

**EXPLORING A CAREER PATH TOWARDS WELL-BEING: HOW
PARENTAL BEHAVIORS, CAREER VALUES AWARENESS, AND
CAREER DECISION-MAKING SELF-EFFICACY IMPACT WELL-
BEING IN UNDERGRADUATE COLLEGE STUDENTS**

by

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A Dissertation

Submitted to the Faculty of Purdue University

In Partial Fulfillment of the Requirements for the degree of

Doctor of Philosophy



Department of Educational Studies

West Lafayette, Indiana

August 2019

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To all the students, clients, friends, participants, acquaintances, and even strangers, who have shared their career journeys with me. These pages are indelibly marked with my understanding of your lived experiences. Your voices were constantly in my head as I wrote each day, and I just hope that I did your words justice. As a psychologist, may I never take for granted the vulnerability, openness, and trust it takes for you to share your stories with me.

I hope the outcome of this work helps to scientifically confirm the sentiments I've shared in person with you. No, it is not "crazy," and it does not make you different than everyone else, to struggle with this stuff. I hope that you find peace within the discomfort, appreciation for the struggle, people to help you along the way, and happiness in the decisions you make. But most importantly, I hope that you find yourself in the journey.

ACKNOWLEDGMENTS

I would like to acknowledge some of those who have helped to encourage, push, and support me on this journey. I cannot name them all; over the ten-plus years of my education, so many peers, instructors, clinical supervisors, clients, and mentors have been instrumental in helping me get where I am.

To begin, thank you to all my friends who checked in on me, helped me edit, danced it out with me, yelled it out with me, or came to work parties. You have surely gotten me through this process; your support, good vibes, and most importantly laughter, have meant the world to me. I am lucky to call you friends, and the fact that you are all brilliant and will no doubt change the world is just a bonus.

To my advisor, Dr. Eric Deemer, thank you for the time and reassurance you so generously gave. You taught me to stay in my lane and forge ahead despite what others may say. In what was arguably the most challenging time my family and I have ever faced, you kindly and persistently asked what I needed. Through this entire process in my moments of panic, you were calm. In my moments of doubt, you had none. You've taught me about the kind of psychologist and mentor I want to become, and I will forever appreciate your unwavering faith in me.

To my parents, thank you for supporting me no matter what. I know that I would not be where, or who, I am today without you. You taught me to value helping others, encouraged my tenacity (aka stubbornness) throughout my whole life, and selflessly gave of yourselves to encourage my goals. While I may have done the work needed to realize these dreams, I never question that I was given a huge advantage in life by having you two behind me. I only hope that I can make you proud, and that I can give of myself to others the way you have given to me.

To Eugie, there are too many moments to count wherein you have been there for me on this road to becoming "Dr. Sam-Sam." As I scroll through this document, I can see your influence (and our inside jokes). When I recall the difficult moments, I feel your support. When I think about the exciting times, you were there and arguably more thrilled than I was. No matter how hard the journey was, I know it was the right one because it led me to you. Thank you for being my best friend.

And finally, to Sadie, my puppy girl, I barely have words to describe how much acknowledgement you deserve in where I am today. You cuddled with me when I cried, danced

around when I was excited, stared me down as I worked too many hours, and even helped type a few words in this document here and there. In our 12 years together, you have taught me what unconditional love means and for that I owe you everything. For now, I'll practice my gratitude by stepping away from the computer more often and enjoying as many walks, smiles and snuggles as we can find.

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ABSTRACT

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Institution: Purdue University

Degree Received: August 2019

Title: Exploring a Career Path Towards Well-being: How Parental Behaviors, Career Values Awareness, and Career Decision-Making Self-Efficacy Impact Well-being in Undergraduate College Students.

Major Professor: Dr. Eric Deemer

While there is evidence about the relationship between career development and psychological outcomes, more work is needed to understand how career development is related to personal mental health outcomes in college students. Studying some of the social and cognitive predictors of self-efficacy, this study espouses a holistic perspective to career development and aims to better understand its impact on well-being. Using social cognitive career theory (SCCT) and Super's life-span, life-space theory, this study examines how social (e.g., parental support) and cognitive (e.g., career values awareness) factors influence career decision-making self-efficacy, and furthermore, how this impacts well-being in undergraduate students. Specific mediation hypotheses were assessed, including the mediating role of career values awareness in the relationship between parental support and career decision-making self-efficacy, and the mediating effect of career-decision-making self-efficacy on well-being. Data were collected from 1446 undergraduate students at a large Midwestern public land-grant university through an online survey. Using structural equation modeling to analyze the data, results indicated that: (a) career values awareness mediated the relationship between parental behaviors and CDMSE; (b) CDMSE mediated the relationship between parental behaviors and well-being; and (c) CDMSE mediated the relationship between career values awareness and well-being. In an alternative model, parental support and socioeconomic status (SES) were also found to be significant positive predictors of well-being. Post hoc analysis revealed that academic standing (i.e., year in school) did not moderate the relationship between CDMSE and well-being. Limitations of the study and recommendations for future research are suggested along with implications for clinical practice.

CHAPTER 1: INTRODUCTION

Students have many pivotal experiences in college, including but not limited to personal growth and exploration, education, freedom, romantic and social relationships, new extracurricular opportunities, and separation from family. It is a unique time in life that many people enter with great excitement; however, college is also quite a challenging time for many students (Acharya, Jun & Collins; 2018; Ibrahim, Kelly, Adams, & Glazebrook, 2013).

College students are among the most depressed people in our society today; according to the National Institute for Mental Health (NIMH), in 2015, 10.3% of people aged 18-25 years old experienced a major depressive episode. The American Psychiatric Association (APA) defines this as depressive symptoms lasting longer than two weeks, according to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; APA, 2013). The prevalence of depression in this age group is higher than any other adult group, with 7.5% of people 26-49 and only 4.8% of people over 50 years old experiencing an episode of major depression (NIMH, 2015). Moreover, estimates suggest that as many as 30-50% of all college students have felt so depressed that they could not function at one time or another (American College Health Association, 2009; American Psychological Association [APA], 2013; Ibrahim et al., 2013). As many as 7.5% of undergraduates in 2012 seriously contemplated suicide, and although far fewer actually try (1.2% of undergraduates), suicide remains a leading cause of death for college students (Suicide Prevention Resource Center, 2014).

People in the general public also experience anxiety at a high rate; anxiety has been estimated to affect roughly 18% of the adult population (Anxiety and Depression Association of America, 2016). As a comparison, one survey of 400 college counseling centers found that 41.6% of clients presented to counseling with anxiety (Association for University and College

Counseling Center Directors, 2012) and that 24.5% of clients were taking psychotropic medication to help treat their mental illness.

But why do so many undergraduates present with depression, anxiety, and/or suicidal ideation? Understanding well-being in the college population is crucially important, as mental health professionals, teachers and researchers all work to address these specific concerns. Because of this need to understand well-being in the college population, researchers have explored and made meaningful contributions to our understanding of college students' experiences and what contributes to their well-being. Some suggestions as to what contributes to well-being in this population have included creating an established sense of community (Cuevas, 2016), sleep quality (Ridner, Newton, Slaten, Crawford, & Hall, 2016), and perceptions of control and course grades (Stupnisky, Perry, Renaud, & Hladkyj, 2013).

Within various career theories, many scholars have suggested that college students' career development may be positively related to college students' overall well-being (Andrews, 2014; Rottinghaus, Jenkins, & Jantzer, 2009; Saunders, Peterson, Sampson, & Reardon, 2000). One unique factor in the college population is that there is an inherent interest in and progression towards career exploration, preparation, and development based on their engagement in higher education. While scholars have discovered some evidence regarding the relationship between education and career development, more work is needed to understand how career development occurs within college students today, and furthermore, how this is related to various affective experiences, including well-being (Rottinghaus et al., 2009).

Theoretical Framework

Increasingly, career decisions are being understood from a global framework (Osipow, 1990). Many career theorists have borrowed from the work of Kurt Lewin, a foundational social

psychologist, who proposed that behavior is a function of the interaction between the person and the environment (Lewin, 1936). In this theory, parents, teachers, and academic advisors (aspects of the environment) serve as integral components that interact with personal factors, and thus influence behavior. To apply to career development, this idea suggests that career behaviors do not happen in a vacuum; rather, career choice is an iterative process in which environmental factors interact with the person (e.g., interests, skills) and influence behaviors such as motivation and choice.

Super's Life- Span, Life-Space Theory

According to Super's (1990) life-span, life-space theory of vocational developmental, people 15-24 years old are in the exploration stage, wherein career exploration is the primary focus. This includes exposing oneself to new things, such as classes, hobbies, and social activities, in an effort to develop skill, understanding, and tentative career choices (e.g., choosing a major, entering a first job). Traditional college students are assumed to be in the exploration phase of Super's life-span, life-space model. Super (1957) hypothesized that those who are more effective at engaging in career development activities and mastering career development tasks can gain valuable knowledge about themselves and increase skills and competencies that generalize to other areas, such as well-being. As people develop further vocational maturity and security, they become more secure in who they are, better adjusted, and more prepared to handle other problems (Super, 1969). Therefore, the life-span, life-space theory suggests that the confidence of success in one aspect of life (e.g., career development) increases self-efficacy and willingness and ability to improve other domains of life.

To demonstrate with an example, a student deciding on an academic major in college is an example of mastering the exploration stage (Super, 1990). Researchers in a 2009 study of

depression among undecided college students (college students who did not have a set academic major) found that students who had not declared a major were significantly more depressed than their peers who had done so (Rottinghaus et al., 2009). They proposed that the student's perception of progress toward a goal (choosing a major) was related to their subjective well-being, an idea others have proposed (Brunstein, 1993; Wilson, 1967), and suggested that establishing career goals is likely one way to reduce the probability of depressive symptoms. According to Super's theory (1990), this establishment of a career goal can be seen as accomplishing the exploration stage, leading to both greater likelihood of success in future stages as well as in other life-spaces.

Social Cognitive Career Theory

While Super's life-span, life-space theory provides a framework for the macro- and developmental framework for this study, Lent, Brown and Hackett's (1994) Social Cognitive Career Theory (SCCT) provides some context for the specific constructs through which Super's theory may be working. More specific to this study, SCCT gives rise to the impact of cognitive variables like self-efficacy and some of the driving factors of academic and career success.

SCCT theory grew out of the social cognitive theory originally developed by Albert Bandura (1977), who posited that self-efficacy beliefs are the most central and formative mechanisms of one's sense of self-control. SCCT highlights that self-efficacy, both general and career related, is a result of socialization experiences. In addition to self-efficacy, within the model of SCCT, other important outcomes include outcome expectations (the outcome someone expects to get from their efforts), personal interests, goals, and action behaviors (Lent et al., 1994). Hackett and Betz (1981) were the first to study self-efficacy within the context of career development and they found that being treated differently based on gender had a negative effect

on the self-efficacy of women. Since that study, the idea of self-efficacy has grown to encompass the experience of socialization and formative messages in all people. SCCT posits that performance and ability in any given task requires both skill and a sense of efficacy (Lent et al., 1994).

Theoretical Framework Summary

As an overarching theoretical framework, this study will integrate both Super's life-span, life-space theory and SCCT. Through a joint test of career exploration, self-efficacy, and the impact these have on well-being, both theories provide a crucial framework to the study and ground the theory with a common purpose: to understand career development from a holistic perspective of a person. SCCT provides a context for how some specific constructs may fit together to facilitate successful career development, while Super's life-span, life-space theory gives credence to the underlying and central impact this development has from a whole person perspective. In some ways, Super's theory provides a blueprint from which psychologists can understand how career development influences a person, both when it is going well and when it is not.

Contributing Factors

An underlying construct that can encompass the entire career decision-making process is the idea of self-exploration. A person begins to learn about who they are through a process of inward exploration, assessment, and understanding, as well as outward exploration through activities, such as learning about the world of work and career options. To this end, both internal and external sources are pivotal factors in the development of career choice, and thus well-being (Andrews, 2014).

Stemming from self-efficacy, career decision-making self-efficacy (CDMSE) is the concept that measures a person's degree of belief that they can successfully complete the tasks needed to make significant career decisions (Betz & Hackett, 1981). CDMSE is an important construct established within the career development literature, partially because of its well established predicative validity of other career related outcomes (e.g., effectiveness job search and attainment of professional employment; Mau & Kopischke, 2001). As CDMSE is built upon the principle of self-efficacy, it is best appreciated by considering the internal (cognitive) and external (social) sources of input. As such, the type (or degree) of input influences the belief one has that they can successfully complete career decision tasks.

As an external factor, virtually all major career development and choice theories appreciate the role of a person's family or upbringing in their career development (Super, 1990; Lent et al., 1994). Many researchers have examined how parents actually impact their children's career development via factors including attachment styles formed early in childhood, demographic variables (e.g., SES, family structure, gender, race), parenting styles, and parent/child relationships in early adulthood. In today's world of digital interconnectedness, the potential influence of parents on their college-age children has increased, but little research has been conducted to explore the extent to which parents continue to be involved in their children's lives in college, or further, how this is perceived by the student (Carney, 2004).

Whereas college students once experienced a great deal of autonomy upon leaving for college, today parents continue to be hugely impactful in decisions ranging from college choice to social experiences to financial and academic decisions (Lange & Stone, 2001; Stringer, Cunningham, O'Brien, & Merisotis, 1998). For example, Oliver (2011) explored the impact of parental behavior in a sample of 4,430 undergraduate students and found a significant

relationship between parental involvement with college choice, academic and social decisions, and the satisfaction of the students. When students were asked if they were satisfied with the level of parental involvement in their overall college experience, 90% stated that they were satisfied, while 10% said that they were not. Furthermore, 80.2% of students stated that they would not want more involvement from their parents and 14.9% indicated that they would have chosen a different college without the involvement of their parents.

While parents and family background are well known external inputs, personal values are well-established as a key internal factor informing career development. Present in the literature since Super's (1990) foundational book on career development, the role of values in career decisions and work has been explored in great depth. Values are core beliefs about what is important to a person that transcend specific circumstances, which influence an overarching state of being and often serve as a way to internally evaluate one's actions (Rokeach, 1973; Schwartz, 1994). Given this definition, a values-driven career decision can be described as one wherein the internal values of the person are a guiding factor in the decision-making (Briscoe, Hall, & DeMuth 2006).

To this end, values are an important factor because they are influential in the decision-making process. Brown (1995) stated that a person must identify, clarify and prioritize their values (e.g., to be respected) in order to be most effective in their decision-making processes. He suggested that only then can behavior be influenced by the person's values. Following this idea, Unite (2015) conducted a study aimed at increasing the career values awareness of 444 college students. She found not only that career values awareness and career decision-making self-efficacy (CDMSE) were positively correlated, but also that when participants received career values training, their career decision-making self-efficacy improved significantly. As one

considers some of the internal mechanisms through which CDMSE is built, values awareness may be an important new construct in the literature.

Statement of Problem

Critical aspects of a college student's experience have been considered in past research, not only in relation to the process of career development, but also as they correlate with greater overall well-being. While many of these variables have been studied extensively in the literature (e.g., career values and CDMSE, parental behavior and CDMSE, CDMSE and well-being), they have yet to be combined in the manner outlined in this study, even though many theories and studies suggest these variables are related (Lent et al., 1994; Rottinghaus et al., 2009; Unite, 2015). Combining them in one study adds to the literature by highlighting a newly defined construct (career values awareness), studying some of the mechanisms through which career development occurs, and considering the global impact of career development on a person's well-being.

While the role of values has been extensively covered in the literature, career values awareness has been largely overlooked. Aspects of value development, such as those that highlight the importance of career values (e.g., Super, 1957; Super & Šverko, 1995), and factors that shape values (e.g., Dries, Pepermans & Carlier, 2008) have been studied in the body of career development research. Arguably the scale most widely used to measure values is Neville and Super's (1989) Values Scale, which is intended to score one's values in 21 categories such as achievement, advancement, personal development, cultural identity and economic security. Another well-known values scale is Super's Work Values Inventory—Revised (SWVI-R; Zytowski, 2006), which, again, is structured around 12 types of values (e.g., motivation, secure work environment). Given that these are the most widely used, the focus of the research that

explores work values continues to fall within the same context of identifying what value the individual holds, such as achievement, helping others, creativity, variety or honesty (e.g., Hammond, Betz, Multon, & Irvin, 2010; Leuty & Hansen, 2012; Rounds & Armstrong, 2014; Sortheix, Dietrich, Chow & Salmela-Aro, 2013).

That being said, aspects of whether and when an individual becomes aware of their career values (regardless of what that value is) and how those impact development is not as well understood. Unite (2012) created the first scale to measure the awareness one has towards their career values and since then, it has only been cited in one other study (Unite, 2015). Thus, little is known about whether and when a person becomes aware of their values via a process of self-exploration and values identification. In the current study, the integration of values will be within the context of values awareness as opposed to the specific content of the value a person may hold holds. With this shift in perspective (from values content to values awareness), the applicability to specific participants is left essentially unrestricted. As an example, if one is very aware of their value of money or power, while another is aware of their value to make a difference in the lives of others, both serve the same function within the context of this study. The purpose of this study is to explore factors that may impact career decision-making self-efficacy and its subsequent impact on well-being.

Within the framework of SCCT and the life-span, life-space theories, this dissertation positions itself within the constructs of parental behaviors, career values awareness, CDMSE, and subsequent well-being in order to understand career development from the more holistic perspective of a person. I propose that students who have greater involvement of their parents to help explore career options and provide emotional support may engage in greater personal (eliciting some values awareness) and career exploration (resulting in greater CDMSE), which

may then be correlated with higher levels of well-being. In other words, parents provide support and instill values in their children from the time they are young, whereas CDMSE and well-being in college follow much later in life. Thus, it is logical to expect that parental support and values awareness would precede CDMSE and well-being in a causal sequence. I will explore this ordering of variables using mediation modeling methodology (MacKinnon, Fairchild, & Fritz, 2007).

Terminology and Definitions

To provide some context for the topics of this dissertation, the following operational definitions may be helpful:

1. *Career*. A long-term approach to work, which can encompass education and training in a skill as well as applied work. It is often a representation of identity or long-term goal, aim, or purpose.
2. *Job*. Short-term employment, often as a means of supporting oneself.
3. *Values*. “Organized sets of general beliefs, opinion, and attitudes about what is preferable, right, or simply good in life” (Šverko & Vizek-Vidović, 1995, p. 5).
4. *Work Values*. “General and relatively stable goals that people try and reach through work” (Šverko & Vizek-Vidović, 1995, p. 5). This may include things such as financial security, responsibility, and personal fulfillment.
5. *Career values awareness*. “The extent to which someone is aware of or has knowledge of what his or her career values are... the degree to which a person knows his or her current career values” (Unite, 2015, p. 35).
6. *Parental behavior*. “Specific actions (taken by a parent) that can be easily identified and quantified” (Keller & Whiston, 2008, p. 198).

7. *Support parental career behaviors*. “General parenting behaviors and psychosocial support” (e.g., encourages child to try new things, tells child he or she is loved; Keller & Whiston, 2008, p. 198).
8. *Action parental career behaviors*. “Behaviors that address specific career-related planning actions” (e.g., give written material about specific careers, ask what careers their child is considering for the future; Keller & Whiston, 2008, p. 198).
9. *Self-efficacy*. The belief someone one has in their own ability to complete a task (Bandura, 1977, 1993).
10. *Career decision-making self-efficacy*. One’s belief in their ability to successfully complete tasks necessary in making a career decision (Betz & Luzzo, 1996; Taylor & Betz, 1983).
11. *Vocational maturity*. “The place reached on the continuum of vocational development from exploration to decline” (Super, 1955. p. 153); readiness to cope with developmental tasks based on one’s life stage (Super, 1955).
12. *Well-being*. Global and subjective assessment of one’s life, represented in cognitive evaluation and affective reactions (Diner, 1984).
13. *Emotional well-being*. The frequency with which an individual experiences positive affect (e.g., feeling happy, interested and satisfied with life; Keyes, 2002).
14. *Psychological well-being*. “Private and personal criteria for evaluation of one’s functioning” (e.g., feeling that one has opportunities to become better, feeling as though one has warm trusting relationships with others; Keyes, 2002, p. 209).
15. *Social well-being*. “Public and social criteria whereby people evaluate their functioning in life... consists of social coherence, social actualization, social integration, social

acceptance and social contribution” (e.g., feeling like one has something to contribute, feeling like people are basically good; Keyes, 2002, p. 209). This also integrates aspects of interpersonal and community variables that impact mental health (Keyes, 2002).

Relevance to Counseling Psychology

The importance of this research related to career development issues could not be timelier, both within the profession of counseling psychology and United States society today. Feelings ranging from being overwhelmed to excited to fearful about the future have likely contributed to the current population of college students being the most depressed of any generation today (Hunt & Eynesbury, 2010). This study aids in exploring the role of career development within these lived experiences.

When considering the six areas of focus that make counseling psychology distinct from other fields (e.g., intact personality, person-environment interaction, career development, strengths-based, multicultural informed), this work is consistent with the spirit and ideals of the discipline (Gelso & Fretz, 2001). The area of focus in counseling psychology related to vocation development as an important area of life, and worthy of attention and understanding, is noted clearly within this work. Perhaps less obvious are the ways in which this work connects to other themes and values of the field. The emphasis counseling psychologists place on intact and normative human development in contrast to pathological development is one example; the proposed study and conceptual framework attempt to understand the lived experiences of people without an attempt to categorize or pathologize them. Counseling psychologists are distinctively trained to meet the needs of various career and personal concerns in counseling and often approach working with these issues with an emphasis on appreciating the many identity, socio-cultural, and latent variables at play (Lent, 2012; Swanson, 2012), and a similar ideology is

present within the current study. Finally, the outcome variable of well-being within a person-centered approach is highly valued.

The holistic perspective counseling psychology has towards the impact of lifespan development and how an individual and the environment interact to influence a person is represented within this study. Inherent in the conceptualization of this study is the idea that career decisions do not occur in a vacuum, separate from other life factors. In considering variables such as parental involvement (which is clearly influenced by past experiences), well-being (a present state of being), and hope for future (career values), this lifespan/developmental theme is well represented.

Finally, the theme of diversity and multicultural issues is germane to the exploration of this topic. Research has demonstrated that parental involvement in career development, the role of values in decision-making, and the meaning of work in an individual's life are all influenced by cultural factors (e.g., SES, race, gender; Vondracek, Lerner, & Schulenberg, 1983, 1986). While this study focuses on students currently studying in the United States, a range of cultural backgrounds is expected within the population, given the diverse student body the participants will be pooled from. Similarities and differences in results based on cultural influences would be a fruitful area for exploration, and depending on sampling, may provide rich post hoc data that can inform future iterations of this work.

The potential implications of these findings to the work of counseling psychologists are clear. They may lend support to the idea that career counseling cannot be separated from personal counseling. Inviting clients to consider the integration of career and personal issues in counseling may be rewarding and relevant areas for exploration throughout the course of counseling, whether it be career specific counseling or mental health counseling that

encompasses academic and career concerns/stressors (Chen, 2001). This work offers the opportunity to help reinvigorate thought regarding the importance of both cognitive and social factors in career decision-making as well as the effect of this decision-making on college students' well-being.

CHAPTER 2: REVIEW OF THE LITERATURE

Chapter 1 of this dissertation established the predicting variables in this study as key concepts in the development of career decision-making self-efficacy, which then has a fundamental effect on well-being in college students. This chapter will focus on different areas of literature that add depth, context and support for the current study.

This chapter will examine seven main areas:

1. Establishment of well-being as an important outcome variable;
2. Further development of the conceptual framework of this study within Super's life-span, life-space career development theory and social cognitive career theory;
3. Role of parenting influence with various career development outcomes;
4. Role of values within the decision-making process and work life;
5. Review of the widespread literature on career decision-making self-efficacy;
6. Discussion of some of the established relationships between parental behaviors, career values, and career decision-making self-efficacy;
7. Review of the research questions and hypotheses driving this study.

Well-Being as an Important Outcome

Imagine a situation in life where everyone around you is working hard to better themselves, make academic progress, and solidify a career path. Now imagine if, within that environment, you were struggling to feel confident in your ability to make such strides. What impact would that have? How would that affect your self-concept and well-being in other aspects of your life?

Well-being is a broad and ambiguous construct that has been frequently studied in career decision-making and outcome literature. Well-being is commonly thought of in terms of representing cognitive and affective states (Diener, 1984). Cognitive states can be appreciated via one's satisfaction with life, while affective states can be thought of in terms of positive and negative emotional reactions. More frequent and higher levels of positive affect related to greater overall life satisfaction and sense of well-being (Lyubomirsky, King, & Diener, 2005).

In their foundational article reviewing many theories of well-being, Jayawickreme, Forgeard, and Seligman (2012) concluded that there are two categories of input variables that can predict well-being, exogenous and endogenous. Exogenous variables are external sources such as environmental conditions, education, and freedom, while endogenous variables, such as talents/strengths, values, needs, and capabilities, represent more internal traits. Both of these variables have relationships to elements of career decision-making, highlighting the need to explore the two constructs in an iterative way (Jayawickreme et al., 2012). In this study, well-being is defined as a global and subjective assessment of one's life, represented in cognitive evaluation and affective reactions (Diner, 1984), and this work aims to explore some of the specific career related exogenous and endogenous factors associated with this well-being.

Context for Using Two Theoretical Frameworks

There are many vocational theories from which one can understand career development. Each contributes a unique angle for consideration and provides a different perspective on the process of career development. In this study, both Super's theory and SCCT provide a foundation from which the research questions were built and results were interpreted.

As a framework, social cognitive career theory focuses on explaining several interrelated aspects of career development, including how students develop academic and career interests,

make educational and career choices, and ultimately, attain academic and career success (Lent, Brown, & Hackett, 2002). By integrating SCCT, this study gains a foundation from which to understand self-efficacy as a driving factor in successful career development, including some of the unique factors that explain this success (social and cognitive inputs).

While SCCT provides a reasonable explanation for career success, it lacks sufficient attention toward the ideas that career development is a lifelong process wherein career and life outcomes are constantly enmeshed with one another (Chen, 1998) and that the personal implications of career development impact a person's overall well-being. Some have cited the need for exploring the relationship between depression and other affective states in order to increase understanding and application of SCCT in the future (Rottinghaus et al., 2009); Super's theory may be one framework to facilitate such exploration.

Super's theory contributes an emphasis on the developmental aspect of career choice, whereby one is continuously growing in both their personal and vocational development via stages, with each stage seen as impacting the next. By integrating various roles and life-spaces (child, student, worker), Super believed psychologists can have a more comprehensive and full understanding of who a person is. Integrating these various roles into one complete understanding of a person and their self-concept shows how success in one role (career development) leads to success in another (personal well-being).

Another way in which both SCCT and Super are needed to frame this study relates to the role of values awareness in career decision-making. While the concept of values is well integrated into SCCT, the role of values awareness may fit more within the developmental perspective of Super's theory. In SCCT, values are an important part of career development, as Lent and his colleagues (1993) argued that they are highly embedded within outcome

expectations. They believed that a person's interest in a field is linked, in part, with the outcomes one anticipates achieving.

Within the context of this study, values awareness contributes to self-efficacy. According to Super (1990), values awareness may be specifically relevant since decision making is most effective when it is based on the understanding and fit of a person's occupational interests and preferences. Connecting back to SCCT, since learning experiences are considered an antecedent to self-efficacy (Bandura, 1997), it may be that the process of developing values awareness also serves as a learning experience (self-reflection) that then supports the career decision-making process.

Lent and his colleagues (1994) suggested that SCCT can explain some of the mechanisms through which Super's theory works. In hypothesizing that "social cognitive theory emphasizes specific learning processes and mechanisms that could serve as an adjunct to Super's more macroscopic, trait-oriented view of learning and development" (p. 116), Lent and colleagues (1994) suggested future research to further explore the relationship between the two theories. In this study, the integration of both global inputs (e.g., developmental perspective, parental relationships) and specific cognitive learning processes (e.g., development of values awareness, social inputs) can provide a more well-rounded understanding of career development than either could explain alone. This study aims to explore mediators of career development at different levels (global and specific), as Lent et al. suggested, to understand their correlation with well-being. Finally, in more recent years Lent and Brown (2013) have begun to expand their conceptualization of SCCT to move towards the social cognitive career theory of self-management. They described aspects of this model as "inspired by Super's life span, life space [sic] theory" (p. 566) to integrate more components of a developmental process such as non-

linear development. Specifically, they included an adaptation of Super's life-span, life-space model, indicating that they recognize the need for a developmental and whole-person perspective in career development.

Following from this, there is a precedent in the literature for analyzing new research questions based on a theoretical understanding that appreciates what each of these two theories provide and how they complement one another. In various studies with focuses ranging from understanding autonomous learning in the workplace (Ellingson & Noe, 2017), exploring causal models of career development and quality of life in college students with disabilities (Chun, 2018), understanding the specific vocational development of college student-athletes (Ackerman, 2013), naming influences on the transition from work-to-school process in high school military reserve trainees (Hargrove, 1981), predicting the career development of the hearing impaired (Punch, Creed, & Hyde, 2005), and reframing career counseling to life career integration (Chen, 2001), many researchers have found value in integrating these two specific theoretical frameworks to study career development.

Super's Life-Span, Life-Space Approach to Careers

Donald Super developed his foundational life-span, life-space approach in the early 1950's, and it has continued to be refined, studied, and validated for decades. Super famously labeled his model as a “differential-developmental-social-phenomenological” (Super, 1969, p. 9) theory. He strongly felt that the only way vocational development could be adequately understood was to appreciate the complex process by which people come to develop in their careers.

Super first introduced the “life-career rainbow” to illustrate his developmental model in 1976. One of the revolutionary tenets of this model is that career development happens in

conjunction with other aspects of a person's life (e.g., relationships, personal, health). Included in the life rainbow, Super reported significant lifestyle factors that impact one's career development. The three major areas/determinants that he described are situational (e.g., family and country of origin, history, and socioeconomic status), environmental (e.g., economy, labor market), and personal (e.g., biological, psychological). These factors underlie all other aspects of the rainbow (e.g., roles, stages). He suggested that situational factors impact one's self-concept of their life roles and that all of these factors interact to shape one's self-concept, which will shape career goals and thus personal career-development tasks, and must be coped with in order to successfully navigate career development. This further elucidates Super's (1990) argument that context is critically important to career development; all three of these lifestyle factors play a role in every stage of one's life roles.

Super's Life Roles

While roles were not included in Super's original career rainbow, they were later added to appreciate some of the personal and sociocultural determinants of career development throughout one's life (Super, 1980). Consistent with this, various life roles are represented in the diagram to depict the multiple roles a person inhabits as they progress through the developmental stages. In 1980, Super proposed nine major roles, which operate within four principle theaters, to highlight this concept. The roles, which approximate a general chronological order, included (a) child (e.g., son/daughter); (b) student; (c) leisureite; (d) citizen; (e) worker (including unemployed and nonworker); (f) spouse; (g) homemaker; (h) parent; (i) and pensioner. To clarify, the term leisureite describes the role of one who is pursuing leisure-time activities, and may include idling in development, and a pensioner describes the role of someone in older age and perhaps retired from the workforce (Super, 1980). Not all roles are undertaken by all people, and

they combine in different ways at different times. They highlight the “constellation of interacting, varying, roles” (Super, 1980, p. 284) and how these impact careers at any given time. Another point highlighted is that none of the roles are particularly sex-linked. People of all genders fulfill important aspects of these roles throughout the lifespan. The four theaters represent the different places where these roles are performed (home, community, school, and workplace).

The specific interplay of roles at any given time may be highly dependent on the person. That being said, Super posited that these roles are nevertheless important, as “success in one facilitates success in others, and difficulties in one role are likely to lead to difficulties in another, although success bought at too high a price may cause failure in another” (Super, 1980, p. 287). Likewise, it may be that the role of values (e.g., leisure time, power and prestige, work/family balance) is related to this construct. Niles, Herr, and Hartung sum up this idea, writing:

Life-role salience is a cornerstone for balancing life-role activities. Knowing which life roles are important in the present, however, is insufficient. Knowing which life roles will be important in the future helps guide the planning behavior of children and adolescents. (2001, p. 18)

Super’s Vocational Development Stages

Like other developmental models, Super (1990) posited that one must complete the necessary developmental tasks at a given stage in order to be prepared for success in the next. Successful coping with a life stage requires the readiness of the individual to meet the demands of that stage. Unlike other developmental models that are staged or progressive, Super affirmed that individuals move in and out of developmental stages, and can cycle back depending on their life-span, life-space needs. Going back to his integration of differential psychology, Super

believed that individuals are unique in personality, interest, and abilities, and that these factors impact how one understands and approaches their needs; he felt that influence is an iterative process that continues as a person learns and is exposed to work. Typical ages for the stages are presented, but should not be considered restrictive.

Growth (Birth-14 years)

This stage is viewed as a time for a child to develop a realistic sense of self (self-concept) that incorporates attitudes and interests. Formative career exposure comes via activities such as fantasy play, and idealized and gender norm work beliefs are typical; towards the latter years in this stage, one may begin to develop interests that may serve as a basis for future career choices (e.g., animals).

Exploration (ages 15-24)

In the exploration phase, individuals begin to “try out” career choices. This is often seen as an age of tentative choices and trial and error. Since these years commonly encompass high school and undergraduate education for individuals, there may be an emphasis on exploring education majors and areas of study. Other common activities during this time include volunteer work, first work experiences (e.g., part-time job), and school clubs/activities. During this phase, individuals begin to gain a sense of reality, and things like aptitude and values enter into their consideration of career options. In general, the purpose of this stage is to emphasize and narrow down interests, while learning more about one’s preferences.

Establishment (ages 25-44)

After interests are narrowed and preferences are more fully understood, the establishment phase is considered one’s introduction into the workplace. Still characterized by some aspects of

trial and error, in this stage, trial is in effort to become more settled and secure in one's skills and position. There still may be job changes, but dramatic shifts in interests are not as common as in the exploration phase. Towards the later years of this stage, success would be demonstrated as becoming settled into a permanent position, demonstrating adequate performance, and potentially acquiring seniority in the workplace (e.g., moving into managerial roles).

Maintenance (ages 45-64)

While there is generally little change at this point in one's career development, activities include adjusting to competitive and younger workers, new approaches to work (e.g., technology movement), and more modern career demands that one may or may not have been trained for. There is a sense of "holding one's own" (e.g., interests, skills) in the face of the changing environment; comparatively, this is a stage of stagnation and a potential opportunity for a plateau.

Decline (ages 65 and older)

After decades of work, the decline stage revolves around one's transition out of work and into the world of retirement. This may include behaviors such as reducing work hours or productivity (e.g., part-time work). It can also be conceptualized as looking for ways to find fulfillment and express one's interests outside of work (e.g., hobbies). While in the United States 65 is a typical age of retirement, many of the attitudes and behaviors involved in leaving the workforce resemble a more gradual shift that occurs differently for each individual and may be influenced by the type of work (e.g., office career versus a physically demanding career).

Super's Vocational Development Tasks

Vocational stages provide the foundation from which individuals approach developmental tasks. Tasks are the implementation of career attitudes and behaviors. Tasks relate to a more conceptual approach to work (e.g., attitudes), rather than the actual activities one performs as in the aforementioned developmental stages, and thus apply to a variety of vocations. While these are presented with the “typical” age during which an individual approaches this task, these tasks can occur at other ages/levels/stages.

Crystallization (ages 14-18)

This developmental task is characterized by a process of cognitive career goal planning. Goal creation is most typically influenced by interests, values, resource availability, and planning. An individual may research career options to increase awareness and clarify their preferred choice(s).

Specification (ages 18-21)

The specification task involves moving from a cognitive representation of career preferences to actually moving towards them. Preferences typically become more specific and stabilized; this may be partially influenced by feeling a pressure to choose a major or career focus. In a college population, this may be the earlier stages of academic development wherein the student chooses a major.

Implementation (ages 21-24)

Implementation encompasses tasks of finalizing training for a vocational preference and joining the workforce in a position related to their training. Depending on the level of training

required (e.g., skill development, undergraduate degree, professional school) this task can fluctuate a great deal.

Stabilization (ages 24-34)

After one enters their preferred career area, there is a period of actual work experience wherein an individual reevaluates their career choice. The task of stabilization encompasses these early work experiences, using one's skills and talents to develop a sense of belonging, with the development of firm establishment, stability and security within their career.

Consolidation (35 and older)

Consolidation is the vocational task of achieving status, advancement, and seniority in one's career. This may come in the form of additional work responsibilities, managerial roles, tenure (in some professions), and additional benefits (e.g., vacation days, healthcare).

Career Maturity

Super's life-span, life-space theory is based on a developmental framework for understanding career development, and many important constructs have stemmed from this idea. While Super originally developed the construct of career maturity in 1951, after a longitudinal study of high school boys' career development (Super & Overstreet, 1960), he noticed that those who had not reached a sufficient level of career understanding or self-awareness had difficulty making vocational decisions. This prompted Super to reframe his approach to career development in terms of intelligence, knowledge, and behaviors rather than age. One recent study conducted by Harlow and Bowman in 2016 interestingly found that in comparing students in their first two years of a 4-year baccalaureate degree and students attending community college, those enrolled in community college demonstrated significantly greater career maturity.

The authors suggested a few hypotheses to explain this finding, such as the greater likelihood of a clear vocational pathway through community college training, and the fact that community college students are closer to graduating with their degree and thus may have spent more time considering their future career path (Harlow & Bowman, 2016).

In describing the construct of career maturity, Savickas (1984) argued that values were an important aspect of the personal appraisal class of career maturity; this class of variables assesses motivation (awareness, direction, coping behaviors), structure (cognitive ability, competency) and content (interests, work values, alternatives) (Savickas, 1984). The construct of career maturity encompasses aspects of both affective and cognitive components of career decision-making (Swanson & Fouad, 1999), which are representative of both readiness and ability to face the problems and challenges of career development (Crites & Savickas, 1996; Super, 1990). For instance, if a person's career maturity is adequate to or supersedes the complexity of the problem, they will be able to resolve the problem with little difficulty.

In contrast, if a career issue or problem requires a level of maturity above that which the person possesses, responses such as avoidance, naïveté and failure are typical. Many factors predict career maturity, such as years in college (Hughes, 2005), gender (with females demonstrating higher career maturity than males) (Luzzo, 1995), college generational status (first-generation students showing lower career maturity) (Harlow & Bowman, 2016), social support and socioeconomic status (Kim & Oh, 2013). This outcome is crucial in Super's theory as when vocational maturity develops, a person is believed to become more secure in who they are, better adjusted, and more prepared to handle other problems (Super, 1969), indicating a positive impact on overall functioning and well-being (Hotaling, 2001).

Social Cognitive Career Theory

Lent, Brown, and Hackett (1994) developed social cognitive career theory (SCCT) out of social cognitive theory. Social cognitive theory suggests that self-efficacy is the confidence and belief that someone has in their own ability to complete a task (Bandura, 1977, 1986, 1993). This idea became the foundational concept behind career decision-making self-efficacy (CDMSE) (Betz & Hackett, 2006).

In Lent and colleagues' 1994 article, the authors described three interlocking models that integrate many environmental and personal factors pertinent to career development. The three models are that of (a) interest development, (b) choice, and (c) performance. SCCT seeks to understand how interests develop (including career and academic interests), how choices are made and acted upon, and finally, how performance outcomes are achieved. Within this model, Lent et al. (1994) identified three primary social cognitive variables (self-efficacy, outcome expectations, and personal goals) and examined them with particular emphasis on how they interact with constructs such as gender, environment, and learning experiences. Central to the fulfillment of these constructs, the theory highlights that people engage in a variety of cognitive, exploratory, and self-reflective processes (Bandura, 1986).

Self-Efficacy

Self-efficacy has been a widely-studied variable in career development theory since its inclusion as a central construct in SCCT. Bandura (1986) originally highlighted that self-efficacy beliefs are the most central and formative mechanisms of one's sense of self-control. This idea was carried through in the work of Lent and others (1994), who stated that "self-efficacy percepts are postulated as helping to determine one's choice of activities and environments, as

well as one's effort expenditure, persistence, thought patterns, and emotional reactions when confronted by obstacles" (p. 83).

Bandura (1994, 1997) suggested that there are four well-known sources that are known to develop self-efficacy within individuals: mastery experiences, vicarious experiences, verbal persuasion, and emotional/psychological states. Mastery experiences relate to feeling accomplished in past performances, which influences a person's perspective on future abilities. Developing self-efficacy through vicarious experiences suggests that by observing a similar person perform a task or manage a situation successfully, one is likely to believe they can do the task as well. Sources of verbal persuasion suggest that when others encourage a person to perform a task, that person believes they are more capable of succeeding in that task. Finally, psychological state relates to how one interprets their emotional state. For instance, an evaluation that one is feeling excited may have the effect of increasing self-efficacy, while feeling anxious or nervous reduces self-efficacy.

Hackett and Betz (1981) were the first to study self-efficacy within the context of career development. Working from the hypothesis that women may lack personal efficacy in a general sense due to socialization experiences, they set out to explore this impact on women's career-related decisions. In an example relevant to this study, the authors illustrated the crucial impact society played in the participants' support systems relevant to gender and, thus, vocational outcomes. The authors summarized their findings: "While boys received admiration and encouragement for their interests, responses to girls were often characterized by ambivalence, lack of encouragement, or suggestions that their goals were inappropriate" (Hackett & Betz, 1981, p. 332-333).

Hackett and Betz (1981) provided early hypotheses of the mechanisms through which general self-efficacy develops and the ways in which it may impact career-related self-efficacy. The four constructs known to inform one's efficacy evaluations are: performance accomplishments, vicarious learning, physiological and affective states, and verbal persuasion (e.g., encouragement, uncooperative; Bandura, 1997). These have since been elaborated on and found to be relevant to the career self-efficacy of all people.

After further study of the impact of self-efficacy, the literature suggests that socialization impacts both men and women to some extent and that messages of encouragement or doubt affect individuals in general and often-marginalized groups even more so (e.g., people of color, people with disabilities; Betz & Hackett, 2006). Developmental processes are also related to self-efficacy's impact on career decisions, since one's internal sense of agency and self-efficacy begins to coalesce via interactions with society at a young age and carries on throughout a person's life. That being said, it is a dynamic and ever-evolving trait (Betz, 2006).

Since the early 1980's, self-efficacy has proven to be a significant predictor of many career, academic, and performance constructs (Bandura, 1997, 2006; Betz & Hackett, 2006). A foundational idea of SCCT is that performance and ability in any given task require both skill and a sense of efficacy in utilizing one's resources (Bandura, 1991; Lent et al., 1994). At its core, the importance of self-efficacy can be seen in its direct impact on an individual's activities, goals, and choices. For instance, low levels of CDMSE have been linked to a lack of career exploration behaviors, while higher CDMSE has been linked to increased engagement in career-decision making tasks (e.g., creating resumes, selecting an occupation; Betz, Klein, & Taylor, 1996; Luzzo, 1996). Finally, some work has been conducted on the long-term effects of self-efficacy. Studies have suggested that higher self-efficacy within university students is a predictor of a

better transition into work life and contributed to individuals being more likely to be engaged and employed within these fields 10 years later (Salmela-Aro & Nurmi, 2007; Pinguart, Juang, & Silbereisen, 2003).

Outcome Expectations

Differing from a person's sense of ability to perform a behavior (self-efficacy), an outcome expectation can be defined as what one can expect as a consequence of performing a given behavior (Lent et al., 1994). Categories of outcome expectations, as originally outlined by Bandura (1986), suggest many of the variables that may factor into a career decision, such as social approval, self-evaluation and satisfaction, and physical outcomes (e.g., financial reward). While there is some debate about how outcome expectations may impact confidence or vice versa, SCCT suggests that thoughtful decisions require consideration of both response outcomes and personal capabilities/skill (Lent et al., 1994).

In one of the two earliest articles outlining SCCT constructs, Betz & Hackett (1981) acknowledge that their construct of outcome expectations often includes the concept of career values (e.g., an outcome that is desired) awareness in decision-making. "It is not difficult to imagine a person with high self-efficacy for mathematics choosing to avoid science-intensive career fields if she or he anticipates negative outcomes (e.g., non-support of significant others, work/family conflict) to attend such options" (Lent et al., 1994, p. 84). In this scenario, being aware of the career values one has (e.g., work/family balance) is an important and determining factor in one's career choices.

Personal Goals

Goals function as a form of self-motivation and regulation, help to organize behavior, guide decisions, and help to sustain motivation in difficult times, all of which increase the likelihood that the outcome will eventually be obtained (Lent et al., 1994). Personal goals can be executed via mechanisms as concrete as making career decisions and plans, but also simply via aspirations or expressed interest/choice. With this, one important factor to consider in gauging the impact on motivation is how tied to reality (e.g., economic climate) and actual action steps the goal is.

Theoretical Framework Conclusion

There is much overlap to be found between SCCT and Super's life-span, life-space theory, including their emphasis on socialization, early learning experiences, values/outcome expectations, and their understanding of reciprocal influence of a person and environment fit in relation to career development. That being said, SCCT may serve as a way to explain some of the mechanisms through which Super's theory works. As Lent et al. wrote, "[social] cognitive theory emphasizes specific learning processes and mechanisms that could serve as an adjunct to Super's more macroscopic, trait-oriented view of learning and development" (1994, p. 116). To this end, the integration of both specific cognitive learning processes, as well more global or overall outcomes, can provide a well-rounded understanding of career development.

Social and Cognitive Factors Associated with Career Development

Having established the underlying theoretical framework, in this section I will provide an overview of some of the factors that may have an impact on career development based on existing literature. Specifically, I discuss how parental involvement and career values influence

overall career development and CDMSE in college students. In this section, I also explore some of the relationships between these factors, providing support for the model I propose, and consider in what ways various cultural factors such as race/ethnicity, gender, age, and SES have been found to influence these variables.

Parental Involvement

The impact of parental involvement in career outcomes has been established in the literature of both SCCT and Super's theories. Since 1986 when Vondracek and his colleagues argued that career development is directly influenced by the social, cultural, and physical features of one's environment, the impact of one's family has been a key factor in understanding personal career development. The importance of parental support was highlighted in this work, stating that "one component of parent-child relationships that appears to be particularly salient to the child's career development is parental support" (Vondracek et al., 1986, p. 52). Others have gone a step further to suggest that parents are the most influential source in the education and career choices of children (Isaacson & Brown, 1993; Levine & Hoffner, 2006; Otto, 2000). Larson (1995) suggested that if there are two decisions parents expect to be involved in within their adult children's lives, it is who they marry and what career they choose.

Furthermore, parents have been found to be the most influential adults in education and career choices of children (Isaacson & Brown, 1993), above and beyond the roles of supporters, teachers, and role models. Given this evidence, the ways in which parents impact their children is a critical factor in understanding career development. Many have explored the various types of support parents can provide (e.g., financial, opportunities, encouragement) and proposed that encouragement and emotional support were the most influential in a child's career choice (Levine & Hoffner, 2006; Otto, 2000).

In SCCT, parental involvement is a crucial component of the background influences that shape self-efficacy and provide children with both direct and vicarious learning opportunities. Super's theory adds a developmental component of the role of parents within career development and highlights some of the ways in which parents impact their child's vocational self-concept from an early age. Parental involvement has a place in both theories' conceptualizations of career development.

Parental Roles within Super's Model

Within Super's life stages and developmental tasks, parents are heavily involved in career development tasks from early on and continue to play an integral role in early development of self-concept, facilitating the maturity of social skills as well as cultivating interest and skills like goal setting and perseverance (Ginevra, Nota, & Ferrari, 2015; Super, 1955, 1990). If one considers the early stages of the life-span, life-space model, one can clearly see the instrumental role parents play in how a child internalizes messages about foundational constructs such as gender, career, ability, and opportunity.

Based on the typical age of stage development, for the purposes of this study, the impact of parents in the stages of and prior to the probable age of those expected to participate in this study will be reviewed. That being said, it is important to emphasize again that Super's (1990) stages are not linear, nor do they occur at the same pace for everyone. With that, it may be helpful to keep the stages as loose frameworks from which to conceptualize the participants in the study and their potential dynamics with their parents. Stages will be discussed in terms of parental action and support, consistent with the Whiston and Keller (2004) framework.

Growth Stage

Seligman, Weinstock, and Owings (1988) found support for Super's theory concerning the family's role during the growth stage (birth-14 years) in actions such as providing enriching learning opportunities, helping with homework, and facilitating interests. Support behaviors may include encouraging fantasy play and sending positive messages of acceptance, respect, and value towards the child. Conceptually, consider the impact on a male child's interpretation of career work if his parents scold him for playing "nurse" with his friends because "that is a girl's game." Compare that to the impact on a young female who expresses interests in cars and airplanes, and is accepted and nurtured in those interests by her parents, who provide opportunities to play with these toys rather than dolls. Even when parents engage in support behaviors, they may enforce gendered expectations on their child.

Exploration Stage

Moving into the adolescent and young adulthood years of the exploration stage (15-24), parents continue to have an impact on the ways in which children think about themselves and work. Action behaviors may include providing academic support (e.g., helping with homework, finding a tutor), being involved in extracurricular activities, helping their children explore college options and submit applications, providing financial support, and discussing vocational interests (Fancher-Ruiz, 2004).

During this time parents begin to communicate their own feelings about work to their children, both explicitly and implicitly (Fancher-Ruiz, 2004). Implicit messages may be inferred from questions or observations such as: (a) Do the parents have careers or jobs? (b) Are parents coming home from work exhausted, irritated, and complaining about their work? (c) Do they seem to find personal fulfillment and identity within their careers? Explicit messages may be

more in the form of: (a) parents telling the child what fields are acceptable to pursue (e.g., engineering over arts), (b) emphasizing how important money should be in their career choice, and (c) parents sharing about their own career paths, including the things they value and/or wish they had done differently. Support behaviors during this time might include not scolding children for a poor grade or failure at a task, acceptance of the narrowing career interests the child is expressing, and open communication regarding their desires (e.g., college location, major).

Parental Roles within SCCT

The role of parents in career development has more specifically been linked to career decision-making self-efficacy since its introduction in the early 1990's. Lent and colleagues (1994) found that actions aimed at developing career interests and goals were stronger in those who perceived favorable environmental conditions (e.g., parental relationships, home environment) and weaker when conditions were viewed as less favorable by the individual. The authors posit that the presence of parental support is a central construct in determining the nature of the environmental condition the child perceives. Other aspects that make up one's environmental/social inputs include constructs such as SES and educational opportunity, which are also largely associated with parental factors.

Parents and Self-Efficacy

Since Bandura (1977a) suggested that an individual's self-efficacy begins to develop early in childhood researchers have been learning more about how parents influence this. For instance, there are numerous books and articles which give tips for parents of young children (Pajares, 2005; National Association for School Psychologists [NASP], 2010). In one handout created by NASP (2010) entitled "Self-efficacy: Helping children believe they can succeed," the

Association gives suggestions about how to facilitate mastery experience, observing others, persuasion (internalized messages from others), and mood/positive emotions. They emphasized the importance of differentiating self-esteem (feeling good about oneself) from self-efficacy (feeling capable and prepared to cope with life and reach goals).

Taking this one step further, researchers have shown that both parental and teacher support were positively correlated with CDMSE in high school students (Gushue, 2006). In one study which sought to understand the relationship between academic support services and CDMSE in student athletes, Burns, Jasinski, Dunn and Fletcher (2013) found that students' satisfaction with the academic support they received was positively correlated with student CDMSE. Thus, it appears that the student's appraisal of the support as positive or negative is important to understand the impact it has on CDMSE.

Some research has suggested that parents also impact CDMSE via work values modeling. Extrinsic work values are values that are a consequence of work (e.g., high income), whereas intrinsic work values are those that are satisfied in the process of work (e.g., autonomy, respect at work). There is evidence that being extrinsic intrinsic work values is related to increases in self-efficacy (and CDMSE), while extrinsic work values are not (Dik, Sargent, & Steger, 2008; Lent et al., 1994).

Choi and colleagues (2013) found that the perceptions of parental work values (extrinsic and intrinsic) were significantly correlated with the students' both extrinsic and intrinsic values. Their results indicated that intrinsic work values influence career decision status via the mediated effect of career-decision self-efficacy. This suggests that observing parental values may be serving as a vicarious experience wherein the student watches and learns about the world of work and thus experiences a boost in self-efficacy that translates into their own intrinsic values

development. It may be that one way these parental values are being communicated is through explicit parental behaviors.

Parental Behaviors

While there is some evidence that parental factors influence career variables in some way, researchers have attempted to parse out what actual behaviors create change in children. Whiston and Keller (2004) identified two general categories of behavior that impact career development in adolescents: general parenting behaviors/support and career-related parenting action. These authors characterized career-related actions to include facilitating information gathering, discussing career options, clarifying interests, and being involved with career/guidance counseling. They also found that general psychosocial support was a critical factor of parental behaviors related to career development. Some behaviors that may fall into this realm include things like general encouragement, curiosity and acceptance of the child's interests, and communicating pride, love and support (a construct that parallels the self-efficacy predictor of verbal persuasion in SCCT).

In 2010, Fouad and colleagues specifically examined the role of support and barriers in STEM fields. Relevant to parental behaviors, categories of support included: help/aid from family, encouragement to do well, engagement in the child's education, and support for career choice. Barriers to success in STEM fields relevant included things such as receiving little help from parents in math/science fields, lack of role models, low aspirations or expectations of attainment, and disengagement from parents in career planning, further demonstrating the crucial role parental behaviors can be in a student's success.

Parent-Child Relationship

Having concluded that emotional support is a critical factor in the parent-child relationship regarding career development, one must step back to appreciate the development and importance of parent-child relationships from a wider perspective. Moreover, the same norms and relationship patterns will be replicated in understanding the parent's role in career development and decision-making. This concept is consistent with those who have argued that a relational perspective is necessary in order to fully understand career development (Schultheiss, 2003). To this end, the literature has focused on everything from attachment styles to parenting styles to family structure (Blustein, Wallbridge, Friedlander, & Palladino, 1991; Tavakolizadeh, Tabari, & Akbari, 2015; Tokar, Withrow, Hall, & Moradi, 2003).

Attachment

The concept of parental attachment, as introduced by Bowlby (1969, 1973, 1988), relates to the type of relationship that forms between parents and a child early on in life. Attachment is considered important based on the lifelong and widespread impact it is known to have on development (e.g., emotional, cognitive, social). Ainsworth, Blehar, Waters, and Wall (1978) found that there are three differentiated patterns of attachment: secure, avoidant and ambivalent. While Ainsworth's original work focused primarily on young children, others have succeeded in establishing that these patterns continue into adulthood relationships (e.g., Hazan & Shaver, 1987). For instance, insecure attachment styles in adults are known to correlate with a lack of self-confidence and trust in others, fear of intimacy, and dependency on others, while secure adults often display greater ease with intimacy, trust, and independence (Hazan & Shaver 1987).

A secure attachment is thought of as the optimal attachment style, fostering a sense of confidence, self-worth, and autonomy within the child (Bowlby, 1988; Bowlby & Zeanah, 1988).

In adulthood, secure attachment has been linked to an individual's willingness to engage in exploratory behaviors, comfort in risk-taking, and mastery of experiences (Bowlby, 1988), all of which have positive implications in the career development process (Blustein et al., 1991; Tavakolizadeh et al., 2015; Tokar et al., 2003) and suggest attachment is an important variable to consider in both career and personal contexts.

Self-efficacy is commonly studied alongside the development of attachment styles in childhood and is one of the mechanisms through which attachment may be seen to impact career development. Blustein and colleagues (1991) sampled 178 undergraduate students and measured parental attachment and psychological separation in relation to one's tendency to foreclose and aspects of vocational exploration and commitment. They found that for both men and women, attachment to parents and conflictual independence (e.g., free from feelings of guilt, anxiety, mistrust, or resentment of parents) from parents was positively related to progress towards career commitment.

More recently, in 2015 Tavakolizadeha and colleagues surveyed 302 high school students and found a significant positive relationship between academic self-efficacy and secure attachment style, and a significant negative correlation between academic self-efficacy and insecure attachment style. They concluded that a secure attachment style was significantly correlated to increased academic self-efficacy, while insecure attachment was a negative predictor of academic self-efficacy.

A secure attachment has also been linked to positive career concepts such as less fear of commitment and lower levels of career indecision (Blustein et al., 1991; Tokar et al., 2003). Furthermore, greater security in attachment is known to impact outcome expectations via willingness to try new things and the mastery of different experiences (Bandura, 1977, 1986). As

one considers how parental behaviors are considered relevant to CDMSE, attachment provides important background information about the interpersonal relationship between parent and child.

Attachment has also been directly linked to well-being in several recent studies (e.g., An & Cooney, 2006). A 2018 longitudinal study that spanned 20 years found that the parental warmth experienced in childhood was predictive of well-being in adulthood (Moran, Turiano, & Gentzler). More specifically, Moran, Turiano, and Gentzler found that problem-focused coping (or responses that focus on the problem causing emotional distress in the child) was a primary mechanism through which parental warmth was associated with well-being. Considering how this relates to the current study, parents engaging in problem-focused coping with their children around career development may subsequently improve children's well-being.

Other Constructs that Influence Parent-Child Relationships in Career Development

Family Structure

There is some support for the idea that the family organization is significant in the vocational development of their children. Family size has proven a salient variable, with children in larger families displaying lower career aspirations (Rehberg & Westby, 1967). One hypothesis that Blau and Duncan (1967) suggested is that family size may impact vocational development as a function of resources, both in financial resources and the time parents are able to devote to the encouragement, support, and individual attention of their children (Blau & Duncan, 1967). Family structure is critical as the impact of emotional support is a well-established factor in career development literature.

The impact of single parenthood on career development has been largely ignored in the literature (Schulenberg, Vondracek, & Crouter, 1984), and thus there is little research to provide guidance in this area. There is some evidence to suggest that children of single parents perceive

their parent as removed from fostering career development, that extended family members take on a greater role in fostering self-efficacy in these children, and that they may be “behind” in their career development (as predicted by career developmental theories; Fancher-Ruiz, 2004). In some cases, this may be exacerbated by the greater difficulty children of divorced parents have in adjusting to college (Graham, 2014). The relevance of single parenthood and/or being raised by divorced parents and career development requires more attention as it impacts over half of the college student population (Nielsen, 1999).

Cultural Norms

Cultural differences have been found to impact the level of influence family can have on career development (Borodovsky & Ponterotto, 1994). One interesting study conducted by Schmitt-Rodermund and Silbereisen (1998) followed the career development of students from East and West Germany throughout the 1990's, a time of intense political turmoil that divided the region. With a sample of over 900 adolescents, they found that in 1991, East German students made career decisions an average of one year sooner than West Germans, and that the influence of family and peers was more impactful on the career decision-making of West German students, while East Germans were more influenced by the government and school environments. During the 1996 sampling, which had allowed adequate time for the healing and rejoining of the nation which reunited the culture, there were no such differences to observe between the students. Students were found to make decisions at approximately the same age and were equally influenced by family. This study demonstrates the role of education and political culture can have in the career development of children.

Socioeconomic status

Socioeconomic status (SES) is a broad measure of one's family status within broader social contexts, and typically provides insights into the educational attainment of one's parents, family income, and occupational status, all of which influence a child's career considerations. Many have found support for the influence of family SES on various educational and occupational aspirations and expectations of the child (MacKay & Miller, 1982; Otto, Haller, Meier & Ohlendorf, 1974), which has been observed in children as early as elementary school (MacKay & Miller, 1982). There are known differences between intrinsic and extrinsic work values based on the SES of the family of origin, with higher SES leading to more intrinsic values development and lower SES leading to more extrinsic values development (Johnson, 2002). One reason for this may relate to the focus on compensation that may be present within lower SES households (Johnson & Mortimer, 2011). With more focus on compensation (extrinsic values) and less focus on intrinsic rewards such as fulfillment or meaning from the work, it stands to reason that the children may be observing this within the home and then internalizing those work values for themselves.

Gender

There are known gender differences in CDMSE, with males tending to report higher levels than females (Hackett & Betz, 1981), and some explanations for this discrepancy point to the role of parental behaviors. There has been some evidence of maternal employment as predictive of a daughter's career aspirations (Vondracek et al., 1983, 1986). One hypothesis is that this may be related to the role of career/work exposure or early gender identity formations, via the constructs of vicarious learning. If young girls see their mothers fulfilling their career aspirations, they may be more likely to develop self-efficacy. However, it may also be true that

mothers who work are more supportive and encouraging of their daughters in having high career aspirations. Young and Friesen (1992) also found that parental behaviors were integral in the decrease of sex-role stereotyped career choices their children made.

Racial/Ethnic Background

There some evidence to suggest that race may be correlated with educational endeavors. One study showed that among white students, factors including ability, academic performance and parental status were the most salient predictors of education expectations, but amongst black students, the most predictive factors were self-esteem/personal efficacy and aspirations (Portes & Wilson, 1976). This suggests parental status may be more impactful in the education expectations of white students than in those of black students, and thus one must be cautious in a uniform interpretation of the meaning or impact of parental behaviors across all students. Interestingly, when factors such as opportunity, ability, and SES were controlled, black students exhibited a greater level of career aspiration (Dillard & Perrin, 1980; Portes & Wilson, 1976). Clearly, there is more to be learned in regard to this construct, beginning with what may be causing the discrepancy.

Values

In Super's (1957) early book, *The Psychology of Careers*, the first chapter is entitled "Why People Work." Super raised the argument that there have long been motivations for work outside of money and financial security, and thus these are important factors to be considered when trying to understand career development. In his attempt to understand the reasons people work, Super suggested three functions/categories of work: human relations (e.g., independence, status, recognition), work (e.g., interesting tasks, fulfilling work), and livelihood (e.g., security).

He went on to state that in considering which of these is most important in a career decision, “this is like asking which is more important, food or water?” (Super, 1957, p. 14). The underlying idea is that all of the aspects about why humans work are needed and emphasized at different points. Someone who is struggling for survival will place importance on livelihood; if those needs are met, they may be better able to place attention towards their human relational needs.

Values serve a distinct purpose in the journey of career development. “Values are related to interests, but differ in that they are qualities sought rather than activities or objects which embody them” (Super, 1990, p. 4). In this sense, values are a more foundational construct when compared to interest.

Formulation of Values

Where do values come from? In considering how people formulate work and career values, Šverko (1989) proposed a model of socialization that predicted two aspects of work values: importance and perception of attainment possibilities in work. The idea that work values are highly impacted by socialization has been supported in the literature by several scholars (e.g., Schmitt-Rodermund & Silbereisen, 1998). “Interactions with or observation of family members, peers, teachers, other significant persons, cultural and religious institutions, and print and electronic media sources provide much of the context for imparting values and personal standards of behavior” (Lent et al., 1994, p. 91).

Super and Šverko (1995) hypothesized that there are three key aspects to the nature and function of work: needs, values, and interests. They posited that needs are the “wants” and survival/physiological requirements, such as hunger, that motivate humans. They are a result of a person’s interaction with the environment and may result in needing help from others or feeling

the need to help others. Values, they stated, are the result of socialization and establishment of personal objectives. Building from one's needs, for instance, they suggest that the need to help others becomes the value of altruism. Taking it one step further, interests, then, are the way in which people work to attain their values. For instance, valuing altruism, one may develop an interest in becoming a teacher. Super and Šverko (1995) felt this cycle was so meaningful as to suggest "those who want to understand what people's needs will lead them to seek should study values" (p. 55). With this, it is important to note that important work has been conducted to establish that values can be objectively measured in comparison to needs (Macnab & Fitzsimmons, 1987).

Demographic Factors that Impact Values

Role of Culture

Many recognize that there are varying processes of how values work influence a person's way of life (Super, 1957) and some of these factors have included demographic variables. For instance, in some cultures, the role of values is more emphasized, as Super and Šverko (1995) suggested "the more important such values are the more important the work role will be in their lives" (p. 16). Considering that one's values are at least partially formed based on one's parents and culture, it is important to consider the role of culture in values development.

To be sure, one salient aspect that has been central to the literature is the individual and cultural difference that influences the relevance of work and work values in an individual's life (Super & Šverko, 1995). The significance of work is not a universal construct, but one that is highly influenced by culture, personal circumstance, expectation, and perception of possibilities. Furthermore, the importance of work in an individual's life greatly depends on their perception of how many and which opportunities they can obtain (Super & Šverko, 1995).

In their book *Life Roles, Values, and Careers*, Super and Šverko (1995) dedicated much of their work towards an expansive Work Importance Study. They outlined both their study efforts and results from their research in 11 countries: Australia, the Netherlands, Canada, Croatia, Israel, Italy, Japan, Poland, Portugal, South Africa, and the United States. They then delineated some of the significant cross-national topics that proved salient across cultures. While there are clear differences to be observed regarding values across cultures, the most significant takeaway from their Work Importance Study was that it was not the actual values that differ between cultures, but rather the degree of importance placed upon them. They suggested that the variation in emphasis was largely due to the impact of socialization, norms, and expectations of the culture.

Another way to consider the meaning of a culture (e.g., employment field, age group, nationality) is through considering what constitutes a successful career. As career success can be defined by many variables including self-development, contribution, satisfaction, security, and responsibility (Dries et al., 2008), there is much room for culture and socialization to influence how an individual learns to categorize/label career success.

Impact of Gender

There is some evidence that values differ by gender. One study of 372 college students found that although women displayed more commitment to work than home compared to men, women also displayed lower expectations to fulfill their values through work than men (Nevill & Super, 1986). This suggests that for women, the role of values fulfillment may be less tied to work, without having an impact on their work commitment and career development. Another study found significant differences in the type of values high-school aged men and women reported; Post-Kammer (1987) found that women more highly valued, altruism, achievement,

variety, and way of life, while men were more likely to report values of management, security, economic return, and independence. One hypothesis Post-Krammer gave for these differences was that men and women may be socialized based on gender to value different things in their work.

Relevance to Career Decision-Making

While the place of values in the importance of occupational choice was introduced early in the literature, overall the role of values in relation to career decision-making has been severely lacking (Unite, 2015). One reason for this may be the relatively recent shift in the role of work in the lives of young people. The concept of a “protean career” is one theory that speaks to this shift. Developed in 1976 by Hall, this is the idea that an individual has primary ownership of and responsibility for their career outcomes, and incorporates an attitude of freedom, self-direction, and personal goals and values in career decision-making.

There are numerous measures used to discern what values people actually have. Scales like the Work Values Scale (Super & Nevill, 1986) assess for specific goals and values (e.g., economics, authority, personal development, advancement, lifestyle). Rounds and Armstrong (2005) provided a comprehensive review of many of these scales. Interestingly, much of the work on values has proven to be applicable to a wide array of occupation levels; many of the important scales in assessing career development, including the Minnesota Importance Questionnaire (MIQ; Rounds, Henly, Dawis, Lofquist, & Weiss, 1981), Minnesota Satisfaction Questionnaire (MSQ; Weiss, Dawis, England, & Lofquist, 1967), and the Work Values Scale have been normed and proven valid with both blue- and white-collar workers.

Career Values Awareness

Rather than focusing on what one actually values, the construct of career values awareness centers around “the degree to which a person knows his or her current career values” (Unite, 2015, p. 35). Although almost absent in the literature, the importance of career value awareness can be traced back to both Super’s (1957) *Psychology of Careers* and Bandura’s (1986) development of social cognitive theory.

Bandura (1986) stated that the higher a person’s self-awareness, the greater success one will achieve. To this extent, the construct of career values awareness can be used in asking the question, do college students know what they personally want out of their career? Given the pivotal role the construct of values has had in the development of SCCT and Super’s life-span, life-space theory, it is surprising that there is such a lack of focus on the awareness of these values (as suggested by Unite, 2015).

When creating the Career Values Awareness Scale, Unite (2015) used cross-validation to explore how the scale of values awareness correlated with other well-known career variables including identity awareness, career planning, a protean career orientation, and career self-efficacy. She found that career values awareness was significantly correlated with career self-efficacy ($r = .45$) and identity awareness ($r = .48$). While these moderate correlations fit within expected relationships of these variables, the results also suggest that they are distinct constructs. Unite (2015) went on to state, “being values-driven causes a person to be more aware of his or her career values, which in turn causes greater career self-efficacy” (p. 43).

To test this, she assessed the mediating effect of career values awareness in the relationship between the constructs of being values-driven (one who emphasizes his or her values when making career-related decisions) and career self-efficacy. Results indicated that

career values awareness was a predictor of career self-efficacy, with a positive and direct effect, and also that career values awareness mediated the relationship between being values-driven and career self-efficacy. This highlights that career values awareness seems to play an important role in the relationship between being values-driven and developing career self-efficacy, and gives insight about how the relationship actually works (Unite, 2015). She also found that career values awareness was a moderator in the protean orientation and career planning relationship (Unite, 2015).

Unite (2015) also used CVA in an intervention study to whether a 1.5 or 3-hour training session had any impact on CDMSE. There were three groups in the study – those who received a 3-hour career skill (self-management strategies) and values training, those who received a 1.5 hour values only training, and a control group. All participants were surveyed two weeks before the intervention, and one week after the intervention to assess for differences in CDMSE. Values-specific interventions engaged participants in reflection, experiential learning, and discrepancy analysis. Results from this study highlight that as students received specific career values awareness training, scores in CDMSE improved significantly.

In summary, even though many have suggested the importance of work values in career decisions, it stands to reason that work values cannot be as influential in a career decision (in a meaningful way) without some self-exploration and awareness into what one wants from their career. As such, the role of career values awareness is an important construct worthy of further study, including those factors that stimulate or prompt values awareness development.

Imaginal Experiences

While Bandura is credited with developing the four sources of self-efficacy, in more recent literature James Maddux (2002) has hypothesized that there may be a fifth source of self-

efficacy. He posits that imaginal experiences, the task of visualizing yourself acting effectively or successfully in each situation is yet another experience that works to develop self-efficacy. It may be that the process of developing values awareness is akin to the deep state of cognitive processing required to have this imaginal experience.

To develop values awareness, one must not only know oneself to have self-awareness about who they are and their values and goals, but one must also spend time thinking about and developing a future orientation towards these goals and values. The imaginal experiences may work to highlight the internal image of one successfully implementing their values, which would then work to develop self-efficacy (Maddux, 2002, 2009). Maddux and Gosselin (2003) went on to suggest that these imaginal experiences could be personal or vicarious experiences that individuals assimilate into future hypothetical situations, may be unwanted rumination, or intentional strategies to improve self-efficacy. That being said, simply imagining oneself doing something (without other active behaviors) is not an effective strategy to influence self-efficacy, as Williams (1995) found.

Career Decision-Making Self-Efficacy

Career Decision-Making Self-Efficacy (CDMSE) is a distinct construct regarding someone's belief in their ability to complete tasks required in making career decisions (Betz & Luzzo, 1996; Taylor & Betz, 1983). This concept is central to the work of SCCT, and it is an established construct in the career development literature. While the term career may innately refer to work behavior, for simplicity within the construct of CDMSE, the term includes academic behaviors and development as well (Lent et al., 1994).

The concept of CDMSE encompasses self-efficacy towards a larger scope of career decision-making tasks (e.g., creating resumes, selecting an occupation). In the article introducing

SCCT, Lent and his colleagues (1994) hypothesized that career self-efficacy would be positively correlated with work preparation actions, such as searching for information, applying for employment/school admission, declaring a major, and actually attaining one's declared career choice. Moreover, lower CDMSE has been associated with a lack of career exploration behaviors, while higher CDMSE has been linked to increased engagement in career decision-making tasks (Betz et al., 1996; Luzzo, 1996).

CDMSE has been studied in relation to many career variables and consistently found to be positively correlated with desirable outcomes. Higher levels of CDMSE have been linked to greater career optimism (Garcia, Restubog, Bordia, Bordia, & Roxas, 2015), career adaptability, career planning (Hirschi & Valero, 2015), satisfaction and perceived fit within a major (Dahling & Thompson, 2012). Furthermore, higher levels of CDMSE haven found to negatively correlate with negative affect and thoughts about changing majors (Dahling & Thompson, 2012). Taken together, these results highlight both the importance and impact CDMSE may have in many career related outcomes.

If one considers self-efficacy a developmental endeavor, there is reason to consider the impact of age, experiences, and personal identities in this development. Alongside CDMSE (a foundational trait associated with SCCT), there are many ways in which to measure aspects of career development. Super (1990) developed the theory of career maturity, which is seen as one's ability to handle the developmental tasks of a particular stage, including both cognitive and affective aspects of coping. He suggested this construct encompasses readiness to make well-informed, age-appropriate decisions. With this, it may be that career maturity is one precursor to career decision-making self-efficacy. As one of Super's most commonly researched concepts, many scales have been created to measure this construct, including the Career Maturity

Inventory (CMI; Crites, 1974) and the Career Development Inventory (CDI; Super, Thompson, Jordaan, Lindeman, & Myers, 1988), both of which have established psychometric validation.

Career indecision is another related topic, which relates to a developmental setback with one's career maturation that results from a lack of information about oneself and/or the world of work (Chartrand et al., 1994; Super & Jordaan, 1973). Measures of career indecision aim to uncover what specific problems may be preventing a person from being able to make a career decision, the most common of which is the Career Decision Scale (CDS) created by Osipow, Carney, Winer, Yanico, and Koschier (1976).

Considering the impact of other variables as they relate to development and career maturity, in 1988, Nevill and Super found that career engagement did differ between juniors and seniors and first-year students and sophomores. After surveying 184 female and 188 male college students, they found juniors and seniors demonstrated significantly more career maturity (e.g., more career-planning activities/engagement) than first-year students and sophomores. This result highlights the developmental aspect of career maturity that may grow over time and with experience. In addition to status in school, some studies suggest a difference in CDMSE may also exist between males and females; Betz and Voyten (1997) found that CDMSE was more significantly tied to outcome expectations in men over women.

Regardless, there is much overlap between the constructs of CDMSE, career maturity and career indecision. As Prideaux and Creed (2001) described it: "Career maturity describes an unfolding of ability to make career related decisions; career indecision is a stumbling block within that developmental process; and CDMSE reflects the confidence to undertake these related tasks" (p. 13).

CDMSE has been established as one of the best predictors of career indecision (Betz & Voyten, 1997), and more specifically, it is known to be an important factor in reducing career indecision (Osipow, 1999). All of these findings lend support to the idea that self-efficacy is an important variable to continue studying in career development, as it is related to career growth (maturity) and difficulty. More specifically, it is helpful to continue exploring the things that develop self-efficacy.

Support

Some have suggested that the impact of support on career decision-making has been largely ignored in the literature (Lent et al., 1994). This is unfortunate given that the role of support is known for having positive implications on CDMSE specifically. Researchers have found that students who utilized support services (e.g., academic advising) were significantly less likely to change majors in college than their peers who did not (Vertsberger & Gati, 2015), and Garcia and colleagues (2015) found that parental and teacher support were both positively correlated with CDMSE. Furthermore, other studies have shown that mere observation, just being around or admiring others who are in a particular field, was an effective way to increase one's appraisal of self-efficacy on a task with which the individual has had no previous experience (Hackett & Betz, 1981). The role of support may be increasing CDMSE in these interactions related to concepts performance accomplishments, vicarious learning, social persuasion, or physiological engagement as Bandura suggested.

Perception of support

Metheny & McWhirter (2013) found that the perception of support was significantly correlated with CDMSE in adolescent students. This is a vital area for study, as the simple

perception that one has guidance and support in their life has been linked to positive SCCT concepts such as self-efficacy, outcome expectations, and career interests (Burns et al., 2013; Garcia et al., 2015; Lent et al., 1994; Lent, Brown, & Hackett, 2000). Given that perception of support (or lack thereof) is known to impact CDMSE, one's perception of having support/guidance may be at cornerstone of the support construct.

One difficulty researchers face in measuring perception of support is that it is difficult to objectively capture in measured behavior. It is possible that a child perceives behavior as unsupportive, while an outside observer may disagree. To assess the validity of measuring support in self-reported measures, Morel, Chen, Jensen, and Deemer (2018) surveyed both parents and children about their experiences of giving and receiving career support; matched-pair analysis was then used to compare the two. Results indicated no significant difference in how parents rated their levels of support compared to what the child perceived in their level of received support. The similarity in how parents and children reported levels of support gives validity to measuring career support in a parent-child relationship via the child's perception.

Well-Being, Super's Theory, and SCCT

Much of the research on success and well-being indicates that success increases well-being, while a lack of success results in disappointment and lower well-being. With that, even though they are both career development theories, Super's theory and SCCT have had a consistent connection in the literature to personal consequences including mental and physical health outcomes.

Struggles in career development have proven to be an impactful variable later in life as well. In a 2013 meta-analysis Milner, Page and LaMontagne compared employed and unemployed people and found that unemployed individuals had significantly lower

psychological and physical well-being, and a greater of incidence of suicide. The authors discussed the long-term impact of unemployment (as long as 16 years post unemployment) but also highlighted the immediate impact of career difficulty in emotional outcomes. They found that suicide risk was greatest in the first 5 years post job loss.

Similar to Super's developmental theories, well-being and positive personal outcomes (e.g., feeling competent) are often attributed to the successful completion of the task of the life stage one is in. A 2014 study examined the relationship between CDMSE (and other career development variables) and depression, anxiety, and stress in 200 undergraduate students. In this study, CDMSE had significant negative correlations with scales of depression, anxiety, and stress (Andrews, 2014). As career engagement and development became more advanced, evidence of emotional distress was less likely. In another meta-analysis, McKee-Ryan, Song, Wanberg, & Kinicki (2005) found that long-term unemployment was associated with a higher rate of suicide and that the longer the duration of unemployment (e.g., over five years), the greater the risk. These findings suggest that career outcomes have both an immediate and long-term impact on well-being.

More specifically related to difficulties in career development, many have connected this difficulty to poor psychological health outcomes. Depression, which is understood as a representation of the affective aspect of well-being, is negatively correlated with self-efficacy (Kavanagh & Bower, 1985; Maciejewski, Prigerson, & Mazure, 2000; Rottinghaus et al., 2009). Work by Konstam, Celen-Demirtas, Tomek, and Sweeney (2015) regarding unemployed young adults found that of the sense of career concern, curiosity, confidence, and control in finding employment, control was the best predictor of well-being (that they assessed) in the sample.

Interestingly, perceived behavioral control has been found to operate similarly to self-efficacy (Ajzen, 2002) in that both are predictive of well-being.

In considering academic-major decision-making, Rottinghaus and colleagues (2009) studied depression among undecided college students and found that undecided students were significantly more depressed than their counterparts who had chosen an academic major, suggesting that the decision-making status of an academic major had a crucial impact on personal well-being. Similarly, in 2000 Saunders and colleagues surveyed 215 college students to assess career development and aspects of anxiety and depression. They found that career indecision and dysfunctional thinking were both positively correlated with depression, state- and trait-anxiety. They concluded that lacking in career development (e.g., higher levels of career indecision) can impact both cognitive and affective variables.

Super (1990) posited that one must complete the developmental tasks of a certain stage in order to be prepared for success in the next, and experiences at earlier stages are known to impact later outcomes. Many studies have been conducted that illustrate this theory. Havighurst (1972) and Kuusinen (1997) found that happiness (or life satisfaction) is partially dependent on the successful achievement of life-phase dependent developmental tasks, and more recently Çakar (2012) found that self-efficacy of young adults significantly predicted their life overall satisfaction.

Part of these developmental tasks include developing personal goals, and “[goals] achieve their self-motivating quality by linking self-satisfaction to goal fulfillment and to the enactment of behavior that meets internally-set standards” (Lent et al., 1994, p. 85). The creators of SCCT argued that making career decisions serves the function of setting personal goals; this statement would suggest that making a career decision (and thus self-efficacy) may instill a form of self-

satisfaction. With that, as vocational maturity develops, people become more secure in who they are, better adjusted, and more prepared to handle other problems (Super, 1969). Increased confidence within career dimensions does not remain distinct from other aspects of life. Positive life events in one dimension (e.g., work, family) are known to increase overall life satisfaction level (Lelkes, 2008).

The negative impact of lower well-being on one's physical health has also been established, suggesting that well-being is an all-encompassing and important outcome variable. In 2011, Diener and Chan conducted a meta-analysis of studies of subjective well-being and overall health and life longevity. They found overwhelming evidence that "happy" people live longer and healthier lives based on numerous studies. For instance, work stress has been found to be positively correlated with cortisol response in the brain; individuals reporting higher work stress also had higher mean cortisol levels during the workweek (Schlotz, Hellhammer, Schulz, & Stone, 2004). This is relevant as high cortisol levels can cause serious health effects such as fatigue, blood sugar imbalances, weight gain, suppression of the immune system, as well as fertility and cardiovascular problems (Aronson, 2009). Other findings cited in the meta-analysis included a study of professional baseball players in 1952, wherein the mortality rate of the men in 2009 could be predicted by the intensity of their smiling in a picture (Abel & Kruger, 2010), and a 12-year longitudinal study that found significant evidence of the effect of optimism on heart attack rates and coronary heart disease in over 1,300 participants (Kubzansky, Sparrow, Vokonas, & Kawachi, 2001).

As much evidence has been established to support the deleterious effects of low well-being, there has been an equal emphasis on highlighting the positive effects of people having greater well-being. Examples of positive outcomes of high well-being include better social

relationships, engagement in work, and work performance/productivity (Diener & Chan, 2011; Diener & Tov, 2007). A recent study examined the effect of career adaptiveness on well-being in 184 unemployed young adults ranging from 21 to 29 years old (Konstam et al., 2015).

Researchers studied the constructs of career concern, control, curiosity, and confidence, and found that greater sense of control and confidence were predictive of greater life satisfaction, while only control was significantly related to higher levels of positive (and lower levels of negative) affect. Concern and curiosity were not predictive of any aspects of well-being. The higher one's sense of confidence and control in their career prospects, the better sense of well-being they experienced; according to this study, confidence and control may be paralleled with self-efficacy as a predictor of well-being.

The World Health Organization (2004) stated:

Mental health is not just the absence of mental disorder. It is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. (p. 31)

Given the prevalence rates of depression and anxiety within the college population discussed in Chapter 1, the well-defined and long-term effects of well-being are clearly important outcomes to be focused on within this population, making well-being a crucial construct to study.

Research Questions and Hypotheses

The overarching aim of this study is to understand the factors associated to CDMSE and its relation to well-being in college students. Both Super and SCCT acknowledge the early influence of parental relationships as foundational to one's personal and career development (for instance, as an external source of input). Moreover, as people are encouraged, motivated, and

reinforced within these relationships, they develop a sense of efficacy in their abilities that then impacts their sense of self and interactions with the world (internal source; Lent et al., 1994). Super's models suggest that parents are an integral part in facilitating an internal focus and awareness of children's selves, interests, and values. As people engage in this internal exploration, one would expect to have a better sense of preparedness and ability to meet and be successful in these goals.

With these two sources of input, SCCT suggests that self-efficacy is developed. From here, Super's theory provides guidance on the impact of this successful self-efficacy development on well-being. As success or failure in one area of life often impacts other aspects of life, as people flourish in some areas (e.g., developing confidence, self-awareness), one would expect greater likelihood for success in others and an improvement in both domain specific and overall senses of well-being (Lent et al., 2005).

This idea also follows from theory in that the research questions I outline seek to bridge the gap between various career influences and psychologists' understanding of personal well-being and life satisfaction throughout the lifespan (Lent et al., 1994; Super, 1990). The overall purpose in this study was to explore to what extent do these factors contribute to well-being in college students? My underlying question was, would parental support, career values awareness, and CDMSE explain well-being in a sample of college students (see Figure 1)? I had three primary hypotheses:

H1: Career values awareness will mediate the relationship between parental behaviors and CDMSE, such that this relationship will be positive and significant.

H2: CDMSE will mediate the relationship between parental behaviors and well-being, such that this relationship will be positive and significant.

H3: CDMSE will mediate the relationship between career values awareness and well-being, such that this relationship will be positive and significant.

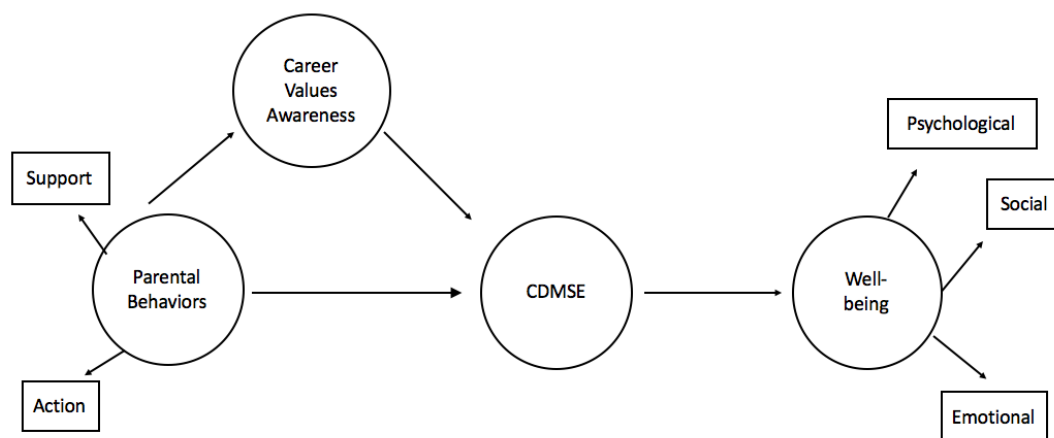


Figure 1. Hypothesized Path Model of Analysis

In addition to my primary hypotheses, I tested an alternative model to determine if parental support and family income had a significant and direct relationship with well-being. As outlined in this chapter, both theories suggest a combination of internal and external influences on career development. As parental support and family income are two well-known factors that influence well-being, an alternative model linking these directly to well-being can be used to examine which model fits the data better without sacrificing parsimony. While much of the literature suggests that external sources (e.g., culture, SES) are impactful in career development, I hypothesized that (H4) the hypothesized model would provide a better fit to the data than the alternate model. This is based on the rationale that since parents are not likely to have as much direct influence on the financial and emotional well-being of their children while in college due to distance and lack of consistent interaction, the paths from parental support and family income to well-being should not contribute significantly to the model. I predict that these variables will

be funneled through internal processes (like one's values or CDMSE), rather than directly linked to well-being. Finally, given the roughly equal sample sizes, as an exploratory aspect of the study I also examined whether year in school would moderate the relationship between CDMSE and well-being, pulling from the literature in career maturity that suggests proximity to graduation may be a crucial factor in this relationship.

CHAPTER 3: METHODOLOGY

This chapter describes the methodology used in this study. It begins with outlining the participants, procedure and instrumentation used to study the variables, and concludes with the data analysis plan used to test the hypotheses described in Chapter 2.

In this study, the relationship between parental involvement in college students' career decision-making self-efficacy was empirically examined. The mediation effect of college students' awareness of their career values was also evaluated. Furthermore, using structural equation modeling (SEM), CDMSE was examined as a mediator between two paths: from parental behaviors to well-being, and from career values awareness to well-being. See Figure 1 for a diagram of this study's model. As the research questions in this study intend to understand the direct and indirect effects between the variables, this study tested a hypothesized relational model using a non-experimental quantitative, correlational design. Because all the observational data were collected through self-report via an online survey, the data were considered cross-sectional.

Participants

To determine the needed sample size to test the hypotheses, a power analyses was conducted to assess the minimum sample size needed. With 4 latent variables and 15 observed variables, a desired power level of 0.80, showing medium effect size of .15 and an alpha level of .05 (Cohen, 1992), a minimum sample size of 630 cases would be needed to detect a medium effect of $R^2 = .15$ for the well-being latent variable.

Participants in this study were recruited from a four-year large public land grant research university in the Midwest region of the United States during Spring 2018 semester. All

undergraduate students who were 18 and older were invited to participate, regardless of major, academic standing, or GPA. There were no exclusion criteria surrounding gender, race, ethnicity, or age.

The final sample consisted of 1446 participants (see Table 1). Within the sample, 885 participants self-identified as female (61.2%), 548 as male (37.9%), 7 (.5%) reported other genders (e.g., agender, androgynous, genderqueer/non-binary, genderfluid), and 4 (0.3%) did not report gender. Age ranged from 18 to 73 ($M = 20.17$; $SD = 2.90$; $Mdn = 20$). Race and ethnicity range was as follows: 186 (12.9%) Asian/Indian/Asian American, 40 (2.8%) Black/African/African American, 52 (3.6%) Hispanic/Latinx, 1 (0.1%) Native American, 4 (.3%) Arabic/Arab American, 1105 (76.4%) White or Caucasian; 51 (3.5%) participants identified as Multiracial and 6 (.4%) identified as “other.” Table 1 indicates most participants were: 5th generation (63.5%), identified as U.S. Citizens (92.7%), and had family incomes ranging between \$75,000-100,000 (38.7%). The majority of the participants reported that their parents had earned college degrees and described that they are having a moderately easy time paying for their college education (21.3%). Other basic information about their status as students was also obtained. Please see Table 1 for complete demographic information about participants.

First-year students and sophomores encompassed 56.0% (810 students) of the sample and 44.0% (636 students) were in their junior or senior years of school. Most participants reported their GPA as being between 3.5-4.0 (39.5%), had identified a major (96.3%), and were students in the College of Engineering (27.7%). Finally, most participants live within a short 1-4-hour car ride to their family (67.7%), speak to a primary family member several times per week (42.0%), and stated that they are enjoying their college experience a fair amount (55.0%).

Table 1. Participants' Demographic Characteristics

Demographic	<i>n</i>	Frequency (%)
Sex		
Female	885	61.2
Male	548	37.9
Other	11	0.8
Age Group		
18-19	632	43.7
20-21	608	42.0
22-23	164	11.3
24+	41	2.8
Race/Ethnicity		
Asian/Indian/Asian American	186	12.9
Black/African American	40	2.8
Hispanic/Latinx	52	3.6
Native American	1	.1
Arabic/Arab American	4	.3
White/Caucasian	1105	76.4
Multiracial	51	3.5
Other	6	.4
Generational Status		
1st Generation	142	9.8
2nd Generation	172	11.8
3rd Generation	34	2.4
4th Generation	185	12.8
5th Generation	914	63.5
GPA		
2.5 or below	75	5.2
2.5-3.0	318	22.0
3.0-3.5	480	33.2
3.5-4.0	573	39.5,
Status in School		
First-year students and sophomores	810	56.0
Juniors and seniors	636	44.0
Year in School		
First-year Student	446	30.8
Sophomore	365	25.2
Junior	338	23.4
Senior	298	20.6

Table 1 continued

Demographic Variables	<i>n</i>	Frequency (%)
College Attended		
Exploratory Studies	53	3.7
College of Agriculture	147	10.5
College of Education	39	2.7
College of Engineering	401	27.7
College of Health and Sciences	280	19.4
College of Liberal Arts	121	8.4
College of Pharmacy	36	2.5
College of Science	175	12.1
Polytechnic Institute	120	8.3
College of Veterinary Medicine	10	.7
Krannert School of Management	78	5.4
Dual college enrollment	28	1.9
Unknown	11	.8
Mother's Education		
High School	263	18.2
College	776	53.7
Post-Graduate Degree	314	21.7
Doctoral Degree	92	6.4
Father's Education		
High School	324	22.4
College	614	42.4
Post-Graduate Degree	350	24.2
Doctoral Degree	153	10.6
Family Income		
less than \$25,000	83	5.7
\$25,000-49,999	170	11.8
\$50,000-74,999	250	17.3
\$75,000-150,000	560	38.7
\$150,000 and higher	365	25.2
Difficulty Paying for College		
extremely easy	169	11.7
moderately easy	308	21.3
slightly easy	184	12.7
neither easy nor difficult	274	18.9
slightly difficult	284	19.6
moderately difficult	184	12.7
extremely difficult	39	2.7

Table 1 continued

Demographic Variables	<i>n</i>	Frequency
Distance to Family		
1-4 hour drive	979	67.7
4-10 hour drive	168	11.6
Plane ride	299	20.7
Speak to Family		
Multiple times per day	231	16.0
once per day	228	15.8
several times per week	608	42.0
several times per month	342	23.7
once per month	32	2.2
several times per year	5	.3
First Choice of University		
Yes	1083	74.9
No	360	24.9
College Enjoyment		
Not liking it at all/hate it	9	.6
Dislike it a fair amount	75	5.2
Even amount of like and	204	14.1
Enjoy it a fair amount	796	55.0
Enjoy everything about it	362	25.0

Note. *N* = 1446

Procedure

The study was approved by the Human Subjects Review Committee of the university Institutional Review Board before any of the following procedural steps began (see Appendix A). Participants for this study were recruited from a four-year large public land grant research university in the Midwest region of the United States during the Spring 2018 semester. All undergraduate students who were 18 and older were invited to participate, regardless of major, academic standing, or GPA. There were no exclusion criteria surrounding gender, race, ethnicity, or age. Participants who met inclusion criteria (undergraduate students at a large Midwestern University) were contacted *en masse* by the registrar's office with an invitation to participate in the survey.

The recruitment email (attached in Appendix B) contained a brief description of what was required to participate in the survey, information regarding incentive to enter a raffle for one of five gift cards valued at \$10 (estimated odds of winning were reported to be 1 in 200), and a URL link to the online survey. Once they clicked the link, participants were prompted to read an informational sheet about the study's aim, to understand more about how parental involvement and values impact career decision-making self-efficacy and well-being in college students, as well as the potential risk and benefits of participating (see Appendix C). Participants were prompted to "agree" to participate before continuing to the actual survey items. After completing the survey, participants were prompted to read debriefing information, and then directed to an external survey link to an optional gift card raffle entry form (see Appendix D). The average time of completion was 26.83 minutes.

After reading the debriefing, participants who wished to be entered into a drawing for a gift card clicked on a link that led to another page, where they entered their name and email address (see Appendix E). Identifiable data (e.g., name, email address) were not linked to participant's responses survey responses in any way; a separate survey was used to ensure anonymity. Five winners were selected randomly and the Amazon.com gift cards were distributed electronically. After distributing the gift cards, all the data collected that contained email addresses were destroyed. All gift cards were purchased with personal funds.

Instruments

Four existing measures were used to study these variables and their relationship to one another. Participants responded to items of (1) Informed Consent and a Socio-Demographic Questionnaire (see Appendix F), (2) Parental Career Behavior Checklist (PCBC; Keller & Whiston, 2008, adapted; Appendix G), (3) Career Values Awareness Scale (CVA; Unite, 2012;

Appendix H), (4) Career Decision-Making Self-Efficacy Scale – Short Form (CDMSE-SF; Betz et al., 1996; Appendix I), (5) Mental Health Continuum – Short Form (MHC-SF; Keyes, 2009; Appendix J).

In this study, the variables measured with the PCBC (Keller & Whiston, 2008), CVA (Unite, 2012), and CDMSE-SF (Betz et al., 1996) served as independent variables, while well-being (as measured with the MHC-SF; Keyes, 2009) functioned as the dependent variable. I selected two instruments in this study (CDMSE-SF and MHC-SF) based on their strong psychometric properties and widespread use in measuring their respective constructs. The other two instruments (PCBC and CVA) were chosen, despite their lack of use in past literature, because of their unique application to the research questions of this study.

Parental Career Behavior Checklist

The Parental Career Behavior Checklist (PCBC) was introduced by Keller (2004) and first published by Whiston and Keller (2004). The scale includes 23 items that measure specific parental actions (related to career behaviors) that can be identified and quantified. The internal structure of the PCBC contains two subscales of parental career behavior: psychosocial support (13 items; e.g., “*My parent encourages me to try new things,*” “*My parent asks what careers I am considering for my future*”) and action (10 items; e.g., “*My parent has given me written materials about specific colleges,*” “*My parent encourages me to take interest assessments or career tests offered by my school*”).

The survey prompt asked participants to think of the guardian who is most concerned with their career issues/development and then report the frequency that guardian engages in each item on a 5-point Likert-type scale ranging from *never* (1) to *very often* (5). A total score was

calculated by summing the 23 items, and subscale totals were calculated from summing their respective items.

Whiston and Keller (2004) found coefficient alpha for the total scale was .93, .90 for the support subscale, and .89 for the action subscale, indicating that the measure was reliable. Furthermore, strong convergent validity with the total scale has been established based on significant correlations to the support ($r = .93$) and action subscales ($r = .92$; $p < .001$, Whiston & Keller, 2004, 2008). During the scale development, authors measured actual parent behaviors and compared them to the perceived behaviors, measured by PCBC (Whiston & Keller, 2004). The partial correlation coefficient of .24 ($p = .004$) suggested that there was similarity in how the participants perceived and reported behaviors on the PCBC compared to observed parental behaviors.

While the scale was originally developed for the adolescent population, it has since been modified for use among a college-aged population (Roach, 2010). To appropriately reflect the population, the questionnaire used in this study included 4 items that were modified to reflect a college student-aged sample (e.g., “*My parent expresses interest in various teenage issues that are important to me*” was changed to “*My parent expresses interest in various college-aged issues that are important to me*”).

Parental Career Behavior Checklist Pilot Study

Given that 14 years have passed since the scale was developed, I sought to retest the concept that parent and student perceptions of career behaviors and support would be similar (Morel, Chen, Jensen, & Deemer, 2018). A separate pilot study was conducted with 35 high school student and parent participant pairs. The student participants had a mean age of 16.09 ($SD = 1.23$), 52.8% were female ($N = 19$), 44.4% were male ($N = 16$), and the most prevalent ethnic

groups represented was White (83.3%; $N = 30$). Participants were recruited from a summer career assessment service at a large Midwestern University. The students completed a survey consisting of demographic questionnaire and an adapted Parental Career Behavior Checklist for students (adapted by Roach, 2010); the parent of the students completed a survey consisting a modified version of the Parental Career Behavior Checklist (Keller & Whiston, 2008).

Matched-pairs t -tests were used to analyze the data given that parent/child dyads are not completely independent of one another (Dolarslan & Torlak, 2013; Pouta et al., 2005). For total scores of career behaviors, the matched pair t -test indicated no significant difference between parents and students $t(35) = -.511$ $p = .307$ (1-tailed), with a trivial effect size ($d = -.100$). For the parental support behaviors subtest, matched pairs t -tests indicated no significant difference between how parents and students reported behaviors, $t(35) = -1.243$. $p = .11$ (1-tailed), with a small effect size ($d = -.248$). For the career action behaviors subtest, matched pairs t -tests indicated no significant difference between parents and students, $t(35) = .386$. $p = .351$ (1-tailed), and effect size analysis indicated that the actual change was small, $d = -.08$.

The results found by Morel and colleagues in 2018 are consistent with those found by Keller and Whiston in 2004. That this scale, which is largely measuring the student's perceived/subjective experience, was representative of what could be observed by corroborating with a parent, lends to support the construct validity of this scale.

Career Values Awareness Scale

The Career Values Awareness Scale (CVAS) was developed to measure the degree to which an individual is aware of their career values within every day and future work life (Unite 2012, 2015). The scale consists of 5 items, and participants are asked to rate with five options the degree to which they agree, ranging from *strongly disagree* (1) to *strongly agree* (5). Responses

were summed, with higher scores indicating higher levels of career values awareness.

Representative items include *“If asked, I could easily describe my most important career values”* and *“I know which values need the most attention if my career is to fulfill me.”*

Career Values Awareness Scale Development

In 2012, Unite conducted a pretest study to perform exploratory and confirmatory analyses on the scale with students taking MBA classes at a Midwestern state university. A total of 198 participants comprised the sample in the exploratory analysis and 255 were in the confirmatory analysis. In the exploratory analysis, the scale included 9 items and an initial Cronbach's alpha reliability of .87 was obtained. Unite found that 4 items could be deleted without changing the alpha, thus resulting in a 5-item scale. Results from the KMO and Bartlett analyses were significant (commonalities above 0.2). In using principle axis factoring, the analysis produced a one-factor solution that accounted for 44.38% of the variance.

In the confirmatory analysis, Unite (2012) compared the Career Values Awareness Scale to the values subscale of the Protean Career Orientation scale (Briscoe et al., 2006) and Identity Awareness Scale (Stumpf, Colarelli, & Hartman, 1983). In confirmatory analyses, Unite tested four different models of the Career Values Awareness measure. Results indicated the 5-item scale fit the data moderately well, $\chi^2 (5, N = 255) = 19.59, p < .001$, RMSEA = .12, SRMR = .03, CFI = .96, NFI = .95, AIC = 39.59.

The 5-item scale has been tested with two different samples in distinct empirical studies by the original author since its exploratory and confirmatory analyses (Unite, 2015). In Unite's cross-validation study (comparing CVA to other career constructs), Cronbach's alpha reliability of the scale was found to be $\alpha = 0.88$. Cronbach alpha results during the intervention study (Unite, 2015) showed that $\alpha = 0.84$ at Time 1 and $\alpha = 0.81$ at Time 2.

Career Values Awareness Pilot Study

Given the lack of research on the construct validity of CVA, I conducted a pilot study to examine how scores on the CVA were associated with participants' ability to freely recall career values as a means of gauging awareness. To examine this, I administered the scale to 69 (19 male, 39 female) college students. After removing missing data and removing 3 cases with outliers, the final number of participants in this sample was 58. The average age was 23.33 ($SD = 22.24$). Of the participants, 20 (34.5%) were sophomores in college, 18 (31%) were juniors, and 20 (34.5) were seniors.

Participants were given the 5-item CVA and then asked to answer two open-response items. The first item was, "Please list all of the different career values you are aware of/have heard of. These do not have to be values that you have identified as important for you." The second item was "Please list all the career values that you identify as personally important to you." These were important as I wanted to evaluate whether participants' CVA scores would be positively correlated with the number of values they hold as personally important, above all the values they are aware of. For instance, someone can know that material/financial profit and gain is a value that drives some in the workplace, but also know that it is not one of their personal career values.

I coded free responses to the two questions based on values listed in the Knowdell Career Values Card Sort (CVCS; Knowdell, 2007). One point was assigned for each value the participant listed that corresponded with a value listed in the CVCS. Responses that did not match a CVCS work value were not counted as a point (e.g., "company benefits"). For instance, one participant responded with a free response answer of "Courage, Innovation, Teamwork, Integrity, Respect." "Innovation" was coded as creative expression ("Be able to express in

writing and in person my ideas concerning my job and how I might improve it; have opportunities for experimentation and innovation”), “teamwork” was coded as the value of working with others (“Have close working relations with a group and work as a team to common goals”), “integrity” corresponded with the value of honesty and integrity (“Work in a setting where honesty and integrity are assets”), and respect was coded as the value of status (“Impress or gain the respect of family, friends and community by the nature and/or level or responsibly of my work”). The participant’s answer of “courage” did not reasonably correspond to any career values in the CVCS and thus it was omitted, resulting in a score of 4.

The average number of overall values reported was 4.45 ($SD = 2.47$) and the average number of personal values reported was 3.19 ($SD = 2.06$). Furthermore, in this sample, CVA scores ranged from 12 to 25 ($M = 20.12$, $SD = 3.39$). The one-tailed Pearson correlation between all values reported and CVA indicated a significant positive association, ($r = .30$, $p = .01$) indicating a moderate effect size.

CVA was positively correlated with personal values reported, but results of the one-tailed Pearson correlation indicated that there was not significant association ($r = .20$, $p = .06$) with a small to moderate effect size. While the results suggest that CVA was not significantly associated with the free response measure of values awareness, the sample size ($N = 58$) may be too small to detect significance here. Since a small to moderate effect could be observed ($r = .20$), these results can be interpreted as evidence of the construct validity of the CVA scale. Furthermore, the Cronbach's alpha coefficient of 0.87 in this pilot study provides further evidence of the scale's reliability.

Career Decision-Making Self-Efficacy – Short Form

Career decision-making self-efficacy, or one's belief in their ability to successfully complete tasks necessary in making a career decision (Betz & Luzzo, 1996; Taylor & Betz, 1983), was measured in this study with the Career Decision-Making Self-Efficacy Scale – Short Form (CDMSE-SF, Betz et al., 1996). The CDMSE-SF version is a 25-item questionnaire that was adapted from the original 50-item version developed by Taylor & Betz (1983).

The survey prompt is worded such that participants are instructed to rate “*How much confidence do you have that you could...?*” Each question has five response options ranging from *no confidence at all* (1) to *complete confidence* (5). The internal structure of the CDMSE- SF consists of five subscales, that were created based on Crites' (1961) career maturity model; each subscale is measured via five items. The sub scales are: (a) self-appraisal (e.g., “*Accurately assess your abilities*”), (b) occupational information (e.g., “*Find out the employment trends for an occupation over the next ten years*”), (c) goal selection (e.g., “*Make a career decision and then not worry about whether it was right or wrong*”), (d) planning (e.g., “*Prepare a good resume*”), and (e) problem-solving (e.g., “*Change careers if you did not like your first choice*”). Total and subscores were calculated by adding the number from each response, with higher scores indicating higher levels of decision-making self-efficacy (Betz et al., 1996).

When the short form version of the scale was first developed, internal consistency as measured by α was 0.94 and test-retest reliability coefficient was 0.83 (for the total score; Betz et al., 1996). In subsequent research, subscale α values have ranged from 0.73 (self-appraisal) to 0.94 (goal selection). In 2002, Nilsson, Meek, and Williams conducted a meta-analysis of 41 published journal articles utilizing the CDMSE-SF and conclude that total scale alpha coefficients ranged from 0.83 to 0.97. Since its creation, most studies utilizing the CDMSE-SF

have been within the college population and the CDMSE-SF has been a consistently valid and reliable measure of the trait (Nilsson et al., 2002).

Mental Health Continuum – Short Form

The Mental Health Continuum – Short Form (MHC – SF; Keyes, 2002, 2009) is a 14-item measure derived from the 40-item long form (MHC-LF) developed to measure overall mental health. Response options of MHC-SF measure the frequency with which participants experienced each item during the last month (Keyes, 2002; 2009). All items include the preface of “*During the past month, how often did you feel...*” with six response options ranging from *never* (0) to *every day* (5).

There are three subclasses of well-being within the overall measure: emotional, social, and psychological. Emotional well-being is measured by three items (e.g., “... *happy*” and “... *satisfied with life*”), while social well-being is measured by five items (e.g., “... *that people are basically good*”), and psychological well-being is measured by six items (e.g., “... *that you had experiences that challenged you to grow and become a better person*”).

This scale can be scored in a variety of ways; (a) continuous overall mental health score; (b) well-being clusters (emotional, social, and psychological); and (c) categories of mental health functioning (languishing, moderately mentally healthy, and flourishing; Keyes, 2009).

In this study, the MHC-SF was scored via the continuous mental health score (as a latent variable) and the three well-being clusters (as observed variables). The continuous mental health score is calculated by the summing of all items in the scale. Additionally, the three clusters of well-being scores (emotional, social, and psychological) were calculated by adding the items for each category. Higher scores in both interpretations indicate a greater sense of well-being in the respective category.

The internal three-factor structure of this scale (emotional, social, and psychological) has been validated both in general U.S adult populations (Gallagher, Lopez, & Preacher, 2009; Keyes, 2009) and in representative samples of college students (Keyes, 2009; Robitschek & Keyes, 2009). MHC-SF has established internal consistency greater than .80 across several studies (Keyes, 2005; Lamers, Westerhof, Bohlmeijer, ten Klooster, & Keyes, 2011).

Satisfactory test-retest reliability coefficients have been established for the scale as well, and range from .57 for the overall psychological well-being domain to .64 for the emotional well-being domain and .71 for the social well-being domain after 4 weeks (Robitschek & Keyes, 2006, 2009). Furthermore, there is some evidence that these results have even longer-term reliability, as evidenced by 3- (.68) and 9-month (.65) test-retest coefficients (Lamers et al., 2011). The MHC-SF has been translated and validated in several languages, including French (Canadian), Korean, Chinese, Japanese, Dutch, Norwegian, Swedish, and Finnish, which provides further evidence of the widespread utility of the scale (Keyes, 2009).

Data Analysis Plan

Preliminary Analysis

Using SPSS, I examined the descriptive statistics by computing frequencies, means, and standard deviations for the variables. Next I performed correlation analyses on the continuous variables and examined between-group differences by performing a multivariate analysis of variance (MANOVA) to establish whether the dependent variables may be different according to the demographic variables. Semi-partial correlation analyses were conducted to establish the multicollinearity within the data. Consistent with Klein's (2005) suggestion, correlations below .80 indicated an absence of multicollinearity. For all measures (total and appropriate sub scales)

internal consistency reliability (Cronbach's α) were explored to ensure that the measures performed adequately or similarly compared to past literature.

Primary Analysis

The hypotheses were (H1) career values awareness will mediate the relationship between parental behaviors and CDMSE, such that this relationship will be positive and significant, (H2) CDMSE will mediate the relationship between parental behaviors and well-being, such that this relationship will be positive and significant, (H3) CDMSE will mediate the relationship between career values awareness and well-being, such that this relationship will be positive and significant and (H4) the hypothesized model will have a significantly better model fit than the alternative model.

The examination of the fit of the model and directions of these associations were examined with structural equation modeling (SEM) conducted with *Mplus* software. SEM is an analysis that uses a specific model to represent predictions of that path among plausible constructs (Kline, 2005). SEM has a few assumptions that must be met. First, that constructs are measured with appropriate observed variables and that all inter-variable relations are specified including the direction of the causal effects between variables based on theoretical deduction. Because each variable relation is specified a priori, SEM concurrently analyzes all of the variables to determine the extent that hypothesized model/inter-variable relationships are consistent with the data. This consistency is evaluated with several goodness-of-fit statistics of the model based on the data.

A 2-step procedure was utilized wherein the measurement model was evaluated using confirmatory factor analysis (CFA) to ensure that all the parameter estimates were adequate and that the model fits the data well. Following the CFA, the structural model was estimated to test

the mediation hypotheses. For evaluating model fit, six fit indices were utilized: (a) model chi-square test, (b) comparative fit index (CFI), (c) Tucker-Lewis index (TLI), (d) Root Mean Square Error of Approximation (RMSEA), (e) Standardized Root Mean Square Residual (SRMR) and (f) Akaike information criterion (AIC).

The chi-square test is one test of the goodness-of-fit of the model. This test examines the null hypothesis, and a significant p-value indicates that we fail to reject the null. Traditionally a researcher wants a significant chi-square value (in order to reject the null hypothesis). In SEM, the aim is to get a low chi-square value, yet it is sensitive to sample size so it is often significant (Kline, 2005). Thus, chi-square index was considered along with the other fit statistics in this study.

CFI was utilized to account for the sample size of the specified model and a model in which the latent variables are correlated. In the model evaluation, .90 and above was considered adequate, while above .95 indicated a good fit (Hu & Bentler, 1999). The TLI provided an adjustment for parsimony. The model fit was considered adequate if it exceeded .90 and a good fit if it was above .95 (Hu & Bentler, 1999). The RMSEA statistic was analyzed for comparison with the specified model (Browne & Cudeck, 1993). A fit of less than .08 was considered reasonable, while results below .05 were deemed a good fit (Hu & Bentler, 1999). Finally, AIC was used to compare models given they are not nested models; lower AIC scores indicate a better model fit (Tabachnick & Fidell, 2013).

Next, the hypothesized a priori mediation model was constructed in *Mplus*. Mediation analysis was used to test a causal chain between at least three variables, whereby the relationship between two variables is accounted for by a third variable (Hayes, 2009).

Furthermore, bootstrapping (a nonparametric sampling procedure) was used to evaluate the significance of indirect effects. Bootstrapping is a statistical resampling of the data wherein cases in the sample are randomly selected with replacement to generate other data sets (Kline, 2005). The process involves extracting multiple randomized samples (e.g., 1000) to form an empirical representation of the sampling distribution (Hayes, 2009). Bootstrapping is advantageous in analyzing multiple mediators within a single model, and provides greater statistical power without assuming multivariate normality in the sampling distribution (Mallinckrodt, Abraham, Wei, & Russell, 2006; Preacher & Hayes, 2008). As recommended by Hayes (2009) for multiple mediation models, iterative bootstrapping was performed 1,000 times in this analysis.

Bias-corrected confidence intervals were used to adjust for over inflation estimates and to yield a parameter estimate for both total and specific indirect effects of all the relationships within the model. If the 95% bias-corrected confidence interval for the parameter estimate did not include zero, then the indirect effect was considered statistically significant, thereby suggesting mediation (Preacher & Hayes, 2008). Furthermore, r^2 values were converted into f^2 using Soper's (2019) software and used to examine effect sizes within the model; Cohen's (1988) recommendations of small ($f^2 = .02$), medium ($f^2 = .15$) and large ($f^2 = .35$) were used to interpret these effect sizes.

An alternative model to the data were tested based on past literature that suggests family income and parental support are highly correlated with well-being and upon examination of the demographic variables of this sample. In this model, a direct path from parental career behaviors to well-being was included, and family income was added as a predictor of well-being. Family income was measured by a single demographic question that asked the participant to indicate

their family's approximate income (in U.S. dollars) based on set categories (see Appendix F). This alternative model was examined for goodness-of-fit **and** to determine if this model fits the data better than the hypothesized model.

Exploratory Analysis

There is a possibility that the relationship between CDMSE and well-being may be stronger for students who are closer to graduation. However, little to no research has been conducted in this area. Thus, as an exploratory analysis I wanted to explore academic classification as a moderator of the relationship between CDMSE and well-being. To test this specific path, measurement invariance testing was used to examine whether the impact of CDMSE on well-being is significantly different for two dichotomous groups (first-year students and sophomores and juniors and seniors). Conceptually, juniors and seniors are likely to be similar to one another, and first-year students and sophomores are likely to have similarities to one another in their progress towards developmental tasks such as having declared a major, proximity to graduation, and perceived pressure/stress related to career decision-making, thus having a potentially a similar impact on well-being.

To test this, the demographic variable of "year in school" was dummy coded to create two groups. One group represented first-year students and sophomores, and the other represented juniors and seniors; these groups were coded 0 and 1 respectively. Combining academic classification into these two dichotomous groups has been used in past studies (Harlow & Bowman, 2016; Nevill and Super, 1988). Measurement invariance testing was then used to examine the if the relationship between CDMSE and well-being was significantly different for the two dichotomous groups. A Wald chi-square test was to determine if year in school moderated the path between CDMSE and well-being. A significant result on the Wald chi-square

test would indicate that year in school is a moderator of the relationship between CDMSE and well-being.

CHAPTER 4: RESULTS

In this chapter, I present the results of my study. I first report the preliminary analyses and analyses of group differences, followed by the analysis of the measurement, hypothesized, and alternative models. I used IBM SPSS 23.0.0 and *Mplus* (Muthén & Muthén, 2016) statistical packages to analyze this data.

Data Screening

A total of 1738 undergraduate students participated in the study. All participants met the inclusion criteria (undergraduate students 18 and older at a large Midwestern University). Given the large sample size, any cases with missing data were deleted according to listwise deletion. Univariate outliers were assessed within the variables. *Z*-scores were generated for all continuous variables and examined for the presence of scores exceeding 3.29 standard deviations from the mean (Tabachnick & Fidell, 2013). With this cutoff, 11 cases were identified as outliers on the CDMSE-SF, 12 cases on the CVA, 7 cases on PCBC, and 7 cases on MHC scale. As some participants overlapped as outliers on multiple scales, not all resulted in separate participant deletion. This screening resulted in a final sample size of $N = 1446$.

Preliminary Analyses

Prior to performing the primary analyses, I conducted preliminary analyses to explore the data for basic descriptive information. I computed descriptive statistics of each variable including means, standard deviations, and the internal consistency coefficient of all the sub-scores (see Table 2).

Cronbach's alphas for total scales ranged from .89 to .95 for all the total scores scales (e.g., Career Decision-Making Self-Efficacy, Career Values Awareness, Parental Career Behaviors Checklist, and Mental Health Continuum) and .76 to .96 for all the sub-scales (e.g., Occupational Information, Career Action, Emotional Well-Being).

Table 2 Descriptive Statistics and Reliability Coefficients of Scale Scores

Measure	Scale Range	<i>M</i>	<i>SD</i>	α
Career Decision-Making Self-Efficacy	1.88-5.00	3.81	.62	.95
Occupational Info	1.60-5.00	3.98	.66	.76
Self-Appraisal	1.00-5.00	3.81	.71	.83
Goal Selection	1.40-5.00	3.87	.69	.81
Planning	1.40-5.00	3.77	.71	.96
Problem Solving	1.40-5.00	3.60	.72	.78
Career Values Awareness	1.60-5.00	3.91	.72	.89
Parental Career Behaviors Checklist	1.30-5.00	3.50	.72	.93
Support Behaviors	1.46-5.00	3.88	.68	.90
Career Action	1.00-5.00	3.00	.92	.91
Mental Health Continuum	0.50-5.00	3.33	.98	.94
Emotional	0.00-5.00	3.64	1.03	.91
Social	0.00-5.00	2.95	1.16	.85
Psychological	0.33-5.00	3.50	1.03	.85

Note. *N* = 1446

Pearson correlation coefficients were computed for all the variables in the study, including both total and sub-scale zero-order correlations (see Table 4). Additional intercorrelations for the hypothesized variables and specific demographic variables (e.g., year in school, family income) are depicted in Table 3.

I assessed for multicollinearity by running two multiple regressions, wherein I rotated the dependent variable and examined the variance inflation factor (VIF). VIF scores below two are indicative of a low probability of multicollinearity within the data (Tabachnik & Fidell, 2013). In the current study, VIF scores ranged from 1.113 to 1.820. The tolerance values ranged from .55

to .90 for all variables, also suggesting no serious multicollinearity (Cohen, Cohen, West, & Aiken, 2003).

Finally, I assessed for normality within the data. Skewness and kurtosis coefficients were within +/- 1.00 for all scales. Visual inspection of Normal Q-Q Plots, stem-and-leaf plots and histograms determined that variables are sufficiently normally distributed (Tabachnik & Fidell, 2013). Nonlinearity and heteroscedasticity were examined visually by generating bivariate scatter plots for all variable pairs in the model and fitting regression lines to the data for each relationship. Results from the visual inspection and curve estimation showed that the relationships follow a linear pattern, which is a prerequisite to using structural equation modeling.

Table 3 Correlations among Total Scores and Demographic Variables

Variables	1	2	3	4	5	6
1. CDMSE	-	-	-	-	-	-
2. CVA	.64*	-	-	-	-	-
3. PCBC	.40*	.32*	-	-	-	-
4. MHC Total	.51*	.37*	.41*	-	-	-
5. Year in School	.09*	.04	-.09*	.05	-	-
6. Family Income	.07*	.02	.16*	.13*	-.03	-

Note. N = 1446. CDMSE = Career Decision-Making Self-Efficacy Total Score, CVA = Career Values Awareness, PCBC = Parental Career Behaviors Checklist, MHC Total= Mental Health Continuum Total Scale.

* $p < .01$ (2-tailed)

Table 4 Correlations among Primary Study Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. CDMSE	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Occ Info	.84*	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Self-Appraisal	.90*	.66*	-	-	-	-	-	-	-	-	-	-	-	-
4. Goal Selection	.90*	.68*	.82*	-	-	-	-	-	-	-	-	-	-	-
5. Planning	.90*	.74*	.75*	.75*	-	-	-	-	-	-	-	-	-	-
6. Problem Solving	.88*	.65*	.75*	.74*	.74*	-	-	-	-	-	-	-	-	-
7. CVA	.64*	.48*	.68*	.60*	.56*	.50*	-	-	-	-	-	-	-	-
8. PCBC	.40*	.33*	.37*	.34*	.34*	.39*	.32*	-	-	-	-	-	-	-
9. Support	.42*	.36*	.38*	.37*	.36*	.39*	.32*	.91*	-	-	-	-	-	-
10. Career Action	.31*	.24*	.30*	.25*	.27*	.33*	.27*	.92*	.69*	-	-	-	-	-
11. MHC Total	.51*	.40*	.45*	.45*	.47*	.47*	.37*	.41*	.44*	.32*	-	-	-	-
12. MHC-EW	.40*	.32*	.35*	.38*	.36*	.38*	.28*	.31*	.36*	.21*	.84*	-	-	-
13. MHC-SW	.41*	.32*	.36*	.36*	.38*	.39*	.30*	.37*	.37*	.31*	.91*	.66*	-	-
14. MHC-PW	.54*	.43*	.48*	.48*	.50*	.49*	.40*	.41*	.44*	.31*	.94*	.75*	.74*	-

Note. $N = 1446$; CDMSE = Career Decision-Making Self-Efficacy Total Score, Occ Info = Occupational Information, CVA = Career Values Awareness, PCBC = Parental Career Behaviors Checklist, MHC Total = Mental Health Continuum Total Scale, MHC-EW = Emotional Well-being, MHC-SW = Social Well-being, MHC-PW = Psychological Well-being.

* $p < .01$ (2-tailed).

Analysis of Group Differences

For exploratory purposes, a one-way multivariate analyses of variance (MANOVA) was performed to examine whether the primary variables (CMDSE, CVA, PCBC, MHC) varied based on the demographic variable of year in school. To test for significant mean differences across groups, year in school was used as an independent variable for the MANOVA and all of the other study variables were used as dependent variables.

Given that the sample sizes for the other demographic groups were unequal (e.g., race/ethnicity), no additional tests were conducted other than group difference. Analysis of variance is only robust to violations of the homogeneity of variance assumption when the group sizes are relatively even.

Pillai's Trace statistic was used to assess multivariate effects, as it is robust to unequal sample sizes and violations of assumptions (Tabachnick & Fidell, 2013). Using year in school as the independent variable, results from the MANOVA test revealed that the combined dependent variables were significantly associated with year in school, Pillai's Trace $V = .37$, $F(12, 4323) = 4.53$, $p < .001$, partial $\eta^2 = .012$.

Upon examining the follow-up univariate analyses of variance (ANOVA), results showed a significant effect of year in school for CDMSE, $F(3, 1442) = 4.22$, $p = .006$, $\eta^2 = .01$, and PCBC, $F(3, 1442) = 4.99$, $p = .002$, $\eta^2 = .01$. There was no effect of year in school for CVA $F(3, 1442) = 1.39$, $p = .24$, $\eta^2 = .003$ or MHC $F(3, 1442) = 1.40$, $p = .24$, $\eta^2 = .003$.

Scheffe's procedure was used to conduct post hoc comparisons of the group means for CDMSE and PCBC. For CDMSE, seniors ($M = 97.72$, $SD = 17.70$) scored significantly higher than first-year students ($M = 93.71$, $SD = 15.87$). First-year students ($M = 82.13$, $SD = 16.34$, $p = .004$) and sophomores ($M = 81.26$, $SD = 17.17$, $p = .04$) reported significantly higher levels of

support from parents than seniors ($M = 77.57$, $SD = 16.41$). See Table 5 for means and standard deviations for the outcomes variables across all four years in school.

Table 5 Mean and Standard Deviation of Scores by Year in School

Measure	All Students	First Year Students	Sophomore	Junior	Senior
CDMSE	95.14 (15.47)	93.71(15.87)	94.91(15.72)	94.96 (15.11)	97.77 (14.70)
CVA	19.53 (3.62)	19.48 (3.68)	19.31 (3.69)	19.51 (3.66)	19.88 (3.39)
PCBC	80.43 (8.87)	82.13 (16.34)	81.26 (17.17)	79.82 (16.27)	77.57 (16.41)
MHC TOTAL	46.65 (13.73)	45.74 (14.33)	46.52 (14.43)	47.64 (12.83)	47.10 (12.87)

Note. $N = 1446$. CDMSE = Career Decision-Making Self-Efficacy Total Score, CVA = Career Values Awareness, PCBC = Parental Career Behaviors Checklist, MHC Total= Mental Health Continuum Total Scale.

Analyses of Hypotheses

A SEM analysis was conducted to examine the hypotheses. As indicated in Chapter 3, there are four hypotheses: (H1) Career values awareness will mediate the relationship between parental behaviors and CDMSE, such that this relationship will be positive; (H2) CDMSE will mediate the relationship between parental behaviors and well-being, such that this relationship will be positive; (H3) CDMSE will mediate the relationship between career values awareness and well-being, such that this relationship will be positive; and (H4) the hypothesized model will have a significantly better model fit than the alternative model.

As outlined in the analysis plan in Chapter 3, a 2-step process using SEM was used to test the hypotheses. First, the measurement model was tested to assess how well the indicators represent the theoretical constructs (Byrne, 2010). Second, the structural model was tested to evaluate the mediation hypotheses (West, Taylor, & Wu, 2012).

Testing the Measurement Model

The first step in testing the hypothesized model was to conduct a test of the measurement model. This is used to ensure the instruments used were accurately measuring the constructs. A CFA was performed using maximum likelihood. To provide a metric for the latent variables, one factor loading for each latent variable was fixed at 1 and remaining indicators were estimated as free parameters. In this model, the factor loadings and covariances between the variables were assessed.

Results indicated the measurement model fit the data well, $\chi^2 (84, N = 1446) = 530.92, p < .001$, RMSEA = .06, SRMR = .03, CFI = .97, TLI = .96, AIC = 89,630.20. Standardized factor loadings (standardized regression weights) in this model were above .40, which is considered an appropriate cut-off point (Ford, MacCallum, & Tait, 1986; Stevens, 1992). Factor loadings for CVA ranged from .76 to .82, CDMSE ranged from .78 to .90, PCBC ranged from .71 to .97, and MHC ranged from .80 to .94. See Figure 2 for factor loadings' inter-variable correlations. For this study, no changes were needed to improve the fit of the measurement model.

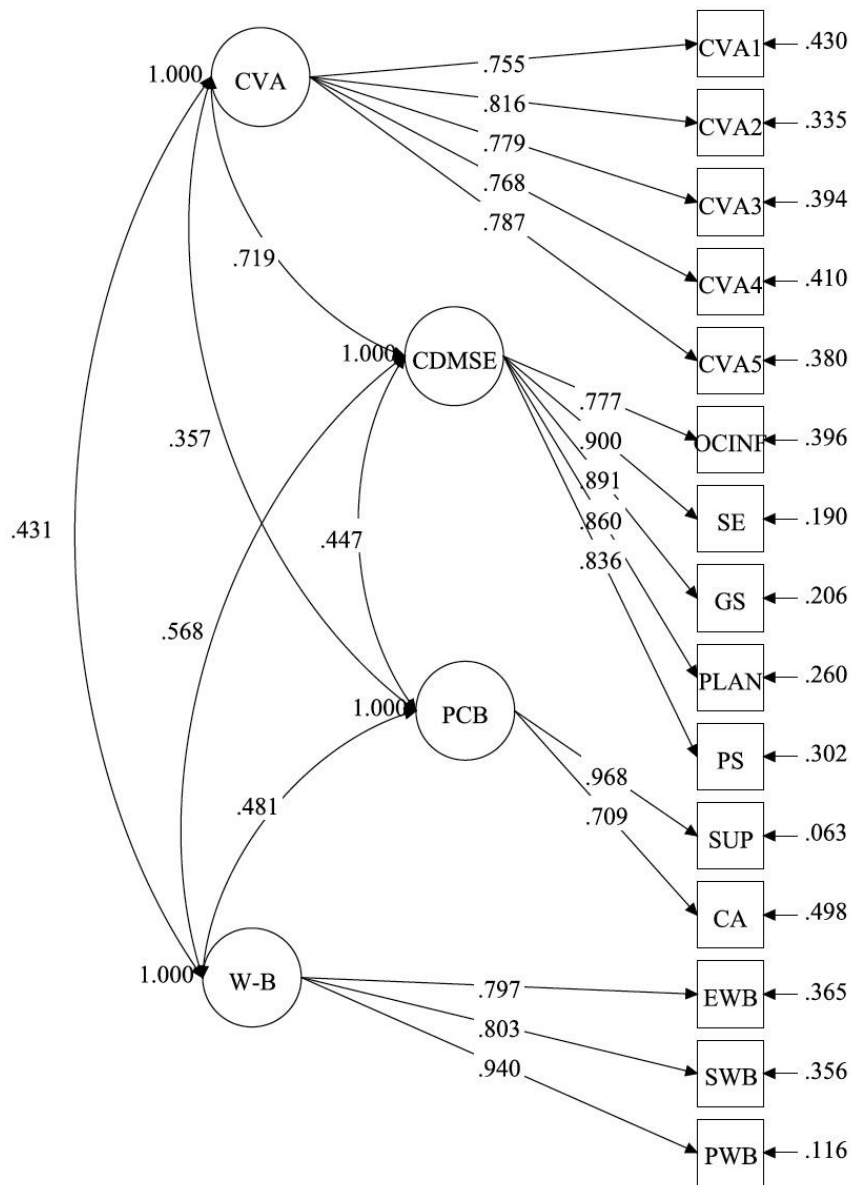


Figure 2. Standardized Factor Loadings and Correlations for Measurement Model

Note. CVA = Career Values Awareness, CDMSE = Career Decision-Making Self-Efficacy Total Score, OCINF = Occupational Information, SE = Self-Efficacy, GS = Goal Selection, PLAN = Planning, PS = Problem Solving, PCB = Parental Career Behaviors Checklist, SUP = Support Actions, CA = Career Actions, W-B = Mental Health Continuum Total Scale, MHC-EW = Emotional Well-being, MHC-SW = Social Well-being, MHC-PW = Psychological Well-being. All standardized factor loadings and correlations in the model were significant at $p < .001$.

The Hypothesized Mediation Model

After testing the measurement model, indirect effects within the mediation model were assessed. As indicated in Chapter 3, bootstrapping was performed 1,000 times. The goodness-of-fit indices for the hypothesized model were $\chi^2 (86, N = 1446) = 644.39, p < .001$, RMSEA = .07, SRMR = .04, CFI = .96, TLI = .95, AIC = 89,739.67. All of the predictors explained a total of 33.3% of the variance in well-being and Cohens $f^2 = .500$ is considered a large effect size.

Results revealed significant direct effects between each of the variables in the model. Parental behaviors were a significant predictor of career values awareness ($\beta = .36, SE = .03, p < .001$) and career decision-making self-efficacy ($\beta = .23, SE = .03, p < .001$). Career values awareness was a significant predictor of career decision-making self-efficacy ($\beta = .64, SE = .02, p < .001$). Finally, career decision-making self-efficacy was a significant predictor of well-being ($\beta = .58, SE = .02, p < .001$). See Figure 3 for full reporting of direct effects.

All of the indirect effects in the model were found to be significant (see Table 6). The total indirect influence of parental behaviors on well-being (*estimate* = .13, *SE* = .01, 95% CI [0.106, 0.160]) showed that CVA and CDMSE functioned jointly as significant mediators in the model. Specifically, the indirect path between parental behaviors and CDMSE via career values awareness was positive and significant (*estimate* = .23, *SE* = .02, $p < .001$, 95% CI [0.190, 0.271]), suggesting that hypothesis 1 (career values awareness will mediate the relationship between parental behaviors and CDMSE, such that this relationship will be positive) was supported.

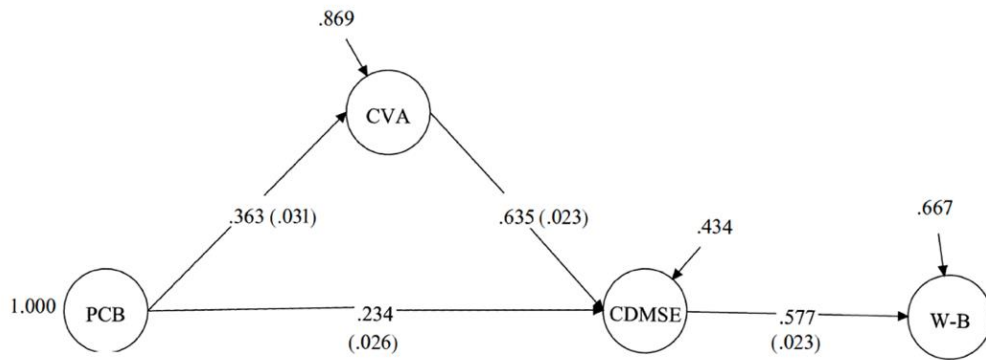


Figure 3. Hypothesized Model with Direct Effects

Note. Standardized coefficients with standard error in parentheses. CDMSE = Career Decision-Making Self-Efficacy Total Score, CVA = Career Values Awareness, PBC = Parental Career Behaviors Checklist, W-B = Mental Health Continuum Total Scale. All direct effects in the model were significant at $p < .001$.

Hypothesis 2 (CDMSE will mediate the relationship between parental behaviors and well-being, such that this relationship will be positive) was also supported as the estimate of the indirect effect did not contain zero (*estimate* = .14, *SE* = .02, 95% CI [0.102, 0.169]). Finally, the indirect effect of career values awareness on well-being via career decision-making self-efficacy (*estimate* = .37, *SE* = .02, 95% CI [0.329, 0.405]) was positive, and the confidence interval estimates did not contain zero, thus showing support for hypothesis 3 (CDMSE will mediate the relationship between career values awareness and well-being, such that this relationship will be positive).

Table 6 Standardized Indirect Effects in Hypothesized Model

Indirect Effect	<i>Estimate</i>	<i>Lower 2.5%</i>	<i>Upper 2.5%</i>
Career Values Awareness → Career Decision-Making Self-Efficacy → Well-Being	.367*	.328	.408
Parental Career Behaviors → Career Decision- Making Self-Efficacy → Well-Being	.135*	.102	.169
Parental Career Behaviors → Career Values Awareness → Career Decision-Making Self-Efficacy	.230*	.189	.271
Parental Career Behaviors → Career Values Awareness → Career Decision-Making Self- Efficacy → Well-Being	.133*	.107	.161

Note. *95% bias-corrected confidence interval for the parameter estimate does not contain zero.

The Alternative Model

SES was found to be highly correlated with well-being and parental support (see Table 4), and parental support was highly correlated with well-being (see Table 3). Given these findings, which are consistent with past literature, the alternative model was tested with an added direct path from parental career behaviors to well-being, and family income was added as a covariate predictor of well-being. Using a 2-step procedure, I estimated an alternative model and compared this model to the hypothesized model using AIC comparison.

In step 1, I added a direct path from PCBC to well-being and added family income as an additional predictor of well-being. Both path coefficients were constrained to zero. In this step, I used maximum likelihood robust estimation without bootstrapping in *Mplus* in order to obtain the chi-square scaling correction factors. Correction factors are needed as the difference between two chi-square values are not distributed as chi-square in the models (Bryant & Satorra, 2012). The goodness-of-fit indices for the original model were $\chi^2 (101, N = 1446) = 615.23, p < .001$, RMSEA = .06, SRMR = .05, CFI = .96, TLI = .95, AIC = 89,630.20. All of the predictors

explained a total of 38.5% of the variance in well-being; finally, $f^2 = .626$, which is considered a large effect size.

In step two, I tested the comparison model with PCBC and family income as freely estimated predictors of well-being. The goodness-of-fit indices for the freely estimated comparison model were $\chi^2 (99, N = 1446) = 513.54, p < .001$, RMSEA = .05, SRMR = .04, CFI = .97, TLI = .96, AIC = 88,560.10. In this model, family income was a significant predictor of well-being ($\beta = .07, SE = .02, p = .005$). Furthermore, PCBC also had a significant direct effect on well-being ($\beta = .27, SE = .03, p < .001$) in the alternative model. The total indirect influence of parental behaviors on well-being with the added variable (family income) and direct path showed that CVA and CDMSE continued to function jointly as significant mediators in the model (*estimate* = .10, *SE* = .01, *p* < .001).

Based on examining the fit indices, the alternative model provides a significantly better fit to the data than the originally hypothesized model. Specifically, AIC was lower in the alternative model than in the original hypothesized model. See Figure 4 for the direct effects of the alternative model. These results indicate that hypothesis 4 (the hypothesized model will have a significantly better model fit than the alternative model) was not supported.

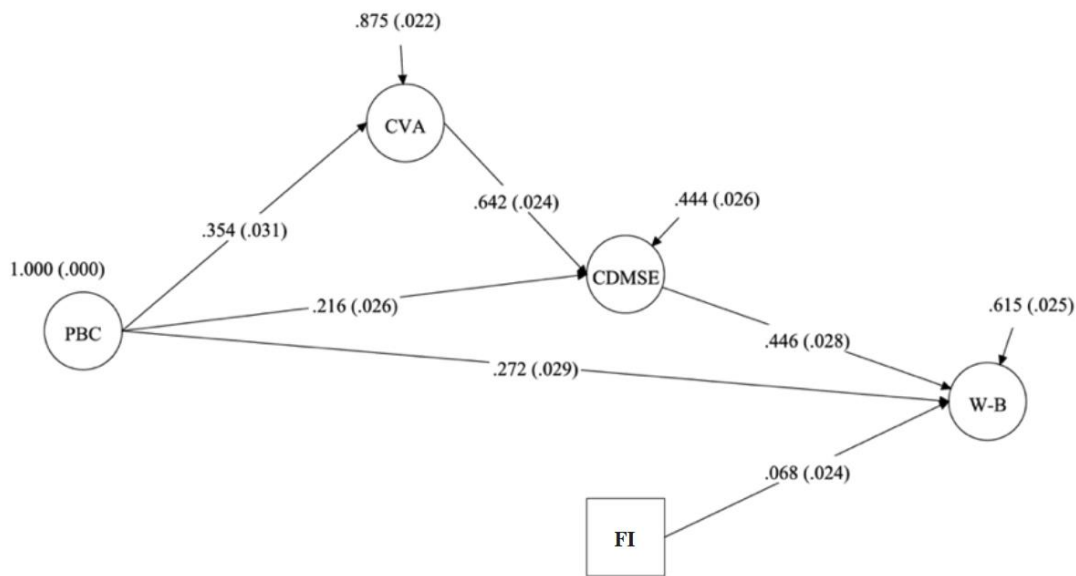


Figure 4. Alternative Model with Direct Effects

Note. Standardized coefficients with standard error in parenthesis. CDMSE = Career Decision-Making Self-Efficacy Total Score, CVA = Career Values Awareness, PBC = Parental Career Behaviors Checklist, W-B = Mental Health Continuum Total Scale, FI = Family Income. All direct effects in the model were significant at $p < .001$ except for FI predicting W-B which was significant at $p = .005$.

Year in School Exploratory Analysis

Demographic variables that may be related to well-being were examined post hoc. Year in school was analyzed to determine if it would moderate the path between CDMSE and well-being using measurement invariance testing. As this was conducted post hoc, I did not specifically hypothesize whether the path from CDMSE to well-being would be moderated by year in school. Since the alternative model was a slightly better fit than the original model, the post hoc analysis was conducted on the alternative model which included the direct path from PCBC to well-being and controlled for the effect of family income.

The mean age of the first-year students and sophomores ($n = 799$) was $M = 19.13$ ($SD = 2.01$) and the juniors and seniors ($n = 629$) was $M = 21.49$ ($SD = 40.59$). The first-year students

and sophomores expressed greater parental emotional support $M = 51.07$ ($SD = 8.87$) and career action related support $M = 30.70$ ($SD = 9.19$) than juniors and seniors, who reported mean scores of 49.73 ($SD = 8.83$) and 29.00 ($SD = 9.19$) on these variables, respectively. Differences between the groups in emotional support $t(1444) = 2.89$, $p < .001$, and career actions $t(1444) = 3.49$, $p < .001$ were both significant. There were no significant differences in CVA scores between the first-year students and sophomores ($M = 19.40$, $SD = 3.68$) and the juniors and seniors ($M = 19.67$, $SD = 3.53$) $t(1444) = -1.419$, $p = .149$.

For the CDMSE scale, the mean score for first-year students and sophomores was 94.24 ($SD = 15.81$) while the mean for juniors and seniors was 96.28 ($SD = 14.97$). On the overall well-being scale, first-year students and sophomores reported a mean score of 46.08 ($SD = 14.37$) while juniors and seniors reported a mean of 47.39 ($SD = 12.84$). Independent sample t -tests indicated that there were significant differences between the two groups in CDMSE, $t(1444) = -2.48$, $p = .013$, but not in well-being $t(1444) = -1.80$, $p = .071$.

A Wald chi-square test was used to determine if year in school moderated the path between CDMSE and well-being. The path from CDMSE to well-being was constrained to be equal for first-year students and sophomores and juniors and seniors, and a Wald chi-square test was performed to test whether this path varies across groups. The result of this test was not significant, $\chi^2(1) = .53$, $p = .466$, indicating this path does not vary by year in school. Thus, year in school did not moderate the relationship between CDMSE and well-being. However, CDMSE was a significant positive predictor of well-being in both first-year students and sophomores ($\beta = .44$, $SE = .04$, $p < .001$) and in juniors and seniors ($\beta = .43$, $SE = .04$, $p < .001$).

CHAPTER 5: DISCUSSION

This study applied SCCT and Super's life-space, life-span theory as the theoretical framework from which to examine the effects of parental support, career values awareness and CDMSE on the overall well-being of college students. The chapter will begin with a summary of the primary findings followed by an interpretation of these results and discussion of the post hoc analyses. The chapter will conclude with a discussion on the study limitations, suggestions for directions of future research, and implications of this work related to counseling practice.

Primary Hypotheses Analysis

In this study, I had 4 primary hypotheses. For H1, I predicted that career values awareness would mediate the relationship between parental behaviors and CDMSE. In H2, I proposed that CDMSE would have a mediating effect in the relationship between parental behaviors (action and support) and well-being. For H3, I expected that CDMSE would mediate the relationship between career values awareness and well-being. Finally, for H4, I hypothesized that the alternative model, which included paths from parental support directly to well-being and integrated family income as a predictor of well-being, would be a slightly worse fit for the data than the original model. The results of the analysis showed support for three of the four proposed hypotheses.

Hypothesis One: Career Values Awareness as a Mediator

Career values awareness mediated the relationship between parental support and CDMSE. In other words, parental support appeared to lead to greater values awareness, which in turn leads to greater CDMSE. Values awareness may be one factor that helps us to understand

why parental support is associated with greater CDMSE in college students. CVA was predicted by parental support in this model, which follows from the idea that values development is in part a process of socialization (Schmitt-Rodermund & Silbereisen, 1998) which is highly influenced by the context around us (e.g., society, family).

It has been established that family is one of the core facets in one's career development (e.g., Isaacson & Brown, 1993; Vondracek, 1986); literature has frequently linked family and parental support to positive career outcomes such as higher rates of CDMSE (Keller and Whiston, 2008), academic success (Dennis, Phinney, & Chuateco, 2005), college completion (Allen, 2015; Wegener, 2015), etc. While there has been much research on the relationship between parental support and CDMSE, the use of CVA as mediator in this study explores how or why this relationship exists. These results suggest there is a function of parental support that is facilitating the development of CDMSE through elements of career values awareness in students.

While CVA has never been studied in this way, these results follow from Super's life-span, life-space theory and SCCT, which suggest that parents are not only engaged in providing both emotional and career related support, but are also instrumental in the process of one's values development throughout the lifespan (Choi et al, 2013; Lent et al., 1994; Super, 1976). In turn, the development of awareness of one's career values leads to increased confidence in one's ability to make career decisions. Parents seemed to have a two-fold impact on career development in this model, both from a self-efficacy perspective as well as that of developing awareness within the student.

When interpreting the direct effects, career values awareness had a stronger relationship with CDMSE than that of parental support. This result is in line with discussions of internal versus external career exploration. How parents are impactful on CDMSE is highlighted when

one considers values awareness. This suggests that having support from one's parents cannot be substituted for the vital process of exploring and knowing what one values from their future career. By parents supporting their student in thoughtfully and intentionally considering their career values, students are engaging in reflective cognitive processing that may then serve to influence the cognitive processing related to gaining self-efficacy in this area; the action or practice of considering their career values may provide exposure to and cultivate their beliefs so that they can make effective career decisions.

Another interpretation of these data may integrate the 4 sources of self-efficacy cited in Bandura's work (1986): (a) performance accomplishments, (b) vicarious learning, (c) social persuasion, and (d) physiological arousal. As students experience performance accomplishments (such as considering their values and developing greater self-awareness) this may lay the foundation for developing confidence in decision-making.

In this study the role of parental support clearly had an impact on career values development and awareness within students. This may lend credence to Super's (1990) theory and others who found that parents influence children's career development from early on, even before college (Seligman et al., 1988). Past studies have found that students who seek out support from others, including support such as academic advising, were significantly less likely to change majors in college than their peers who did not (Vertsberger & Gati, 2015). One hypothesis as to how this reduction in major changes may be occurring is that in the process of receiving support, not only are students benefiting from both an external source of input (e.g., vicarious learning, mastery experiences, social persuasion), but these supportive people may also be encouraging and facilitating the student to engage in an internal self-exploration to learn about themselves (e.g., increasing CVA). Data from this study suggests that both processes are

associated with parents, are occurring simultaneously, and may contribute to more thoughtful and secure career decisions.

In addition, while the parental role has often been linked to self-efficacy development (Gushue, 2006; Tavakolizadeh et al., 2015), the relationship between values awareness and self-efficacy requires further exploration. Results from this study suggests that parental support only goes so far in the development of self-efficacy, and that there is an important role that the development of internal values awareness plays in this process. Much of these results connect back to the concept of a “protean career” wherein autonomy, self-directed searching, personal goals and values in career decision-making are considered of the utmost importance (Hall, 1976; Unite, 2015). Furthermore, this is consistent with SCCT, which suggests vicarious learning and verbal persuasion are key in the development of self-efficacy (Bandura, 1994, 1997; Hackett & Betz, 1981). Parents are not only role models and people one observes engaging in the world of work, but also primary sources of support who teach their children that they can master certain skills and be effective in sustaining efforts when problems arise.

This result also suggests that career values are important predictors of career decision-making factors, rather than something that develops after the career path has been established. While much of Unite's (2015) work aimed at interventions to increase values awareness as a way of increasing career self-efficacy, this work helps to shed light on the idea that when we include values awareness as part of the understanding of the foundation career decision-making, we have a better understanding of CDMSE, the factors that impact it, and perhaps then, how to raise it. These results provide support for CVA as a valid construct that is worthy of further attention within the body of career research.

Hypothesis Two: CDMSE as a Mediator Between Parental Behaviors and Well-Being

CDMSE was a significant mediator in the relationship between parental support and well-being. This result may suggest that one of the primary ways in which parents are impacting student's overall well-being is through their engagement in student's career related development. The finding that parental support is mediated by that student's level of CDMSE may suggest that no matter how much support a student receives, there is still an integral role of increasing one's self-efficacy in career development and subsequent well-being. Thus, CDMSE is one of the constructs by which we understand how parental support is related to greater well-being in college students.

Interestingly, the data in this study suggests that the support subscale was more prominently correlated with CDMSE, rather than the career action subscale. This indicates that students benefited in CDMSE from the general, emotionally supportive actions of their parents, more so than their parents' career direction actions. This finding is consistent with the attachment theory literature that suggests a secure attachment (creating a supportive and connected relationship), which begins to form via relationships with parents from a very young age, is an integral part of one's career development throughout the lifespan (Blustein et al., 1991; Tokar et al., 2003).

One study of note is Tavakolizadeha and colleague's 2015 study which found that in high school aged children, there was a significant relationship between secure attachment styles and self-efficacy, and that an insecure attachment style was a negative predictor for academic self-efficacy. The senses of self-worth, autonomy, and confidence that are developed in childhood through a secure attachment (Bowlby, 1988) are factors that influence a person's specific career-related self-efficacy later in life.

Hypothesis Three: CDMSE as a Mediator Between Career Values Awareness and Well-Being

The third hypothesis was also supported by the data, as higher values awareness was related to greater CDMSE, which was then associated with more positive experiences of well-being. Based on these results, CDMSE helps to explain why values awareness is associated with well-being. This suggests well-being is not only influenced by a sense of self-awareness, but that one's belief about their ability to succeed in making a career decision is an integral part of well-being.

One way that the influence of CVA on well-being can be understood is through the SCCT principle of mastery experiences, more specifically, that mastery experiences in one domain are known to have positive impacts in other areas of life (Bandura, 1986), and that one's perception of their own abilities is a core component that shapes how one feels about themselves overall (Lent et al., 1994; Super, 1990). From this perspective, the more intently one thinks about their own values, the more that person may develop a sense of mastery over their cognitive processing of career issues, likely leading to greater self-awareness, confidence in making career decisions, and feeling like they can navigate this process successfully. As I explored in the CVA pilot study explained in Chapter 3, I compared the relationship of CVA with both the number of overall values one may know as well as those one has identified as personally valued. Through a concept of mastery experiences, one may have knowledge of many values but also being clear in that only one or two values are core to their career decision making. This idea gives some context on why scores of CVA were significantly correlated to knowledge of various career values (number of overall career values they know) but not significantly to correlated to the number of personal values held. In understanding CVA through both a knowledge based and

personally identified values perspective, we may better understand the role of mastery experiences and thus the relationship of CVA on CDMSE.

From an affective standpoint, having greater CDMSE will likely alleviate anxiety about identifying a career and thus increase feelings of well-being. As a person feels more self-aware and prepared to make an informed a career decision, they may experience a sense of goal fulfillment (Lent et al., 1994), which then influences higher self-efficacy and positive emotion in other realms of life leading to overall greater well-being. This supports Bandura's (1986) theory that the higher a person's self-awareness, the higher the likelihood for success in many areas of life.

Within the college-aged population, there are many developmental tasks occurring based on Super's (1990) vocational development stages. The personal exploration described in this study fits within the exploration phase of Super's stages, wherein an individual is engaged in trying out career choices, learning from their first real work experiences and developing a sense of their own values. The specification and implementation tasks that coincide with these stages relate to putting those ideas into action (or feeling prepared to do so) through various behaviors such as finalizing their education or entering their field of choice. As highlighted by the tasks of these phases, there is a combination of a cognitive and behavioral self-assessment processes that co-occur and inform a person's progress through the stages. This study adds to the literature by understanding both self-awareness (CVA) and cognitive (CDMSE) processes, and illuminating our understanding of how both are impacting the overall well-being of college students today.

Person-Environment Fit

There is a newer body of literature developing related to person-environment (P-E) fit in the workplace that may help explain the importance of self-awareness within a career (Caplan,

1987; Kristof-Brown, Zimmerman, & Johnson, 2005). P-E fit relates to how well a person's characteristics, with all their skills, values, goals, needs, abilities, etc., fit within the demands, norms, culture of the social environment (i.e., career path).

The construct of P-E fit goes beyond just cognitively knowing things about the environment or various career values and requires an internalization of the information. In order to establish a good fit, one must apply this knowledge or information to themselves and consider how those factors fit for them based on their own understanding of who they are and what they need (Hansen, 2013). The greater the self-awareness, the more informed the decision-making process can then be. In many ways, this cognitive assessment of fit has a similar precipitating need for self-awareness as is outlined in this study.

Not surprisingly, some work has been conducted to test the impact of fit on well-being in the workplace, and has found a significant impact on perceptions of P-E fit on worker well-being (Follmer, 2016; Johnson, Taing, Chang, & Kawamoto, 2013). As we think about college students who may enter career fields/majors that are not a good P-E fit for them (based on feeling pressured to do so, lack of self-awareness, lack of options, etc.), it may be interesting to explore the impact this fit has on their well-being.

Hypothesis Four: Original vs. Alternative Model

In the preliminary data analysis, family income was highly correlated with both well-being and parental support, and there was a significant correlation between parental support and well-being (see Tables 3 and 4). While adding more paths to a model will improve model fit, this comes at the expense of parsimony. The addition of these paths explained 5% more of the variance in well-being (compared to the original model), and the chi-square difference test indicated that adding these two paths did justify using two more degrees of freedom.

Parental Support

Parental support was a predictor of well-being both directly and indirectly in the alternative model. This result would suggest that parental support is highly related to student well-being, and is not filtered through CVA or other intrapersonal variables like attachment (that may be developed earlier in life). Because parental support has a direct effect on one's current experience of well-being, it appears that the original hypothesized model underestimated the strong connection of this factor on college student's well-being.

Many questions on the MHC-SF ask about one's experiences of feeling like they belong to a group, having warm relationships, etc. While one's answers can be related to a myriad of people and experiences, it stands to reason that those who have more frequent and supportive contact with their families are more likely to endorse these items than those who do not. One explanation for this based on social trends may be the higher rates of contact that are occurring through technology such as telephone, email, video chatting, and text messaging. In the study, almost half the participants stated that they talk to their family "several times per week," 16% stated they talk to a primary family member once per day, and another 16% endorsed talking to their family multiple times per day. These levels of contact are consistent with what others have found in recent years (Hurtago et al., 2007). With more frequent contact than has been possible in the past, parents and families may have a greater opportunity to provide support and impact well-being in their college students respectively.

Relatively little work has been done in the area of child-parent contact, and that which does exist has been divergent in its conclusions. For instance, Stein, Osborn, and Greenberg conducted a study in 2016 and found that "young adults' reports of contact with parents were not significantly associated with self-reported depressed mood, overall sense of psychological well-

being, or general self-esteem" (p. 1811). In contrast, Gentzler, Oberhauser, Westerman, & Nadorff (2011) found that students who had more frequent phone conversations with their parents reported more satisfying, intimate, and supportive parental relationships, which then served in their adjustment to college life.

Socioeconomic Status

In the preliminary correlation analyses, family of origin income was weakly correlated (although significantly) with all the variables in the model except CVA. While there is some literature to support this, I was not expecting family income to be as influential in the study as it was. When entered into the alternative model as a covariate, family income was a significant positive predictor of well-being. These results are consistent with other studies that suggest there are differences in well-being based on college student SES. Jury and colleagues (2017) conducted a meta-analysis on the topic in 2017 and concluded that students from low income backgrounds face both more economic and psychological barriers to success in higher education settings, and predicted that this may be impactful on factors such as motivation, self-perception, and even identity development as college students. Even more specifically, Tong and Song (2004) studied low family income students in China and found that both self-efficacy and well-being were lower in those from low SES backgrounds. They hypothesized that financial stress may be an added cause of anxiety in these students, thus having an exacerbated impact on well-being than students of higher family incomes.

In this study, 83% of students stated that they depend on family for financial support. Thus, with the higher family income demographic that most the participants reported, the sample from this study seems to be demonstrating the same pattern of findings, but from the opposite perspective. In this study, family of origin income was a predictor of well-being, but it was a

positive predictor. It may be that the relieved burden of having to support oneself in college is contributing to reducing some pressure and stress, and thus allowing for higher well-being during these years. Going one step further, it may be that higher family income is contributing to well-being by allowing for greater flexibility in exploring one's interest and values for a potential career, rather than forcing a student to choose a career due to the financial earning potential.

Interpretation of Descriptive Findings

Participants in this study displayed levels of well-being similar to that found in other recent studies (e.g., van Erp Taalman Kip & Hutschemaekers, 2018, Lamers et al., 2011; Petrillo, Capone, Caso & Keyes, 2015). Well-being was not significantly correlated with age in this study, nor did it differ by gender, but was highly related to family income, as discussed in the alternative model. This supports theories which suggest that well-being is a construct that is highly subjective to environmental variables, and particularly for college students, should be considered in relation to career development factors (Andrews, 2014; Rottinghaus et al., 2009; Saunders et al., 2000).

When comparing CVA results from this study to that of Unite's (2015) work, the participants in this study seemed to self-report slightly lower levels of career values awareness. One explanation for this may be related to population sampled, as the group of 444 participants used in Unite's study were recruited from an MBA program (compared to the undergraduate population in this sample), the participants had a higher mean age, and had a greater range in ages compared to the current study. As it is clear that CVA is tied to personal and career development, it is likely that these variables are related to the higher CVA reported in Unite's studies. In this study, men and women displayed similar levels of CVA, also suggesting that age

and time to develop awareness may be more impactful in developing CVA over other variables like gender norms or expectations.

Many themes in how the participants self-reported CDMSE and perceptions of parental support reported in this study were consistent with past literature. The similarities noted across decades of study only further suggests that these constructs are pervasive, greatly entwined, and thus important to understand. In contrast to past work, in this study CDMSE did not vary based on gender as some past work in SCCT suggests it may (Hackett & Betz, 1981), but scores did significantly differ based on age. PCBC scores in this sample were significantly different based on both age and gender in this study. Results suggested that women reported significantly higher perceptions of support, and that the older one is, the less the support they perceive from their parents. Contrary to past literature that shows women may have lower CDMSE than men, perhaps the additional support the students in this sample perceive to have from their parents is helping to offset other variables and thus increasing self-efficacy. As Betz and Hackett (2006) suggested, one of the primary mechanisms from which gender may impact self-efficacy is through that of socialization, messages of praise and support, encouragement, and instilling a sense of empowerment. As the women in this study reported higher levels of support, they may also be more prone to have a greater sense of self-efficacy.

Both CDMSE and PCBC differed significantly based on family income, which is consistent with literature dating back decades. Shulenberg, Vondracek, & Crouter (1984) stated, “If one were permitted only a single variable with which to predict an individual’s occupational status, it surely would be the socioeconomic status of that individual’s family of orientation” (p. 130). In this study, a large majority of the participants described receiving financial support from their parents. When considering these results, it may be that those with higher family income

backgrounds had support from their parents via funding to facilitate their ability to try out different clubs, volunteer organizations, or activities, or may be under less stress in college due to reduced economic stress. Another hypothesis from past research suggests that via a focus on compensation, those with higher SES backgrounds may have come to develop more intrinsic work values than those from lower SES backgrounds (where extrinsic work values are more commonly developed; Johnson, 2002; Johnson & Mortimer, 2011; Lechner, Sortheix, Gollner, & Salmela-Aro, 2017). It may also be that these parents with higher SES's are more likely to be college graduates themselves and thus able to relate and support their students through the college experience more easily (Hayes, 2006), or that parents with more secure finances may have more time or energy to focus on supporting their student.

Year in School

Building on these results from descriptive findings, I was interested to explore the role of age and year in school on the variables of CDMSE and well-being. Pulling from Super's (1990) developmental tasks, I wanted to explore whether there were observable differences related to the tasks of specification (generally estimated between ages 18-21) and implementation (ages 21-24). Given the cross-sectional design used in this study, the specification task may better encompass the vocational development of first-year students and sophomores who are often exploring majors or becoming more secure in their academic areas, while the implementation task is thought to capture the experience of juniors and seniors who are more likely in the final stages of preparing to enter the workforce.

In this sample, the juniors and seniors were significantly older, reported greater CDMSE, and indicated higher levels of well-being than first-year students and sophomores. Consistent with Super's theory, the juniors and seniors seemed to be further along in their career

development based on greater CDMSE. The differing rates of CDMSE is consistent with past work by Neville and Super (1988) and Harlow and Bowman (2016), who suggested that career outcomes have a developmental component to them, and students in closer proximity to graduation are likely to display higher levels of career maturity. Furthermore, this result lends support to the idea that self-efficacy is predictive of well-being (Ajzen, 2002; Lent et al., 1994).

In this study, while CDMSE was a predictor of well-being for all students, there were no significant differences in well-being based on year in school. This suggests that low or high CDMSE seemed to impact well-being similarly across all years in school. The idea that a senior who displayed the same CDMSE as a first-year student would have lower well-being was not supported by the data. Perhaps year in school is less important than other factors such as personal paths of career growth and having support when it comes to understanding well-being in college students.

One interesting finding to consider was the lack of difference between juniors and seniors and first-year students and sophomores regarding CVA. It appears that career values awareness was not something that is growing or changing based on year in school in this sample. One possible reason for this is that career awareness is developed before one enters the college setting, giving further support for the influence of parental support and early developmental factors such as socialization (Lent et al., 1994; Schmitt-Rodermund & Silbereisen, 1998), culture (Super & Šverko, 1995), and pre-college career development (Super & Overstreet, 1960). Another possible explanation for this result follows from Unite's (2015) work wherein she stated that CVA is highly influenced by training or placing specific attention on exploring oneself, one's values, and how values relate to one's career decisions.

Threats to Validity and Limitations

As with all literature, this study had several limitations. There is always potential for variance in the dependent variable to be attributed to something other than the intended traits outlined in the study. There are inherent biases that are known to impact self-report measures ranging from consistency motif, acquiescence bias, transient mood state, and social desirability, all of which impact the measures' validity and reliability (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003). The use of email as a recruiting tool may set precedence for more conscientious students to become aware of and respond to the survey request. For instance, perhaps conscientious students will be more likely to read the email recruitment or to be interested in career development issues, and thus participate in the study.

Another potential limitation to recruitment is the nature of sensitive information measured in this study. For example, it may increase the willingness to participate from recruited participants who are more clearly impacted; students who perceive themselves to have positive support from their parents, and are interested in the topic may self-select into the study, whereas students who for example have distant or chaotic relationships with their parents might be less likely to participate. With this, the correlational results must not be assumed to apply to all individuals (even those who share similar characteristics to the study population).

Furthermore, many of the variables in this study, including well-being are well-established as being sensitive to culture (e.g., Church et al., 2014). To this end, it may be that the role of culture and other demographic variables are so distinct in their impact of these constructs that differences in the dependent variable are occurring through traits other than those being measured. It is important to acknowledge the skewed sample wherein most participants identified as white and came from higher family income backgrounds with parents who attended

college, along with the fact that I only pooled from one large Midwestern university.

Furthermore, a large percentage of the participants are within the STEM field. These results may not generalize to other regions of the country/world, ethnic/racial groups, SES backgrounds, or academic areas of study.

There are several limitations that warrant acknowledgement within this study's design. One criticism of Super's theory is that it is not a true developmental model. Even if this criticism was ignored, a clear limitation still exists in that it is methodologically impossible to test a developmental model without conducting a longitudinal study. Common method bias is another limitation to the current study's design. All data were collected based on self-report and did not integrate other sources of measurement, such as an integration of parental perspectives related to support. An element of systematic error variance shared amongst the variables may be occurring as a function of using the same method/source of measurement for the variables, and may have impacts such as inflating the path coefficients between the variables (Podsakoff et al., 2003).

A final note of limitation regards the structure of cross-sectional and correlational research. Although the results may indicate a significant relationship exists between these variables, the analyses will not be able to categorically prove that one variable causes a change in another, nor can it indicate the direction of the interaction. While these associations have important investigative value for things like research and practice, a longitudinal and experimental study would be required to assess causal relationships between the variables. Furthermore, while SEM can account for the variance change between two variables, there is still a potential for an unobserved "third" variable to exist that causes a change in both variables outside the hypothesized traits.

Future Directions for Research and Implications for Clinical Practice

Results from this study give our field important insight into how factors related to career development influence the well-being of college students. Future research can build on these findings by further exploring the role of CVA, reevaluating the role of parental impact in career development and psychosocial well-being of their college students in the modern time, and finally, continuing to understand the importance of career development within the framework of well-being. Following from this study and other evidence, there are implications in clinical practice ranging from a call for a holistic approach to career development to specific career constructs that may be helpful to integrate into what is considered personal counseling.

Future Directions for Research

In this study, CVA performed well as a variable. Results of the pilot study indicated that CVA was correlated with the number of work values the participant could identify, the factor loadings from the measurement model were considered acceptable, and results were in line with previous studies. All of these results point to the construct validity of CVA, and suggest that it is a variable we ought to continue studying.

The strong correlation with CDMSE in this study suggests that CVA warrants further exploration, including how it correlates with other existing constructs. One area for future research that could be informative in this area of study is that of the use of qualitative methodology. Learning more about how college students appreciate the role of values in their career development, the ways in which they have come to explore themselves and their goals and values, and how values awareness has been helpful in driving their career decision-making would be crucial in understanding the ways in which values awareness may impact our understanding of career development.

One specific area for investigation includes how CVA may fit into Lent and Brown's (2013) updated conceptualization of SCCT, the social cognitive model of career self-management. Since this model integrates a wide array of adaptive career behaviors that people employ and adjust to thrive within various educational and work environments across the career lifespan (Lent, Ezeofor, Morrison, Penn, & Ireland, 2016; Lent & Brown, 2013), based on the results of this study, values awareness may be an important adaptive career behavior that contributes to adjustment and thriving within many areas.

Furthermore, the social cognitive model of career self-management (CSM) adds to the literature by focusing on the process aspects of career development, and includes elements of personal agency that "allow individuals to take part in their own career development, adaptation, and renewal" (Lent et al., 2016, p. 47), such as career exploration among adolescents and developing exploratory career goals. While there is acknowledgement about the need to integrate values into these process elements of career development, CSM can expand upon this by integrating the importance of values awareness in the understanding of the process of career behavior from a young age.

More specific than just acknowledging that personal values should be integrated for successful career development, this study suggests that one's sense of values awareness, not just the actual value one holds, supports the process aspects of career development. Future research can expand upon SCCT and CSM theories in this way by better understanding the intentional process of developing values awareness and how this impacts the various processes of career development, such as a person's resilience or adaption.

With that, it would be interesting to begin researching the role of values awareness prior to college. Issues such as at which age people begin to develop career values, how we understand

values awareness in high school children, whether parents are discussing career values with their children, and what factors besides values training (as Unite, 2015 did) and parental support are known to facilitate values awareness would all be valuable questions to study. Furthermore, it may be interesting to investigate if those with higher values awareness are more prepared to begin college or enter the workplace and then integrate themselves into this environment successfully.

While parents are well known to influence the career development of their children, there seems to be a gap in more recent literature. This study highlighted the all-encompassing role of parents in the well-being of their college-aged children, through the actions of supporting their career and personal development. Parental support seemed to play an even bigger role in the study outcomes than I had expected, and thus may highlight a need for the reinvigoration of research on the impact of parental support on career development and psychosocial well-being in today's world.

Career development is clearly beginning before college, consistent with both Super's life-span, life-space Model and SCCT. Future research may benefit from exploring the impact of parental support from very early ages and how it impacts children and/or changes over time. For example, a longitudinal study focusing on parental behaviors from an early age through adulthood would be an invaluable way to study constructs of attachment and self-efficacy development, personal self-awareness, career decision-making self-efficacy, and well-being over the lifespan. Although I discussed a temporal element to this career development in this work (i.e., parental support is established first and leads to self-efficacy), a longitudinal study is required to truly study the temporal components of career development as suggested here.

Furthermore, as we know these career development ideas are highly associated with society norms, this too would be important to replicate across many different countries and cultures. Doing so may not only provide confirmation that cultures approach career and personal development differently, but a longitudinal study may also help explain how and why these constructs develop differently over time via parental support. Many have proposed structural equation modeling methods specific for testing a temporal hypothesis (Gollob & Reichardt 1991; Kraemer, Wilson, Fairburn, & Agras, 2002; MacKinnon et al., 2007), which would be important to consider in designing such a study.

Similar to our understanding of career development as being culturally bound, it is important that we continue to explore the construct of well-being across different cultures. Christopher (1999) suggested that contemporary definitions of well-being are inextricably entrenched with Western culture. Unfortunately this sample did not provide a well-rounded or culturally diverse perspective from which to explore these questions. On a broad scale, there is some question within the literature as to whether well-being and definitions of mental health vary by culture or if there are universally important elements that are innate (Valliant, 2012). Within the context of career development, there may be universal and distinct elements of well-being as it relates to the role of work in our lives. Perhaps a cross-cultural study using grounded theory methodology would help to explore this topic more in-depth with a reduced threat of bias based on stereotypical ideas.

Further research is needed related to the role of communication between parents and children in the digital age. Proximity is no longer a barrier to providing support, and thus parents may have opportunities to remain as influential factors in their children's development even longer in today's world. As children move away for college, or even begin in the world of work,

parents may continue to provide direct support more so than in the past. The ways in which this relationship may continue to impact the student's career and personal development clearly requires further exploration.

As we know, mental health outcomes impact academic functioning and retention in school (Lipson & Eisenberg, 2018). With that, it will remain important to keep exploring the dynamic relationship between career development and well-being, particularly in college students. In some university settings, retention is the primary mechanism through which school administrators grasp mental health and college student well-being (Hutt, 2012; Matson & Robinson, 2018). More specifically, it is important that we continue to demonstrate (via study, measurement, and evidence) that efforts providing resources that support college students' career development and/or well-being can increase retention in school (McEwan, 2013). In engaging in this research, it may help to shore up funding for student life programs (such as mental health resources on campus); by investing in the development and well-being of students, we actually serve the university mission, which is often focused on academic endeavors such as the conservation, advancement, and dissemination of knowledge.

Another important area for further study may include exploring similarities and differences in well-being between similar aged adults who are not pursuing college and entered the workforce, or those who sought vocational school or community college options, which would be advantageous in understanding more about what may be unique about well-being as it relates to the college experience. In evaluating these individuals' perceptions of parental support, values awareness, and CDMSE, we may be able to appreciate similarities and differences in how career development may relate to well-being. Assessing any differences in these populations may also be helpful information as it relates to preparing younger students for entering the workforce

or attending college. Perhaps there are specific needs of each group that can be fostered more directly in pre-college development.

Finally, SCCT suggests that psychological and emotional distress may be in fact signs of vulnerability in dealing with poor performance, and positive emotional affect can be understood as representing things that boost or support confidence in our skills, including career decision-making (Bandura, 1997; Williams, 1995). While this work supported the argument that career development is related to overall well-being in college students, and may be partially understood by the paths laid out in this study, we need to continue studying the reciprocal relationship between well-being and career development within college students.

Implications for Clinical Practice

There are clear and important implications for clinical practice that can be gleaned from this work. Most directly, they can have a direct application to working with a college student in therapy in a variety of settings, including but not limited to university counseling centers. One implication may be the need for an existential, developmental or identity-related approach to counseling work when issues of career development are evident. In contrast, perhaps the results of this study may suggest the necessity of a clinician introducing a discussion of whether or how career development may be related to a client's well-being, for instance when a student presents with concerns of depression or anxiety, as appropriate.

If anything, this study suggests that aspects of career development as a college student have vast implications on one's overall well-being. This maintains the age-old idea that personal counseling is career counseling and career counseling is personal counseling. Furthermore, clients will likely not present to counseling stating things like, "I am struggling with my career development." They may present with statements such as "I'm about to graduate and I still don't

know who I am or what I want for my life and it's making me anxious and sad." As a clinician, it may be important for us to look for these themes, to educate clients on them, and invite these discussions into the room, particularly if our clients lack insight into how they may be related.

Within the field of counseling psychology, we aim to focus on a holistic perspective to mental health and well-being. The current results suggest that when working at a university counseling center treating students with depressive symptoms, it may be imperative to also consider variables such as values, the role their parents play in supporting them, and SES into one's case conceptualizations. It may be important for clinicians to develop some awareness and uniformity about what they ask in initial registration paperwork or intake sessions as it relates to career certainty and satisfaction. Some university counseling centers include questions about academic decision-making and feelings of "sureness" in their registration paperwork and some do not. Regardless, clinicians can work to ask about and integrate career related concerns with consistency. This study suggests that assessing a client's values awareness in intake would also be important; in doing so we may learn a great deal about their own self-awareness particularly as it relates to their career development, but also perhaps in a broader way. Once we do this, clinicians may have the opportunity to do intentional identity and values based exploration in the therapy work, which is the process by which Unite (2012) suggested this awareness develops.

From a macrolevel perspective, the field of counseling psychology has a clear investment in education and prevention at a community level. We can work to develop programming to educate certain populations on the impact career development can have on well-being and provide resources for support. Perhaps one need would be to develop insight and awareness within parents as to the integral role they play in the career development of their children throughout the various stages of their lives. For instance, these results suggest that emotional

support was more impactful in the career development of students, over and above career related actions, or that parents can support their students by intentionally exploring their values and supporting their development of some awareness related to what they may value in their future careers. In providing this information, we can educate parents and help them support their students more effectively.

Conclusion

The purpose of this study was to explore the impact of career decision-making self-efficacy on well-being, with specific attention towards how parental support and career values awareness are related to these constructs. Overall this study supported the idea that parental support and career values awareness are predictors of CDMSE, and subsequently, that these are impactful on overall well-being within college students. The proposed model fit the data well. Parental support was positively related to both career values awareness and CDMSE within college students. Career values awareness was positively associated with CDMSE. Finally, CDMSE accounted for significant and unique variance in well-being within the college students in this study. In examining an alternative model, both family income and parental support were positive direct predictors of well-being.

Results contribute to the understanding of career development as a holistic endeavor that does not happen in isolation from other variables, but rather is something that is started early in life via actions such as experiencing a sense of mastery in our tasks, developing a sense of self and observing our parents in their work. Additional research would be useful to better understand how career values awareness is developed and influences the career development process so that researchers, clinicians, parents, and students can more intentionally integrate this concept into their career development activities. Future research should also explore how this model predicts

well-being or other mental health outcomes, especially differences across cultural factors such as nationality. Finally, this work supported the idea that career values awareness is a new and important variable to consider, along with reinvigorating the importance of studying parents as a primary player in student's career development, particularly in today's ever-connected society.

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APPENDIX A. PURDUE IRB APPROVAL



HUMAN RESEARCH PROTECTION PROGRAM
INSTITUTIONAL REVIEW BOARDS

To:	DEEMER, ERIC DMOREL, SAMANTHA A
From:	DICLEMENTI, JEANNIE D, Chair Social Science IRB
Date:	11/16/2017
Committee Action:(2)	Determined Exempt, Category (2)
IRB Action Date:	11 / 16 / 2017
IRB Protocol #:	1711019891
Study Title:	Exploring a career path towards well-being: How parental behaviors, career values awareness, and career decision-making self-efficacy impact well-being in undergraduate college students.

The Institutional Review Board (IRB) has reviewed the above-referenced study application and has determined that it meets the criteria for exemption under 45 CFR 46.101(b).

Before making changes to the study procedures, please submit an Amendment to ensure that the regulatory status of the study has not changed. Changes in key research personnel should also be submitted to the IRB through an amendment.

General

- To recruit from Purdue University classrooms, the instructor and all others associated with conduct of the course (e.g., teaching assistants) must not be present during announcement of the research opportunity or any recruitment activity. This may be accomplished by announcing, in advance, that class will either start later than usual or end earlier than usual so this activity may occur. It should be emphasized that attendance at the announcement and recruitment are voluntary and the student's attendance and enrollment decision will not be shared with those administering the course.
- If students earn extra credit towards their course grade through participation in a research project conducted by someone other than the course instructor(s), such as in the example above, the students participation should only be shared with the course instructor(s) at the end of the semester. Additionally, instructors who allow extra credit to be earned through participation in research must also provide an opportunity for students to earn comparable extra credit through a non-research activity requiring an amount of time and effort comparable to the research option.
- When conducting human subjects research at a non-Purdue college/university, investigators are urged to contact that institution's IRB to determine requirements for conducting research at that institution.
- When human subjects research will be conducted in schools or places of business, investigators must obtain written permission from an appropriate authority within the organization. If the written permission was not submitted with the study application at the time of IRB review (e.g., the school would not issue the letter without proof of IRB approval, etc.), the investigator must submit the

written permission to the IRB prior to engaging in the research activities (e.g., recruitment, study procedures, etc.). Submit this documentation as an FYI through Coeus. This is an institutional requirement.

Categories 2 and 3

- Surveys and questionnaires should indicate
 - only participants 18 years of age and over are eligible to participate in the research; and
 - that participation is voluntary; and
 - that any questions may be skipped; and
 - include the investigator's name and contact information.
- Investigators should explain to participants the amount of time required to participate. Additionally, they should explain to participants how confidentiality will be maintained or if it will not be maintained.
- When conducting focus group research, investigators cannot guarantee that all participants in the focus group will maintain the confidentiality of other group participants. The investigator should make participants aware of this potential for breach of confidentiality.

Category 6

- Surveys and data collection instruments should note that participation is voluntary.
- Surveys and data collection instruments should note that participants may skip any questions.
- When taste testing foods which are highly allergenic (e.g., peanuts, milk, etc.) investigators should disclose the possibility of a reaction to potential subjects.

You are required to retain a copy of this letter for your records. We appreciate your commitment towards ensuring the ethical conduct of human subjects research and wish you luck with your study.

APPENDIX B. RECRUITMENT EMAIL

Dear Purdue Student,

My name is Samantha Morel and I am a graduate student in the Department of Educational Studies at Purdue University. I am e-mailing to invite you to participate in a research study that could benefit in the understanding of how career decision-making self-efficacy, career values awareness, and parental support behaviors impact well-being. We wish to study these factors among a group of Purdue students and you meet criteria for inclusion in the study.

We would like to give you a Qualtrics survey, which can be completed online. Upon completing the Qualtrics survey, you will be asked to voluntarily submit your email address for a chance to **win one of five \$10 Amazon gift cards** from a random drawing. It is possible to complete the Qualtrics survey without entering the gift card drawing. The odds of winning an Amazon.com gift card are estimated to be 1 in 200.

Your participation in this study is completely voluntary. You must be over the age of 18, a student enrolled at Purdue University. Only the researchers will have access to the data and all the data collected will be kept confidential.

Thank you if you have already responded. If you have not, please consider participating in my study. If you are interested in participating and helping add to the research in this area, please use the link below to complete the Qualtrics survey:

https://purdue.ca1.qualtrics.com/jfe/form/SV_a2UN7yFIYJMqSGh

Sincerely,

Samantha A. Morel, M.S. Ed

Counseling Psychology Doctoral Candidate

Purdue University

Department of Educational Studies

smorel@purdue.edu

APPENDIX C. RESEARCH PARTICIPANT INFORMATION SHEET

Eric Deemer, Ph. D
Samantha Morel, M.S.Ed.
Dept. of Educational Studies
Purdue University

What is the purpose of this study? The purpose of this study is to explore the impact of career decision-making self-efficacy, perceived parental support, and career values awareness on college student's well-being.

What will I do if I choose to be in this study? If you agree to participate, you will be asked to complete one online survey, which will take approximately 15 minutes to complete.

Will I receive payment or other incentive? If you choose, you may enter into a gift card drawing for the chance to win one of five \$10 Amazon.com gift cards. The odds of winning the Amazon.com gift card are estimated to be 1 in 200.

What are the possible risks or discomforts? Participation in this research involves minimal risk. There is no expectation of discomfort expected from participation in this research. The risks involved in participation are no more than would be encountered in everyday life or during the performance of routine psychological exams or tests.

Are there any potential benefits? Participation in this study may contribute to the scientific body of knowledge regarding students' career decision-making self-efficacy, perceived parental support, career values awareness and the impact these have on well-being in college students.

Will information about me and my participation be kept confidential? Purdue University Institutional Review Board or its designees may inspect the project's research records to ensure that participants' rights are being protected. Only the researchers will have access to the data. All the data collected will be kept confidential. All information provided in the survey will remain confidential. Only the researchers will have access to the data, which will be downloaded from a secure Internet server (qualtrics.com) and stored on the researchers' password-protected computers. Data will be deleted from their computers after it has been analyzed. Data gathered from this research may be presented in scientific outlets, but this data will be based on *average* responses, not individual responses.

What are my rights if I take part in this study? Your participation in this study is voluntary. You may choose not to participate or, if you agree to participate, you can withdraw your participation at any time without penalty or loss of benefits to which you are otherwise entitled.

Whom to contact if you have questions about the study: If you currently have questions that may aid in your decision to participate in this research or if you have any general questions or concerns, please contact Samantha Morel (smorel@purdue.edu), Department of Educational

Studies, Purdue University. If you have concerns about the treatment of research participants, you can contact the Institutional Review Board at Purdue University. Contact information for the Purdue University IRB is 1032 Ernest C. Young Hall, 155 S. Grant Street, West Lafayette, IN 47907-2114. The phone number for the Board is (765) 494-5942. The email address is irb@purdue.edu.

We suggest you print this page for your records.

Clicking "I agree" in the lower right portion of your screen indicates that you have read and understand the information provided above, that you willingly agree to participate, that you are aware that you may withdraw your consent at any time and discontinue participation without penalty. If you choose not to participate, simply close your web browser and the study will be terminated.

APPENDIX D. DEBRIEFING INFORMATION

The purpose of this study is to gain a clearer understanding of how career decision-making self-efficacy, career values awareness, and parental support behaviors impact well-being. More importantly, we were interested in learning if greater parental support, values awareness, and career decision-making self-efficacy are related to increased perceptions of well-being in college students.

Contact Information:

If you currently have questions that may aid in your decision to participate in this research or if you have any general questions or concerns, please contact Samantha Morel (smorel@purdue.edu), Department of Educational Studies, Purdue University. If you have concerns about the treatment of research participants, you can contact the Institutional Review Board at Purdue University. Contact information for the Purdue University IRB is 1032 Ernest C. Young Hall, 155 S. Grant Street, West Lafayette, IN 47907-2114. The phone number for the Board is (765) 494-5942. The email address is irb@purdue.edu.

If you wish to enter for a chance to win one of five \$10 Amazon.com gift cards, click continue.

APPENDIX E. RAFFLE CARD ENTRY

If you wish to enter for a chance to win one of five \$10 Amazon.com gift cards, please provide your email address below and submit.

APPENDIX F. DEMOGRAPHICS QUESTIONNAIRE

1. What is your age? ____

2. What is your overall GPA:

2.5 or below

3.0-2.5

3.0-3.5

3.5-4.0

3. What is your gender:

Male

Female

Transgender

Other (please explain): _____

4. What is your race/ethnicity?

Black/African/African American

Asian/Indian/Asian American

Hispanic/Latino

Native American

White

Arabic/Arab American

Multiracial (please describe): _____

Other (please explain): _____

5. What is your generational status? Please select the generation that best applies to you.

First generation = You were born in another country

Second generation = You were born in the U.S. and **either** parent was born in another country

Third generation = You and both your parents were born in the U.S., and **all** grandparents were born in another country

Fourth generation = You and both your parents were born in the U.S., and **at least one** grandparent was born in another country

Fifth generation = You, your parents, and **all** your grandparents were born in the U.S.

6. National Status

U.S. Citizen

U.S. Permanent Resident

International Student (National origin: _____;

Years in the US _____)

7. What year in school are you?

Freshman First Semester
Freshman Second Semester
Sophomore First Semester
Sophomore Second Semester
Junior First Semester
Junior Second Semester
Senior First Semester
Senior Second Semester

8. Have you selected major?

Yes

No (e.g., in Exploratory Studies)

9. If yes, what is your major? _____

10. What college is this major in? _____

11. How “sure” are you of the major you’ve chosen?

Very unsure

Unsure

Somewhat unsure

Somewhat sure

Sure

Very sure

N/A

12. Do you have siblings?

Yes

No

Decline to answer

13. If so, how many?

1

2

3

4

5 or more

14. Also, if so, what is your birth order? (i.e., first child, second child, etc.)

First

Second

Third

Fourth

Fifth

Other: _____

15. Do you have older siblings that have attended/graduated from college?

Yes

No

16. Are you the first in your immediate family to attend college?

Yes

No

17. What is the highest education of your mother?

High school

College

Post-Graduate (MS, MA, ect.)

Doctoral Level Degree (MD, JD, PhD, ect.)

18. What is your mother's occupation? (Please be specific): _____

19. What is the highest education of your father?

High school

College (BA, BS, AA, etc).

Post-Graduate (MS, MA, ect.)

Doctoral Level Degree (MD, JD, PhD, ect.)

20. What is your father's occupation? (Please be specific): _____

21. How far away does your family live from campus:

Short car ride (1-4 hours)

Long car ride (4-10 hours)

Plane ride

22. How often do you speak to a primary family member?

Multiple times per day

Once per day

Several times per week

Several times per month

Once per month

Several times per year

23. Do you depend on your family for financial support?

Yes

No

24. Please indicate your approximate family income (in U.S. dollars):

Less than \$25,000

\$25,000 – \$49,999

\$50,000 - \$74,999

\$75,000-150,000

\$150,000 or more

25. Taking into account the financial aid you (may have) received, and the money you and/or your family have, how difficult has it been for you to pay for school expenses?

No difficulty

A some difficulty

A fair amount of difficulty

Great difficult

26. When you chose to enroll at Purdue, was this your first choice?

Yes

No. Provide the reason(s) you decided to enroll. _____

27. How much are you enjoying your college experience?

Not at all/ I hate it

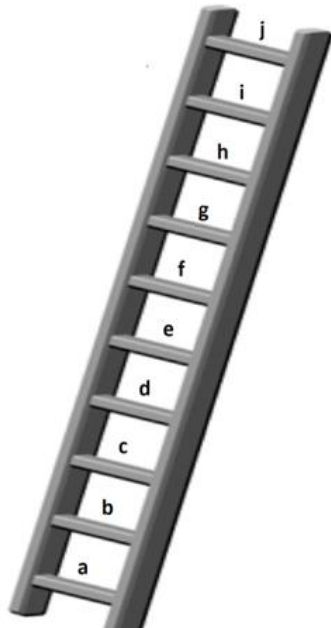
Dislike it a fair amount

Even amount of like and dislike

Enjoy it a fair amount

Enjoy everything about it

28. The MacArthur Scale of Subjective Social Status (Adler, Epel, Castellazzo, & Ickovics, 2000)



Think of the above ladder as representing where people stand in the United States. At the top of the ladder are the people who are the best off - those who have the most money, the most education, and the most respected jobs. At the bottom are people who are the worst off - who have the least money, least education and the least respected jobs or no job. The higher up you are on this ladder, the closer you are to people at the very top; the lower you are, the closer you are to people at the very bottom. Where would you place yourself on this ladder?

- A
- B
- C
- D
- E
- F
- G
- H
- I
- J

APPENDIX G. PARENTAL CAREER BEHAVIOR CHECKLIST

(Keller & Whiston, 2008, adapted per Roach, 2010)

Directions:

Select the parent/guardian who is most concerned about your career issues.

Parent/guardian you selected: (i.e., mother, father, stepmother, etc.) _____

Highest level of education of parent/guardian selected: (Circle one)

1	2	3	4	5
No college	2-year degree	4-year degree	Master's	Doctorate

For each statement below, please read carefully and indicate the degree to which each statement applies to the parent/guardian you selected above by marking your answer according to the key. Mark your answer by circling the appropriate number under each question.

1	2	3	4	5
Never	Almost Never	Sometimes	Often	Very Often

1. My parent tells me he or she is proud of me.
2. My parent encourages me to ask questions about different jobs.
3. My parent has encouraged me to be involved in extracurricular activities.
4. My parent expresses interest in various college-aged issues that are important to me.
5. My parent has encouraged me to participate in a structured career development workshop offered by my college, church, etc.
6. My parent tells me he or she loves me.
7. My parent has given me written material about specific careers.
8. My parent encourages me to make my own decisions.
9. My parent asks me what careers I am considering for my future.

10. My parent tells me about specific careers.
11. My parent has shown me where to find information about careers in the library or bookstore.
12. My parent encourages me to try new things.
13. My parent tells me he or she has high expectations for my career.
14. My parent has helped me understand the results from career tests or interest assessments I have taken.
15. My parent encourages me to choose whatever career I want.
16. My parent helps me feel better when I tell him or her I am worried or concerned about choosing a career.
17. My parent has given me written material about specific graduate or professional school/programs.
18. My parent has supported me when I have told him or her that I am interested in a specific career.
19. My parent has talked to me about the steps involved in making difficult decisions.
20. My parent has encouraged me to take interest assessments or career tests offered by my school.
21. My parent really tries to understand my thoughts, feelings, and opinions about various topics.
22. My parent has encouraged me to consider many different educational and career options.
23. My parent encourages me to talk to him or her about my career plans.

APPENDIX H. CAREER VALUES AWARENESS SCALE

(Unite, 2012)

Directions: *For each statement below, please read carefully and indicate how much you agree by marking your answer according to the key. Mark your answer by choosing the appropriate number for each question.*

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree

1. If asked, I could easily describe my most important career values.
2. I know how to prioritize my values when I make a career decision.
3. I know which values need the most attention if my career is to fulfill me.
4. If I were making a job decision today, it would be easy for me to understand the priorities I would base it upon.
5. I know which values drive me in my career.

APPENDIX I. CAREER DECISION-MAKING SELF-EFFICACY SCALE – SHORT FORM

(Betz, Klein, & Taylor, 1996)

Directions: For each statement below, please read carefully and indicate how much confidence you have that you could accomplish each of these tasks by marking your answer according to the key. Mark your answer by choosing the appropriate number for each question.

1	2	3	4	5
No Confidence At All	Very Little Confidence	Confidence	Moderate Confidence	Complete Confidence

1. Find information in the library about occupations that you are interested in.
2. Select one major from a list of majors that you are considering.
3. Make a plan of your goals for the next five years.
4. Determine the steps you take if you are having academic trouble with an aspect of your chosen major.
5. Accurately assess your abilities.
6. Select one occupation from a list of potential occupations that you are considering.
7. Determine the steps you need to take to successfully complete your chosen major.
8. Persistently work at your major or career goal even when you get frustrated.
9. Determine what your ideal job would be.
10. Find out employment trends for an occupation over the next ten years.
11. Choose a career that will fit your preferred lifestyle.
12. Prepare a good resume.
13. Change majors if you did not like your first choice.
14. Decide what you value most in an occupation.
15. Find out the average yearly earning of people in an occupation.
16. Make a career decision and then not worry whether it was right or wrong.

17. Change occupations if you are not satisfied with the one you enter.
18. Figure out what you are and are not ready to sacrifice to achieve your career goals.
19. Talk with a person already employed in the field you are interested in.
20. Choose a major or career that will fit your interests.
21. Identify employers, firms, and institutions relevant to your career possibilities.
22. Define the type of lifestyle you would like to live.
23. Find information about graduate and professional schools.
24. Successfully manage the job interview process.
25. Identify some reasonable major or career alternatives if you are unable to get your first choice.

APPENDIX J. MENTAL HEALTH CONTINUUM – SHORT FORM

(Keyes, 2009)

*Please answer the following questions are about how you have been feeling during the past month. Place a check mark in the box that best represents how often you have experienced or felt the following **in the past one month**:*

0	1	2	3	4	5
Never	Once or Twice A Week	About Once	About 2 or 3 Times Per Week	Almost Every Dat	Every Day

During the past month, how often did you feel ...

1. happy
2. interested in life
3. satisfied with life
4. that you had something important to contribute to society
5. that you belonged to a community (like a social group, or your neighborhood)
6. that our society is a good place, or is becoming a better place, for all people
7. that people are basically good
8. that the way our society works makes sense to you
9. that you liked most parts of your personality
10. good at managing the responsibilities of your daily life
11. that you had warm and trusting relationships with others
12. that you had experiences that challenged you to grow and become a better person
13. confident to think or express your own ideas and opinions
14. that your life has a sense of direction or meaning to it

VITA



Samantha A. Morel

EDUCATION

- | | | |
|----------------|---|-----------------------------|
| Ph.D. | Purdue University, West Lafayette, IN
Counseling Psychology, APA Accredited
Advisor: Eric Deemer, Ph.D.
Current GPA: 3.97
Dissertation (Defended Dec 2018): <i>Exploring a career path towards well-being: How parental behaviors, career values awareness, and career decision-making self-efficacy impact well-being in undergraduate college students</i> | (Expected) Aug. 2019 |
| MS. Ed. | Fordham University, New York, NY
Program: Mental Health Counseling
Overall GPA: 3.97
Master's Internship Completed at Dr. Robins & Associate's | 2014 |
| B. S. | Louisiana State University, Baton Rouge, LA
Major: Psychology
Overall GPA: 3.64 | 2012 |

CLINICAL EXPERIENCE

- | | |
|---|-----------------------------|
| Pre-Doctoral Psychology Intern-- Texas A&M University
Student Counseling Service (APA-accredited), College Station, TX | Aug. 2018-Aug. 2019 |
| Advanced Doctoral Practicum, Purdue University
Counseling and Psychological Services, West Lafayette, IN | Aug. 2017 – May 2018 |
- ☐ Conducting intakes and providing brief psychotherapy to a caseload college students with a variety of presenting concerns
 - ☐ Created detailed intake reports, session notes, and termination reports as appropriate
 - ☐ Engaged in weekly individual supervision and biweekly case consultation and didactics
 - ☐ Clinical supervisor: Dr. Julie Beckwith, Psy.D.

Doctoral Career Assessment Practicum, Purdue University **Summer 2016 & 2017**
Purdue Counseling and Guidance Center, West Lafayette, IN

- ☐ Administered and career and intellectual assessments to high school students (including: semi-structured interviews, NEO PI-R, Self-Directed Search, Strong Interest Inventory and Skills Confidence Inventory, and Woodcock-Johnson III Brief Battery)
- ☐ Interpreted and created integrated assessment reports, session notes, and termination reports
- ☐ Engaged in weekly group supervision
- ☐ Clinical supervisor: Dr. Eric Deemer, Ph.D.

Advanced Doctoral Practicum, Indiana University- **Aug. 2016 – May 2017**
Purdue University Indianapolis
Counseling and Psychological Services, Indianapolis, IN

- ☐ Provided intake assessments, weekly psychotherapy, and crisis interventions to a caseload of college students with a variety of DSM-5 diagnoses
- ☐ Co-facilitated two six-week MBSM psychoeducational groups
- ☐ Engaged in weekly individual supervision, weekly case consultation and didactic training
- ☐ Clinical supervisors: Dr. Becca Stemple Psy.D. and Dr. Michelle Doeden, Ph.D.

Doctoral Practicum, Purdue University **Aug. 2015 – May 2016**
Purdue Counseling and Guidance Center, West Lafayette, IN

- ☐ Provided intake assessments, weekly psychotherapy, and crisis interventions to a caseload of college students and community members with a variety of DSM-5 diagnoses
- ☐ Created detailed intake reports, session notes, and termination reports as appropriate
- ☐ Attended and participated in weekly group and individual supervision
- ☐ Clinical supervisors: Dr. Eric Deemer, Ph.D. and Dr. Blake Allan, Ph.D.

Mental Health Professional **July 2014 – May 2015**
Community Empowerment Services, Baton Rouge, LA

- ☐ Provided psychotherapy (1-4 times per week) to a caseload of clients (child, adolescent, and adult) with a variety of DSM-5 diagnoses
- ☐ Facilitated communication and advocating for clients' needs between client, parent, psychiatrists, and teachers as needed
- ☐ Attended and participated in weekly group supervision and monthly staff meetings and continuing education opportunities
- ☐ Clinical supervisor: Walthena Gosa, LFMT

Masters Internship **Sep. 2013 – May 2014**
Dr. Robins & Associates, New York, NY

- ☐ Provided weekly trauma-focused psychotherapy to a caseload of clients with a variety of PTSD, Depression, Anxiety, and Post-Concussion Syndrome diagnoses

- ☐ Observed the administration of Neurocognitive and Psychological evaluations
- ☐ Attended and participated in weekly case conferences
- ☐ Clinical supervisor: Dr. Elenor Daneshvar, Psy.D.

TEACHING EXPERIENCE

Graduate Assistant, Purdue University

May 2018 -- June 2018

Collaborative Leadership and Interpersonal Skills (EDPS 315)

- ☐ Assisted in reformulating course outline, manuals, and guidelines for upcoming sections
- ☐ Researched and integrated new materials for the course
- ☐ Created online resources and a class website for instructors to use in facilitating course learning

Instructor, Purdue University

Aug. 2016 – May 2018

Collaborative Leadership and Interpersonal Skills (EDPS 315)

- ☐ Instructor of record for four course sections over two semesters
- ☐ Facilitating student learning in areas of leadership, active listening and interpersonal skills
- ☐ Creating course material, teaching bi-weekly classes, grading assignments, providing students with feedback, answering student questions, holding office hours and managing online course website

Instructor, Purdue University

Aug. 2015 – Dec. 2016

Academic and Career Planning (EDPS 105)

- ☐ Instructor of record for five course sections over three semesters
- ☐ Facilitated student learning in areas of career exploration and decision-making
- ☐ Created course material, taught weekly lab, graded assignments, provided students with feedback, answered student questions, held office hours and managed online course website
- ☐ Engaged in weekly to instructor preparation meetings

Instructor, Purdue University

Jan. 2015 – May 2016

Introduction to Research Methods in Psychology Lab (PSY 203)

- ☐ Instructor of record for one section
- ☐ Facilitated student learning in areas of research methods and APA writing
- ☐ Created course material, taught weekly lab, graded assignments, provided students with feedback, answered student questions, held office hours and managed online course website

**Undergraduate Teaching Assistant, Louisiana State University
Statistical Analysis Lab**

Jan. 2012 – May 2012

- ☐ Collaborated with the graduate teaching assistant to teach lab lessons, answered student questions on both lab and lecture material, and assisted with SAS software problems

OUTREACH AND PROFESSIONAL DEVELOPMENT

**Counseling Psychology Multicultural Seminar
Purdue University, West Lafayette, IN**

Sep. 2017 – Jan. 2018

- ☐ Student representative in organizing and planning a 90-minute bi-weekly seminar focused on multicultural issues in psychology for counseling psychology program

Direct Relationship Team

Sep. 2017 – May 2018

Counseling and Psychological Services, West Lafayette, IN

- ☐ Serving as a member of the direct relationship outreach team focusing on the Purdue Latino Cultural Center

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**Volunteer Group Facilitator, Building Bridges
Purdue University, West Lafayette, IN**

Oct. 2017

- ☐ Facilitated safe discussion space for students and community members who are affected by the looming end of DACA, Muslim travel ban and other anti-immigrant issues in the community

RESEARCH EXPERIENCE

**Research Assistant, Starr Career Development Center
Baruch College, New York, NY**

April 2013 – May 2014

- ☐ Research focused on Asian American college students and factors of career decision making self-efficacy, ethnic identity, English language fluency, and career development
- ☐ In charge of all data entry, verification, cleaning, and analysis
- ☐ Research Supervisor: Dr. Richard Orbé-Austin, Ph.D.

**Research Assistant, Anxiety and Addictive Behaviors Laboratory
Louisiana State University, Baton Rouge, LA**

Aug. 2011 – May 2012

- ☐ Screened for eligible study participants and engaged in data entry, verification, cleaning
- ☐ Served as a confederate in experiments
- ☐ Research Supervisor: Dr. Julie Buckner, Ph.D.

**Research Assistant, Beck Visual Cognition Research Laboratory
Louisiana State University, Baton Rouge, LA**

Aug. 2010 – May 2011

- ☐ Ran intensive experiment protocol that required manipulation of an eye-tracking device
- ☐ Research Supervisor: Dr. Melissa Beck, Ph.D.

PUBLICATIONS AND PRESENTATIONS

Publications

Deemer, E. D., Yough, M., **Morel, S. A.** (2017). Performance-approach goals, science task choice, and academic procrastination: Exploring the moderating role of competence perceptions. *Emotion and Motivation*.
<https://doi.org.ezproxy.lib.purdue.edu/10.1007/s11031-017-9649-z>

Deemer, E. D., Dotterer, A., **Morel, S. A.**, Bastnagel, A. (2017). Undergraduate students' achievement goals for conducting research: Examining the motivational benefits of classroom affiliation. *Learning Environments Research*, 20(3), 325-338.

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Ponterotto, J.G., Reynolds, J. D., **Morel, S. A.**, & Cheung, L. (2015). Psychobiography training in psychology in North America: Mapping the field and charting a course. *Europe's Journal of Psychology*, 11 (3), 459-475.

Presentations

Morel, S. A., Chen, C., Jensen, L., & Deemer, E. (2018, April). *Differing perceptions of support? Exploring high school students' and parents' perceptions of career behaviors*. Poster session presented at the annual meeting of the Great Lakes Regional Counseling Psychology Conference, Kalamazoo, MI.

Morel, S. A. (2017, October). *Exploring a career path towards well-being: How parental behaviors, career values awareness, and career decision-making self-efficacy impact well-being in undergraduate college students*. Brown Bag presentation for College of Educational Studies.

Deemer, E. D., Dolson, J., **Morel, S. A.**, Bastnagel, A. (2016, August). *Psychological Well-Being of Women Engineers: Examining the Moderating Role of Gender Bias in the Workplace*. Poster session presented at the annual American Psychological Association, Denver, CO.

Morel, S. A., & Deemer, E. D. (2016, April). *Symptoms of depression and academic major decision-making self-efficacy: Examining the moderating roles of parental attachment and academic support/guidance*. Poster session presented at the annual meeting of the Great Lakes Regional Counseling Psychology Conference, Bloomington, IN.

Morel, S. A., Reynolds, J. D., & Ponterotto, J. G. (2013, October). *Psychobiography in teaching psychology*. Poster session presented at the annual meeting of the Northeast Conference for Teachers of Psychology, Bridgeport, CT.

PROFESSIONAL ASSOCIATIONS AND SPECILIZED TRAININGS

- ☐ APA Division 17 Student Affiliate, APA Graduate Student Affiliate, Golden Key National Honor Society, New England Psychological Association, Phi Kappa Phi National Honor Society, Phi Sigma Theta National Honor Society, Psi Chi National Honor Society
- ☐ Two-Day Advanced Trainings for Mental Health Providers – *Brief Cognitive Behavioral Therapy for Suicide Risk* (Attended February 2017)
- ☐ Safe Zone Training (Attended April 2017)
- ☐ Asexuality 101 Training (Attended October 2017)

SCHOLARSHIPS AND AWARDS

- ☐ Purdue College of Education Graduate School Scholarship: Award amount of \$2,000
- ☐ Fordham Graduate School of Education Scholarship: Award amount of \$16,314
- ☐ Taylor Opportunity Program for Students: Award amount of \$14,001
- ☐ Roddy L. Richards General Studies Scholarship at Louisiana State University
- ☐ Dean's List, Louisiana State University