career thoughts, which impact one's career decision state and occupational choice self-efficacy (Bullock-Yowell, 2011b), thus the first research question in this study was related to developing an understanding of the differences in career thoughts, as measured by the Career Thoughts Inventory (Sampson et al., 1996), between students who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19.

After running a MANOVA with the combined dependent variables with an $\alpha = .05$ and $p < .027$, providing evidence that there was statistical significance between students who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19, which was the primary focus of research question four. Upon review of the univariate analysis of variance, of the three measures, Career State Inventory (Leierer et al.,

2017), Occupational Choice Self-Efficacy Scale (Osborn et al., 2020), and the Career Thoughts Inventory (Sampson et al., 1996), only the CTI provided evidence of statistical significance between groups. In analyzing dysfunctional career thoughts, the CTI t-score accounted for 7.8% of the variance between pre-COVID and during COVID-19 career counseling imitations. Furthermore, students who initiated career counseling during COVID-19 expressed higher CTI t-scores with a mean of 61.81 for pre-COVID imitation of career counseling compared to a mean of 66.28 for those who initiated career counseling during COVID-19.

The first research question was designed to gain a greater understanding of career thoughts as factor of the capability dimension of readiness for career choice. With three subscales within the CTI, decision making confusion, commitment anxiety, and external conflict are measured. Through a second MANOVA, α=.05, $p. < .001$, additional evidence was provided that there was statistical significance in dysfunctional career thoughts between students who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19. Through additional univariate analyses, of the three subscales, DMC and CA demonstrated statistical significance, accounting for 8.1% and 13.8% of variance, respectively. These results indicated that students who initiated career counseling during COVID-19 presented with higher t-score on the CTI subscales for DMC and CA. Furthermore, t-score means for the DMC and CA subscales also demonstrated elevation for students who initiated career counseling during COVID-19 with means of 66.68 and 67.43, respectively, compared to pre-COVID means of 61.24 and 61.10. Of the two subscales the greatest difference was within the subscale of commitment anxiety.

As discussed by Leierer et al. (2017), career state, as measured by the Career State Inventory (Leierer et al., 2017) is also an indicator or way to assess capability as a dimension of

readiness for career choice. The second research question was developed to assess whether or not career state accounted for variance between students who initiated career counseling prior to COVID-19 and students who initiated career counseling during COVID-19. The combine variable MANOVA provided evidence with an $\alpha = .05$ and $p < .027$ that there were differences between students who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19. However, upon running univariate analyses, there was no statistically significant evidence that the CSI accounted for variance between the two groups who initiated career counseling. Additionally, research question three was developed to explore whether or not the Occupational Choice Self-Efficacy Scale accounted for variance between the two groups who initiated career counseling, and like the CIS, the OCSES did not provide statically significant evidence that occupational choice self-efficacy accounted for variance between students who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19.

Finally, after multivariate and univariate analyses of the three measures and the CTI subscales, research question five was developed to examine variance while accounting for the interaction of demographic variable as a second independent variable or fixed factor. Upon running factorial or two-way MANOVAs with each demographic category as a second independent variable, as with the MANOVA results with the combined dependent variables of the CSI, OCSES, and CTI, the results provided no statistically significant variance between the two groups of students who initiated career counseling with any interaction from a demographic category as a second dependent variable. Upon reviewing the Wilk's Λ, not a single demographic variable demonstrated evidence of statistical significance to account for variance between the group. Thus, providing a greater understanding of the implications of increased

complexity factors during COVID-19 accounting for variance between the groups of students who initiated career counseling.

From the analyses of the data, the results of the study are consistent with prior literature. As previously mentioned, according to Bullock-Yowell et al. (2011b), life stress increases negative career thoughts, and given the uncertainty and complexity factors presented during COVID-19 related to economic uncertainty, family and social stress, possible financial and familial strain, as well as a volatile job market, this research study found that dysfunctional thoughts did present as elevated. With the findings from this study, there are implications for practitioners, counselor educators and researchers, and specifically related to dysfunctional career thoughts, and specifically with in the subscales of DMC and CA, as a measure of the dimension of capability in relation to complexity factors and readiness for career choice.

Implications for Counselors and Counselor Educators

This study sought to directly impact career counselors and career services on college and university campuses, as it investigated cognitive factors related to career decision-making challenges faced by college students during a global health crisis, the COVID-19 pandemic. The global pandemic led to drastic and sharp declines in the economy and available occupational options, as well as impacted contextual factors, thus increasing complexity in the career decision-making process. The results of this study provide discussion points for counselor educators in relation to the readiness for career choice, and specifically around dimension of capability, as measured by dysfunctional career thoughts through the CTI. From previous research, increased negative career thoughts are corelated with mild to moderate anxiety in depression (Dierenger et al., 2016; Hayden & Osborn, 2020; Saunders, Peterson et al., 2000; Walker & Peterson, 2012), thus providing insight to counselor educators and practicing career

counselors that there is a greater likelihood that students seeking career counseling during times of crisis or increased complexity are more likely to experience comorbidity of career and mental health concerns. In considering the comorbidity of career and mental health issues, it is important for counselor educators to teach counselors in training (CIT) that an intersection between career decision-making and mental health exists, as well as how to select and interpret instruments, such as the CTI (Sampson et al., 1996), in the identification of intersecting concerns.

Additionally, in the use of the CTI, providing information to increase the understanding of the relationship between career thoughts and complexity, and moreover the indicators of elevated decision-making confusion and commitment anxiety, as potential indicators of increased life stress or complexity factors that also correlate to mild to moderate depression and anxiety (Dierenger et al., 2016; Hayden & Osborn, 2020; Saunders, Peterson et al., 2000; Walker & Peterson, 2012). Through a greater understanding of Readiness for Career Choice (Sampson et al., 2004) as it relates to career decision making and mental, Counselor Educators can support CITs in developing a more holistic conceptualization of clients and greater identification of primary, secondary, and tertiary presenting issues, develop more integrated treatment plan, as well as identify more appropriate interventions. Additionally, practicing counselors, who are limited in their knowledge skill within career or mental health counseling based on their specialty area, by understanding the implications of COVID-19, may review their practice and provision to increase consultation in an effort to better support their clients. Thus, through assessing their scope of knowledge and practice in the development of consultative practices, two-way exchanges of information, increased professional development to supplement knowledge and skill, or referrals to more appropriate services.

Additionally, this exploratory investigation sought to provide information that can inform future practice and research in career services and career counseling. This study provided a mere insight into one aspect readiness for career choice during times of rapidly increasing complexity and crisis. This study can serve as a starting point for additional research related to readiness for career choice and the relationship of capability and complexity in times of crisis to promote additional research in areas related to the relationship of trauma and career decision making, natural disasters and career decision making, or other areas to increase research and identify intersections between crisis counseling, mental health and career concerns. Which can then support the education of CITs and the professional development of counselors to work with clients experiencing diverse yet intersecting challenges. Specifically, this study sought to inform career counseling practitioners in relation to cognitive and emotive trends in assessments related career decision-making during times of economic upheaval and uncertainty that can inform interventions for career counseling. From this study, the Career Thoughts Inventory (Sampson et al., 1996) provided the greatest reliability and strongest measure of capability during a time of crisis. Thus, reinforcing previous studies that demonstrate correlations between career thoughts and psychological distress (Dierenger et al., 2016; Hayden & Osborn, 2020; Saunders, Peterson et al., 2000; Walker & Peterson, 2012), specifically related to mild to moderate anxiety and depression. From the literature and the results of this study, during times of crisis and trauma, the CTI may be a more reliable assessment for counselors that can contribute to greater conceptualization, treatment planning, and intervention selection.

In addition to counselor education, counseling practice and research, it was not lost on the researcher that the sample sizes pre COVID-19 and During COVID-19 were different, with the sample of during COVID-19 participants being smaller. To an extent the difference was

attributed to the change in provisions of counseling to tele-career counseling, which posed a novel issue of students who initiated career counseling being located in state different from where their counselor was legal able to practice. Thus, prompting the need to review and look at advocacy work for greater portability and reciprocity of counseling privileges from on state to another, as well as a greater referral network for practicing counselors. Moreover, in looking at the decline in participants during COVID-19, it was also noticed that traditionally marginalized identities in relation to race saw the greatest decline, yet from during COVID-19, based on available research experienced these identities experienced greater increases in complexity Bowleg, 2020; Falco et al., 2020). Based on the limited data, new questions related to access to reliable internet services, technology, and other future research questions related to equity, access, and advocacy emerged.

From the pursued research, evidence of a potential trend, related to elevated career thoughts, and specifically DMC and CA, informs counselor educators and supervisor on trends related to the implications of COVID-19 related to the initiation of career counseling by college students to assist in the education and training of future counselors, and to equip them in working with college and university clients experiencing career indecision, dysfunctional career thoughts, or low occupational self-efficacy during times of crisis and uncertainty. Not only was the purpose of this study to inform counselors, counselor educator and supervisor, but also to derive focus on future research related to career counseling as there is a paucity of research related to the specialty of career counseling, and even more so in relation to career counseling during times of crisis.

Limitations

One limitation for this study was the higher amount of attrition in the group of students who initiated career counseling during COVID-19. Due to state licensure laws that limit portability and/or practice across state lines, there was an increased number of students who started the initiation process but were not able to continue due to relocated for school and not residing in the same state as the career counselor, or who did not have consistent or reliable access to confidential spaces or internet. Due to these limitations, as a possible contributing factor, there were fewer participants in the group who initiated counseling during COVID-19 than those who initiated career counseling prior. With having groups that were not equal, scale reliability and variance of the smaller scales, CSI and OCSES, may have been impacted.

Additionally, the limited diversity in demographic variables related to age and race may have impacted the ability to effectively analyze variance across these variables. This issue may also have impacted the results of the analysis of variance when accounting for gender where there was a significantly higher percentage of female students who initiated career counseling over male students. In addition to gender there was a more significant decrease in BIPOC identities during COVID-19, which may also have contributed to, or impacted results related to independent variable interactions and variance.

The final limitation of this study was the lack of data related to complexity variables. The lack of identification of complexity variables experienced by participants limited the ability of the researcher to identify if there were any specific factors of complexity that correlated with the elevation in career thoughts, and specifically Decision-Making Confusion and Commitment Anxiety.

Future Recommendations for Research

Future studies on cognitive factors of career decision making and the initiation of career counseling need to focus on complexity factors to establish whether or not and how such factors as financial stress, familial, social, economic, health issues or trauma may correlate with career thoughts. Moreover, the relationship between complexity factors and decision-making confusion, commitment anxiety, and external conflict. Identifying whether or not there is a relationship between complexity factors and dysfunctional career thoughts could provide greater insights and inferences for practicing counselors, as well as assist counselor educators in preparing counselors in training to work with clients experiencing career indecision through enhanced conceptualization, treatment planning, intervention selection and assessment.

A qualitative study focuses on complexity factors and students experiences prior to and during COVID-19 is needed to further establish an understanding of the lived experience of COVID-19 and affective factors of career-decision making intersected with dysfunctional career thoughts. Additionally, a qualitative study could provide additional insight into issues related to knowledge or career counseling resources, as well as the impact of equity and access to career support service on the experience of students in college during the pandemic. A qualitative study with such a focus could help provide strategic insight or enhanced services on college campuses, as well as inform future counseling provisions.

With the changes in provisions for career counseling that occurred during COVID-19, the differences in preferences of counseling modality, as well as the comparison of counseling outcomes between modalities would increase the research that focuses on counseling provisions. Although tele-counseling service delivery has increased as a provision for direct clinical practice (Barnett & Kolmes, 2016; Varghese et al., 2020,) there continues to be a paucity of research that explores tele-counseling services, and even more so a dearth of research related to the specialty

of career counseling provided through tele-counseling. With the attrition or differential in a sample size, additional research on the provision of counseling, and specifically tele-career counseling in relation to equity and access is essential. Additional research on the provision of counseling could enhance counselor educators' ability to provide enhanced training to future counselors, advocate greater equity and access, as well as greater information on intervention and assessment use across modalities.

Summary

The current study developed an understanding of the variance and differences between career thoughts, career state, and occupational choice self-efficacy, of students who initiated career counseling prior to COVID-19 and during COVID-19, through the analysis of the Career Thoughts Inventory, Career State Inventory, and Occupational Choice Self-Efficacy Scale, as well as CTI subscales of Decision-Making Confusion, Commitment Anxiety, and external conflict across demographic variables. Furthermore, this study identified that during a time of increased complexity in the midst of a global pandemic, students who initiated career counseling assessed as having a higher level of dysfunctional career thoughts, as well as elevated DMC and CA, as compared to those students who initiated career counseling prior to COVID-19. With a paucity of research on the impacts of a global crisis that encompasses severe economic decline, job uncertainty, familial stress, health concerns, and social isolation, additional research related to the impact of complexity factors on career thoughts is needed to further provide counselor educators with valid and reliable measures that can inform practice and interventions. In addition, this study presents information to help prepare counselors to identify students who are experiencing psychological stress related to career indecision that is highly correlated with depression and anxiety during times of significant crisis or uncertainty.

Chapter 5: Manuscript

Cross-Sectional Examination of Career Counseling Initiation: Considerations of the Impact of COVID-19

Abstract

The purpose of the current study was to gain an understanding of the differences related to the capability dimension of readiness for career choice in college students as measured by career thoughts, career state, and occupational choice self-efficacy when initiating career counseling prior to and during COVID-19. Research indicates that students who have dysfunctional career thoughts, lower self-efficacy, and higher career indecision while experiencing high or significant life complexities are at risk of depression, anxiety, and becoming stuck or paralyzed in the career decision making processes (Dierenger et al., 2016; Hayden & Osborn, 2020; Saunders, Peterson et al., 2000; Walker & Peterson, 2012). Additionally, research indicates that the cognitive and emotion-based process of career decision making are confounded by negative complexities (Bullock-Yowell et al., 2011b; Sampson et al. 2004), as those experienced by many during the COVID-19 pandemic, related to economic concerns, familial and social support, and the job market. This study explored a cross-section of participants who initiated career counseling prior to COVID-19, as well as participants who initiated career counseling during the COVID-19 pandemic utilizing archival data to develop a greater understanding of the implications of two time-periods with differing global complexity factors and the implications on the initiation of career counseling through a Cognitive Information Processing theoretical lens. Implications were developed for counselors, counselor educators, as well as for future research related to career counseling during times of crisis, with

an emphasis on readiness for career choice through the relationship between the dimensions of capability and complexity.

Keywords

career thoughts, career state, counselors, decision making confusion, commitment anxiety, external conflict

Introduction and Background of the Problem

January 2020 was the beginning of a new year and new decade, as students prepared to return to campus after winter break. Students were preparing to declare their major, participate in experiences to help them solidify occupational options, make decisions about their career goals, or prepare to graduate and were amid job searches and graduate school interviews. Other students were preparing to take the next step in their career after graduating. However, by March, these experiences and plans were dramatically changed. At the time COVID-19 was classified as a global pandemic, the impact on the academic environment was immediate, and institutions quickly transitioned into a temporary online learning environment that then began to feel more permanent as the months of quarantine and shutdowns continued for over a year (Streufert & Blackburn, 2020). Students suddenly found themselves flooded with overwhelming emotions and forced to navigate a new landscape, unable to participate in the experiences, interviews, ceremonies, and career opportunities for which they had planned and imagined (Streufert & Blackburn, 2020). Within this abrupt disruption of life due to COVID-19, students found that there was a need for support as they transitioned to what became the pandemic state of normal, which included learning how to attend classes and work remotely, learning to advocate for health and wellbeing, or searching for employment using nearly 100% online and virtual tools while

being physically distant and isolated from friends, classmates, and campus departments and offices that they previously could visit in person (Streufert & Blackburn, 2020).

With everything students were experiencing concerning changes in their daily lives, school, and career development, the pandemic revealed trends within the world of work that gave more significant pause, such as the disproportionate burden on essential workers across specific demographics, and such as gender, race, and socioeconomic status (Bowleg, 2020; Falco et al., 2020). In occupation types and industries primarily impacted by the pandemic, women and minorities were disproportionately impacted as the demands of caretaking increased as children attended virtual school at home that rolled into summer break without open daycares and camps (Falco et al., 2020). People making 20 dollars an hour or less, ages 18-24, or over the age of 50, were also significantly impacted by layoffs, lack of employment opportunities, no health insurance, and higher rates of housing insecurity (Falco et al., 2020). According to Kalev (2020), periods of unemployment can have a lasting impact, such as lower earning potential and an increased risk of periods of unemployment later in life, particularly for young people or individuals of low socioeconomic status.

As the COVID -19 pandemic continued, some students experienced significant psychological, economic, and personal stress (Fishman & Hiler, 2020; Fishman et al., 2021; Knechtel & Erickson, 2021). Stress experienced was intensified by increasing isolation and the realities attached to increased deaths and economic upheaval, which paralleled increasing physical, psychological, and mental exhaustion as the pandemic continued. Amid this crisis, universities continuously struggled to modify teaching, programs, and services (Knechtel & Erickson, 2021), including services to assist and support students during the pandemic, such as educational support, counseling, and career counseling services. Provision of career counseling

became a critical response by college student career services. With the COVID-19 pandemic, unprecedented complications and uncertainty, along with isolation, lack of access to resources, mixed with threats to one's health, finances, and an economic downturn, created paralyzing anxiety that gave way to questioning career decisions, thus reinforcing the enmeshment of identity, career development and mental health (Bamji & Godfrey, 2020; Falco et al., 2020). Thus, career counseling services became a significant component of helping and supporting students (Augustana, 2020; Streutfert & Blackburn, 2020).

Coupled with this increasing and critical need, college career counseling services were also dealing with the process of quickly and effectively changing how services were provided. Traditionally career services and career counseling have been offered face-to-face, and suddenly practitioners and counselors were working from home, which propelled the need for a change in the medium in which clinical services were delivered. University career services quickly had to evaluate the landscape and provisions for tele-counseling, while ensuring considerations were given to ethical and legal standards (Education Policy & State Higher Education Executive Officers Association, 2021; Johal & Peterson, 2021). New procedures for intakes and referrals were created, as well as safety and security measures established in an effort to maintain HIPAA compliance and establish protocols for crisis situations that may arise during tele-counseling (Barnett & Kolmes, 2016). The way in which students experiencing career indecision accessed career counseling, as well as the mode in which career counseling was delivered, changed at a rate not experienced prior to COVID-19.

Career-Decision Making and Cognitive Information Processing Theory

As noted, during COVID-19 students were impacted on multiple levels, and college career centers and services were changed and modified at a dramatic level to meet these

changing needs. This included changing the nature of services, and the format and methods by which services were provided. Career indecision and problem-solving skills became a paramount component of this process when considering the career services students may need during COVID (Augustana, 2020; Bamji & Godfrey, 2020; Falco et al., 2020). In examining these changes, it was critical to consider the models of career counseling that integrate the components of career decision making and problem-solving.

Theoretical models of career counseling provided a foundation for helping students address their career problems and choices when balancing multiple other issues, such as those presented by COVID 19. An appropriate framework was Cognitive Information Processing (CIP) theory, an approach to career development that focuses on expanding information-seeking behavior around career choices and enhanced career decision-making and problem-solving (Sampson et al., 2004). CIP assumes that career decision-making is both cognitive and emotive, and how an individual thinks about their career problem and decision-making process relates to our emotions, which can motivate or even paralyze a person in the decision-making process (Sampson et al., 2004). Additionally, effective career decision-making involves essential knowledge of self and career options, as well as a cognitive process for thinking through knowledge acquired (Sampson et al., 2004). Career problems occur when there are gaps in knowledge or the cognitive process of decision-making (Sampson et al., 2004).

Within the CIP theory, there are two core constructs, The Pyramid of Information Processing (see Figure 1) and the decision-making process that includes five phases of Communication, Analysis, Synthesis, Valuing, and Execution, known as The CASVE Cycle (see Figure 2) (Sampson et al., 2004). The Pyramid of Information Processing focuses on career information and the three foundational domains or building blocks of knowledge, decision-

making skills, and metacognitions or executive processing (Osborn et al., 2020.; Sampson et al. 2004; Peterson et al., 1991; Peterson et al., 2002; Peterson et al., 1996). The knowledge domain at the base of the Pyramid of Information Processing consists of two foundational building blocks, self-knowledge and occupations knowledge, which consists of schema developed throughout an individual's lived experiences (Peterson et al., 2002; Sampson et al., 2004).

After the knowledge domain, which builds the foundation for the Pyramid of Information Processing, the second or middle domain is decision-making skills which encompasses the general decision-making skills used by an individual to solve a problem or make a decision, as well as the incorporation of the CASVE cycle (Sampson et al., 2004). Within CIP, the CASVE cycle, which is the process of career decision-making, comprises five phases, which are Communication, Analysis, Synthesis, Valuing, Executing (Osborn et al., 2020; Sampson et al., 2004). Early in the decision-making process, there is the communication stage, or the awareness of a gap or need to decide that is prompted by internal or external pressures or motivators (Osborn et al., 2020). From the communication stage, a person moves into the analysis stage. They evaluate their interests, values, and skills, also known as self-knowledge, concerning their options, which initially expand potential career possibilities (Osborn et al., 2020). In the synthesis phase, career options or occupational options narrow. Options are more deeply considered regarding self-knowledge, which leads to valuing where a limited list of opportunities that closely align with one's self-knowledge develops. After valuing, a prioritized option materializes, and a person executes the decision. Once a career decision is made, the person enters the communication phase again, evaluating the gap or thinking about their decision and its alignment with their self-knowledge, determining career satisfaction or dissatisfaction (Bullock-Yowell et al., 2011a).

At the top of the Pyramid of Information Processing is the executive processing domain, which focuses on metacognition, or the cognitive strategies used to make a career decision (Sampson et al., 2004). Within the executive processing domain, career thoughts, self-talk, self-awareness, monitoring, and control comprise the critical cognitive factors that impact the decision-making skills and knowledge domains (Sampson et al., 2004). A person with negative self-talk or dysfunctional career thoughts may experience anxiety, all of which can influence an individual's self-perception or a negative outlook on their interests and skills, thus diminishing their confidence in their ability to make a career decision (Sampson et al., 2004). A lack of confidence in an individual's ability to make a career decision can lead to a lack of motivation to engage in information seeking or career exploration activities (Sampson et al., 2004). However, self-awareness, monitoring, and control can aid in learning to reframe dysfunctional career thoughts and negative self-talk to create more effective career decision-making skills (Sampson et al., 2004).

Within the CIP theory, readiness for career choice "is defined as the capability of an individual to make appropriate career choices while taking into account the complexity of family, social, economic, and organizational factors that influence an individual's career development" (Sampson et al., 2004, p. 65). Readiness for career choice (see Figure 3) is assessed through two independent dimensions, capability and complexity (Sampson et al., 2004), which looks at an individual's preparation to engage in the effortful career decision-making process (Leierer et al., 2017; Sampson et al., 2000). Of the two dimensions of readiness, "capability is the cognitive and affective capacity for an individual to engage in effective career problem solving and decision making" (Sampson et al., 2004, p. 65). Individuals with a positive affect and a greater cognitive capacity posse a higher level of readiness and are more prepared to

engage in career decision-making (Sampson et al., 2004). Whereas an individual with a negative affect, who is dissatisfied with, or lacks clarity in their occupational choices, has a lack of self or occupational knowledge, or lacks confidence in their ability to make an effective career decision. An individual who is uncertain and lacks clarity or clear career goals may demonstrate low capability or lack the motivation and ability to engage in effective exploration of self and occupational options necessary to execute the career decision-making process (Leierer et al., 2017; Sampson et al., 2004). As noted, these uncertainties may only have been heightened during COVID.

Capability Dimension of Readiness for Career Choice

Career State as an Indicator of Capability

As demonstrated in research**,** a career state or career decision state is not static; rather, it is a momentary state related to an individuals' consciousness regarding their career goals or aspirations and is subjective in nature (Hayden & Osborn, 2020; Leierer et al., 2017). A career decision state can be influenced or impacted by multiple internal and external factors (Hayden & Osborn, 2020; Leierer et al., 2017; Sampson et al., 2004). Determining an individual's career decision state begins with their ability to specify occupational choice options that they are considering (Leierer et al., 2017; Sampson et al., 2004), or the Occupational Alternatives Question (Zenner & Schnuelle, 1972; Modified by Slaney, 1980). An inability to identify possible occupational choice options may indicate a career decision state of undecided or indecisive, both of which indicate a moderate to low capability dimension of readiness for career choice; thus indicating the need for career counseling, as there is a potential gap in a foundational domain of knowledge on the Pyramid of Information Processing (Sampson et al., 2004), as well as a lack of confidence in decision-making skills, in addition to possible

dysfunctional thoughts and mental health concerns (Sampson et al., 2004). During COVID, all of these factors could be critical or play into students' career decision-making as well as the processes used to make these decisions.

Career Thoughts as an Indicator of Capability

When considering the overarching demands and challenges COVID 19 presented to students and the potential impact on career decision-making, it was imperative to discuss how these challenges may have directly influenced the ability to engage in career decision-making. Cognition and the ability to process career information are paramount to career decision-making. Career decision-making is a cognitive process that also involves behaviors and emotions. According to both Cognitive and CIP theories, life stress and career decision is mediated by negative career thoughts or negative thoughts about one's life circumstance (Bullock-Yowell et al., 2011b). Students who expressed or experienced dysfunctional career thoughts regarding a career decision reported feeling paralyzed and avoid making a career decision (Sampson et al., 1996). CIP theory is a framework that focuses interventions on cognitions (Lustig et al., 2012). According to Bullock-Yowell et al. (2011a), when negative career thoughts are accounted for, individuals are more certain and satisfied with their career decision, even those under pressure to make a career decision while experiencing a stressful life circumstance, similar to what students experienced during COVID-19. Thus, it was imperative to emphasize the importance of altering negative career thoughts to facilitate positive career-decision making outcomes.

Psychological and Mental Health Considerations of Capability

As previously discussed, career decision-making capability is a process that is directly reflective of an individual's mental health and psychological stress. Specifically, these factors can influence all aspects of an individual's ability to engage in and make effective decisions

about their career choices. Understanding these dynamics was imperative when discussing the career indecision process for students during COVID -19, and how career counseling centers effectively addressed these areas during this time. Moreover, within the complex process of career development, which encompasses numerous aspects of the human experience, there is a connection between career problems and career decision-making with mental health concerns (Hayden et al., 2016). According to Hayden et al. (2016), it is essential to consider that the etiology of mental health concerns may exist in a career problem instead of in the person, and yet conversely a mental health concern or the presence of psychological symptoms the contributor to a career problem and or state of career indecision (Dierenger et al., 2016; Walker & Peterson, 2012).

For individuals who enter into career counseling, there is a continuum of psychological distress that accompanies the presentation of a career problem (Walker & Peterson, 2012). Of individuals experiencing career indecision, it is more common for these individuals to experience mild to moderate anxiety and depression (Dierenger et al., 2016; Hayden & Osborn, 2020; Saunders, Peterson et al., 2000; Walker & Peterson, 2012). Clearly, during COVID-19 these emotional and mental health issues only intensified for students (Fishman et al., 2021). Specifically, the worry and fear linked to this period of time contributed to an affective state of anxiety and a perceived loss of control over one's environment and emotions, all contributing to increased levels of anxiety (Apodaca, 2016; Hayden & Osborn, 2020). Thus, contextual factors around career decision-making are correlated to career thoughts and career decision-making readiness.

Contextual Factors as Indicators of Complexity

Contextual factors such as anxiety, fear, and worry, can all contribute to how college students engage in career decision-making. Specifically, the contextual factors that impact the level of difficulty in processing information needed to make a career decision is the readiness dimension known as complexity (Sampson et al., 2004). Complexity accounts for the elements that negatively or positively impact an individual's self-talk, self-knowledge, occupational knowledge, and approach to career problem solving, such as personal and identity factors, family, social support, the economy and economic circumstances, mental health, physical wellness, and diverse ability (Leierer et al., 2017; Sampson et al., 2004). An individual's state of readiness will vary based on contextual factors or level of complexity. Those with a higher state of readiness have fewer negative complexity factors in coping with solving a career problem or making a career decision (Sampson et al., 2004). In contrast, individuals with greater complexity may be facing encumbering or multiple contextual factors, which increase the difficulty in problem-solving and career decision making (Sampson et al., 2004). It was not hard to consider how COVID-19 is reflected in these multiple contextual factors, understanding what these factors are and how they may relate was an essential part of considering career decision-making.

Family Factors

Various family factors can impact an individual's readiness for career choice, as individual's responsibilities and stressors related to family vary, with some having fewer or greater family responsibilities or stressors (Sampson et al., 2004). The fewer responsibilities or stressors an individual has to account for or cope with, the less complexity there is regarding the career decision (Sampson et al., 2004). Additionally, family factors can be positive or supportive in the career decision-making process, which may increase resources and support for coping with a career problem and aid in career decision making (Sampson et al., 2004). Conversely,

individuals with multiple family roles or multiple stressors stemming from family factors may need additional support or a more robust schema to make an effective career decision, as not all family support is positive in nature. (Sampson et al., 2004). External conflict, or the extent to which negative or dysfunctional career thoughts are associated with input from other and important people in a person's life, can be a negative family factor, and particularly for those from cultural backgrounds where input from the family is greatly valued in the career decision making of a child, spouse, or family member within their immediate sphere (Sampson et al., 2004).

There are clear indications that students have faced many of these challenges during COVID. Initially, students during COVID had the challenge of having to move back home during the initial stages of the quarantine. Students reported dealing with the stress and challenges of being back in home environments after having been more independent, and according to the Joint Center for Housing Studies of Harvard University (2021), during the pandemic up to 78% of full-time college students were living with their families at home during COVID-19. Students reported a wide range of challenges from competing for internet to increased childcare responsibilities for siblings or dependents of their own. According to Fishman et al., (2021), approximately 61% of students were concerned about paying tuition and education expenses in December 2020, and 79% were concerned about paying for non-educational related expenses, with 46% of student respondents in August of 2020 being concerned about their ability to afford food and housing past a months-time (Fishman & Hiler, 2020). Students also reported higher levels of family stress, as well as greater social isolation from friends and peers, increasing their depression and anxiety, with 79% of college students surveyed reporting being concerned about their mental health (Fishman et al., 2021)

Social Factors

Career decision-making for students is often reflective of peer influences and social supports, both experiencing major shifts during COVID 19. Similar to family factors, social factors can positively or negatively support career decision-making, thus increasing or decreasing complexity (Sampson et al., 2004). Individuals with a significant social network that provides care, mentoring and modeling may have access to additional resources and supportive social factors that aid in the career decision-making process (Sampson et al., 2004). However, individuals without a socially supportive network that provides modeling and mentoring are more likely to have a challenging or complicated career decision-making process, as there may be limits to exposure and knowledge or options related to education, training, occupations, and employment possibilities (Sampson et al., 2004). Despite a multicultural society, some individuals based on intersections of their identity may find societal obstacle within career decision making and career development, as factors such as age, ability, gender, nationality, race, socioeconomic status, race, religion, and sexual orientation, may present social challenges related to implicit bias, societal norms of the majority, and systemic marginalization (Niles & Harris-Bowlsby, 2002; Sampson et al., 2004). It was apparent that if these social factors and supports shifted significantly during COVID 19 then so would the influence and impact on career decision-making.

Economic Factors

One of the areas directly impacted by COVID was jobs and employment. During COVID-19, students graduating were entering a workforce where over 38 million unemployment claims were filed in a two-month time frame between March 2020 and May 2020 (Friedman, 2021). According to the National Association of Colleges and Employers, 4.4% of employers

surveyed in April 2020 reported revoking full-time job offers that had been made prior the pandemic to student graduating from college in the 2020, and 22% of employers surveyed indicated that they were revoking summer internship offers (Friedman, 2021). These issues are extremely relevant when discussing career decision making and career counseling during this time. As with family and social factors, economic factors can either support or undermine readiness for career choice (Sampson et al., 2004), as they impact the variability or rate of change in the job market, and due to a global economy and rapid change in industries, economic factors and the job market can fluctuate from periods of stability and growth to instability and volatility (Sampson et al., 2004). During times of economic crisis or market volatility such as what we are experiencing with COVID-19, individuals may face more complexity and need more support in gaining occupational or options knowledge necessary to make a career decision (Sampson et al., 2004). Additionally, personal economic factors can support or inhibit career decision-making (Sampson et al., 2004). There are clear indications that we can expect that these psychological stressors and factors will also be paramount in those experiencing the impact of COVID-19.

Possible Impacts of COVID-19 on Career Decision Making

As the pandemic continued, the inverse correlation of readiness for career choice within CIP, low capability and high complexity (Sampson et al., 2004) prompted referrals to career counseling for students experiencing career indecision and negative thinking around the factors of capability and complexity, which created a career decision making challenge. As a result of the COVID-19 pandemic, the economy experienced a drastic decline and shift in occupation options and employment possibilities for students (Friedman, 2021). Additionally, students directly impacted by job loss, whether the loss of a part-time job or a parent who experienced

sudden job loss, found themselves experiencing greater financial and familial stress, which are complexity factors that can directly contribute to career indecision and lower career decision self-efficacy, which can increase negative thinking.

The difficulty experienced with career indecision due to dysfunctional career thoughts during a time of transition and stress, such as the COVID-19 pandemic, where there was a significant increase in complexity factors, may enhance the likelihood of academic and psychological distress, such as anxiety and depression (Saunders et al., 2000). According to both Cognitive and CIP theories, life stress and career decision is mediated by negative career thoughts or negative thoughts about one's life circumstance (Bullock-Yowell et al., 2011b). According to Bullock-Yowell et al. (2011b), when negative career thoughts are accounted for, people under pressure to make a career decision while experiencing a stressful life circumstance(s) are more certain and satisfied with their career decision. Consequently, those experiencing negative career thoughts amid life stress disclose or demonstrate more significant career uncertainty and dissatisfaction (Bullock-Yowell et al., 2011b).

Self-efficacy and career decision-making difficulties have been linked to negative career thoughts or dysfunctional career thinking that impedes an individual's ability to make a career decision (Bullock-Yowell et al., 2014; Osipow, 1999; Vondracek et al., 1990). In a study by Bullock-Yowell et al. (2011a), variance in career decision-making self-efficacy was explained by negative career thoughts and associated with an increase in career indecision (Bullock-Yowell et al., 2014; Kilke, 1997; Saunders et al., 2000). In a study by Saunders et al. (2000), negative career thoughts were positively correlated with career decision-making difficulty, which is consistent with research conducted by Kleiman et al. (2004) and explained 61% of the variance in career indecision (Bullock-Yowell et al., 2014). Heightened negative career thoughts, similar

to what college students may have experienced during COVID-19, can be related to career-decision making difficulty and increased anxiety, which can prompt and individual to slow their decision making, stop, or avoid making a career decision (Bullock-Yowell et al., 2014; Fouad et al., 2009; Gati & Amir, 2010; Peterson et al., 1991; Peterson et al., 1996). In considering these potential outcomes of career decision-making avoidance or significant difficulty, the complexity factors experienced by students during the pandemic are compounded particularly those related to increased financial burden. Moreover, during a period heightened stress and isolation there was greater potential for dysfunctional career thoughts that are correlated to anxiety and depression. All of this leads to a greater need for career counseling services that effectively deal with career decision-making while also addressing the challenges of providing these services in a different format and method. Specifically, in considering these issues it was imperative to also discuss the ways these services were impacted during COVID-19.

Changes to College Career Counseling: Tele-Career Counseling

Due to stay-at-home orders and a move to remote learning after college and university campuses closed brick and mortar facilities, students who once sought resources and support on campus were now lacking proximity and potential access to the resources and support once easily accessed (Knechtel & Erickson, 2021; New America.org, 2021). With this change, access to career counseling once only offered face-to-face was now only accessible virtually or through Tele-Career Counseling, during a time and phenomenon that significantly impacted mental health (Knechtel & Erickson, 2021), as well as cognitive and contextual factors that impact career decision-making.

Additionally, due to the possibility of service interruptions or access to reliable internet, the client and counselor can get disconnected during sessions or students may have been unable

to access tele-career counseling services; thus, it was imperative at the onset of tele-counseling for a plan to be established in the instance of an interruption or disconnection occurs (Barnett & Kolmes, 2016). Additionally, it was the ethical and legal and legal considerations had to be made, which including limits to providing services to students within the state the counselor resides or is licensed (Barnett & Kolmes, 2016), thus possibly prompting a number of referrals for students that had moved home in a state outside of the state in which the school was located.

When considering the impact of COVID-19, tele-counseling was an essential service delivery medium for college students who were experiencing difficulty with the career decision-making process. Due to campus closings and moving to virtual instruction and student support platforms, students experiencing career indecision, dysfunctional career thoughts, or significant factors that contributed to increased complexity or decreased capability in their career decision state, career counseling was limited to a virtual mode of service delivery through tele-counseling. This limitation to service delivery created a novel and never before experienced circumstance for those seeking career counseling, particularly for students on a traditionally brick and mortar university campus. Thus, it was essential to consider how the changes in service delivery as it relates to career counseling on college campuses may have impacted the initiation of career counseling services by students.

Purpose of the Study

The purpose of this cross-sectional study was to conduct an examination of career thoughts, career state, and occupational choice self-efficacy among college students seeking career counseling. Of specific focus was how these areas compare across students who initiated services prior to COVID-19 and during COVID-19. As noted, career services during this time changed from the provision of counseling services in-person to totally online services.

Moreover, during COVID-19 students would also be impacted by the social, economic, psychological, and personal impact of COVID-19. All of these factors could directly and indirectly impact their ability and process of engaging in career decision-making.

Significance of the Study

This study sought to directly impact career counselors and career services on college and university campuses, as it investigated cognitive factors related to career decision-making challenges faced by college students during a global health crisis, the COVID-19 pandemic. Additionally, this study also examined the impact of providing services in changing modalities and formats. Specifically, the provision of moving counseling services from direct contact to online. Implications of this study related directly to career counseling during times of novel and global crisis, provisions for tele-career counseling for direct clinical services in career centers at college and universities, and the initiation of career counseling services by students through a cross-sectional comparison of pre-counseling assessments pre and during the COVID -19 pandemic. This exploratory investigation sought to provide information that can inform future practice and research in career services and career counseling.

Research Questions

The study presented investigates the following research questions:

1. What are the differences across measures of career decision-making for students who initiated career counseling as compared before COVID-19 and during-COVID-19?

2. What are the differences in college students' career thoughts for students who initiated career counseling; including decision-making confusion, commitment anxiety, and external conflict as compared before COVID-19 and during-COVID-19?

3. What the differences in college students' career state for students who initiated career counseling as compared before COVID-19 and during-COVID-19?

4. What are the differences in college students' occupational choice self-efficacy for students who initiated career counseling as compared before COVID-19 and during-COVID-19?

5. What are the differences across career decision-making indicators when compared across demographic variables for students who initiated career counseling pre-COVID-19 as compared to during COVID-19?

Procedures

Upon IRB exemption, as well as, with written approval from the career center at a large regionally accredited southern university to utilize archival data, participant data was gathered from a de-identified archival data-based provided clients consented to be included in archival data research, which is included in the informed consent forms for career counseling. During the initiation of career counseling, Demographic, Career State Inventory (Leierer et al., 2017) and the Occupational Choice Self-Efficacy (Osborn et al., 2020) data were collected through HIPAA Qualtrics and the Career Thoughts Inventory (Sampson et al., 1996) through PARiConnect. Before the researcher accessed the data, the data was de-identified and each client given a participant code to ensure no personally protected or identifiable information was included in the data set. Due to the study's anonymous and archival nature, participants could not withdraw, as their data could not be retracted due to the researcher's inability to identify which data to remove. In addition, the career decision-making assessment measures used in this study were collected prior to counseling, however some participants did not complete all the pre counseling assessments. Based on this, data across the two samples were compared as appropriate by removing participants with an incomplete data set across assessments. Upon receipt of the data sets, the data was examined for exclusion criteria such as incomplete data from participants due to early or self-termination. The data was analyzed using SPSS V22.0 software. All incomplete data sets were removed prior to data analysis

For this cross-sectional study, career thoughts, career state, and occupational choice self-efficacy were explored through archival data collected on career counseling clients who initiated career counseling pre and during the COVID-19 pandemic. Basic demographic information such as gender, ethnicity, and age were collected to explore possible differences among sample of 107 students who completed three measures, the Career Thoughts Inventory (Sampson et al., 1996) the Career State Inventory (Leierer et al., 2017), and the Occupational Choice Self-Efficacy Scale (Osborn et al, 2020) upon initiation of career counseling. Additionally, changes pre and post counseling using assessment measures and demographic variables were examined to explore a possible difference across measures and demographic variables for those initiated in-person career counseling (pre-COVID-19) or virtual, tele-career counseling (during COVID-19).

The participants for this study were college students who initiated career counseling at a southeastern university career center during the calendar year 2019, prior to the start of the COVID-19 pandemic, and those college students who initiated career counseling after the beginning of the COVID-19 pandemic between May 2020 and May 2021. Due to early or self-termination and changes in the format of counseling delivery from face-to-face to a telehealth service delivery format, due the need to change counseling provisions as a result of COVID-19, the clients who initiated career counseling between January 2020 and April 30, 2020, are being excluded. To participate in this study, respondents must have been at least 18 years of age and a self-reported college student who initiated in career counseling within the time parameters set for this study.

Instrumentation

The participants were asked to complete a brief demographic questionnaire and pre-counseling assessments: The Career State Inventory (CSI) (Leierer et al., 2017), career clarity

and confidence questions, and the Career Thoughts Inventory (CTI) (Sampson et al., 1996). To understand and compare the relationship between a person's career state, occupational knowledge, and career thoughts among career counseling clients seeking counseling pre and during the COVID-19 pandemic, participants provided information related to the complexity factors within the demographic questionnaire related to career decision making. Participants in this study completed a series of measures assessing the career decision state, occupational alternatives, career thoughts and constructs of decision-making confusion, commitment anxiety, and external conflict.

Brief Demographic Measure

A basic demographic survey utilized at client intake provided data on participants' age, gender, race, current occupation, years of education, current major, and student status or year in college. A text entry was included to capture the expressed presenting issue or challenges that prompted the client to seek career counseling.

Career Thoughts Inventory

The current study utilized the Career Thoughts Inventory (Sampson et al., 1996**)** to understand and compare the presence of dysfunctional career thoughts among college students seeking career counseling and determine the relationship of career state and self-efficacy in relation to CIP domains among college students seeking counseling prior to and during the COVID-19 pandemic. The CTI is a 48-item self-administered measure designed to assess dysfunctional thinking in career decision-making (Sampson et al., 1999).

The CTI asks respondents to endorse to the extent they agree or disagree with statements that reflect common dysfunctional thoughts that occur during career decision making (Sampson et al., 1999). Responses range from 1 to 4 in Likert form with 1 = Strongly Disagree, and 4 =

Strongly Agree. Psychometric data for the CTI indicates very good internal consistency reliability with a coefficient alpha of .97 for the total CTI score, and across the three constructs or subscales, .94 for Decision-Making Confusion (DMC), .91 for Commitment Anxiety (CA), and .81 for External Conflict (EC) (Sampson et al., 1999). Sampson et al. (1996) indicated a lower correlation for scales or constructs with fewer items. Thus, the DMC construct, having the most items (14), is highly correlated (.93) with the CTI total score (Sampson et al., 1996). Commitment Anxiety (.88) with ten items and EC (.76) with five items are moderately to highly correlated with the CTI total scores. Statements on the Decision-Making Confusion subscale inquire about a respondents' dysfunctional thinking using a Likert scale with statements such as "Choosing an occupation is so complicated, I just can't get started." The Commitment Anxiety subscale asks respondents to respond on the Likert scale to statements such as "There are several fields of study or occupations that fit me, but I can't decide on the best one." The final subscale, External Conflict, ask respondents to respond on a Likert scale to statements such as "I know what I want, but someone's always putting obstacles in my way."

Career State Inventory

The Career State Inventory (CSI) (Leierer et al., 2017), a brief questionnaire and revision of the Career Decision State Survey (CDSS), possesses an acceptable level of reliability and internal consistency with a Cronbach's alpha of r = .74 and is comprised of five questions that assess the capability component of readiness within the framework of Cognitive Information Processing, and specifically, "one's readiness to engage in career decision making" across goal certainty, career goal satisfaction, clarity and confidence (self-efficacy) in pursuing a career goal (Hayden & Osborn, 2020; Leierer et al., 2017 p. 2).

The CSI comprises aspects of other widely used career assessments to create a short form. The first question, which focuses certainty, of the CSI incorporates the Occupational Alternatives Questions that was initially used in the Self-directed Search, revised by Slaney (1978, 1980), and as cited by Leierer et al. (2017) in studies cited by Bullock-Yowell et al. (2011b) concurrent validity and test-retest reliability was demonstrated. In the first question, respondents were asked to list the occupations they are considering and then their first-choice occupation or undecided, with a first choice only rendering a score of 1, a first choice and alternative a score of 2, alternatives only a score of 3, and undecided only a score of 4 (Leierer et al., 2017). The second question, which focuses on satisfaction, is the Satisfaction of Choice Scale, which originated with Zener & Shmuelle (1972) and adapted by Holland et al., (1975) and in its current version, the question "How well satisfied are you with your responses to No. 1 above?" has been modified from a six-point scale to a five-point scale by the authors of the CSI with the scale ranging from Very Satisfied (1) to Very Dissatisfied (5) (Leierer et al., 2017). Lastly, the three final questions, Vocational Clarity, includes three true/false items, such as, "Making up my mind about a career has been a long and difficult problem for me" derived from the Holland, Johnston, and Asama (1993) My Vocational Situation with true equaling a score of 1 and false a score of zero for each item (Leierer et al., 2017).

Occupational Choice Self-Efficacy Scale

In this study, occupational choice self-efficacy was measured by the Occupational Choice Self-Efficacy Scale (Osborn et al., 2020), which is comprised of questions related to CIP domain skills and career decision-making self-efficacy pre career counseling assessment measure that was developed by affiliates of the Florida State University (FSU) Career Center to measure self-efficacy within the domains of the Pyramid of Information Processing (Sampson et al., 2004), a

pillar within CIP theory (Hayden & Osborn, 2020). This measure has been used in other studies, and in Osborn et al. (2020) was utilized for pre-test with 202 students and produced a Cronbach's alpha of .82.

The measure contains total six items. The items focus on assessing self-efficacy and career decision-making areas reflective of CIP theory, specifically relating to the CIP domains of self-knowledge, occupational options knowledge, and decision-making process. The CIP Skills related questions consists of three items with responses on a five-point Likert scale from strongly disagree to strongly agree and has been normed on college-aged students (Hayden & Osborn, 2020; Osborn et al., 2020). In addition to the items pertaining to the CIP theory this assessment also includes three items that focus on affective components of self-efficacy as it relates to one's ability to engage in career decision-making. This includes questions pertaining to confidence in career decision-making, confidence in developing a career plan, and monitoring self-talk (Hayden & Osborn, 2020; Osborn et al., 2020). Individuals responded using a five point-Likert scale ranging from poor to excellent.

Data Analysis

Data analysis was performed using SPSS. Descriptive statistics including demographic information, frequencies, analysis of means, and percentages were used to understand trends within and between sample populations. Statistical measures or *F*-tests to identify variance between groups were utilized. Specifically multivariate analyses of variance were used for this study, along with assumption testing prior to analysis. Tables and needed charts were utilized to display data analysis findings.

Results

The current study was developed to gain an understanding of the differences in career state, occupational choice self-efficacy, and dysfunctional career thoughts, as measured by the Career State Inventory (CSI, Leierer et al., 2017), Occupational Choice Self-Efficacy Scale (OCSES, Osborn et al., 2020), and Career Thoughts Inventory (CTI, Sampson et al. 1996) between students who initiated career counseling prior to and during COVID-19. Further, this study sought to examine the variance of each measure between groups, as well as the subscales, Decision Making Confusion, Commitment Anxiety, and External conflict as measured by the CTI. In addition to examining the difference of career decision-making measures, this study sought to examine the difference across demographic variables.

Results from this study indicated that dysfunctional thoughts, as measured by the CTI, accounted for the greatest variance between students who initiated career counseling prior to and during COVID-19. Furthermore, subscales of DMC and CA, also accounted for variance between groups, with Commitment Anxiety being the strongest predictor or factor. From comparing the means of the CTI, DMC, and CA between those who initiated career counseling prior to and during COVID-19, the means comparison provided additional evidence that elevated t-scores on the CTI and subscales of DMC and CA were indicative of those who initiated career counseling during COVID-19, as opposed to those who initiated career counseling prior to COVID-19.

Demographic Information

Of the 168 of the individuals who initiated career counseling prior to and during COVID-19, 107 completed all three of the measures related to the career counseling intake process, including a questionnaire on demographics (see Table 1). From the 107 participants, 67 (62.6%) completed the intake process to initiate career counseling prior to COVID-19 and 40 (37.4%)

completed the intake process during COVID-19. Participants ages ranged between 18-47 and within the following age ranges with 83 (77.6%) between18-24, 9 (8.4%) between 25-29, 6 (5.6%) between 30-34, 3 (2.8%) between 35-39, 4 (3.7%) between 40-44, and 2 (1.9%) between 45-49 years of age. Of the 107 participants all indicated their gender, as either male, female, or non-binary with 69 (64.5%) of the participants indicated they identified as female, 36 (33.6%) of the participants indicated they identified as male, and 2 (1.9%) of the participants indicated they identified as non-binary. 10 (9.3%) indicated their student status as freshmen, 15 (14.0%) indicated their student status as sophomore, 31 (29.0%) indicated their student status as junior, 37 (34.6%) indicated their student status as senior, 14 (13.1%) indicated their student status as a graduate student. Within the participants, 42 (39.3%) identified their race as Black, Indigenous, People of Color (BIPOC), with the full disaggregated racial identities of participants as 1 (0.9%) American Indian/Native American, 4 (3.7%) Asian, 10 (9.3%) Black, 18 (16.8%) Hispanic/Latinx, 65 (60.7%) White, and 9 (8.4%) Multiracial. Participants indicated their relationship status as 1 (0.9%) Cohabitation/Domestic Partner, 2 (1.9%) Divorced, 8 (7.5%) Married, 96 (89.7%) Single.

In addition to traditional demographics, participants were asked to identify the need of accommodations related to a disability, and previous and current mental health counseling. Of the 107 participants, 15 (14.0%) indicated a need or possible need for accommodations due to a disability and 92 (86.0%) no need of accommodations. Seventy-five (70.1%) of participants had previously engaged in mental health counseling and 30 (29.9%) had not previously engaged in mental health counseling. Participants also indicated whether or not they were currently in mental health counseling, and 42 (39.3%) indicated that they were currently engaged in mental

health counseling, while 65 (60.7%) indicated they were not currently engaged in mental health counseling.

Table 1

Demographic Information

Characteristic	Identity Group	Prior to COVID-19	During COVID-19	N	Percentage
Initiation of Career Counseling	Initiation Period	67	40	67	62.6%
				40	37.4%
	Total			107	100%
Age	18-24	55	28	83	77.6%
	25-29	6	3	9	8.4%
	30-34	3	3	6	5.6%
	35-39	1	2	3	17.7%
	40-44	2	2	4	4.5%
	45+	0	2	2	98.6%
	Total	67	40	107	100%
Gender	Male	24	12	36	33.6%
	Female	42	27	69	64.5%
	Non-Binary	1	1	2	1.9%
	Total	67	40	107	100%
Student Status	Freshman	6	4	10	9.3%
	Sophomore	10	5	15	14.0%
	Junior	23	8	31	29.0%
	Senior	22	15	37	34.6%
	Graduate	6	8	14	13.1%
	Total	67	40	107	100%

Race	American Indian/Native American	1	0	1	0.9%
	Asian	1	3	4	3.7%
	Black	9	1	10	9.3%
	Hispanic	12	6	18	16.8%
	White	37	28	65	60.7%
	Multiracial	7	2	9	8.4%
	Total	67	40	107	100%
Aggregated Race	BIPOC	30	12	42	39.3%
	White	37	28	65	60.7%
	Total	67	40	107	100%
Accommodation for Disability	Accommodation	9	6	15	14.0%
	No Accommodation	58	34	92	86.0%
	Total	67	40	107	100%
Previously Engaged in Mental Health Counseling	Previous Counseling	41	34	75	70.1%
	No Previous Counseling	26	6	32	29.9%
	Total	67	40	107	100%

Table 1

Demographic Information Continued

Characteristic	Identity Group	Prior to COVID-19	During COVID-19	N	Percentage
Currently Engaged in Mental Health Counseling (MHC)	Currently in MHC	19	23	42	39.9%
	Not in MHC	48	17	65	60.7%
	Total	67	40	107	100%
Relationship Status	Cohabitation/Domestic Partner	0	1	1	0.9%
	Divorced	0	2	2	1.9%
	Married	4	4	8	7.5%
	Single	63	33	96	89.7%
	Total	67	40	107	100%

Reliability Testing

Prior to running a one-way multivariate analysis of variance (MANOVA), the researcher conducted reliability analysis of the independent variable measures. The mean, standard deviation, and reliability statistics are reported in Table 2 for the Career State Inventory (CSI),

Occupational Choice Self-Efficacy Scale (OCSES), and Career Thoughts Inventory (CTI), which yielded an α =.521, α =.656, and α =.888, respectively. Additionally, the CTI subscales of Decision-Making Confusion, Commitment Anxiety, and External Conflict yielded α =.869, α =.739, and α =.722. The CSI α = .521, is much lower than α = .74 as cited in Leierer et al. (2017). The low number of items to measure career decision state, as well as a smaller sample size within this study as compared to previous studies using the CSI and OCSES, which had participant sample sizes of 200 or more, may have contributed to a lower Cronbach's alpha.

Table 2

Scale Reliability

Scale	N	Mean	SD	Cronbach's Alpha	Cronbach's Alpha Prior Research
CSI	5	8.52	1.679	.521	.74
OCSES	7	17.09	4.074	.656	.82
CTI (Full Scale)	48	120.28	15.739	.888	.97
CTI-Decision Making Confusion	14	33.67	6.822	.869	.94
CTI-Commitment Anxiety	10	29.06	4.240	.739	.91
CTI-External Conflict	5	10.70	2.982	.722	.81

Testing Assumptions of MANOVA

For the one-way MANOVA, preliminary assumption testing was conducted, including power through G*Power (Faul et al., 2007) which found Power (1-β)=.99 with a global effect size of .667 given the 107 participants. For an adequate sample size, Power (1-β)=.99 with a global effect size of .667 was calculated as a sample size of 40 per group. Additionally, normality was tested by creating boxplots. There were two univariate outliers as assessed by examination of the boxplots, which were removed since the dataset was archival and the researcher was unable to check for errors in data entry. Upon removing the univariate outliers and examining the new boxplots, the assumption of no extreme outliers is tenable, however the assumption of univariate normality or each dependent variable at each level or group of the independent variable is not tenable according to the results of Shapiro-Wilk tests of normality. Shapiro-Wilks test for levels of the independent variables for both dependent variables indicated that the assumption of normality was tenable for the CTI and OCSES dependent variables for each level or group of the independent variable. However, the assumption of normality for the dependent variable Career State Inventory was not tenable based on Shapiro-Wilks test. However, according to Tabacknick and Fidell (2018), with a sample size of more than 20 per cell, MANOVA is reasonably robust when no extreme outliers effect normality, which was found to be tenable for this study through the evaluation of boxplots.

Mahalonbis distance was used to assess the multivariate outliers, one multivariate outlier was determined by exceeding the critical value of 16.27, and the outlier was removed from the dataset, thus establishing a dataset where the critical value of 16.27 was not exceeded with a maximum value equal to 10.63. Linearity is satisfactory per inspection of scatterplots (see Figure 5). Pearson's r was utilized to test for multicollinearity or singularity. The association between the dependent variables CSI and OCSES was significant with a moderate negative

correlation, r(3) = -.563x, $p < .001$, the association between CSI and CTI was slightly positively correlated, r(3) = .225, $p \leq .02$, and the association between the CTI and OCSES was moderately negatively correlated, r(3) = -.422, $p < .001$. All correlation coefficients were less than .6 at an $\alpha = .05$; thus, multicollinearity is not a concern (Tabacknick & Fidell, 2018). Singularity is not a concern because there is adequate significance between the three dependent variables. The assumption of the homogeneity of variance-covariance for the three independent variables CSI, OCSES, and CTI was tenable based on the results of the Box's test $M = 1.342$, F (6, 44510.270) = .216, $p = .972$. The results of Levene's test of equality of error provided evidence that the assumption of homogeneity of variance across groups was also tenable for CSI, OCSES, and CTI, F (1, 105) = .403, $p = .527$, F (1, 105) = .461, $p = .499$, and F (1, 105) = .012, $p = .911$, respectively.

Research Question 1: What are the differences across measures of career decision-making as compared before COVID-19 and during-COVID-19?

Across measures of career decision-making as compared to prior to COVID-19 and during COVID-19, the results of the MANOVA yielded that there was a statistically significant difference between the two groups on the combined dependent variables, of CSI, OCSES, and CTI, Wilks $\Lambda = .915$, F (3.00, 103.00) = 3.196, $p < .027$, partial $\eta^2 = .085$, observed power = .723. Through univariate analyses, one-way ANOVA for each independent variable, CTI, F (1, 105) = 8.848, $p = .004$, partial $\eta^2 = .078$, observed power = .838, CSI, F (1, 105) = .041, $p = .839$, partial $\eta^2 = .000$, observed power = .055, and OSC, ANOVA, F (1, 105) = 2.618, $p = .109$, partial $\eta^2 = .024$, observed power = .361, evidence rejects the null hypothesis that there is no statistically significant difference across measures, as there is a statically significant difference

for the CTI. Which is further supported when evaluated the means between independent variable groups.

However, the CTI was the only measure to show statical significance, as the results of the ANOVA for the CSI, F (1, 105) = .041, p = .839, partial η^2 = .000, observed power = .055, and OSC, F (1, 105) = 2.618, p = .109, partial η^2 = .024, observed power = .361 failed to provide evidence of statistical significance. Thus, indicating that neither the CSI nor OCSES accounted for variance of the dependent variable. Further evaluation of the differences in means between those who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19, provide additional support for a lack of statistical significance between groups as related to the CSI and OCSES.

From the analysis across measures, evidence from both the MANOVA and univariate analyses of the independent variables, CSI, OSCES, and CTI, provide evidence that the CTI is the only measure that accounts for variance of the dependent variable, and that elevated CTI T-Scores are the strongest predictor or factor related to the difference between those who initiated career counseling prior to COVID-19 and those initiated career counseling during COVID-19.

Table 3

Descriptive Statistics and Univariate Analysis of Variance

	Prior to COVID-19			During COVID-19				
Measure	Mean	SD	N	Mean	SD	N	*F*	*p*
Career Thoughts Inventory	61.81	7.130	67	66.28	7.861	40	(1,105) = 8.848	.004
Career State Inventory	8.51	1.727	67	8.57	1.551	40	(1,105) = .041	.839

Occupational Choice Self-Efficacy Scale	17.58	4.016	67	16.27	4.089	40	(1,105) = 2.618	.109

α =.05

Research Question 2: What are the differences in college students' career thoughts; including decision-making confusion, commitment anxiety, and external conflict as compared before COVID-19 and during-COVID-19?

On the combined dependent variables of the CTI subscales (Sampson et al., 1996), Decision Making Confusion T-Score (DMC), Commitment Anxiety T-Score (CA), and External Conflict T-Score (EC) The results of the MANOVA yielded that there was a statistically significant difference between the two groups, prior to COVID-19 and During COVID-19, Wilks $\Lambda = .856$, F (3.00, 103.00) = 5.797, $p < .001$, partial $\eta^2 = .144$, observed power = .945. For the CTI, the effect size was large. The observed power was .961, indicating that there was an 96.1% probability of a statistically significant difference occurring. The strength of relationship between the timeframe of initiating career counseling and dysfunctional career thoughts was strong, F (1, 105) = 8.848, $p = .004$, partial $\eta^2 = .078$, observed power = .838, with the Career Thoughts T-Score, as measured by the Career Thoughts Inventory accounting for 7.8% of the variance of the dependent variable. The observed power of .838 indicated that there was 83.8% probability of a statistically significant difference occurring.

Additionally, univariate analysis through one-way analysis of variance for subscales of Decision-Making Confusion (DMC) and Commitment Anxiety (CA) F (1, 105) = 9.267, p = .003, partial $\eta^2 = .081$, observed power = .855 and F (1, 105) = 16.339, p = < .001, partial η^2 = .138, observed power = .980 provided evidence that both DMC and CA statistically differed for the two groups of those who initiated career counseling prior to COVID-19 and those who

initiated career counseling during COVID-19. Observed power for DMC and CA indicate that there was a probability of 85.5% and 98.0%, respectively, for a statistically significant result with each ANOVA. The strength of relationship between CA and when career counseling was initiated, accounted for 13.8% of the variance of the dependent variable. While CTI T-Score, DMC, and CA provided evidence to reject the null hypothesis, the results of the one-way ANOVA for External Conflict (EC), F (1, 105) = .073, p = .788, partial η^2 = .001, observed power = .058. With an observed power of .058, there was a 5.8% probability of the difference between groups occurring by chance. Thus, the subscale of EC, as measured by the CTI did not account for the variance of the dependent variable.

Upon evaluating the means, found in the descriptive statistics (see Table 4), between those who initiated career counseling prior to COVID-19 and during COVID-19, provided a greater understanding of the two assessed groups on the CTI subscales. Based on the differences in means for DMC, and CA, with higher means calculated for those who initiated career counseling during COVID-19, there is evidence to support that those who initiated career counseling during COVID-19 presented with elevated dysfunctional thoughts overall, and specifically related to DMC and CA subscales. In evaluating both variance and difference between means, CA was the strongest predictor or factor for those who initiated career counseling during COVID-19 as compared to individuals who initiated career counseling prior to COVID-19.

Table 4

Descriptive Statistics and CTI Univariate Analysis of Variance

	Prior to COVID-19	During COVID-19

CTI Subscale	Mean	SD	N	Mean	SD	N	*F*	*p*
Decision Making Confusion	61.24	8.419	67	66.68	9.752	40	(1,105) =9.267	.003
Commitment Anxiety	61.10	7.746	67	67.43	7.958	40	(1,105) =16.339	<.001
External Conflict	60.73	12.745	67	61.40	11.862	40	(1,105) =.073	.788

*α =.05

Research Question 3: What are the differences in college students career state as compared before COVID-19 and during-COVID-19?

A univariate analysis of the CSI was conducted through a one-way ANOVA. As evident from the results of the one-way ANOVA, F (1, 105) = .041, p = .839, partial η^2 = .000, observed power = .055. With an observed power of .055, there was a 5.5% probability that the difference between groups occurred by chance. Thus, career decision state, as measured by the CSI did not account for the variance of the dependent variable.

Upon evaluating the means, found in the descriptive statistics (see Table 5), between those who initiated career counseling prior to COVID-19 and during COVID-19, further evidence fails to reject the null hypothesis. Thus, there is evidence that there was no statically significant difference in the career state of those who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19.

Research Question 4: What are the differences in college students' occupational choice self-efficacy as compared before COVID-19 and during-COVID-19?

To evaluate variance between occupational choice self-efficacy between students who initiated career counseling prior to COVID-19 and during COVID-19, a univariate analysis of the CSI was conducted through a one-way ANOVA, F (1, 105) = 2.618, p = .109, partial η^2 =

.024, observed power = .361. With an observed power of .361, there was a 36.1% probability that the difference between groups occurred by chance. Thus, occupational choice self-efficacy, as measured by the OCSES did not account for the variance of the dependent variable.

Upon evaluating the means, found in the descriptive statistics, between those who initiated career counseling prior to COVID-19 and during COVID-19, further provided an understanding of the difference of occupational choice self-efficacy between groups. Thus, there is evidence that there was no statically significant difference in the occupational choice self-efficacy of those who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19.

Research Question 5: What are the differences across measures when compared across demographic variables for college students prior to COVID-19 and during COVID-19.

Test the null hypothesis that there were no differences between dependent variable levels or groups, those who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19 across measures when compared across demographic variables, factorial or two-way MANOVAs were run with demographic variables (see Table 3) as fixed factors with the fixed factor of time of counseling initiation. For each demographic category, the identifying groups within each demographic variable was assigned a numeric value that corresponds with or codes the identity group which allowed for demographic categories to be added as a fixed factor or second independent variable when running the MANOVA. From this approach, an understanding of interactions between two independent variables, a demographic variable and time of counseling initiation, accounted for variance of the dependent variables as measured by the CSI, OSCE, AND CTI. Based on the analysis of variance, evidence failed to reject the null hypothesis (see Table 8). From the factorial or two-way MANOVAs, no

demographic variable or fixed factor with the time of counseling initiation provided statistically significant results that accounted for variance of the dependent variables the measured by, CSI, OCSES, and CTI.

Table 5

Multivariate Analysis of Variance Interaction with Demographics

Interaction with Time of Counseling Initiation	Wilk's Λ	*F*	*p*	η^2
Age Range	.911	(12,248.992) = .741.312	.711	.030
Gender	.984	(6,198) = .274	.945	.008
Student Status	.888	(12,28.992) = 1.269	.776	.014
Aggregated Race	.918	(6,198) = 1.445	.199	.042
Race	.871	(12,248.992) = 1.299	.219	.052
Accommodation	.986	(3,101) = .473	.702	.014
Previous Mental Health Counseling	.975	(3,101) =. 863	.681	.015
Current Mental Health Counseling	.958	(3,101) = 1.485	.223	.042

Relationship Status	.958	(3,101) = 1.485	.223	.042

*$\alpha = .05$

Discussion

Career decisions are an important part of the development process for college students (Amir & Gati, 2006), yet pervasive career problems can lead to avoidance to stagnation in the decision-making process. During highly stressful times related to complexity factors such as familial concerns, financial worry, economic decline, health and ability challenges, and lack of social support, students who are experiencing psychological distress around their career decision-making may initiate career counseling. According to Cognitive and CIP theories, stress related to complexity factors and career indecision is mediated by dysfunctional or negative career thoughts, which impact one's career decision state and occupational choice self-efficacy (Bullock-Yowell, 2011b), thus the first research question in this study was related to developing an understanding of the differences in career thoughts, as measured by the Career Thoughts Inventory (Sampson et al., 1996), between students who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19.

After running a MANOVA with the combined dependent variables there was statistical significance between students who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19, which was the primary focus of research question one. Upon review of the univariate analysis of variance, of the three measures, Career State Inventory (Leierer et al., 2017), Occupational Choice Self-Efficacy Scale (Osborn et al., 2020), and the Career Thoughts Inventory (Sampson et al., 1996), only the CTI provided evidence of statistical significance between groups. In analyzing dysfunctional career thoughts, the CTI t-

score accounted for variance between pre-COVID and during COVID-19 career counseling initiations. Furthermore, students who initiated career counseling during COVID-19 expressed higher CTI t-scores than those who initiated career counseling prior to COVID-19.

The second research question was designed to gain a greater understanding of career thoughts as factor of the capability dimension of readiness for career choice. With three subscales within the CTI, decision making confusion (DMC), commitment anxiety (CA), and external conflict (EC) are measured. Through a second MANOVA, evidence was provided that there was statistical significance in dysfunctional career thoughts between students who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19. Through additional univariate analyses, of the three subscales, DMC and CA demonstrated statistical significance and accounted for variance. These results indicated that students who initiated career counseling during COVID-19 presented with higher t-score on the CTI subscales for DMC and CA. Furthermore, t-score means for the DMC and CA subscales also demonstrated elevation for students who initiated career counseling during COVID-19 compared to pre-COVID. Of the two subscales the greatest difference was within the subscale of commitment anxiety.

As discussed by Leierer et al. (2017), career state, as measured by the Career State Inventory (Leierer et al., 2017) is also an indicator or way to assess capability as a dimension of readiness for career choice. The third research question was developed to assess whether or not career state accounted for variance between students who initiated career counseling prior to COVID-19 and students who initiated career counseling during COVID-19. Upon running univariate analyses there was no statistically significant evidence that the CSI accounted for variance between the two groups who initiated career counseling. Additionally, research

question four was developed to explore whether or not the Occupational Choice Self-Efficacy Scale accounted for variance between the two groups who initiated career counseling, and like the CIS, the OCSES did not provide statically significant evidence that occupational choice self-efficacy accounted for variance between students who initiated career counseling prior to COVID-19 and those who initiated career counseling during COVID-19.

Finally, after multivariate and univariate analyses of the three measures and the CTI subscales, research question five was developed to examine variance while accounting for the interaction of demographic variable as a second independent variable or fixed factor. Upon running factorial or two-way MANOVAs with each demographic category as a second independent variable, as with the MANOVA results with the combined dependent variables of the CSI, OCSES, and CTI, the results provided no statistically significant variance between the two groups of students who initiated career counseling with any interaction from a demographic category as a second dependent variable. Upon reviewing the Wilk's Λ, not a single demographic variable demonstrated evidence of statistical significance to account for variance between the group. Thus, providing a greater understanding of the implications of increased complexity factors during COVID-19 accounting for variance between the groups of students who initiated career counseling.

From the analyses of the data, the results of the study are consistent with prior literature. As previously mentioned, according to Bullock-Yowell et al. (2011b), life stress increases negative career thoughts, and given the uncertainty and complexity factors presented during COVID-19 related to economic uncertainty, family and social stress, possible financial and familial strain, as well as a volatile job market, this research study found that dysfunctional thoughts did present as elevated. With the findings from this study, there are implications for

practitioners, counselor educators and researchers, and specifically related to dysfunctional career thoughts, and specifically with in the subscales of DMC and CA, as a measure of the dimension of capability in relation to complexity factors and readiness for career choice.

Implications for Counselors and Counselor Educators

This study sought to directly impact career counselors and career services on college and university campuses, as it investigated cognitive factors related to career decision-making challenges faced by college students during a global health crisis, the COVID-19 pandemic. The global pandemic led to drastic and sharp declines in the economy and available occupational options, as well as impacted contextual factors, thus increasing complexity in the career decision-making process. The results of this study provide discussion points for counselor educators in relation to the readiness for career choice, and specifically around dimension of capability, as measured by dysfunctional career thoughts through the CTI. From previous research, increased negative career thoughts are corelated with mild to moderate anxiety in depression (Dierenger et al., 2016; Hayden & Osborn, 2020; Saunders, Peterson et al., 2000; Walker & Peterson, 2012), thus providing insight to counselor educators and practicing career counselors that there is a greater likelihood that students seeking career counseling during times of crisis or increased complexity are more likely to experience comorbidity of career and mental health concerns. In considering the comorbidity of career and mental health issues, it is important for counselor educators to teach counselors in training (CIT) that an intersection between career decision-making and mental health exists, as well as how to select and interpret instruments, such as the CTI (Sampson et al., 1996), in the identification of intersecting concerns.

Additionally, in the use of the CTI, providing information to increase the understanding of the relationship between career thoughts and complexity, and moreover the indicators of elevated decision-making confusion and commitment anxiety, as potential indicators of increased life stress or complexity factors that also correlate to mild to moderate depression and anxiety (Dierenger et al., 2016; Hayden & Osborn, 2020; Saunders, Peterson et al., 2000; Walker & Peterson, 2012). Through a greater understanding of Readiness for Career Choice (Sampson et al., 2004) as it relates to career decision making and mental, Counselor Educators can support CITs in developing a more holistic conceptualization of clients and greater identification of primary, secondary, and tertiary presenting issues, develop more integrated treatment plan, as well as identify more appropriate interventions. Additionally, practicing counselors, who are limited in their knowledge skill within career or mental health counseling based on their specialty area, by understanding the implications of COVID-19, may review their practice and provision to increase consultation in an effort to better support their clients. Thus, through assessing their scope of knowledge and practice in the development of consultative practices, two-way exchanges of information, increased professional development to supplement knowledge and skill, or referrals to more appropriate services.

Additionally, this exploratory investigation sought to provide information that can inform future practice and research in career services and career counseling. This study provided a mere insight into one aspect readiness for career choice during times of rapidly increasing complexity and crisis. This study can serve as a starting point for additional research related to readiness for career choice and the relationship of capability and complexity in times of crisis to promote additional research in areas related to the relationship of trauma and career decision making, natural disasters and career decision making or other areas to increase research and identify

intersections between crisis counseling, mental health and career concerns. Which can then support the education of CITs and the professional development of counselors to work with clients experiencing diverse yet intersecting challenges. Specifically, this study sought to inform career counseling practitioners in relation to cognitive and emotive trends in assessments related career decision-making during times of economic upheaval and uncertainty that can inform interventions for career counseling. From this study, the Career Thoughts Inventory (Sampson et al., 1996) provided the greatest reliability and strongest measure of capability during a time of crisis. Thus, reinforcing previous studies that demonstrate correlations between career thoughts and psychological distress (Dierenger et al., 2016; Hayden & Osborn, 2020; Saunders, Peterson et al., 2000; Walker & Peterson, 2012), specifically related to mild to moderate anxiety and depression. From the literature and the results of this study, during times of crisis and trauma, the CTI may be a more reliable assessment for counselors that can contribute to greater conceptualization, treatment planning, and intervention selection.

In addition to counselor education, counseling practice and research, it was not lost on the researcher that the sample sizes pre COVID-19 and During COVID-19 were different, with the sample of during COVID-19 participants being smaller. To an extent the difference was attributed to the change in provisions of counseling to tele-career counseling, which posed a novel issue of students who initiated career counseling being located in state different from where their counselor was legal able to practice. Thus, prompting the need to review and look at advocacy work for greater portability and reciprocity of counseling privileges from on state to another, as well as a greater referral network for practicing counselors. Moreover, in looking at the decline in participants during COVID-19, it was also noticed that traditionally marginalized identities in relation to race saw the greatest decline, yet from during COVID-19, based on

available research experienced these identities experienced greater increases in complexity Bowleg, 2020; Falco et al., 2020). Based on the limited data, new questions related to access to reliable internet services, technology, and other future research questions related to equity, access, and advocacy emerged.

From the pursued research, evidence of a potential trend, related to elevated career thoughts, and specifically DMC and CA, informs counselor educators and supervisor on trends related to the implications of COVID-19 related to the initiation of career counseling by college students to assist in the education and training of future counselors, and to equip them in working with college and university clients experiencing career indecision, dysfunctional career thoughts, or low occupational self-efficacy during times of crisis and uncertainty. Not only was the purpose of this study to inform counselors, counselor educator and supervisor, but also to derive focus on future research related to career counseling as there is a paucity of research related to the specialty of career counseling, and even more so in relation to career counseling during times of crisis.

Limitations

One limitation for this study was the higher amount of attrition in the group of students who initiated career counseling during COVID-19. Due to state licensure laws that limit portability and/or practice across state lines, there was an increased number of students who started the initiation process but were not able to continue due to relocated for school and not residing in the same state as the career counselor, or who did not have consistent or reliable access to confidential spaces or internet. Due to these limitations, as a possible contributing factor, there were fewer participants in the group who initiated counseling during COVID-19

than those who initiated career counseling prior. With having groups that were not equal, scale reliability and variance of the smaller scales, CSI and OCSES, may have been impacted.

Additionally, the limited diversity in demographic variables related to age and race may have impacted the ability to effectively analyze variance across these variables. This issue may also have impacted the results of the analysis of variance when accounting for gender where there was a significantly higher percentage of female students who initiated career counseling over male students. In addition to gender there was a more significant decrease in BIPOC identities during COVID-19, which may also have contributed to, or impacted results related to independent variable interactions and variance.

The final limitation of this study was the lack of data related to complexity variables. The lack of identification of complexity variables experienced by participants limited the ability of the researcher to identify if there were any specific factors of complexity that correlated with the elevation in career thoughts, and specifically Decision-Making Confusion and Commitment Anxiety.

Future Recommendations for Research

Future studies on cognitive factors of career decision making and the initiation of career counseling need to focus on complexity factors to establish whether or not and how such factors as financial stress, familial, social, economic, health issues or trauma may correlate with career thoughts. Moreover, the relationship between complexity factors and decision-making confusion, commitment anxiety, and external conflict. Identifying whether or not there is a relationship between complexity factors and dysfunctional career thoughts could provide greater insights and inferences for practicing counselors, as well as assist counselor educators in

preparing counselors in training to work with clients experiencing career indecision through enhanced conceptualization, treatment planning, intervention selection and assessment.

A qualitative study focuses on complexity factors and students experiences prior to and during COVID-19 is needed to further establish an understanding of the lived experience of COVID-19 and affective factors of career-decision making intersected with dysfunctional career thoughts. Additionally, a qualitative study could provide additional insight into issues related to knowledge or career counseling resources, as well as the impact of equity and access to career support service on the experience of students in college during the pandemic. A qualitative study with such a focus could help provide strategic insight or enhanced services on college campuses, as well as inform future counseling provisions.

With the changes in provisions for career counseling that occurred during COVID-19, the differences in preferences of counseling modality, as well as the comparison of counseling outcomes between modalities would increase the research that focuses on counseling provisions. Although tele-counseling service delivery has increased as a provision for direct clinical practice (Barnett & Kolmes, 2016; Varghese et al., 2020,) there continues to be a paucity of research that explores tele-counseling services, and even more so a dearth of research related to the specialty of career counseling provided through tele-counseling. With the attrition or differential in a sample size, additional research on the provision of counseling, and specifically tele-career counseling in relation to equity and access is essential. Additional research on the provision of counseling could enhance counselor educators' ability to provide enhanced training to future counselors, advocate greater equity and access, as well as greater information on intervention and assessment use across modalities.

Conclusion

The current study developed an understanding of the variance and differences between career thoughts, career state, and occupational choice self-efficacy, of students who initiated career counseling prior to COVID-19 and during COVID-19, through the analysis of the Career Thoughts Inventory, Career State Inventory, and Occupational Choice Self-Efficacy Scale, as well as CTI subscales of Decision-Making Confusion, Commitment Anxiety, and external conflict across demographic variables. Furthermore, this study identified that during a time of increased complexity in the midst of a global pandemic, students who initiated career counseling assessed as having a higher level of dysfunctional career thoughts, as well as elevated DMC and CA, as compared to those students who initiated career counseling prior to COVID-19. With a paucity of research on the impacts of a global crisis that encompasses severe economic decline, job uncertainty, familial stress, health concerns, and social isolation, additional research related to the impact of complexity factors on career thoughts is needed to further provide counselor educators with valid and reliable measures that can inform practice and interventions. In addition, this study presents information to help prepare counselors to identify students who are experiencing psychological stress related to career indecision that is highly correlated with depression and anxiety during times of significant crisis or uncertainty.

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Appendix A. Letter to Utilize Archival Data from Florida State University Career Center

The Career Center
Design Your Career

June 23, 2021

Jamie Carney, PhD
2084 Haley Center
Special Education, Rehabilitation, and Counseling
College of Education
Auburn University, Auburn, AL 36832

Dear Dr. Jamie Carney,

This letter is to verify that Erica Stallings, a doctoral student in the Counselor Education and Supervision Doctoral Program in the College of Education at Auburn University, has permission from Myrna Hoover, Director of the Florida State University Career Center, who directs the department and supervises the collector of the requested data set, to utilize the data obtained from archived career counseling assessment data. The approved data includes FSU Career Center pre-career counseling and post-career counseling questionnaires, the Career Thoughts Inventory, and the Career State Inventory for the purpose of analysis in her doctoral dissertation. All archival data is limited to the years of 2019, 2020, and 2021, and has been scrubbed to remove protected and personally identifiable information. Data sets are provided through an encrypted and password protected data file. Each data set for the assessments listed above are in a CSV format. Data is not to be shared with anyone or used outside of the proposed research study related toward the completion of Erica Stalling's doctoral dissertation. Additional or further use of the archival data outlined in this letter, requires a request and approval for the new intended research purpose.

Respectfully,

DocuSigned by:
Myrna Hoover
32283B65BA547D...
Myrna Hoover
Director, FSU Career Center

Dunlap Success Center, 100 South Woodward Avenue, P.O. Box 3064162, Tallahassee, FL 32306-4162
(T) 850.644.6431 · (F) 850.644.3273 · career.fsu.edu

Adult Informed Consent for Career Counseling (In Person)

Start of Block: Default Question Block

Q1
INFORMED CONSENT FOR CAREER COUNSELING

During the time of online instruction, due to State of Florida licensure laws, we are only able to provide Career Counseling to individuals who are located in the state of Florida. To begin Career Counseling this form will provide you with information on your clinician's credentials, the process of counseling, confidentiality, emergencies, and other details about Career Counseling. At any time during Career Counseling, please feel free to ask any clarifying questions.

Credentials
Our career counseling services are provided by counselors-in-training, psychologists-in-training, nationally certified counselors, licensed counselors, and licensed psychologists. All counselors-in-training and psychologists-in-training are providing services under faculty and clinical supervision. Questions about your career counselor's qualifications can be discussed with him/her or the Program Director for Career Advising and Counseling.

Counseling style
The FSU Career Center clinicians utilize Cognitive Information Processing Theory and interventions, as well as empirically researched and valid assessments based on the client's needs and goals. Each clinician may integrate other theoretical counseling approaches into their practice and work with clients and will disclose these practices to the client at the beginning of the first session.

Page Break

Q2 **Client's participation** - Expectations of the client:
The client should – (please check off each item and place your initials in the text boxes)

☐ Dress appropriately during sessions
_____

☐ Do not conduct other activities while in session, and have all electronics muted or turned off, unless previously discussed with the counselor.
_____

☐ Do not bring any weapons of any kind to session (i.e., firearms, ammunition, flammable or explosive objects, household tools, sharp objects, sporting or camping paraphernalia)
_____

☐ Do not record sessions _____

☐ Avoid using mind altering substances prior to session
_____

☐ Minors should have a parent or guardian with them at the location/building, unless otherwise agreed upon with their clinician.
_____

Page Break

Q3
Confidentiality and Records
All of your PHI (Protected Health Information) is kept for a minimum of seven years. In the event of your clinician's death, retirement, or incapacity, your records will be given to the acting Program Director for Career Advising and Counseling. This records custodian will be responsible for responding to any request of records you may have, and for safely destroying your records after the legal time frames for storing them have been satisfied. They will also contact you at the time of transfer of records. If you are a current client, the same records custodian will assist in providing appropriate referrals for further treatment.

The following information explains how the Career Center handles and stores your PHI while you are receiving counseling. Although it is not guaranteed that these methods will prevent 100% of confidentiality breaches, they are designed with the intention of supporting the confidentiality of all

clinical communications:

On-site:
On-site sessions in your clinician's office which are designed for privacy.
Your information is stored via server which is designed for healthcare and provides a Business Associate Agreement for HIPAA compliance. Zoom HIPAA uses point-to-point, federal approved, encryption. Any devices, storage (including cloud-based storage), or servers that contain your records or identifying information are encrypted, password protected, and kept secure.
Any paper with your personal information is kept in a locked cabinet behind a locked door.

Recordings and Live Observations:
All sessions with a clinician who is a Counselor or Psychologist in training must be recorded to provide adequate clinical supervision and ensure you receive quality career counseling services. Recordings are encrypted and stored on a secure drive in a password protected file and are deleted immediately after the clinician's supervision session, which will be no more than two weeks after your career counseling date. Supervisors have access and ability to do live observation via Zoom HIPAA. You the client, nor the clinician, will be able to see or hear the supervisor within your session.

Archival Data and Research:
Upon termination, assessment and demographic data is de-identified, coded, and archived, which means any identifiable information is removed and coded to maintain confidentiality, and data is placed in a longitudinal archival dataset that may be used for research purposes. All requests for archival data must be reviewed by the Program Director for Career Advising and Counseling to ensure compliance with ethical research standards, and approved request is provided a letter of approval that provides access archival data to be used under the specifics of the outlined research study.

Client Initials as Acknowledgement:
I understand how my counseling record is maintained and that every effort to maintain confidentiality and security is taken by the Career Center, and that my de-identified data, post counseling termination may be used for research purposes. By initialing below, I acknowledge my understanding or record maintenance, security, and archival research procedures using de-identified data.

_____

Page Break

Q4

Email:

Email is not always secure. However, you have the option to request appointment reminder to be sent via email. The Florida State University server stores our email correspondence. Any email correspondence will not disclose your clinicians name or the nature of your appointment. It will only state that you have a scheduled virtual appointment with the FSU Career Center, and it will include the date and time.

Texting:

For the sake of your privacy, the Career Center does not use SMS or MMS texting with clients, outside of non-descript appointment reminders that state the appointment date, time, and that the appointment is with the FSU Career Center. Text messages will not include identifying information, the nature of your appointment, or who your appointment is with.

Q5

Contact information

When you need to contact your clinician for any reason, these are the most effective ways to get in touch in a reasonable amount of time:

By phone: (850) 644-6431 You may leave messages on the voicemail, which is confidential.

Please refrain from making contact with your clinician using any social media messaging systems such as Facebook Messenger or Twitter. These methods have very poor security, and I am not prepared to watch them closely for important messages from clients.

Please refrain from creating reviews of your clinician's services online. Online reviews are for the public to see and therefore they would put your confidentiality at risk.

Page Break

Q6

Your communication preferences:

List the ways in which you authorize us to contact you. Messages left on voicemail will be limited to scheduling information.

- ○ Home Phone _____
- ○ Cell Phone _____
- ○ Work Phone _____

Q7 **Can We Leave Messages (Yes/No)**

	Yes	No
Home Phone	○	○
Cell Phone	○	○
Work Phone	○	○

Q8 **Mailing Address:**

- ○ Address _____
- ○ Address 2 _____
- ○ City _____
- ○ State _____
- ○ Postal code _____

Page Break

Q9

Response Time

I may not be able to respond to your messages and calls immediately. For voicemails and other messages, you can expect a response within 24 hours on weekdays, and 72 hours on weekends. Be aware that there may be times when I am unable to receive or respond to messages, such as when out of cellular or WIFI range or out of town.

Emergency Contact

If you are ever experiencing an emergency, including a mental health crisis, please call 911, (850) 644-Talk (8255), Dial 211 or (866) 728-8445 to connect to resources in Florida, or Suicide Prevention Lifeline 1-800-273-8255, or go to your nearest emergency room.

If you need to contact your clinician about an emergency, the best method is:

By phone: (850) 644-6431 If you cannot reach your clinician by phone, please leave a voicemail.

Cancellation Policy

Cancellations should be made 24 hours in advance by calling the FSU Career Center at (850) 644-6431. Three or more consecutive cancellations or cancellations in less than a 24-hour time frame prior to your session, may result in termination of services.

Q10

No Shows

If you do not initiate the meeting at your scheduled time or contact your clinician within five minutes of your session start time it will be considered a no-show. Within ten minutes of your scheduled time, the clinician will attempt to contact you via the contact information provided, in the event that you do not initiate your session. Three or more consecutive no shows may result in termination.

Page Break

Q11

Professional Relationship

Due to the professional relationship between client and clinician, and to maintain confidentiality, clinicians will not accept invitations to connect on social media platforms or acknowledge the client-clinician relationship in the instance both parties are in a public place outside of the FSU Career Center.

Termination Policy

Termination will occur over the last three Career Counseling sessions to provide adequate plans, resources, and referrals, unless the client has three consecutive no shows or cancellations. In the instance termination occurs due to no-shows or cancellations after three consecutive attempts to hold a Career Counseling session, the client will be referred alternative community or university resources and can utilize Drop-In Career Advising and other services offered by the FSU Career Center.

Statement Regarding Ethics, Client Welfare & Safety

Clinicians at the FSU Career Center abide by the ethical codes and decision-making processes and guidance provided by the American Counseling Association Code of Ethics, National Career Development Association, and the Board of Clinical Social Workers, Marriage and Family Therapy, and Mental Health Counseling. Additionally, clinicians abide by governing laws set forth by the State of Florida, as well as the United States of America Federal Government. Clinicians follow these ethical codes and laws for the welfare and safety of you the client, as well as the public.

Q12 **LIMITS OF CONFIDENTIALITY** Contents of all therapy sessions are considered to be confidential. Both verbal information and written records about a client cannot be shared with another party without the written consent of the client or the client's legal guardian/parent. Noted exceptions are as follows:

Duty to Warn and Protect (Serious Harm to Self or Others; Homicide/Suicide)

If a client discloses intentions or a plan to harm another person or property, the career counselor or clinician is required to warn the intended victim and report this information to legal authorities. In cases in which the client discloses or implies a plan for suicide or serious self-harm, the career counselor or clinician is required to take the necessary steps to keep the client safe which may include notifying legal authorities and/or hospitalization. The career counselor or clinician may, though it is not mandatory, make reasonable attempts to notify the emergency contact provide that the client has given consent to contact in the instance of an emergency, as long as in doing so, there would be no additional or potential harm to the client.

Abuse of Children and Vulnerable Adult (Elder or Person with Disability)

If a client states or suggests that he or she is abusing a child or a vulnerable adult, or the client has recently abused a child or a vulnerable adult, or a child or a vulnerable adult) is in danger of abuse, the career counselor or clinician is a mandated reporter and is therefore required by law to report this information to the appropriate social service and/or legal authorities.

Court Order

To comply with a court order signed by a judge.

Minors/Guardianship

Parents or legal guardians of non-emancipated minor clients have the right to access the clients' records.

LIMITS OF CONFIDENTIALITY SUMMARY The law protects the relationship between a client and a counselor, and information cannot be disclosed without written permission, with specific exceptions. The staff of The Career Center consults with other professionals, including ethicists and attorneys, when in doubt as to the validity of an exception

Please place check off each exception to confidentiality and initial below each exception to acknowledge your knowledge of the limits to confidentiality. Exceptions:

☐ Suspected child abuse or dependent adult or elder abuse, for which the counselor or clinician is required by law to report this to the appropriate authorities immediately.
_____

☐ If a client threatens serious bodily harm or death to a specific and identifiable individual or group of persons, the career counselor or clinician must notify the police and inform the intended victim. Hospitalization may be necessary. _____

☐ If a client intends to harm themself, the career counselor or clinician will make every effort to enlist their cooperation in ensuring their safety. If they do not cooperate, the career counselor or clinician will take further measures without the client's permission that are provided to the career counselor or clinician by law in order to ensure the client's safety.
_____

Page Break

Q13 By initialing below, I am authorizing my clinician to begin career counseling with:

○ In Person and recorded via Zoom HIPAA for counseling supervision purposes.
_____

Q14

You may, at any time during the course of your treatment, withdraw your authorization to any of these

modes of treatment and/or this agreement form as a whole. Simply contact your clinician by phone, secure messaging, or mail.

By signing below, you acknowledge that you agree that you have read and understood this agreement form and agree to accept career counseling services by, a clinician at the FSU Career Center.

- Client Full Name _____
- Date (mm/dd/yyyy) _____
- Clinician Name _____
- Date (mm/dd/yyyy _____

Q15 Client Signature

Q16 Clinician Signature

End of Block: Default Question Block

Adult Informed Consent for Tele-Career Counseling

Start of Block: Default Question Block

Q1

INFORMED CONSENT FOR CAREER COUNSELING

To begin Career Counseling this form will provide you with information on your clinician's credentials, the process of counseling, confidentiality, emergencies, and other details about Career Counseling. At any time during Career Counseling, please feel free to ask any clarifying questions.

Credentials

Our career counseling services are provided by counselors-in-training, psychologists-in-training, nationally certified counselors, licensed counselors, and licensed psychologists. All counselors-in-training and psychologists-in-training are providing services under faculty and clinical supervision. Questions about your career counselor's qualifications can be discussed with him/her or the Program Director for Career Advising and Counseling.

Counseling style

The FSU Career Center clinicians utilize Cognitive Information Processing Theory and interventions, as well as empirically researched and valid assessments based on the client's needs and goals. Each

clinician may integrate other theoretical counseling approaches into their practice and work with clients and will disclose these practices to the client at the beginning of the first session.

Q2 **Client's participation** - Expectations of the client:
The client should – (please check off each item and place your initials in the text boxes)

☐ Dress appropriately for sessions, which means fully clothed, no bathing suits or athletic attire that exposes large areas of skin or body.
_____

☐ Arrive prior to the session start-time to ensure the session begins and ends on time. Arriving 15 minutes late or later will result in a no-show for the scheduled session. Three or more no-shows may result in termination. _____

☐ Do not bring anyone else into the counseling room unless you first discuss it with your clinician _____

☐ Do not conduct other activities while in session, cell phones and electronics need to be silenced during session unless discussed with the clinician.
_____

☐ Do not bring any weapons of any kind to session (i.e., firearms, ammunition, flammable or explosive objects, household tools, sharp objects, sporting or camping paraphernalia)
_____

☐ Do not record sessions _____

☐ Avoid using mind altering substances prior to session
_____

☐ Minors should have a parent or guardian with them at the location/building of the web-based session, unless otherwise agreed upon with their clinician.
_____

Page Break

Q3
Confidentiality and Records

All of your PHI (Protected Health Information) is kept for a minimum of seven years. In the event of your clinician's death, retirement, or incapacity, your records will be given to the acting Program Director for Career Advising and Counseling. This records custodian will be responsible for responding to any request of records you may have, and for safely destroying your records after the legal time frames for storing them have been satisfied. They will also contact you at the time of transfer of records. If you are a current client, the same records custodian will assist in providing appropriate referrals for further treatment.

The following information explains how the Career Center handles and stores your PHI while you are receiving counseling. Although it is not guaranteed that these methods will prevent 100% of confidentiality breaches, they are designed with the intention of supporting the confidentiality of all clinical communications:

On-site:
On-site sessions in your clinician's office which are designed for privacy.
Your information is stored via a secured server which is designed for healthcare and provides a Business Associate Agreement for HIPAA compliance. Zoom HIPAA uses point-to-point, federal approved, encryption. Any devices, storage (including cloud-based storage), or servers that contain your records or identifying information are encrypted, password protected, and kept secure.
Any paper with your personal information is kept in a locked cabinet behind a locked door with the key in a lockbox and the lockbox key is kept in a secure and undisclosed location. Only Career Counselors and approved support staff can access the lockbox key.

Recordings and Live Observations:
All sessions with a clinician who is a Counselor or Psychologist in training must be recorded and/or supervised live to provide adequate clinical supervision and ensure you receive quality career counseling services. Recordings are encrypted and stored on a secure drive in a password protected file and are deleted immediately after the clinician’s supervision session, which will be no more than two weeks after your career counseling date. Supervisors have access and ability to do live observation via Zoom HIPAA or through mirrored observation windows in counseling rooms. You the client, nor the clinician, will be able to see or hear the supervisor within your session, unless a crisis arises that requires the supervisor to intervene.

Archival Data and Research:
Upon termination, assessment and demographic data is de-identified, coded, and archived, which means any identifiable information is removed and coded to maintain confidentiality, and data is placed in a longitudinal archival dataset that may be used for research purposes. All requests for archival data must be reviewed by the Program Director for Career Advising and Counseling to ensure compliance with ethical research standards, and approved request are provided a letter of approval that provides access archival data to be used under the specifics of the outlined research study.

Client Initials as Acknowledgement:
I understand how my counseling record is maintained and that every effort to maintain confidentiality

and security is taken by the Career Center, and that my de-identified data, post counseling termination may be used for research purposes. By initialing below, I acknowledge my understanding of record maintenance, security, and archival research procedures using de-identified data.

_____

Page Break

Q4

Email:

Email is not always secure. However, you have the option to request appointment reminders to be sent via email. The Florida State University server stores our email correspondence. Any email correspondence will not disclose your clinicians name or the nature of your appointment. It will only state that you have a scheduled appointment with the FSU Career Center, and it will include the date and time.

Texting:

For the sake of your privacy, the Career Center does not use SMS or MMS texting with clients, outside of non-descript appointment reminders that state the appointment date, time, and that the appointment is with the FSU Career Center. Text messages will not include identifying information, the nature of your appointment, or who your appointment is with.

Q5

Contact information

When you need to contact your clinician for any reason, these are the most effective ways to get in touch in a reasonable amount of time:

By phone: (850) 644-6431 You may leave messages on the voicemail, which is confidential.

Please refrain from making contact with your clinician using any social media messaging systems such as Facebook Messenger or Twitter. These methods have very poor security, and I am not prepared to watch them closely for important messages from clients.

Please refrain from creating reviews of your clinician's services online. Online reviews are for the public to see and therefore they would put your confidentiality at risk.

Page Break

Q6

Your communication preferences:

List the ways in which you authorize us to contact you. Messages left on voicemail will be limited to scheduling information.

- ○ Home Phone _____
- ○ Cell Phone _____
- ○ Work Phone _____

Q7 **Can We Leave Messages (Yes/No)**

	Yes	No
Home Phone	○	○
Cell Phone	○	○
Work Phone	○	○

Q8 **Mailing Address:**

- ○ Address _____
- ○ Address 2 _____
- ○ City _____
- ○ State _____
- ○ Postal code _____

Page Break

Q9

Response Time

I may not be able to respond to your messages and calls immediately. For voicemails and other messages, you can expect a response within 24 hours on weekdays, and 72 hours on weekends. Be aware that there may be times when I am unable to receive or respond to messages, such as when out of cellular or WIFI range or out of town.

Emergency Contact

If you are ever experiencing an emergency, including a mental health crisis, please call 911, (850) 644-Talk (8255), Dial 211 or (866) 728-8445 to connect to resources in Florida, or Suicide Prevention Lifeline 1-800-273-8255, or go to your nearest emergency room.

If you need to contact your clinician about an emergency, the best method is:

By phone: (850) 644-6431 If you cannot reach your clinician by phone, please leave a voicemail.

Cancellation Policy

Cancellations should be made 24 hours in advance by calling the FSU Career Center at (850) 644-6431. Three or more consecutive cancellations or cancellations in less than a 24-hour time frame prior to your session, may result in termination of services.

Q10 **No Shows**

If you do not initiate the meeting at your scheduled time or contact your clinician within 15 minutes of

your session start time it will be considered a no-show. Within ten minutes of your scheduled time, the clinician will attempt to contact you via the contact information provided, in the event that you have not arrived. Three or more consecutive no shows may result in termination.

Verification of Identity
For sessions via video conferencing you will have to have a brief interaction via video conferencing in order to verify your identity by matching you with your picture ID. During this initial verification, you will choose a password which you will use for all future sessions. This process protects you from another person posing as you.

Page Break

Q11
Professional Relationship
Due to the professional relationship between client and clinician, and to maintain confidentiality, clinicians will not accept invitations to connect on social media platforms or acknowledge the client-clinician relationship in the instance both parties are in a public place outside of the FSU Career Center.

Termination Policy
Termination will occur over the last three Career Counseling sessions to provide adequate plans, resources, and referrals, unless the client has three consecutive no shows or cancellations. In the instance termination occurs due to no-shows or cancellations after three consecutive attempts to hold a Career Counseling session, the client will be referred to alternative community or university resources and can utilize Drop-In Career Advising and other services offered by the FSU Career Center.

Statement Regarding Ethics, Client Welfare & Safety
Clinicians at the FSU Career Center abide by the ethical codes and decision-making processes and guidance provided by the American Counseling Association Code of Ethics, National Career Development Association, and the Board of Clinical Social Workers, Marriage and Family Therapy, and Mental Health Counseling. Additionally, clinicians abide by governing laws set forth by the State of Florida, as well as the United States of America Federal Government. Clinicians follow these ethical codes and laws for the welfare and safety of you the client, as well as the public.

Q12 **LIMITS OF CONFIDENTIALITY** Contents of all counseling sessions are considered to be confidential. Both verbal information and written records about a client cannot be shared with another party without the written consent of the client or the client's legal guardian/parent. Noted exceptions are as follows: **Duty to Warn and Protect (Serious Harm to Self or Others; Homicide/Suicide)**
If a client discloses intentions or a plan to harm another person or property, the career counselor or clinician is required to warn the intended victim and report this information to legal authorities. In cases in which the client discloses or implies a plan for suicide or serious self-harm, the career counselor or clinician is required to take the necessary steps to keep the client safe which may include notifying legal authorities and/or hospitalization. The career counselor or clinician may, though it is not mandatory, make reasonable attempts to notify the emergency contact provide that the client has given consent to contact in the instance of an emergency, as long as in doing so, there would be no additional or potential harm to the client. **Abuse of Children and Vulnerable Adult (Elder or Person with Disability)**
If a client states or suggests that he or she is abusing a child or a vulnerable adult, or the client has recently abused a child or a vulnerable adult, or a child or a vulnerable adult) is in danger of abuse, the career counselor or clinician is a mandated reporter and is therefore required by law to report this information to the appropriate social service and/or legal authorities.

Court Order
To Comply with a court order signed by a judge. **Minors/Guardianship**
Parents or legal guardians of non-emancipated minor clients have the right to access the clients' records.

LIMITS OF CONFIDENTIALITY SUMMARY The law protects the relationship between a client and a counselor, and information cannot be disclosed without written permission, with specific exceptions. The staff of the Career Center consults with other professionals, including ethicists and attorneys, when in doubt as to the validity of an exception.

Please place check off each exception to confidentiality and initial below each exception to acknowledge your knowledge of the limits to confidentiality. Exceptions:

☐ Suspected child abuse or dependent adult or elder abuse, for which the counselor or clinician is required by law to report this to the appropriate authorities immediately.
_____

☐ If a client threatens serious bodily harm or death to a specific and identifiable individual or group of persons, the career counselor or clinician must notify the police and inform the intended victim. Hospitalization may be necessary. _____

☐ If a client intends to harm themself, the career counselor or clinician will make every effort to enlist their cooperation in ensuring their safety. If they do not cooperate, the career counselor or clinician will take further measures without the client's permission that are provided to

the career counselor or clinician by law in order to ensure the client's safety.
_____

Page Break

Q13 By initialing below, I am authorizing my clinician to begin career counseling with:

- Informed Consent _____

Q14
You may, at any time during the course of your treatment, withdraw your authorization to any of these modes of counseling and/or this agreement form as a whole. Simply contact your clinician by informing them during a session, phone call, or mail.

By signing below, you acknowledge that you agree that you have read and understand this agreement form and agree to accept career counseling services by, a clinician at the FSU Career Center.

- Client Full Name _____
- Date (mm/dd/yyyy) _____
- Clinician Name _____
- Date (mm/dd/yyyy _____

Q15 Client Signature

Q16 Clinician Signature

End of Block: Default Question Block

Appendix C. Pre-Career Counseling Assessment with Brief Demographic Form, Career State Inventory, and CIP Domain Skills and Self-Efficacy Ratings

Pre- Career Counseling Assessment

Please complete the following demographic information

- ○ Age _____
- ○ Date of Birth _____

Of the gender options, please select the gender that is most representative of your identity.

- ○ Male
- ○ Female
- ○ Transgender Male
- ○ Transgender Female
- ○ Gender Non-conforming
- ○ Don't know/Not sure
- ○ I Prefer Not to Identify
- ○ I prefer to Self-Identify _____

Are you currently an FSU Student?

- ○ Yes
- ○ No

What is your current major?

_____

Please select your current student status.

- ○ Freshman
- ○ Sophomore
- ○ Junior
- ○ Senior
- ○ Graduate Student

Please select the highest level of education you have completed.

- ○ High School: 10th Grade
- ○ High School: 11th Grade
- ○ High School: 12th Grade
- ○ College 1 year
- ○ College 2 years
- ○ College 3 Years
- ○ College 4 years
- ○ College 5 years
- ○ College 6 years
- ○ Master's Degree
- ○ Educational Specialist
- ○ Doctorate (Please indicate the type of degree) _____
- ○ Other _____

Which ethnic group or groups below make up your identity. (Select all that apply)

- ☐ American Indian/Native American
- ☐ Asian

- [ ] Black
- [ ] Hispanic
- [ ] Native Hawaiian/Pacific Islander
- [ ] White
- [ ] I prefer not to identify

Do you need accommodations for your meetings with a career counselor?

- ○ Yes
- ○ No

What accommodations, if any, may be necessary during the course of counseling sessions?

_____

Have you previously received counseling or therapy from another professional?

- ○ Yes
- ○ No

Are you currently receiving counseling or therapy from another professional?

- ○ Yes
- ○ No

Marital Status

- ○ Cohabitation/Domestic Partner
- ○ Divorced
- ○ Married
- ○ Single
- ○ Widow/Widower

Current Occupation

_____

Page Break

Please Complete the Following Questions Related to Your Current Career Decision State

---

CSI* Participant Version 8.0 Stephen J. Leierer, PhD; Gary W. Peterson, PhD; Robert C. Reardon, PhD; Debra S. Osborn, PhD

List all occupations you are considering right now.

- ○ Occupation option _____
- ○ Occupation option _____
- ○ Occupation option _____
- ○ Occupation option _____
- ○ Occupation option _____
- ○ Occupation option _____

Which occupation listed above is your first choice? If undecided, write "" undecided"""

_____

How well satisfied are you with your responses to your occupation options and first choice occupation? Place a check next to the appropriate statement below:

- ○ Very Satisfied
- ○ Satisfied
- ○ Not Sure
- ○ Dissatisfied
- ○ Very Dissatisfied

Please Select True or False

	True	False
If I had to make an occupational choice right now, I'm afraid I would make a bad choice.	○	○
Making up my mind about a career has been a long and difficult problem for me.	○	○
I am confused about the whole problem of deciding on a career.	○	○

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Additional Self-Efficacy and Cognitive Information Processing Domain Questions:
Please read the question carefully and respond with the most appropriate answer for you by circling one of the following responses: Strongly Agree, Disagree, Neither agree nor disagree, Agree, or Strongly agree

I feel anxious about my career concern.

- ○ Strongly disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Strongly agree

I feel I know the next steps needed to attain my career goal.

- ○ Strongly disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Strongly agree

I feel confident that I can make the next steps to attain my career goal.

- ○ Strongly disagree
- ○ Somewhat disagree
- ○ Neither agree nor disagree
- ○ Somewhat agree
- ○ Strongly agree

Page Break

Please read the question carefully and respond with the most appropriate answer for you by circling one of the following responses: Poor, Fair, Good, Very good, or Excellent

Knowledge of your values, interests, and skills

- ○ Poor
- ○ Fair
- ○ Good
- ○ Very Good
- ○ Excellent

Knowledge about the career options I am considering.

- ○ Poor
- ○ Fair
- ○ Good
- ○ Very Good
- ○ Excellent

Career decision making skills.

- ○ Poor
- ○ Fair
- ○ Good
- ○ Very Good
- ○ Excellent

Awareness of and ability to monitor/control your self-talk.

- ○ Poor
- ○ Fair
- ○ Good
- ○ Very Good
- ○ Excellent

Page Break

What would you like to accomplish related to your time in Career Counseling? In addition, what is your time frame for addressing your career concern?

_____

_____

_____

_____

_____

End of Block: Default Question Block

Appendix D: Career Thoughts Inventory

Due to reproduction limitations by Psychological Assessment Resources Inc. (PAR, Inc.), the publisher, only three questions and the Likert Scale can be reproduced within a dissertation. Below provides one question from each of the three subscales.

Decision Making Confusion:

"Choosing an occupation is so complicated, I just can't get started."

Strongly Disagree Disagree Agree Strongly Agree

Commitment Anxiety:

"There are several fields of study or occupations that fit me, but I can't decide on the best one."

Strongly Disagree Disagree Agree Strongly Agree

External Conflict:

"I know what I want, but someone's always putting obstacles in my way."

Strongly Disagree Disagree Agree Strongly Agree