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Latino Career Choice and Prestige: Examining Prestige, Cultural Values and Family Influence in Predicting Career Choice

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LATINO CAREER CHOICE AND PRESTIGE:

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by

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ABSTRACT

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Under the Supervision of Professor Nadya Fouad

Career choice continues to be a principal area for career development research, as finding ways to determine what contributes to career choices, and how those choices impact individuals' micro and macro systems, informs best practices in vocational psychology. The field of vocational psychology can benefit from exploring myriad variables that may have an impact on career choice, career congruency, and persistence in the world of work; and highlighting the unique experiences and needs of diverse populations can produce new insight about different groups and people that the field should endeavor to improve.

To this end, this study sought to uniquely contribute to the field of vocational psychology by being among the first to utilize certain measures with Latino/a populations; explore cultural values and family influences on career decision making and congruence; glean insight on traditional career choices and what may impact them; and address the gap in examining prestige with Latino/a populations: a potent dimension in career choice informed by social desirability, social norms, and present day attitudes about work. The Latino/a Values Scale, specifically the subscales of Cultural Pride and Familismo, was used to explore and predict career congruence in

Latino/a males and females. The Family Influence Scale, specifically informational support, family expectations, financial support, and values/beliefs was used to explore and predict career congruence in Latino/a males and females.

Finally, prestige was examined among Latino/a males and females in this study. While some analysis produced significant results, there were also considerable limitations to the study. However, all exploration within the analyses in this study can inform directions for future research, invite further inquiry into the dynamics between these groups and variables, and contribute to development and refinement of further measures and research questions around these topics.

To

my parents and grandparents,

my family, friends, and mentors,

and every star in the constellations of my life that helped light the way

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ACKNOWLEDGEMENTS

These acknowledgements are the end note of a journey that began when I was only 10 years old… I could not understand at the time what I aspired to when I agreed in earnest with my 5th grade teacher, while we were working on my remarks for graduation, that I would need to become a doctor, like she was, in order to ever call her by her first name… Sheila. Ms. Wright, a black woman with a doctorate degree in education from Harvard university, teaching in the Harlem neighborhood of New York City in 1992, was not the first, but one of many invaluable people in my life who mentored me, guided me, paved the way for where I am today, and showed me what greatness was. As this journey comes to a close, I reflect on the pain I have endured, the loss, the darkness, the doubt, the despair, and I question how it is possible that I even made it half way here let alone this far. My great fortune has been that, like the many stars in the sky, the constellations of my life have been illuminated by amazing people, great people, titans, without whom I would not be here today. It is not possible to give thanks to the cosmos in this small acknowledgement section, to pay homage to every star that has brilliantly lit the path, but I must adore the suns in my life to whom I am eternally grateful.

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CHAPTER I: INTRODUCTION

Choosing a career is a complicated process. People take an amalgam of factors into consideration when deciding what they want to do for work. Different people take different things into account. They consider: their interests, what they like doing, what they want from their jobs, how much money they want to make, what people will think of their career, and how they fit into the world. This complexity is enriched by the diversity of experiences, traditions, and cultures of different people. Different people, and different groups of people, weigh different factors when making career decisions. Even when they consider the same set of factors, groups differ on the weight they place on those factors; for example, on the role of interests in choice versus family expectations of career choices. As a group, Latinos/as present a variety of personal and group characteristics that make examining their choices fascinating and informative; that was the focus of this study. As a Latino, I have experienced this complexity first hand when considering what were the most important factors involved in my choice to pursue higher education, work towards becoming a psychologist, and ultimately establish my professional identity as one that helps my community and brings me personal success, prestige and fulfillment. It has also informed my goal to understand contextual factors in Latinos' choices. When considering the importance of research into experiences like mine, I considered what information could provide a foundation for interventionists seeking to improve and influence the career development of Latinos/as like myself. Perspectives on success and satisfaction, cultural influences and expectations, the role of the family, and my place as a member of a community that is part of a larger society, are just some of the important factors vocational psychologists should be tasked in examining when it comes to Latino/a career development.

Latinos/as have made inroads in recent decades in terms of social mobility, visibility, cultural and social influence, and success and attainment (Rodriguez, 1996). Latinos/as can be seen on television, in music, the legislature, throughout institutions of higher learning, and occupying jobs across the country. However, Latinos/as continue to be under represented in the American workforce in positions of leadership, positions of power and influence, and positions of high achievement and status (Byars-Winston, Fouad & Wen, 2015). While individual Latinos/as have acquired singular success, Latinos/as as a group have not seen their distribution across the American workforce accurately reflect their population. In other words, some occupations have many more Latinos than their representation in the population, and other occupations have very few. This is an important issue to examine because occupational representation can be indicative of occupational choice. Investigating occupational choice with minority populations can glean important information that can be used by educators and guidance professionals to improve success among minority students and clients.

Latinos/as account for roughly 17 percent of the population of the United States of America, making Latinos/as the largest minority population group in the U.S. (United States Census Bureau, 2015); thus, they should also account for roughly 17 percent across occupational areas. However, Latinos/as are underrepresented in multiple occupations and occupational areas. Of particular note is the under representation of Latinos/as in: professional (e.g. white collar, non-manual) occupations, the software/computer sector (4%), healthcare practitioners (3%)(not to be confused with healthcare support, such as nurses and health aides), the financial sector(3%), and the life, physical and social sciences (2%) which has the most egregious underrepresentation (United States Department of Labor: Bureau of Labor Statistics, 2016; Byars-Winston, Fouad & Wen, 2015). On the contrary, Latinos/as are over represented in blue

collar occupations like agriculture (22%) where the percentages of the workforce that identify as Latino/a can be as high as 54.3 percent for an agricultural sorter (United States Department of Labor: Bureau of Labor Statistics, 2016; Byars-Winston et. al., 2015). This is even more critical when noting that underrepresentation is in professional and high-paying occupations. This poses an interesting question as to what factors account for this disparity, and also an interesting problem for counselors and educators in guiding Latino/a students and clients into higher paying occupations (if they are commensurate with their interests and skills), as well as where further representation can enrich those vocations overall.

The career trajectories of Latinos/as have been shaped by important demographic considerations like the rapid growth of the Latino/a population in the US and their standing as the largest racial/ethnic minority group, and their underachievement in education and low occupational status. However, vocational research remains limited on career development and choice issues for Latinos/as' (Arbona, 1990; Flores et. al., 2006; Flores & O'Brien, 2002; Fouad, 1995). These areas are ripe for further inquiry, but research has been limited by current vocational theories that do not account for cultural differences, and models that lack contextual factors to provide greater depth in understanding vocational phenomenon (Fouad & Kantamneni, 2010; Fouad & Kantamneni, 2008). Vocational research into the influences of cultural variables on an individuals' career cognitions and behavior can provide greater understanding about Latinos/as' career choices (Byars-Winston, Fouad & Wen, 2015; Fouad & Kantamneni, 2008). Therefore it is critical for vocational interventionists and researchers to understand cultural context in perceptions and decision making about work (Fouad & Kantamneni, 2013).

Identifying the variety of factors that contribute to the cultural context of Latinos/as remains complicated, and applying them to Latinos/as to account for demographic disparities in

the workforce remains a challenge. Researchers are unsure what exactly accounts for these cultural disparities and the extent of specific factors that may influence the occupational landscape for Latinos/as (Flores, Navarro, Smith & Plo, 2006). There are limited explanations that researchers can provide for the occupational choices of traditionally Latino/a career incumbents. Some researchers have found that examining parental occupational choices and parents' education can provide information on career choices with Latinos/as when analyzing correlations between parent/child choices in careers (Flores & O'Brein, 2002). Flores and colleagues looked at mother-daughter dyads and found that parental education and feminist attitudes were not significantly related to non-traditional career decision making in Latinas as can be found in White samples (Flores & O'Brien, 2002); when examining mother and father career choice with sons they found that paternal non-traditional career choice and modeling did have a direct effect on Latino career decision making (Flores, Navarro, Smith & Plosaz, 2006). Acculturation is also an important career choice factor that has been examined with Latino/a populations due to the nature of functioning in the predominately Western culture of the U.S. Additionally, gender differences in Latino/a career choices have been investigated due to the importance of both examining differences in gender socialization between males and females, and studying the influence of cultural expectations within the Latino/a community on males and females (Flores, et. al. 2006; Flores & O'Brein, 2002). Flores and colleagues found that the acculturation level of Latinas inversely effected non-traditional and prestigious career choices, they posited that high acculturation may result in a deeper socio-political understanding of barriers that can be encountered in male-dominated and prestigious careers, causing women to avoid them (Flores & O'Brein, 2002). When examining Latino male acculturation levels they found the opposite effect, more acculturated Latino males were more likely to make non-

traditional career choices which they attributed to greater flexibility in gender roles found in the dominant (White) culture (Flores et. al. 2006). These two examples serve as differentiation in acculturation and also gender differences for Latinos/as. These are but some of the factors that Latinos/as present as unique dimensions to their career decision making process that can include cultural values, gender differences, and family influences (Flores et. al., 2006; Flores & O'Brein, 2002). For example, cultural values like honoring the family (familismo), respecting your elders (respeto), sacrificing individual goals for collective success (collectivism) and others are meaningful in helping understand how career decisions are being made in Latino/a communities.

As noted, research have studied some factors that can be taken into account when studying Latino/a career choices, but we still do not know enough about prestige, satisfaction, self-efficacy, family expectations, or societal pressures to fully understand Latino/a career choices. The aforementioned values, and others, provide further information beyond what many vocational theories have hypothesized as shaping choices because vocational theories do not always account for the influences of cultural values and norms. Additionally, many vocational theories have been normed on White, and predominately male, samples that may exemplify different cultural norms than the Latino/a population.

For example, consider how individualistic notions of success and career inform mainstream Western perspectives. Ideas include: career choice is independent from the needs of the family or community, and salary is more important than familial obligations. These examples highlight the influence of individualism as an important cultural value in Western cultures. Meanwhile, collectivistic cultures (like many Latinos/as groups are) may have values (like collectivism) which differ from mainstream cultural perspectives; such as the importance of the community or family over individual motivations or desires, and the importance of

addressing interpersonal needs before vocational needs. These differences in values can facilitate different perspectives on success and achievement, and examining these perspectives is important for understanding how success and achievement are defined outside of the mainstream.

Mainstream perspectives of success and achievement are influenced by constructs such as wealth, satisfaction, fulfillment and prestige, examining how these constructs manifest within cultural minority groups will provide greater understanding on how career decisions are made. Moreover, we do not really know how these constructs are interpreted in minority groups such as Latinos/as. Are the constructs shaped by cultural values? For example, is wealth valued as individual attainment of assets, (being able to purchase and own assets for individual benefit) or the ability to provide (support, maintain and meet needs) for a large family? Is prestige determined by individual perception or familial influences? Is satisfaction a function of person-environment fit or adherence to cultural values? These questions are important; however, research remains limited in this area. Vocational research that identifies the influence of specific cultural values such as familismo and cultural pride on career choice is even more limited. Family may be the predominate influence on Latino/a career decision making because of the multiple values that are nested within family units, predisposed by culture and cultural identity, and enforced by familial relationships and expectations. Latinos who adhere to traditional values, or who are more highly acculturated, may be more likely to adhere or diverge from expectations of family and gender roles, rely on family for information and decision making, consider family role models, and pursue careers that support collective and familial goals (Flores, Navarro, Smith & Ploszaj, 2006; Flores & O'Brien 2002). They may be better served by vocational strategies that account for the family. Unfortunately, family influence research is not

highly represented in the literature although researchers have found that that family influences career choice by acting as a conduit for information, establishing culturally relevant expectations, and supporting career decisions (Tate, Fouad, Marks, Young, Guzman & Williams, 2015).

Concurrently, research has attempted to use extant vocational theories to help explain some of the factors that can account for disparities in the occupational landscape with Latinos/as without integrating cultural values. These theories are not always sensitive to cultural values and influences, and the lack of sensitivity to cultural values can result in findings that do not adequately explain the impact of cultural values on career choices. Generally speaking, most vocational theories and career interventions focus on career choice as a function of individual opportunity and ability, without accounting for differences in resources, worldview and perceptions (Fouad & Kantamneni, 2013). However, pulling away from theory and attempting to explore and explain vocational choices without a basis in theory is not the goal of this study. The goal is to identify how we can combine additional factors, concerns, variables, and challenges to enrich the complexity and generalizability of findings around the issues of career choice. Therefore, we argue that multiple factors contribute to choice, tenure, satisfaction and success with Latinos/as, and this is important in examining choice with Latinos/as given that researchers are unsure what accounts for differences in their vocational outcomes.

Most career theories have a major focus on interests, how interests manifest in individuals, and how interests guide career choices (Hansen, 2013). This is due to the stability of interests over the lifespan, the importance of a stable and valid measurement for the reliability of assessments, and the predictive nature of interest characteristics (Hansen, 2013). Measuring interests, and examining the influence of interests on career choice, is helpful for vocational interventionists who intend to help clients truncate or broaden their occupational possibilities

(Hansen, 2013). Additionally, measuring interests can help in predicting occupational choices which can give insight to practitioners and clients on the possibility or occupations (Hansen, 2013). How individual interests contribute to Latino/a's career decisions, how interests broaden and/or truncate occupational possibilities, is critical in understanding why individuals go into certain fields, remain in those fields, or choose not to enter those fields. This is an important factor to take into account when examining the representativeness of minorities in occupational fields. For example, are traditional career choices for certain ethnic identities based on interests? Therefore, how interests are utilized in career theories is important to consider when working with minority populations, and in research it is important in examining measures and factors that contribute to career choice.

Examining the role of interests in current theory and how it interacts with other variables and factors provided by culture is an important step in integrating cultural variables with theory for multicultural populations. Understanding the theoretical foundation provides perspective in how additional cultural factors may expand current knowledge on career choice. Career choice and vocational interests are a foundational component of vocational psychology that has contributed to the development and evolution of vocational theory, and the provision of career counseling (Betsworth & Fouad, 1997).

The exploration of vocational choice and the development of theory began in the 1920's with Parson's seminal work on helping individuals understand themselves within the world of work, and from that came one of the most influential person-environment fit theories, Holland's theory (Nauta, 2013; Fouad & Kantamneni, 2010; Betsworth & Fouad, 1997; Holland, 1997). Characterized by the RIASEC acronym, which stands for Realistic, Investigative, Artistic, Social, Enterprising and Conventional, Holland's theory provides a framework for how

occupational interests play a role in career choices. Holland's framework, in the shape of a hexagon (see appendix), geometrically maps the relationship between people's interests and can compare them to existing work environments (Nauta, 2013; Holland, 1997). Individuals' interest scores are generally gleaned from inventories, such as the Strong or Interest Profiler, that can measure people's interests in these occupational areas (Hansen, 2013). After attaining an individual's interest score on one or more of the themes listed above, comparisons are made between their score and the interest score of an occupational environment. The relationship between individuals and their environments is termed congruence, which is the crux of Holland's theory. He postulated that individuals who are in occupations that are congruent with their environment (e.g., someone with Realistic interests in a Realistic environment) would be more satisfied with his or her career and stay in the job longer. It also allows research with interests and ethnic minorities to be meaningful because the structure of those interests remains the same across cultural groups (Hansen, 2013; Fouad, Harmon & Borgen, 1997). This supports the validity of using interest measures based on Holland with multi-ethnic populations (Hansen, 2013).

The principles of Holland's theory reside in four main constructs: consistency, differentiation, identity, congruence (Holland, 1997). Career congruence has been researched heavily in vocational psychology, yet there are still gaps in the literature when it comes to examining vocational issues and multicultural populations (Fouad, Harmon & Borgen, 1997). This is unfortunate because congruence is the principle that elucidates people's satisfaction (or dissatisfaction) with their career choices, tenure, or unwillingness to enter a field. Congruence can help us determine what factors play a role in the broadening or limiting or career possibilities, and congruence can show us how individuals fit into different occupational

environments. Finally, a lack of congruence can provide valuable information as to the presence of additional factors that play a role in career choice, and the potential for those factors to mitigate incongruence and dissatisfaction. It is likely that when incongruence occurs, then career choices were influenced by factors beyond interests that are likely more powerful, influential, or meaningful than interests alone. Examining congruence in models with multiple variables can give us perspective on how much those variables account for congruence, and therefore account for individual career choices.

Holland's theory has also been examined by other researchers that suggest there are multiple dimensions beyond the two dimensional hexagon indicative of the theory (upon where the RIASEC acronym is set) (Tracey & Sodano, 2002). The extra dimensions that extend beyond Holland's hexagon add additional components in the assessment of interests including individual's analysis of data, importance of people and ideas, and prestige (Tracey, 2002). These additional dimensions provide further information when examining occupational choices and satisfaction. Prestige, in particular, is a concept that has been researched primarily by sociologists who look at occupational attainment, and has been lacking in the vocational literature (Tracey & Sodano, 2013). Prestige has been sparingly addressed in research with ethnically diverse populations (Tracey & Sodano, 2013). While sociologists have focused on defining and measuring the construct of prestige, psychologists have not incorporated knowledge about prestige into the examinations of career choices and theory (Tracey & Sodano, 2013).

Prestige has been studied by sociologists since the 1940's following the seminal work for the National Opinion Research Center that established prestige rankings for hundreds of occupations represented in the US census (Featherman & Hauser, 1976). Researchers continue to update prestige rankings, but have also developed socio-economic scales that have been used

to explore prestige (Nakao & Treas, 1992). Prestige rankings underwent revisions every decade until the 1980's. The most recent is by Stevens & Hoisington and is used in examining prestige rankings and classifying how society views and values different occupations (1987). However, some controversy remains over whether prestige rankings are actually socio-economic rankings or pure prestige rankings due to issues in measurement and findings by different authors over the decades (Nakao & Treas, 1992).

Additionally, prestige has not been measured with ethno-cultural populations or differences in mind, only gender has received attention in the sociological literature in the measurement of prestige (Nakao & Treas, 1992). Unfortunately, vocational psychologists have not been part of this dialogue, so prestige measures are not informed by vocational research and vice-versa (Tracey & Sodano, 2013). However, prestige is likely to provide important information about career choices and the occupational landscape. Consider that prestige is informed by societal values and beliefs, such as gender roles or the value of an occupation to society at large. For example, medical doctors are generally considered to be in prestigious occupations because of the skill involved and their positive impact on society. These values and beliefs are informed by the majority culture, but minority populations will likely have their own values and beliefs that are likely to influence how they perceive prestige concordantly or differently than the majority. Specifically, an occupation that is perceived as prestigious within a minority population may be perceived as such based on its value within that group, and that value may not be reflected in the majority culture. This increased or decreased perception of prestige about occupations can help explain occupational representativeness by certain populations if individuals seek occupations of prestige within their ethnocultural group. For example, Walker and Tracey examined African American prestige rankings for careers in

comparison to White peer groups and found that their African American sample endorsed careers where African Americans were better represented as opposed to their White peers (2011). They posited that this difference could be attributed to the value of certain occupations within the African American community, and supported this theory with the evidence that the only significant differences in prestige rankings between African Americans and Whites in their sample occurred with careers where African Americans were more highly represented (Walker & Tracey, 2011). Thus, understanding cultural values may be important in examining this relationship.

Cultural values have been discussed throughout this introduction as a possible major dimension in which career choices are made. Cultural values influence expectations about work, information about work, perceptions of opportunity and success, and value of work. Additionally, cultural values and family influences interact with each other based on the fact that family structures and expectations are influences by culture, and family is the conduit by which cultural values are learned. For example, cultural pride could determine what information and expectations families provide. The complexity which cultural values introduces in vocational research lends to interesting questions with regards to perceptions of opportunity, traditionality, and prestige in career choice, satisfaction and tenure. Cultural values may be key components in understanding cultural minorities' navigation of the occupational landscape, and inclusion of cultural values when examining vocational choices may be necessary in order to promote multiculturally competent research.

Significance of the Study

It is important to continue to examine the multiple variables that can contribute to career choices. This is helpful in discerning factors that can foster interventions to reinforce supports or dispel barriers. Therefore, the purpose of this study is to promote further exploration and examination of variables that can account for career choices and expand vocational knowledge with Latino/a populations. This dissertation sought to explore the relatedness of prestige, cultural values, and family influence as variables that can be used to predict occupational choice. Prestige has been posited as an important aspect of occupational choice which guides the perception and selection of occupations; however, research in support of prestige as a key ingredient in occupational choice is not fully substantiated in the psychological literature (Tracey & Sodano, 2013). Components of prestige such as social desirability and social evaluation have been demonstrated in various theories and occupational selection models, and identified by notable vocational researchers such as Anne Roe and John Holland, but were not operationalized in their theories and thus have gone largely ignored in vocational assessment of interests (Tracey & Sodano, 2013).

Prestige, as a social desirability construct, is related to cultural perceptions and expectations that affect myriad groups within the world of work (Tracy & Sodano, 2013). As discussed previously, in Walker and Tracey's work, prestige has been examined in African Americans to explore the correlation of prestige perceptions in African American samples in comparison to the established prestige rankings normed on a White samples (Walker & Tracey, 2012). The most significant differences between prestige rankings for African Americans and Whites occurred in occupations where African Americans were more highly represented. Walker and Tracey's findings suggest that it is an important area to further explore given the

underrepresentation of ethnic minorities in occupations associated with prestige in the mainstream culture. Prestige allows researchers to explore societal expectations and perceptions of different occupations. These societal expectations and perceptions are likely to change with different ethnic groups that maintain different cultural values, expectations and perceptions within their societal group. Prestige remains an important construct in vocational literature which underlies career theories that take into account personality factors, social influences, and contextual variables (Tracey & Sodano, 2013). However, research has not been done to examine how cultural variables and prestige effect career decision making. In addition to the cultural differences in the value of an occupation, cultural minorities may perceive barriers to attainment that are not present in majority populations.

It is important for vocational psychologists to understand prestige as a variable in career choice, particularly, for multicultural populations that may demonstrate differentiating views on occupational attainment. For example, differences in perceptions of the prestige of an occupation across cultures may lead to different interest in choosing that occupation, which help to account for cultural differences in occupational representation. In other words, Latino-traditional occupations (those in which Latinos are overrepresented) may be viewed as more prestigious by Latinos.

Specifically, research has not been done with ethnic minorities in examining how a variety of variables such as prestige, cultural values, and family influences affect perceptions of career choice. Work of this nature has been suggested by Walker and Tracey (2012) and Fouad, Cotter, Fitzpatrick, Kantamneni, Carter & Bernfeld (2010). There are limited empirical studies where researchers are exploring these unique perspectives and needs of Latinos/as when it comes to their career; ethnicity and cultural values integration is an important issue in career

development that has not garnered enough interest (Gushue, 2006, Fouad, 1995; Fouad, 1994; Fouad & Arbona, 1994; Arbona, 1990). This study integrated issues of Latino/a cultural values to examine relationships with career related variables such as prestige and career congruence, and expand on the role that cultural values may play in the gaps in occupational attainment and aspiration for Latinos/as. Finally, this dissertation expands on existing research into family influence, the interrelatedness of family influences and cultural values, and the impact of family support on occupational choice.

Research Questions

The following research questions are investigated:

1. What significant differences are there between men and women in cultural values (cultural pride) and family expectations (informational support, family expectations and family values/beliefs) and their relationship to occupational congruence and prestige?

2. Can individual prestige rankings, cultural pride and familismo, informational support, family expectations and family values/beliefs be used to predict occupational traditionality for Latino/a males and females?

3. Can individual prestige rankings, cultural pride and familismo, informational support, family expectations and family values/beliefs be used to predict occupational congruence for Latino/a males and females?

4. Does prestige mediate the relationship between cultural pride and traditionality for Latino/a males and females?

Hypotheses

The anticipated findings for these research questions are captured in the following hypotheses:

Hypothesis #1: Latinos/as that have higher traditionality scores (are in more traditional occupations) will have higher cultural values scores and family influences scores, which will account for more of the variance in their occupational choices. This explains cultural and familial influences on going into traditional occupations.

Hypothesis #2: Cultural variables such as cultural pride, and family influences such as family expectations, informational support, and values/beliefs, should account for significant variance in career congruence for those with lower congruence scores, showing that something else is accounting for career choice beyond interests.

Hypothesis #3: Prestige (which is social desirability value) will explain more of the variance in predicting occupational congruence or traditionality when using cultural pride as a predictor.

Hypothesis #4: The expectation of males and females within cultural frameworks in the Latino/a community are different, these differences can be seen in differences on cultural values variables which help to explain why cultural influences and family influences have a different effect on males and females.

Definition of Terms

Holland Codes: Holland codes are the method in which an individual's vocational personality type is identified using Holland's theory of vocational personalities and work environments. As stated previously, Holland's theory is characterized by four main constructs: consistency, differentiation, identity, congruence (Holland, 1997). Holland's theory, which is one of the hallmarks of career counseling and a foundational theory within vocational psychology (Betsworth & Fouad, 1997), was further explored in this dissertation. Holland's codes are characterized by the acronym RIASEC. The acronym stands for: Realistic, Investigative, Artistic, Social, Enterprising and Conventional (Holland, 1997). An individual's Holland code is derived from these categories.

Career Congruence

Career congruence refers specifically to the construct of congruence in Holland's theory of vocational personalities and work environments. It states that personality types are better suited to vocational environmental types, and the resulting junction of person-environment fit produces congruence (Nauta, 2013; Fouad & Kantamneni, 2010; Holland 1997). Congruence is generally determined by examining Holland codes and determining the fit between a person's Holland code and their occupational environment's Holland code. Congruence is measured by producing a score for an individual based on values for types within Holland's theory, and comparing and calculating them with predetermined values for occupational environments (Brown & Gore, 1994). A high congruence score occurs when an individual's congruence values and their environmental values highly match, low congruence occurs when the value of the match is less. When congruence occurs it is usually evaluated by examining work satisfaction, tenure, fulfillment and success in an occupation (Nauta, 2013; Fouad & Kantamneni, 2010); high

congruence can result in positive features of satisfaction, fulfillment and success at work, while low congruence can result in negative features of satisfaction and work success.

Cultural Pride

Cultural Pride is a term that incorporates principles of cultural identity theory including acculturation, which is the process of adapting to the norms of the dominant culture, and enculturation, which is the process of socializing into and maintaining the norms of one's indigenous culture (Kim, Soliz, Orellana & Alamilla, 2009). Cultural pride is used in this study to explore the meaningfulness of, and adherence to, cultural values that include maintaining and preserving indigenous language, customs, traditions, and celebrations that can be found in the Latino community. Cultural pride is demonstrated by loyalty to, and pride in, an individual's cultural group. Cultural Pride goes beyond the simple designation of an individual's culture and accounts for the manner in which an individual embraces or rejects the values, custom, expectations and world view of their indigenous culture (Ponterotto, Casas, Suzuki & Alexander, 2010).

Career Traditionality

Traditionality has been used consistently in vocational research as a term to denote in what ways traditional expectations can guide and influence career decision making (Weisgram, Dinella & Fulcher, 2011). However, traditionality has not been clearly defined in the literature. Traditional can be defined as long-established and habitually replicated characteristics of people places and things consistent with a specific identity. For example, traditional foods are associated with different and specific cultures. Traditional classifications can be seen as

stereotypical, and therefore traditionality can be seen as function of stereotyping. However, most research utilizes statistics within the population to determine stereotypical categories as opposed to cognitive heuristics. For the purposes of this study, traditionality will serve to capture the concept of traditionally representative occupational areas as shown by high percentages in the population. In vocational research traditionality has been commonly used to explore differences in male and female vocational behaviors and choices, attributing "traditional" classifications to occupational areas where men and women are over represented (Flores, Navarro, Smith & Ploszaj, 2006; Lease, 2003; Flores & O'Brien, 2002). Cultural minority vocational research has focused on traditionality of choice when examining traditional differences (Fouad & Byars-Winston, 2005).

Interest Assessment

Assessment is an integral component of career counseling as it serves to address career oriented issues that evoke counseling need; clients seek career counseling to explore and confirm career decision making. Career assessments are used to promote career exploration and exploration activities, and to predict future satisfaction and success (Fouad, 1993). Assessment is not limited to formalized instruments, but can also assessment processes which provide context to the nature of career decision making, and are important in working with multicultural populations (Fouad, 1993). Interest assessments provide valuable information for the provision of career counseling, understanding and applying theory in practice, and facilitating research (Fouad, 2002).

Ethnic Identity

Ethnic identity is defined as an individual's self-knowledge, understanding, and evaluation of their membership in a social group, or groups, and the individual's self-concept as a member of that group. Distinct from racial identity, which is developed in response to racism and phenotype, ethnic identity is the concordant development of identity in response to cultural influences and societal perspectives on that culture (Ponterotto, Casas, Suzuki, & Alexander, 2009). Ethnic identity requires self-identification and cultural salience, and does not simply entail adherence to minority culture but exploration, assessment and achievement of identity within the framework of a cultural group.

Social Desirability

Social desirability is an important concept in the social sciences that helps to explain the behavior and decision making processes of individuals within the framework of societal expectations (Crowne & Marlowe, 1960). For example, responding "favorably" to a question on a survey is an expression of social desirability. Understanding what constitutes as "favorable" in the previous example is part of the work of various social scientists. Social desirability is an underlying principle in prestige.

Masculinity and Femininity

Masculinity is defined as the behaviors and personal qualities traditionally associated with being a man; within the social sciences it is used to denote the social construction of what it means to be a man (Wester, 2007). Femininity is defined as the behaviors and personal qualities associated with being a woman; within the social sciences it is used to denote the social construction of what it means to be a woman. Both terms are concerned with the social

expectations of men and women and therefore are mechanism for exploring social desirability in the behaviors of men and women. As a factor of social desirability, cultural context plays a key role in the construction of what it means to be a man or a woman given the cultural lens and ethnic identity of an individual.

Prestige

Prestige is a sociological term that is used in occupational literature to describe and denote the relative social hierarchies of an occupation, the nature of the job's rating, the perception of its worthiness, and value in society. Prestige is used to determine the social desirability of an occupation. There are differing characteristics of occupations that contribute to their prestige, these can be: the amount of power and influence associated with the activities of a job, the characteristics of people in those fields (e.g. incumbents), the standard of living for incumbents, the level of qualification and education needed, and the social resources afforded to individuals in those fields (Featherman & Hauser, 1976; Hodge, Siegel, & Rossi, 1964).

Family Influence

Family influence is defined as the methods in which families support, influence and direct career decision making processes; derived from the factor analysis performed in the development of the family influence scale (FIS) the following subscales are indicative of family influence constructs: Informational Support, Financial Support, Family Expectations, and Values/Beliefs (Fouad, Cotter, Fitzpatrick, Kantamneni, Carter, Bernfeld, 2010).

Familismo

Familismo is a construct used in examining Latino/a cultural values that was identified nearly 40 years ago to help describe the tendency to place the needs of the family before the needs of the individual (Smith-Morris, Morales-Campos, Alvarez & Turner, 2012). As a core cultural value, it involves elevating the collectivistic needs of the family above the individualistic needs of the individual, resulting in strong identification with the nuclear and/or extended family (Smith-Morris, Morales-Campos, Alvarez & Turner, 2012).

CHAPTER II: LITERATURE REVIEW

The purpose of this literature review is to provide information on the theoretical constructs that underlie the study, frame the research questions, and guide the data analysis. The research questions are based on well researched and widely used theories in vocational psychology and sociology which are reviewed in this chapter. There is a great deal of literature in vocational psychology, and in these areas, to support the foundation of assumptions rooted in questions about career choice and interest (Betsworth & Fouad, 1997). A key variable is that we do not know the role of various factors that influence choice for ethnic minorities – prestige may be one. However, there has not been enough research on factors influencing career choices for Latinos and multicultural populations. There has not been enough research on prestige as it pertains to career choice, and due to prestige being a social variable rooted in sociology, many psychologists have not broached the topic in the vocational literature (Tracey & Sodano, 2013).

Holland

Holland's theory is widely used, highly regarded, influential in the area of vocational psychology, and among the most easy to utilize in theory and practice (Nauta, 2013). Holland developed his theory in 1959 following his experiences as a vocational counselor in educational, military and clinical settings, and was influenced by his predecessors in Parsons and Strong; his theory was based on the premise that people and environments can be described with six typologies: Realistic, Investigative, Artistic, Social, Enterprising and Conventional (Nauta, 2013; Fouad & Kantamneni, 2010; Betsworth & Fouad, 1997; Holland 1997). Holland stated that the theory can be used to predict individual satisfaction with career choice by examining person-environment interactions (or fit) and helps to answer three important questions: what person-environment characteristics lead to career satisfaction, what person-environment characteristics

demonstrate stability or change in work over time, and what can practitioners do to effectively help with career problems (Holland, 1997). The tenants of the theory are the six typologies and the principles of theory are the four constructs of consistency, differentiation, identity and congruence (Nauta, 2013; Fouad & Kantamneni, 2010; Holland 1997).

Typologies

The six basic personality types are: Realistic, Investigative, Artistic, Social, Enterprising and Conventional (RIASEC). The six types are characterized by multiple activities, beliefs, abilities and values unique to the type such as: outdoor activities for realistic, scientific acumen for investigative, creative abilities for artistic, desire to help people for social, leadership skills for enterprising, and organizational prioritization for conventional (Holland, 1997). However, Holland did not posit that individuals could be categorized by a single component of the model and instead would likely reflect multiple combinations of the six typologies (Nauta, 2013; Holland 1997). With the possible combination of all RIASEC typologies numbering 720, there is a great deal of complexity that goes into determining an individual's type, and most practitioners and researchers use a three-type code known as a Holland Code (Nauta, 2013). The combination of typologies is not only expressed by individuals, but vocational environments also demonstrate typology characteristics and can concordantly be classified by their Holland code either with any of the 720 combinations or more commonly with a three-type code (Nauta, 2013). The theory posits that individuals will seek out work environments where they can express their Holland code, and that greater satisfaction is achieved when their code matches their work environment and thus matches their desired expression of interests, skills and values (Nauta, 2013; Fouad & Kantamneni, 2010; Holland 1997). The RIASEC types also fit onto a hexagon (see appendix), with each typology at a point of the shape, following the acronym order

(RIASEC), and are integral in calculating the structure of individual interest (Fouad & Kantamneni, 2010; Holland, 1997, Brown & Gore, 1994).

Consistency

The way in which the typologies appear on the hexagon is integral to understanding the consistency construct of Holland's theory. The consistency construct hypothesizes that the shorter the distance between types on the Holland hexagon, the more similar the interests are to each other, and the stronger the correlation and the stronger the rewards of the vocational environment for those whose interests are similar (Nauta, 2013; Fouad & Kantamneni, 2010; Holland, Whitney, Cole & Richards, 1969). By examining the Holland hexagon, one can see that types that are closer to each other have higher correlations due to similarities in core components of the type of work; for example enterprising and social are next to each other on the hexagon and have a correlation of .54, this is likely due to the fact that both occupational areas include working closely and collaboratively with people (Nauta, 2013). Therefore, occupations that demonstrate high consistency tend to reflect this phenomenon of similarities across occupational activities. Environments are more likely to be "consistent", and maintain closely related interest areas. Due to the consistent nature of occupational areas, individuals with consistent Holland codes tend to have greater flexibility and options when it comes to career choices and satisfaction in occupational environments (Nauta, 2013; Fouad & Kantamneni, 2010). For example, an individual with a highly consistent Holland code like ESA (correlation for E-S = .54 and correlation for S-A = .42) will have more occupational choices as there will be more occupations that demonstrate combinations of ESA in their environmental Holland code. Consistency is related to the calculus of Holland codes, and has been used to develop indices of congruence like the C-index (Brown & Gore, 1994) which can be used to

calculate congruence. Consistency and congruence can be used to examine interests within different cultural and ethnic groups, the relationship among different interest areas may be different for various cultural and ethnic groups (Fouad, Harmon & Borgen, 1997).

Differentiation

The 720 combinations of RIASEC allows for a great amount of complexity and variation in defining personal interests and environmental types, as well as person-environment fit; the variability in individuals and environments to associate with multiple types is the key to understanding differentiation (Nauta, 2013, Fouad & Kantamneni, 2010). Differentiation is characterized by the difference between an individual's highest and lowest Holland code, and differentiated individuals or environments will more closely resemble fewer typologies; therefore, undifferentiated individuals and environments will resemble multiple RIASEC types and usually result in more difficulty in career choices due to the variability in interests and the wide range in choices (Nauta, 2013, Fouad & Kantamneni, 2010). Additionally, Holland posited that highly differentiated environments would draw differentiated individuals, which would result in greater congruence and satisfaction (Nauta, 2013).

Identity

Identity relates to the clarity and consistency of an individual, or an environment, in formulating vocational goals and maintaining vocational interests over time (Nauta, 2013; Fouad & Kantamneni, 2010). Vocational environments that have set and standard goals that are consistent over time, for example a hospital where medical professionals are required to work, will have a more solidified identity and therefore draw individuals of likeminded interests (Nauta, 2013). Individuals with strong identities will also be more consistent, over time, in their

interests; therefore they will make clearer vocational decisions that will result in higher degrees of satisfaction (Nauta, 2013; Fouad & Kantamneni, 2010). Identity is related to differentiation, and also consistency, and while the construct can be seen as redundant, it is useful in the application of Holland's theory because it is a strong characteristic of self-identification and required vocational goal-setting which can be explored in practice (Nauta, 2013; Holland, 1997).

Congruence

Unarguably the most important and central of the Holland constructs is congruence, the concept that personality types are better suited to vocational environmental types, and that the match that occurs when individuals of certain typologies find themselves in environments of certain typologies results in work satisfaction, tenure, fulfillment and success (Nauta, 2013; Fouad & Kantamneni, 2010; Holland 1997). Congruence overarches the other constructs in Holland's theory, as they all contribute to congruence, and the ultimate goal in helping individuals make career choices is to foster and increase congruence in order to predict work satisfaction (Nauta, 2013; Fouad & Kantamneni, 2010; Holland 1997). Congruence is most simply understood as the degree to which a person fits within the environment, and specifically within Holland's theory, to what degree does a person's Holland code match the Holland code of the environment. For example, an individual who has a Holland code of ISA would be highly congruent in an environment that is also ISA, less so than in an environment that is RSA, and worst yet in an environment that is ERC. Congruence has been operationalized and measured in multiple ways including using only the first letter of the Holland code, to multiple combinations of the person-environment code match (Nauta, 2013). For the purposes of this study the C-index was utilized.

The C-index developed by Brown and Gore (1994) tends to be widely used in research, it compares the order of the three letters in the Holland code and calculates their congruence using the following formula C = 3 (Xi) + 2 (Xi) + 1 (Xi). The calculation of this equation is further discussed in chapter 3 where the use of the C-index is explained for this study. The intention of the development of the C-index was threefold. They intended to discriminate numerically between individuals who had similar interests, provide further evidence of incongruence in individuals whose codes were similar but in different orders, and account for the proximity of personality types on the Holland hexagon (Brown & Gore, 1994). What this means is that, numerically, the differences between scores calculated with the C-index are meaningful because they utilize the positions of interests domains on the Holland hexagon in creating a continuous variable used to measure the differences between one score and another.

Research has shown that these constructs can be both a challenge and strength when conducting research that examines career interests and choice in samples that demonstrate varying levels of career choice, work experience, interest exploration and development and construct associations (Fouad & Kantamneni, 2010). For example, conducting research on samples that are employed or not employed can raise issues with differentiation, as differentiation will be present in individuals who are employed and drawn towards differentiated occupations, while unemployed samples remain somewhat generalized in their interests (Fouad, Harmon & Borgen, 1997).

Additionally, there are gaps in research as to how consistency and differentiation manifest in multicultural samples (Fouad & Mohler, 2004). Cason & Mowsesian, for example, explored the correlations between work satisfaction and consistency and differentiation in a sample of 139 employed adults who had completed Strong Interest Inventories (1993). They found small

correlations of -0.3 to .12 when measuring the moderation effect of the Holland constructs on congruence and job satisfaction. Leong, Austin, Sekaran, & Komarraju (1998) used regression analysis to examine Holland's constructs with a sample of 172 people from India to find cross-cultural validation for Holland and to predict work satisfaction. They found small correlations for the constructs, -.18 to .04, and were unable to significantly predict work satisfaction in their sample.

Fouad, Harmon, and Borgen used a multi-racial sample of African Americans (805), Asian Americans (795), Latinos (686) and American Indians (159) but left out the American Indians from their analysis due to the small sample size (1997). They utilized participants' responses on the Strong Interest Inventory to compare responses to 50 occupational groups and examine the structural relationship of the Holland hexagon with multi-racial groups (Fouad, Harmon & Borgen, 1997). Of the two analyses they conducted, the first was to determine if the circular nature of the Holland hexagon would hold true and they found that after testing randomized placement of the Holland typologies, there was significant correlations with the circular model to support the use of the hexagon with all the groups (Fouad, Harmon & Borgen, 1997). The second analysis used nonmetric multidimensional scaling to represent the spatial proximity of the variables on the hexagon and found that, on a two dimensional plane, white males maintained the original structure of the Holland hexagon but that females and racial groups shifted towards (and away from) different points on the hexagon in favor of realistic investigative social and enterprising themes for African Americans and women, and conventional enterprising and social themes for Asian American men (Fouad, Harmon & Borgen, 1997). The authors provided the stress When comparing these findings with the equilateral hexagon, the

authors found that the data did not fit, supporting the potential inadequacy of the hexagon to represent racial and gender differences in vocational interests (Fouad, Harmon & Borgen, 1997).

Fouad and Mohler used a multi-racial sample of 750 individuals per racial group (African American, Latino, Caucasian, and Asian and American Indian) that was randomly selected from a large national sample of participants in the Strong Interest Inventory (2004). They examined correlations to the Holland model, using a special program that would provide them with a correspondence index (min. -1 to max 1), to test the circular nature of the model and found a range of .57 for Native American men to .94 for the Asian American women with a mean correspondence index of .77; all were significant and validated the circular pattern of the Holland theory in their sample (Fouad & Mohler, 2004). A Manova was conducted, and large effect sizes were found for differences between males and females (.34) and small effect sizes were found for differences between racial groups (.03)(Fouad & Mohler, 2004). However, these studies have used racial categories as the demographic marker for between group differences and have not explored ethnic identity, using contemporary measures for ethnic identity, or examining within group differences.

Latino/a Career Development and Traditionality

Vocational psychology, career theory, and occupational interventions with Latino populations remains an area where research is limited in scope, and where researchers have been challenged in identifying tools to adequately explore within and between group differences with Latinos (Gushue, 2006, Fouad, 1995; Fouad, 1994; Fouad & Arbona, 1994; Arbona, 1990). Career theory that is normed on white samples, and utilizes individualistic social values that may not be salient in the Latino community, has presented difficulties in vocational intervention work and research (Fouad, 1995; Arbona, 1990). Additionally, Latinos represent a wide variety of

cultures, languages, customs, countries of origin and even racial identity within their ethnic group (Fouad, 1995). The variance in population demographic variables makes generalizability a challenge, introduces differences between groups that can confound research when Latinos are grouped into a singular category, and can be quite meaningful in Latino specific research when considering differences in ethnic identity development for different Latino groups. For example, Mexican Americans have a history of immigration and naturalization which informs their perspective in American society while Puerto Ricans are born American citizens (even those born in Puerto Rico) which distances their history and experience in the United States from the immigration experience. Finally, multiple factors play a role in Latino career development including race, socio economic status, family influence, education of parents, self-efficacy and ethnic identity formation. However, there are limited empirical studies where researchers have examined Latino perspectives on career development, and utilize the integration of ethnic identity as a construct in vocational research designs (Gushue, 2006, Fouad, 1995; Fouad, 1994; Fouad & Arbona, 1994; Arbona, 1990).

In a study conducted on Latino ethnic identity and career decision-making self-efficacy on outcome expectations, Gushue (2006) performed a path analysis and examined a model to explore the directionality and relationship of ethnic identity on self-efficacy and outcome expectations using social cognitive career theory. Gushue discovered that the paths from ethnic identity to self-efficacy, and from self-efficacy to outcome expectations, were statistically significant and demonstrated good model fit; standardized correlations of .34 and .48 were provided for the paths. The participants in the study were 57% male and 41% female (with a missing = 2%) which prompted a preliminary analysis to explore gender differences and bias, a MANOVA was conducted to compare the variables but was not significant. The sample was also

very diverse in terms of within group differences in Latino ethnic identity, the sample consisted of self-identified Dominicans (44%), Puerto Ricans (22%), Mexicans (8%), Central Americans (7%), South Americans (6%), Cubans (2%), and "Latino," no nationality specified (10%) (missing = 2%) (Gushue, 2006). A MANOVA was conducted to explore potential acculturation differences in the sample, and was not found to be significant (Gushue, 2006).

Important information regarding the effect of ethnic identity was gleaned from this study. However, Gushue used language preferences as a proxy for acculturation, and this may not have been indicative of acculturation activities or behaviors exemplified by the sample due to the necessity of English at their level of education. Additionally, the MEIM was used for the purposes of ethnic identity development, and may not have been the most appropriate measure of ethnic identity development in a highly ethnically diverse Latino group. The MEIM has been critiqued as a familiar and heavily used tool that may not be as sensitive to the unique ethnic identity development criteria of Latinos (Coakley, 2007).

Traditionality is often used in vocational research to explore occupations where individuals traditionally excel in terms of tenure and representativeness (Weisgram, Dinella & Fulcher, 2011). In some vocational research with Latinos, traditionality is conceptualized as both the representativeness of an occupation in the Latino population, and the expectations (e.g. family, gender) of that occupation within Latino culture (Flores, Navarro, Smith & Ploszaj, 2006; Lease, 2003; Flores & O'Brien, 2002). However, traditionality does not have a clear definition in the literature and there is no consensus on what dimensions of traditionality contribute to the construct. The traditional classification can be seen as stereotyping, thus culturally expected behaviors, interests and beliefs are useful in understanding traditionality as a vocational construct.

In two different studies on Latino career development, Flores et. al. (2006) and Flores & O'Brien (2002) examined traditional career choices in samples of Mexican American males (n = 302) and females (n = 364) respectively. Path models were developed using social cognitive career theory to examine how multiple contextual factors influence career choices for Latinos in male dominated or underrepresented, and female dominated or underrepresented fields. The contextual factors that were tested and assessed in the studies were: perceived occupational gender barriers, parental support, acculturation level, non-traditional career self-efficacy, same-sex parental educational and occupational traditionality, feminist attitudes, parental support and career aspirations (Flores et. al., 2006; Flores & O'Brien, 2002). They found that acculturation level and parental support were significantly related to predicting non-traditional career self-efficacy in both studies, the ARSMA was used in assessing acculturation level, which is a widely used measure of acculturation in Mexican Americans (Flores et. al., 2006; Flores & O'Brien, 2002). Non-traditional career self-efficacy was significantly related to nontraditional career interests as they hypothesized, and while coefficients were different in the two studies, the relationships were similar (Flores et. al., 2006; Flores & O'Brien, 2002). Finally, same-sex parental non-traditionality in occupation was also significant in predicting non-traditional career interests for both males and females (Flores et. al., 2006; Flores & O'Brien, 2002).

Unfortunately, traditionality has not been adequately defined in the literature. Definitions are unclear and examination of traditional roles and occupations rely on stereotyping and assessing percentages (proportion of representations) and not necessarily cultural variables that play a role such as meaningfulness or value. Additionally, most researchers examine percentages and representativeness in the population to determine culturally appropriate expectations for cultural groups. This means that traditionality markers are simply an issue of numbers, and do

not account for cultural and contextual variables that play a role in traditional choices. Furthermore, traditionality is most commonly explored in vocational research when examining difference in male and female occupational attainment and self-efficacy beliefs (Flores et. al., 2006; Lease, 2003; Flores & O'Brien, 2002), and not in cross-cultural or withing groups traditional occupation choice research. Finally, these studies utilized family variables that are consistent with the theory found in the family influence scale, and it would be interesting to replicate these studies with that existing tool.

Sociology and Prestige

The study of prestige is situated within the discipline of sociology. As such, sociologists have been instrumental in the development and understanding of prestige hierarchies and ranking scales that are used by multiple disciplines to examine the stratification of occupations and the nature of inequality in society. Prestige in an occupation has been defined by sociologists in myriad ways including the respect and social standing of an occupation, the skills and ability needed to conduct the tasks of the occupation, the social standing of incumbents, and socioeconomic status of an occupation (Nakao & Treas, 1992). Prestige has been eaxmined in the vocational psychology literature as an individual's assessment of the ability required to perform activities required of an occupation, and the amount of effort to be successful in that occupation (Tracey & Sodano, 2013). However, these two constructs were not sufficient for Sodano and Tracey to fully define prestige in a study where they attempted to clarify the meaning of prestige in activity preference and the differentiation of prestige in sex-typical activities (2008).

Sodano and Tracey recruited two samples of college students from career development courses at universities in the southwest that consisted of 124 students for the first sample and 267

students in the second sample with demographic features of 59% White, 6% African American, 2% Asian American, 21% Latino, 6% Native American, and 2% Other for the first and 70% White, 7% African American, 5% Asian American, 15% Latino, and 3% Native American for the second. A critique would be that unfortunately the demographic features, overwhelmingly white, are indicative of prestige research throughout the literature. Sodano and Tracey had participants rate the activities scale from the Personal Globe Inventory (Tracey, 2002) using a Likert scale to discern prestige involved, effort involved, skill involved, competition involved in the activity, extent to which it was associated with girls and women, and the extent to which it was associated with boys and men. They found that singularly no construct was particularly good at capturing prestige, but the combination of both effort and skill in defining activities was able to capture prestige scores (Tracey & Sodano, 2013; Sodano & Tracey, 2008). Additionally, sociologists have considered social economic status, social understanding of occupations, information available, media exposure of occupations, utility in society, etc. as indicators of prestige. Therefore, prestige remains a controversial topic due to the fact that measures approach prestige from different perspectives and prestige is ultimately "in the eye of the beholder" (Tracey & Sodano, 2013).

In order to provide a rationale for the use of one prestige scale versus another, the historical development of prestige scales in sociology is briefly explored here. In 1964 Hodge Siegel and Rossi examined the National Opinion Research Center (NORC) studies of occupational prestige to determine the stability of prestige rankings over time. The prestige hierarchies examined in their work were indicative of characteristics of occupations such as: the division of labor, the amount of power and influence in occupational activities, characteristics of incumbents, and resources available to incumbents (Hodge, Siegel, & Rossi, 1964).

This study was a replication of a 1947 North-Hatt NORC study, as cited in Hodge Siegel and Rossi, where respondents from a small national sample were asked to rate the social standing of an occupation using a Likert scale (excellent, good, average, somewhat below average, poor and don't know). Based on the Likert evaluation of an occupation, with an arbitrary value (100, 80, 60, 40 and 20 respectively) placed on the range of the Likert scale, a score for each occupation was calculated based on the aggregate of respondents' scores (Hodge, Siegel, & Rossi, 1964). The sample consisted of 651 interviews with a national sample of adults and youths; the adult/youth dyads replicated the father/son dyads of the 1947 study, although the demographic information for the sample was not included (Hodge, Siegel, & Rossi, 1964). The prestige scores that evolved from the original analysis, in 1947 and the replication in 1963 (the time in which the study was completed), were used to examine changes in prestige over time.

The prestige rankings themselves served as the foundation for future work on prestige, in addition to providing important contextual information on how people determine prestige rankings. Hodge, Siegel, & Rossi observed that respondents in 1963 were less knowledgeable about the occupational functions of a specific vocation (i.e. nuclear physicist) but were more willing to provide a ranking (instead of choosing the "don't know" option) than in the 1947 study. Thus, in the 1963 study those occupations for which individuals believed to have more information on, compared to 1947, had higher prestige scores. The authors attribute this to increased publicity about certain types of jobs; for example, nuclear physicists and their work were described and discussed in the media during the Cold War, and the increased publicity of this occupation resulted in greater information availability for respondents (Hodge, Siegel, & Rossi, 1964). Respondents showed more willingness to appropriate qualities to those occupations, with which they had greater contemporary awareness and information, with positive

qualities that may be erroneous but result in higher prestige (Hodge, Siegel, & Rossi, 1964). For example, a nuclear physicist occupation was very important during the Cold War era and thus seen as more impactful and integral to the survival of society at that time. This literature informed Siegel's dissertation where he developed a prestige scale by combining the NORC data from the 1960's, performed a regression analysis predicting occupational ratings of prestige, and aggregated occupational titles into a single list with associated prestige scores that reflected the occupations lists provided by the Census Bureau (Siegel, 1971).

The 1947 North-Hatt NORC study was also the genesis of the socioeconomic index (SEI), a prestige scale developed by Duncan in 1961. The Duncan scale used education and income levels for male occupational incumbents from census information from the 1950's to predict prestige scores (Duncan, 1961). The educational level and income level served as the independent variable, and were used to predict the prestige report of participants (e.g. excellent, good, average, below average, poor), as opposed to the direct prestige score, to thereby amplify the range between middle status occupations (Duncan, 1961). After performing regression and multiple regression analysis on prestige scores accounted for by education and income, Duncan found that the intercorrelation between prestige ranking, education and income is high, as well as the partial correlations with each predictor (Duncan, 1961). The high statistical significance after combining the two predictors of education and income in a multiple regression accounted for five-sixths of the variance in occupational prestige (Duncan, 1961). Duncan commented that, given the disparities in the labor force in the 1950's when occupational categories were being developed for the census, that the original NORC studies were biased in terms of asking about male occupational attainment and rankings (1961). The study was therefore unable to parcel the effects of male dominant occupations being ranked more highly, and occupations with female

associations and terminology (e.g. seamstress) being ranked more low. Additionally, demographic information including ethnicity and/or race regarding the sample was not provided.

The Duncan SEI, as well as an international prestige scale developed by Treiman, has gone on to be widely used in the study of occupational status (Nakao & Treas, 1992). The Treiman scale is not examined here because it was normed on international populations, and sociologists contend that prestige rankings are reflective of societal expectations and evaluations (Featherman & Hauser, 1976). Therefore, the international scale should not be used in examining U.S. samples. It is quite popular with cross cultural research, and further examines socio-economic attainment, social mobility, and international comparisons of prestige.

The original prestige scale created by Siegel was updated using data from the 1970's by Featherman and Hauser while these authors took into consideration socio-economic constructs like social mobility and examined the socio-economic index measure by Duncan that was done in 1961. They also examined an international prestige scale, normed on an Australian sample, by Treiman from 1977 (it was in press at the time of these authors' publication). It is important to note that socio-economic status and attainment were important concepts for Hauser and Featherman because they hypothesized that prestige was simply an "error-prone" socio-economic ranking (Featherman & Hauser, 1976).

Therefore, taking into consideration socio-economic attainment as a key component of occupational rankings allowed them to transform the data on the Siegel, the Duncan, and the Treiman scales to make comparisons in correlations to see which type of scale, pure prestige or socio-economic, would account for more of the variance in prestige rankings. It is because of this analysis that Featherman and Hauser concluded that the Duncan scale is actually a prestige scale predicted by socio-economic variables (Featherman & Hauser, 1976). The data

transformation included turning raw scores from the original scales, into percentage scores that would reflect 1970's census classifications of occupations, produce a mean of 50 in the scores, and cause the differentiation between socio-economic scores and prestige scores to be based on the ranking properties of the scale (Featherman & Hauser, 1976). They found that by examining the data in this way, more of the variance in occupational attainment is explained by socio-economic versus prestige units of measurement. The R2 values for the structural equations they used were lower when occupational regressions were done using percentiles, and these lower scores were reflected in prestige analysis whereas socio-economic factors produced larger R2 values and accounted for more variance in their models.

During the 1970s and 1980s, the time that Featherman and Hauser were working on their examination of existing prestige scales, the US census bureau made changes to their occupational codes that included the addition of more detailed occupational titles, shifts in the occupational clusters and groups, and expansions of existing occupational codes such that they would include more variance in occupational responsibilities (Stevens & Hoisington, 1987). These changes in the census codes changed the landscape of the occupational codes used by Featherman and Hauser, as many of the same codes no longer existed or changed. In their study, Stevens and Hoisington estimated current prestige rankings by calculating the sum of the prestige ratings in the 1971 Seigel scale and multiplying it by the proportion of workers in the matching 1980s category, while estimating for missing/new codes (Stevens & Hoisington). This transformation of census titles and prestige rankings makes Stevens and Hoisington's prestige scale one of the most comprehensive and contemporary (Walker & Tracey, 2012). Additionally, Stevens and Hoisington were motivated to address prestige rankings in response to social changes including increases in women in the workforce, a small decline in occupational sex segregation, and

pervasive low prestige associations with female dominated fields and high prestige association with male dominated fields (1987).

The authors sought to determine if these social changes had resulted in changes of perception of prestige in occupations along sex segregated lines (Stevens & Hoisington, 1987). They found that when occupations were designated as either male or female occupations (90% of workers either male or female), sex neutral occupations (42.7%, +/- 10% of workers are female), female dominated (over 52.7% of workers are female), or male dominated (under 32.7% of workers are female), that prestige rankings favor male dominant occupation given that 42.7% of the workforce in the United States (at the time) was female (Stevens & Hoisington, 1987). While many male dominated occupations were seen as low prestige (e.g. truck drivers, carpenters) and many female dominated occupations were seen as high prestige (e.g. secretaries, registered nurses) when given the percentage of male and female workers in the labor force, representativeness in occupations, and mean scores of prestige, male dominated occupations come out ahead (Stevens & Hoisington, 1987). However, because a large number of men are employed in male low prestige occupations, and a high number of women are employed in female high prestige occupations, overall prestige distribution tends to be quite similar in males and females. Stevens and Hoisington used these findings to argue that, while there are differences in male and female occupational attainment, prestige characteristics between male and female occupations are similar (1987).

These prestige measures have been used in vocational psychology to examine the social desirability construct as it pertains to vocational issues such as occupational choice, tenure, success and career development (Tracey & Sodano, 2013). Particularly, vocational researchers have posited that prestige is related to racial, cultural and group perceptions of opportunity,

expectations of work, role appropriate work, and between group differences in the world of work (Tracy & Sodano, 2013). However, prestige as a construct has not been widely identified in vocational literature despite its underpinning in theories like Holland and Gottfredson (Tracey & Sodano, 2013). Contemporary vocational researchers have begun to expand in this area.

For example, Walker and Tracey conducted a study where they examined prestige rankings of African American (n=124) samples and White (n=174) sample with the established prestige rankings from the Stevens and Hoisington (1987) measure of prestige (2012). They had participants rank 36 occupations, representing high medium and low occupational prestige, and then correlated the scores of the groups with Stevens and Hoisington's scores to examine the differences. They found significance in the relationship between the sample groups' occupational rankings of prestige with the established prestige rankings, and found that after conducting a t-test the White sample was more closely correlated with the established prestige rankings than the African American sample (Walker & Tracey, 2012). Furthermore, they examined differences in the prestige rankings of different occupations grouped by Holland code, and found that African Americans and Whites differed on prestige scores in the Realistic, Social, Enterprising and Conventional Holland coded occupations, however, there were no significant differences in Investigative or Conventional occupational prestige rankings (Walker & Tracey, 2012).

Prestige rankings and measurements of occupational prestige have always been an assessment of a vertical dimension of occupation reflected in some social variable like general standing of the occupation, social standing of the incumbents and social desirability (Stevens & Hoisington, 1987; Featherman & Hauser, 1876; Siegel, 1971), and varying occupational criteria like value to society or functional importance (Siegel, 1971). However, social scientists are

unable to reach any consensus as to the multiple variables involved in understanding prestige, prestige measurements varying in what constructs they utilize (i.e.. socio-economic status, educational level, occupational tasks, etc.), and researchers varying in their interpretations of prestige measures and findings based on those measures. Additionally, no prestige rankings take into consideration within group differences in samples, considering the effect of cultural variables in the perceptions of respondents. Walker and Tracey (2012) shed some light on possible differences in perceptions or prestige among multi-ethnic and multi-racial groups given their hypotheses about the value of certain occupations within cultural groups, but they don't present a method in which this is measured aside from previous findings about differences in African American and White occupational attainment and their own conjecture about the reasoning behind motivation for African Americans to enter certain fields.

Cultural Values Scales

Cultural values are an important construct that is integral to the social sciences in investigating differences between racial ethnic groups. The dynamics of cultural values within groups can yield important information about between and within group differences. This is important to examine with Latino/a populations because of the significant heterogeneity between ethnic groups that come from different places like the Caribbean or South America, have different migration histories like being first generation or several generations removed from migration, and demonstrate varying levels of the manner in which a new culture is assimilated and/or indigenous culture is maintained. When discussing assimilation of cultural customs, acculturation and enculturation are important terms that researchers use to determine the behavior that best describes how groups assimilate. Acculturation is used to examine levels of cultural assimilation when members of ethnic groups come into contact with different customs

and cultures, like in the case with immigrants who encounter the culture of the new country, and choose to participate in that culture and/or maintain their indigenous culture (Segall, Dasen, Berry, & Poortinga, 1999). Enculturation is similar in that it examines cultural maintenance, but occurs when individuals socialize into their indigenous culture, which may be early in life or later in life as may be the case with the children or grandchildren or immigrants (Organista, Marin & Chun, 2010). These two terms give us lenses to examine how groups and individuals maintain their cultural values when proximal or distal to their cultural roots.

Many measures of cultural assimilation, when working with groups in the United States, examine how individuals adhere to their indigenous values or the values of U.S. and use a continuum that ranges between these; critically, scholars have commented on this approach being unable to discern biculturalism in individuals since it gives little variability for those that strongly endorse both value systems (Kim, Soliz,, Orellana, & Alamilla, 2009). Kim and Abreu, in a scholarly review from 2001, examined 33 measures of acculturation and cultural values which included the very popular and widely used ARSMA – II (Acculturation Rating Scale for Mexican Americans - II), and found issues with these scales in terms of their inability to measure values on multiple continua, to measure biculturalism, in measuring behaviors only, and to isolate values in their measurement (Kim, Soliz,, Orellana, & Alamilla, 2009). Scholars have commented that examining values in particular, and not just focusing on behavior, can yield important information about cultural assimilation because: values provide a more complex understanding of what occurs in groups when they assimilate, values reflect worldview, behavioral changes occur more quickly in response to survival needs, such as economic survival, while values may remain unchanged or change at a much slower pace, and values have psychological influences such as problem etiology, emotional expression, and help-seeking

behaviors (Kim, Soliz,, Orellana, & Alamilla, 2009). Therefore, a critical ingredient in examining cultural assimilation is in examining cultural values and adherence to cultural values.

Kim, Soliz,, Orellana, & Alamilla (2009) developed the Latino/a Values Scale (LVS) in response to the challenges associated with other measures of cultural values with Latino/a populations, specifically; to isolate cultural values in their measurement without mixing items that involve other dimensions of acculturation such as behavior, to expand the continuum of measurement of acculturation to include enculturation and be useful and representative of populations distal from migration, and improve the complexity in which cultural values are examined. They accomplished their values scale development by engaging in three separate studies that included: the development of the items on the scale and initial reliability and validity examination, a confirmatory factor analysis and further reliability and validity testing, and a test-retest reliability study.

In the first study they utilized a sample of 181 university college students from a large West Coast institution; the sample included 135 females and 46 males. The age range for participants was between 18 and 29 years, with a mean age of 18.6, which is reflective of the 68.5% (124 students) of the sample that were first-years. The authors stated that 147 of the students identified as Latino/a and 34 of the students identified as European American, of the 147 Latino/a students 138 identified as full Latino/a and 9 identified as multiracial with Latino/a ancestry. The ethnic groups for the Latino/a portion of the sample were as follows: Mexican or Chicano/a 80.3% (n = 118), El Salvadoran 6.1% (n = 9), Guatemalan 1.4% (n = 2), Chilean 0.7% (n = 1), Ecuadorian 0.7% (n = 1), Honduran 0.7% (n = 1), 1 Peruvian 0.7% (n = 1), Uruguayan 0.7% (n = 1), Other 1.4% (n = 2), and 2 did not specify their ethnicity although they identified as Latino/a. This sample was then administered a questionnaire of 120 items reflecting 12 Latino/a

values dimensions that had been identified in preliminary item development using literature review of Latino/a cultural values, such as familismo, with 10 items per dimension (Kim et. al. 2009). This questionnaire was the basis of the study; however, the ARSMA-II was also utilized to assess behavioral components of acculturation and enculturation as previously discussed, and the Rosenberg Self-Esteem Scale was used to test feelings about self for validity testing (Kim et. al. 2009).

A t-test was conducted on each of the 120 preliminary items using European Americans (n = 32) and the first-generation Latino/a participants in the sample (n = 29) as the comparison groups, with alpha held at .05, to yield 35 items strongly endorsed by the Latino/a respondents; these 35 items were named the Latino/a Values Scale (LVS) (Kim et. al. 2009). The 35 items were subjected to principle component analyzation using verimax rotation and eigenvalues greater than 1 from the results from all 147 Latino/a participants; the initial yield of 10 components was further tailored by identifying components with at least three items that loaded at least .40 and that could be interpretable (Kim et. al. 2009). This procedure yielded 4 components which accounted for the following variances: 10 items for 21.10%, 6 items for 8.56%, 5 items for 6.44%, and 3 items for 4.50%, which accounted for 21.10%, 8.56%, 6.44%, and 4.50%. These items were aggregated into subscales labeled Cultural Pride (10 items), Simpatia (6 items), Familismo (5 items) and Espiritismo (3 items). Internal reliability estimates provided for the subscales were .89 for Cultural Pride, .65 for Simpatia, .75 for Familismo, and .53 for Espiritismo with an overall coefficient alpha of .88 for the LVS (Kim et. al., 2009). Concurrent validity was tested using the subscales of the ARSMA-II, specifically the Latino Orientation Scale (LOS) and the Anglo Orientation Scale (AOS); the authors predicted significant positive correlations with the LOS, and significant negative correlations with the AOS

(Kim et. al., 2009). As predicted, the researchers found positive correlations between the LVS scores and the LOS scores, and negative correlations with the LVS scores and the AOS scores with one exception, the Espiritismo subscale did not yield a significant correlation with the AOS (Kim et. al., 2009).

In the second study, the intent to perform a confirmatory factor analysis and further examine reliability and validity, the authors utilized a sample of 231 Latino/a university college students from two West Coast institutions; the sample included 170 females and 61males. The age range for participants was between 18 and 60 years, with a mean age of 21.9; unlike the previous sample this sample was markedly upperclassmen with 30.7% (71 students) at junior standing and 29.4% (68 students) at senior standing. The authors stated that 12 participants identified as multiracial, and the ethnic breakdown for the rest of the sample was as follows: Mexican or Chicano/a 69.7% (n = 161), multiethnic 6.5% (n = 15), El Salvadoran 6.1% (n = 14), Guatemalan 4.8% (n = 11), Honduran 2.2% (n = 5), Chilean 1.3% (n = 3), Cuban 1.3% (n = 3), Nicaraguan 1.3% (n = 3), Puerto Rican 1.3% (n = 3), Colombian 0.9% (n = 2), Bolivian 0.4% (n = 1), Panamanian 0.4% (n = 1), Peruvian 0.4% (n = 1), Other 2.2% (n = 5), and 3 did not specify their ethnicity. Additionally, the authors reported on generational status of this sample and notably 21.2 % (49 students) were first generation and 68.8% (159 students) were second generation. The sample was administered the Latino/a Values Scale as well as the Self-Construal Scale to measure views about the self in terms of the two subscales used: Independent and Interdependent (Kim et. al., 2009). They were also given the Cultural Identification Scale, specifically the two subscales of Culture-of-Origin and Anglo Identification, in order to measure the sample's identification with and endorsement of Latino/a culture or Anglo culture (Kim et. al., 2009). Finally, they were given the Social Desirability Scale, a scale of 33 true or false items

used to measure a person's need to endorse socially and culturally desirable behaviors such that high scores show a willingness and need for social desirability in behavioral decision making (Crowne & Marlowe, 1960). This was used to test discriminate validity, with the authors hypothesizing that there would not be any significant correlations between the LVS subscales and the Social Desirability Scale due to lack of empirical and theoretical evidence, the procedures done by the authors did not yield any significant correlations as hypothesized (Kim et. al., 2009).

A confirmatory factor analysis was conducted to test the hypothesized model from the first study, the 4 subscales of Cultural Pride, Simpatia, Familismo and Espiritismo were the first-order latent variables in the hypothesized model and the LVS score was the second-order latent variable (Kim et. al., 2009). They found that this model fit the data well, and fit indices fell into the good or fair range, the CFI for the hypothesized model was .98 and the RMSEA .082. The hypothesized model was compared to two competing models; Model A was identical to the hypothesized model with the omission of the second-order latent variable and the first-order variables set to be uncorrelated, the second, Model B, was identical to Model A except that the latent variables were set to be correlated (Kim et. al., 2009). The CFI for Model A was .97 and .98 for Model B, the RMSEA for Model was .093 and .082 for Model B. Given the values of the fit indices, the authors concluded that Model B and the hypothesized model resulted in superior fit indices than Model A (Kim, et. al., 2009). Internal reliability estimates provided for the subscales were .85 for Cultural Pride, .46 for Simpatia, .68 for Familismo, and .50 for Espiritismo with an overall coefficient alpha of .85 for the LVS (Kim et. al., 2009). The authors stated that due to low coefficients for the subscales of Simpatia and Espiritismo in both the first study and this study, they could not recommend further use of these subscales in subsequent

research Kim et, al., 2009). Concurrent validity was tested using bivariate correlation coefficients that were calculated between the LVS scores and the scores of the subscales for Self-Construal Scale and the Cultural Identity Scale. The authors hypothesized positive correlations with the Interdependent and Latino/a subscales, and negative correlations with the Independent and Anglo subscales, and found significant correlations as they hypothesized with the exceptions begin a lack of significance between the Cultural Pride subscale and Interdependent subscale, the LVS scores and the Independent subscale, and between LVS and Familismo scores and the Anglo subscale (Kim et. al., 2009).

In the third study, after having used the first and second study to dismiss the low coefficient subscales, Kim et. al. used the LVS-Cultural Pride and VS-Familismo subscales in a test-retest study to measure effects over a 2 week period (2009). They used a sample of 40 students (29 females and 11 males), with ages ranging from 18 to 22 years, who were a subsample of the sample from the second study (see above). Because of the small size of the sample, the class standing percentages were relatively similar with 30-32.5% for all class standings above first-year (First-year was 7.5%). The authors identified the ethic background information as follows: Mexican or Chicano/a 65.0% (n = 26), multiethnic 12.5% (n = 5), Guatemalan 7.5% (n = 3), Salvadoran 7.5% (n = 3), Bolivian 2.5% (n = 1), Cuban 2.5% (n = 1), and Other 2.5% (n = 1). Additionally, the authors reported 72.5% of the sample (29 students) were second-generation with 25% being first-generation (10 students) and one third-generation student. The sample was administered the same questionnaire as in the second study, and the second administration 2 weeks later only involved the 35-item LVS.

The data from the second study, also the first administration for the third study, yielded the following descriptive statistics: Latino/a Values Scale, M = 2.77 (SD = 0.36); LVS–Cultural

Pride Subscale, M = 3.04 (SD = 0.51); and LVS–Familismo Subscale, M = 2.81 (SD = 0.51) (Kim et. al., 2009). The second administration, two weeks later, yeidled the following descriptive statistics: Latino/a Values Scale, M = 2.74 (SD = 0.32); LVS–Cultural Pride Subscale, M = 3.02 (SD = 0.50); and LVS–Familismo Subscale, M = 2.88 (SD = 0.44). Coefficient alphas for internal consistency were .89 for the LVS, .88 for LVS-Cultural Pride, and .61for LVS-Familismo at Time 1; for Time 2 the coefficients were and .88 for LVS, .89 for LVS-Cultural Pride, and .53 for LVS-Familismo; the stability coefficients for the 2-week period were .78 for LVS, .75 for LVS-Cultural Pride, and .75 for LVS–Familismo.

The Latino/a Values Scale successfully isolates values from behaviors in order to measure adherence to values without relying on the expression of behaviors or participation in cultural customs as the device that measures how well values are internalized. This is an important area of progress in measuring Latino/a cultural values because of the differences in experience for individuals who are removed from their root culture by distant migratory histories or who have overlapping customs (i.e. Puerto Ricans) because of Western influences. However, the LVS still encounters many of the same issues that research with Latino/a cultures often encounter, primarily, that Mexican and Mexican American participants tend to dominate samples sizes and contribute a larger proportion of sample data; therefore, many Latino/a measures remain normed on primarily Mexican and Mexican American samples. While the Latino/a Values Scale's development did include a much more diverse ethnic range than is usually encountered in Latino/a research, the percentages of other ethnicities and cultures represented was still markedly low by comparison. Additionally, geographic focus and convenience sampling of Western and Southwestern United States sampling pools continues to provide similar ethnic and migration descriptives in Latino/a research.

For the purposes of this dissertation the Latino/a Values Scale is a strong measure of enculturation and adherence to ethnic values that takes into account individuals' feelings about values and not just behavioral indicators of values adherence. When examining vocational issues this focus on internal values and value adherence, instead of just behaviors, is important because of the proclivity of culturally diverse groups to behave and act in accordance with majority cultural norms in order to survive (as in the case of economic survival: work). It is also important to note the validity of the LVS was tested using the Social Desirability Scale, which is integral in understanding prestige rankings and informs the prestige research discussed earlier in this chapter. The LVS informed the hypotheses of this study by providing scores for Latino/a values that can be used to examine traditionality salience and the influence on occupational choices and prestige rankings.

Family Influence

The influence of the family has always been a very important construct in understanding human development, researchers have been aware of the influence of family on dimensions of identity and socialization, and vocational psychologists have begun to examine family influence on career development (Fouad et. al., 2010; Phinney & Ong, 2007; Whiston & Keller, 2004). This is particularly important when examining vocational issues with racial and ethnic minorities considering that research has shown racial ethnic minorities are more likely to take family expectations and obligations into consideration in their career decision making (Fouad, et. al. 2010). This is most likely a reflection of the collectivistic nature of many racial ethnic minority cultures, and is often at odds with individualistic concepts throughout western vocational research including theory and intervention. Focuses on family influence in vocational research have included examining the ways in which family plays a role in the provision of

information and financial support, structuring expectations values and beliefs, development of occupational interests, support of vocational exploration, and facilitation of career decision making including decisions about school and education (Fouad, Kim, Ghosh, Chang & Figueiredo, 2015; Tate, Caperton, Kaiser, Pruitt, White & Hall, 2015; Tate, Fouad, Marks, Young, Guzman & Williams, 2014; Fouad et. al., 2010; Whiston & Keller, 2004).

Fouad et. al. (2010) developed the family influence scale (FIS) in response to these challenges in assessing career decision making in cultural and ethnic minority populations and to assist with further research and interventions that focus on the family as a major component instead of the individual. The researchers conducted two studies, the first to develop the scale and test the reliability, and the second to refine the items and validate the scale. For the first study they developed a scale of 57 items that grasped 10 primary constructs of family influence on career decision making based on a review of the literature which included: gender expectations, religious expectations, role models, financial support, instrumental support, informational support, emotional support, home–work relationships, family disapproval or resentment, and family resources (Fouad et. al, 2010). They recruited a sample of 205 participants (49.2% male 48.8% female and 4 individuals who did not specify gender) that self-identified as European American (n = 169), African American (n = 13), Latino (n = 6), Asian American (n = 10) and Native American (n = 1) to test the items and conducted an exploratory factor analysis on the result. They found that 4 factors accounted for 51% of the total variance, these factors being informational support (22.7%), emotional support (13.9%), financial support (9.0%), and family expectations (5.4), and they retained the 32 items associated with those 4 factors for the FIS.

In the second study, Fouad et. al. addressed the lack of cultural diversity in the initial sample used in the first study, and tested the validity of the items by testing the FIS in conjunction with five scales that have been used to examine parental relationships and family dynamics in decision making and life satisfaction (e.g. Parental Attachment Questionnaire, Individualism/Collectivism Scale, Career Decision-making Self-Efficacy Scale, Well-Being measure, and Satisfaction with Life Scale) (2010). They recruited a sample of 537 participants (154 men and 368 women and 2 individuals who did not identify gender) that self-identified as European American (n = 390), African American (n = 43), Latino (n = 29), Asian American (n = 46) and Native American (n = 11) and Other (n = 19) and split the sample in half for the purposes of cross validation. In the second study, three factor analyses were performed which identified the same 4 factors, but with a reduction in items to 22 instead of 32, which resulted in a higher account of the variance (roughly 60%). The validation measures correlated with the scales on the FIS, and provided support for construct validity of family influence effects on decision making, and the relationships were as expected (Fouad et. al., 2010). The researchers identified the use of convenience sampling and lack of ethnic diversity in their samples as limitations, and further research has attempted to expand on that limitation by assessing larger culturally diverse samples.

In another study, Tate et. al. conducted a regression analysis to with a sample of underrepresented first generation college students in the McNair program to examine the effect of family influence and self-efficacy in predicting students' decisions about graduate level education (2014). They utilized a diverse sample in the McNair program, a program funded by the US Department of Education designed for helping underrepresented students pursue graduate education. The sample consisted of 170 participants (73.7% female, 25.7% male, and 1

individual identified as transgender) that identified themselves as Hispanic Latino (36%) or Non-Hispanic Latino (64%), and racially as White (37.4%), African American (27.7%), Asian American (3.2%), Pacific Islander (2.6%), Native American (2.6%), and Other (16%). The sample was given a self-efficacy measure, a coping measure for coping with barriers, a measure that indicates intent to attend graduate school, measure for perceptions of barriers, and the FIS (Tate et. al., 2014). The scores from these measures served as the independent variables in a hierarchical regression analysis to predict students' intent to attend graduate school. They found that of the predictors, graduate school self-efficacy (14%) and family influence (8%) accounted for the largest increases in the variance in scores and that the other predictors did not add significantly to the model (Tate et. al., 2014).

The family influence scale is still relatively new and has not been utilized enough in vocational research despite the importance of family influence factors that have been widely identified and studied (Fouad et. al., 2015). While research exploring family influence is varied, there has not been enough to close the gaps in understanding how individualistic westernized career theory can be actualized though a collectivistic lens in ethnic and cultural minority populations where family plays a key role in decision making. Extant career theories are still challenged by assessing the role of the family, and this extends beyond research into practice as well.

Summary

This review of the literature further emphasized the importance of this study. Exploring career development, career decision making, and the contextual factors that play a role in the world of work with ethnic minority populations is important because of the lack of attention paid to this area in research, the limited knowledge we have on factors that affect these groups, and addressing issues of underrepresentation in occupational fields. In addressing congruence in a career, it is possible to increase satisfaction and tenure, and tenure in various occupational areas can address representativeness by facilitating minorities entering and staying in the field. However, we are not able to adequately address issues of congruence without taking into consideration the perceptions that ethnic minorities have towards different occupations, or the affect their identity has on those perceptions. By identifying and exploring the relationships between ethnic identity and prestige, and how prestige, ethnic identity and family influence help predict occupational choices, further knowledge can be gleaned on those perceptions and the role of those factors in occupational choice.

CHAPTER III: METHODS

The purpose of this study was to investigate the influence of factors that can predict career choice for Latinos/as. The study sought to examine how various social-cultural variables such as prestige, cultural pride, and family influences can influence career choices. The study examined traditional career choices and explored how representation of Latinos/as in vocational fields is predicted by cultural variables like: cultural pride, familismo, informational support, family expectations and values, and prestige. The study also examined how cultural variables contribute to career congruence, an integral component of Holland's vocational typologies, by gathering data regarding career choices and assessing career congruence.

Participants' Holland theme code (Holland, 1997; Brown & Gore, 1994), derived from their responses to the O*Net interest profiler, were compared with the Holland theme code of their identified occupation and the congruence was calculated using the C-Index measure. The O*Net was used to create a Qualtrics inventory with the same questions used in the Interest Profiler Short Form which consisted of 60 questions using a Likert scale. The Qualtrics data was analyzed using the manual for the O*Net Interest Profiler (Rounds, Walker, Day, Hubert, Lewis, & Rivkin, 1999).

Participants' prestige rankings of occupations were compared to established prestige rankings from the 1980s (Stevens & Hoisington, 1987), commonly used in occupational prestige research, to examine the correlation of prestige scores and congruence as the dependent variable for the study. A traditionality variable was created for participants' identified occupation by using United States Bureau of Labor Statistics data to determine the percentages of Latinos/as in given occupations and assigned a score to participants based on those percentages (Flores et; al. 2006; Flores & O'Brian, 2002). The cultural variables of cultural pride were assessed using the

corresponding subscale of the Latino/a Values Scale (Kim, Soliz, Orellana & Alamilla, 2009). The family influence variables of informational support, family expectations and values/beliefs were assessed using the corresponding subscales of the Family Influence Scale (Fouad et. al., 2010). These subscales provided continuous variables that were used as predictors in the following analysis. The dependent variables were career traditionality and career congruence; participants' traditionality scores were assigned based on percentages of Latino/a representation in occupational areas and participants' career congruence was calculated using the c-index by Brown and Gore (1994).

Research Questions

The following research questions are investigated:

1. What significant differences are there between men and women in cultural values (cultural pride) and family expectations (informational support, family expectations and family values/beliefs) and their relationship to occupational congruence and prestige?
2. Can individual prestige rankings, cultural pride and familismo, informational support, family expectations and family values/beliefs be used to predict occupational traditionality for Latino/a males and females?
3. Can individual prestige rankings, cultural pride and familismo, informational support, family expectations and family values/beliefs be used to predict occupational congruence for Latino/a males and females?
4. Does prestige mediate the relationship between cultural pride and traditionality for Latino/a males and females?

Hypotheses

The anticipated findings for these research questions are captured in the following hypotheses:

Hypothesis #1: Latinos/as that have higher traditionality scores (are in more traditional occupations) will have higher cultural values scores and family influences scores, which will account for more of the variance in their occupational choices. This explains cultural and familial influences on going into traditional occupations.

Hypothesis #2: Cultural variables such as cultural pride, and family influences such as family expectations, informational support, and values/beliefs, should account for significant variance in career congruence for those with lower congruence scores, showing that something else is accounting for career choice beyond interests.

Hypothesis #3: Prestige (which is social desirability value) will explain more of the variance in predicting occupational congruence or traditionality when using cultural pride as a predictor.

Hypothesis #4: The expectation of males and females within cultural frameworks in the Latino/a community are different, these differences can be seen in differences on cultural values variables which help to explain why cultural influences and family influences have a different effect on males and females.

Procedures

This study utilized Amazon Mechanical Turk (MTurk) for recruitment and sampling. MTurk is a crowdsourcing marketplace that provides individuals and businesses with options for outsourcing processes and tasks that cannot be completed by computers and requires human intelligence, it is a discreet and convenient method for human workers to complete tasks in bulk for a fee. Therefore, MTurk is considered convenience sampling, with all the advantages and

disadvantages normally attributed to convenience sampling (Follmer, Sperling & Suen, 2017). Two Human Intelligence Tasks (HITs) were created on MTurk for this study. HITs are announcements to participants through the service that inform them of the study, invite them to participate, set up criteria for participation and instructions for incentives, and allow them access to the measures once they accept the confidentially release and complete a Captcha, which is a device used online to distinguish robots from humans. The language of the HITs, the content of the participation agreement, and some failsafe questions on the survey, served as multiple filters to assure participation from the target demographic (Latinos/as between the ages of 18-35 with college degrees). MTurk provides an option to those submitting tasks to limit the geographic location of the participants; MTurk workers can be based in the United States or can be recruited from their worldwide pool. Though the worldwide pool is international, roughly 75% of the total workers on MTurk reside within the United States and India (Follmer, Sperling & Suen, 2017). In order to increase the generalizability of the study to American populations, the participant pool was restricted to individuals who reside in the United States, but citizenship was not a requirement. The United States option was selected, and the MTurk program utilized IP addresses of workers on the service to determine if they qualify to participate for the region limitation. The first question on the HIT was the consent form and recruitment letter, it described the purpose of the study, the requirements for participation, contact information for the primary investigators, and the risks and benefits to participants, and the limits of confidentiality. The study would allow participants to remain anonymous, with their MTurk worker IDs only used for remuneration.

All questions on the measures that were included in the survey, including fill in boxes for the demographic questionnaire, were made to require a response (forced response). Therefore,

incomplete surveys were not allowed or recorded, and there was no missing data in the dataset. After fulfilling the requirements of the HIT, MTurk workers are then guided via the website to Qualtrics where they accessed the survey for this study. The study was expected to take between 10 to 20 minutes, though some participants reported taking longer. MTurk workers were compensated $0.50 for completing the survey, which is below average for general MTurk HITS, but slightly above average for social science research HITS. Participants were paid directly through the MTurk platform after completion of the survey, and within three days of submission as per MTurk guidelines, pending authorization from this researcher. No direct exchange occurred with the researcher of this study and participants, the researcher paid Amazon directly who disbursed compensation.

Participants

The sample size goal was 300 participants; between males and females the goal was to recruit at least 150 males and 150 females. G*Power was conducted to determine the best sample size for the regression analyses while maintaining a *p* value of 0.05, a beta of .95 and an effect size of .25, to ensure that 300 meets the requirements. The original sample size collected from MTurk was 2022 total participants, 966 male and 1056 female. However, not all of those participants data would make it through the data cleaning process to be used in the analysis. The final sample size was 385, 184 males and 201 females. Meeting the requirement for power based on the G*Power calculation. Participants in this study were gathered from multiple geographic locations around the United States including the East Coast, West Coast, Midwest and Southwest of the United States. This is determined first by the provisions set by this researcher on the HITs, through the service, which barred workers associated with foreign IP addresses and worker information to participate in or even have access to the HIT; secondly, by examining the IP

address locations of the respondents, information that is not maintained in the data for this study but was accessible by this researcher from MTurk when collecting the data. This allowed the sample to be representative and improve external validity (Follmer, Sperling & Suen, 2017). The sample consisted exclusively of participants who identify as Latinos/as. Participants were prompted by the Human Intelligence Task (HIT) on MTurk that the survey was for Latinos/as and that only those who identify as such would receive incentives; within the survey in the demographic questionnaire participants were forced to respond with a self-identified ethnic identity (e.g. Puerto Rican, Mexican). Participants who did not identify as Latino/a were not allowed to complete the survey and their data was not recorded for the study. While some research has shown that the majority of MTurk workers identify as white, research examining the racial ethnic characteristics of MTurk has shown a greater percentage of non-white participants than comparable and common university convenience sampling (Follmer, Sperling & Suen, 2017). The sample consisted of males and females, and individuals who wished to identify outside of the gender binary on the demographic survey were given the opportunity to do so. A male HIT and a female HIT were designed for MTurk in order to collect the dataset for males and females separately, participants who did not identify within the binary, or who took the wrong survey for their gender identity, were not allowed to complete the survey and their data was not recorded. The sample consisted exclusively of individuals between the ages of 18 and 35. Within the survey in the demographic questionnaire participants were forced to respond by selecting one of several age categories between the ages of 18-35, as well as a selection for 35 and over. Participants who self-identified as 35 and over by selecting this option were not allowed to complete the survey and their data was not recorded.

Measures

1. Demographic Questionnaire

   Participants completed a set of demographic questions which provided data for use in the study. The data collected from the demographic questionnaire was used to access participants' current careers and assign a Holland code, which were used for congruence comparisons; and self-identified ethnicity and age in order to control for the group of interest in the study and produce findings in order to grasp within group differences. Data gathered from the questionnaire included: current occupation, age, gender, post-secondary education level, post-secondary academic concentration, and racial/ethnic identification. Occupational choice and academic major were be determined by a fill in box. Level of education, gender, ethnic identity and age group were selected from a list of options.

2. O*Net Interest Profiler

   Participants used the O*Net Interest Profiler, an inventory developed for the United States Department of Labor to replace outdated inventories of career interest, utilizing Holland's RIASEC model to assess individual vocational interests (Lewis & Rivkin,1999). The 60-item O*Net Interest Profiler consists of 10-items per RIASEC model typology, with each item describing a related occupational activity that effectively grasps the concept of each RIASEC type (Rounds, Walker, Day, Hubert, Lewis, & Rivkin, 1999). The assessment utilizes a Likert scale in order for respondents to rank, from 1 to 5, their endorsement of occupational activities based on how much they like (5) to how much they dislike (1) a related activity (Rounds et. al., 1999). A participants' score is thus the sum of scores related to each Holland typology, with the highest scores being assigned, in rank from highest to lowest, and the top three scores resulting in a Holland Code for the respondent (Rounds, et.

al. 1999). The O*NET Interest Profiler produces high internal consistency estimates across all the corresponding RIASEC scales; estimates range from .93 to .96 (Rounds et. al., 1999). Intercorrelations of the scales were done to test validity (Rounds et. al., 1999)

3. Latino/a Values Scale: Subscales

The Latino/a Values Scale was designed to assess an individual's adherence to Latino/a cultural values in multiple cultural domains. It was used to gather data about participants' endorsement of Latino/a cultural values. The initial creation of the scale had the researchers analyzing 120 items, with 10 items per dimension in the Latino/a cultural values dimensions of cariño (affection), collectivism and interdependence, confianza (trust), cultural pride, dignidad (dignity), espiritismo (spiritualism) and fatalismo (fatalism), familismo (familismo), hembrismo and marianismo (female gender role), machismo (male gender role), personalismo (personalism), respeto (respect), and simpatía (congeniality) (Kim et. al., 2009). The initial study, after exploratory factor analysis was conducted, yielded 35 items that loaded onto 4 factors: cultural pride, simpatia, familismo and espiritismo. A second study was conducted, with confirmatory factor analysis used, to finalize the current measure which is comprised of 24 items for each of the following subscales: cultural pride which has 10 items, simpatia which has 6 items, familismo which has 5 items, and espiritsmo which has 3 items (Kim et. al., 2009). The following reliability coefficients were presented from a sample of 231 Latino/a college students: cultural pride was .85, simpatia was .46, familismo is .68 and espiritismo is .50 (Kim et. al., 2009). In order to assess validity, the subscales of cultural pride and familismo on the Latino/a Values Scale were correlated with a self-construal scale interdependent and independent (correlations were .21 with and .01 respectively for cultural pride and .04 and .02 respectively for familismo at $p < .05$) a cultural

identification scale Latino/a and Anglo (correlations were .31 and -.10 respectively for cultural pride at $p < .001$ and .32 and -.22 respectively for familismo at $p < .01$ and $p < .001$ respectively) and a social desirability scale with correlations of .07 and -.06 for cultural pride and familismo respectively at $p < .05$ (Kim et. al., 2009).

For the purposes of this study the subscales of cultural pride and familismo were used. The cultural pride subscale was used because cultural pride asks questions regarding one's bond, loyalty and preservation of cultural heritage and traditions. In examining career choices, maintenance of cultural traditions may play a role in decisions that are traditional and/or in congruence/incongruence with interests. The cultural pride subscale contains 10 items, all items were used and a sum was calculated and reported. The familismo subscale was used because it asks questions that consider how decisions affect the family and the significance of traditional gendered roles in the family unit. The familismo subscale constains 5 items, all items were used and a sum was calculated and reported. Simpatia and espiritismo subscales were not used because they assess constructs of spiritualism and interpersonal relationships.

4. Family Influence Scale: Subscales

The Family Influence Scale (FIS) was included to examine the impact of family on career decisions. This measure remains an important tool to examine how family, regardless of specific family structure, and within the context of culture, provide messages and influence decision making for individuals when it comes to career (Fouad et. al., 2010). The authors reviewed past literature on family influences that examined 10 themes of family influence: gender expectations, religious expectations, financial support, instrumental support, informational support, emotional support, role models, home–work relationships, family

disapproval, resentment and resources (Fouad et. al., 2010). That review contributed to the creation of the 57 initial items based on the 5 domains of informational support, emotional support, financial support, family expectations and role models (Fouad et. al., 2010). These 5 factors were tested using an exploratory factor analysis which resulted in a 4 factor model that demonstrated goodness of fit (Fouad, et. al., 2010). The remaining 4 factors: informational support, emotional support, financial support, and family expectations were retained, comprised of 32 items including: 10 for informational support, 8 for emotional Support, 5 for financial support, and 9 for family expectation (Fouad et. al., 2010). The reliabilities for these four factors for a sample of 537 Midwestern university and community college students of diverse backgrounds were provided by the authors and are as follows: 0.79 for information support, 0.90 for emotional support, 0.79 for financial support, and 0.85 for family expectations (Fouad et. al., 2010). In the follow-up study, the convergent validity of the scale items was tested with the 537 culturally diverse university student sample for the purpose of addressing the relationship between the scales and constructs such as individualism, collectivism, and parental attachment and well-being (Fouad et. al., 2010). The diverse sample used in the second study was split randomly and two confirmatory factor analyses were conducted to confirm the 4 factors previously determined in the EFA performed in the first study (Fouad et. al., 2010). The FIS items were also tested for convergent validity in the second study and an analysis of variance was conducted on the 32 item scales with the constructs of individualism, collectivism, and parental attachment and well-being and resulted in a final 22 item scale (Fouad et al., 2010). The ANOVA conducted on the scale demonstrated convergent validity (Fouad et al., 2010). The resulting 22 items that remained in the measure are distributed among the subscales in the following ways: 8

items or informational support, 6 items for family expectations, 4 items for financial support and 3 items for values/beliefs (Fouad et al., 2010).

For the purposes of this study the subscales of the FIS were used independently to produce the independent variables used in the predictive models that were analyzed in the study. Specifically, the informational support subscale was used to measure the manner in which participants received information from their families about careers, making career choices and how to obtain work. This subscale includes items that ask about family guidance, education and training about work. The informational support subscale contains 8 items, all items were used and a sum was calculated and reported. The family expectation subscale was used to measure participants' feelings about their family expectations about work, and how career choices affect their family. The family expectations subscale includes items that ask about family approval and expectations about work and cultural and gender expectations. The family expectation scale contains 6 items, all items were used and a sum calculated and reported. The values/belief subscale was used to measure how perceptions of family values influence career choices. The values/belief subscale includes items that ask about career choices matching family values. The values/beliefs subscale contains 3 items, all items were used and a sum calculated and reported. The financial support subscale was used in this study because that subscale is used to measure how families provide financial support while career decisions are being made, a sum was calculated and reported.

5. Occupational Prestige Scales

Participants were given an occupational prestige scale which consists of a list of 36 occupations representing high, medium, and low prestige occupations, according to the Stevens & Hoisington (1987) rankings of prestige, for each Holland Code. Participants then

ranked these occupations, using a Likert scale, from 1 to 7 (1 being not prestigious at all and 7 being very prestigious). The occupational listing that participants used was developed by Walker and Tracey to examine prestige with African Americans (2012). The Walker and Tracey list was used with African Americans; therefore Latino/a labor statistics were examined to ensure that the occupations on the list have Latino/a representation (even if that representation is small). The 36 occupational prestige listing created by Walker and Tracey was itself derived from a larger distribution of prestige rankings provided by Stevens and Hoisington (1987). The Stevens and Hoisington occupation list consisted of over several hundred different occupational titles and several occupational clusters drawn from census data in the 1980's and ranked by individuals based on prestige (Stevens & Hoisington, 1987). Stevens & Hoisington presented a distribution of occupations based on prestige rankings and derived scores for occupations based on the aggregated scores of the prestige rankings (1987). Walker and Tracey sampled occupational titles from the three levels of prestige in Stevens & Hoisington's rankings, corresponding with high, medium and low prestige; two occupations from each level were selected to represent each RIASEC type (Walker & Tracey, 2012). In order to ensure reliability, Walker and Tracey included two identical occupations for participants to choose from (Walker & Tracey, 2012). For the purposes of this study, the Stevens and Hoisington prestige scale was also used in order to analyze correlations with the 36 occupational rankings participants provided.

6. Similarity of Prestige Score

Similarity of Prestige scores was determined for participants by conducting a correlation on the prestige scores provided by participants on the 36 occupational choices used by Walker and Tracey (2012), and the actual prestige score drawn from Stevens and Hoisington (1987)

occupational prestige listing. The correlation conducted on the prestige scores from participants provided an index of the similarity or difference of each individual participant's prestige score and the Stevens and Hoisington standard. For the purposes of this study, we can extrapolate this index as the difference between Latino/a perceptions of prestige and mainstream (i.e. White) perceptions of prestige. This score served as the prestige score that functioned as an independent variable throughout several of the analyses in this study. This score is a continuous variable that is appropriate for use in multiple regression analysis.

7. Traditionality Score

Traditionality scores were determined for participants by examining their preferred occupation, reviewing United States Bureau of Labor Statistics to identify the percentage of Latinos/as currently represented in those occupations, and assigning a raw score based on the percentage. This process has been used to determine occupational traditionality scores in a number of studies that have examined traditional career choices for men and women (Weisgram et. al., 2011), and with Latino/a populations in studies of Latino/a men's (Flores et. al., 2006) and Latino/a women's (Flores & O'Brian, 2002) career traditionality. Specifically, the percentage of Latino/a identified workers in an occupational group serves as the traditionality variable. For example, if a participant identifies their preferred occupation in construction: drywall, then they would receive a traditionality score of 62 given that 61.8% of construction: drywall jobs in the US are represented by individuals who identify as Latino/a according to US Bureau of Labor Statistics (2016). A score of 26 or above would constitute high traditionality, and a score of 9 or below would constitute low traditionality given that Latinos/as account for roughly 17 percent of the population in the United States according to current US census data. Therefore a score of 62 in the previous example would

indicate very high traditionality. Scores can vary from 1-100, reflective of possible percentages and are continuous variables that are appropriate for use in multiple regression analysis.

8. Congruence Index

Participants' occupational congruence was analyzed using the C-index by Brown and Gore that identifies individual scores as meeting high, medium or low congruence (1994). The C-index was developed using Holland's theory of congruence, after examining 10 existing measures of occupational congruence, and conducting an analysis to determine the most effective measure for identifying differences in congruence (Brown & Gore, 1994). The c-index yields congruence scores that range from 0-18, and measures the three letter code typical of Holland's RIASEC theory, with higher scores in different RIASEC dimensions equaling higher congruence (Brown & Gore, 1994). This is accomplished by utilizing the Holland hexagon, a geometric formula for calculating Holland codes from the RIASEC model based on their distance from each other on the hexagon (Brown & Gore, 1994). Distances on the Holland hexagon provide correlational scores, these scores (see appendix) are representative of the correlational relationship between the different interest domains when normed on heterosexual white males in the US. This means that, numerically, the differences between scores calculated with the C-index are meaningful because they utilize the positions of interests domains on the Holland hexagon in creating a continuous variable used to measure the differences between one score and another. While differences in interest vary across groups, interests domains remain the same; the circular position of interests on the hexagon do not change. This allows for interests to be calculated as a continuous variable. The corresponding letter scores ranges from 3, which would be a perfect match to

the position of a letter on the hexagon, to 0 when the letter is directly opposite of the corresponding letter on the hexagon. For example, an established occupational code of ISA, and an individual interest code of SAI, would be calculated by matching the code pairs and calculating congruence based on the weight of the scores. First letter matches are weighted more heavily, with a score of 3, the second letter with a score of 2 and the third with a score of 1; this suggests that the importance of the place in which letters occur in the code is indicative of their theoretical importance (Brown & Gore, 1994). Therefore, congruence, using the C-index, is calculated using the following equation: C = 3 (Xi) + 2 (Xi) + 1 (Xi). "Xi" is determined by the Holland code letter positions, as stated previously, where Xi = 3 if letters are identical; Xi = 2 if the letters are adjacent; Xi = 1 if the letters are alternates; and Xi = 0 if the letters are opposite on the hexagon (Brown & Gore, 1994). Using the previous example, the congruence calculation on Holland codes ISA::SAI would be C = 3(1)+2(2)+1(2)= 11.

Data Analysis

SPSS software was used to conduct all data analysis in the study. All other analysis not performed through SPSS was conducted manually. An a priori alpha significance level of 0.05 was utilized for all statistical analysis in the study in order to determine if rejection of the null hypothesis is appropriate. Descriptive statistics was provided for demographic information and gender. Career congruence scores were calculated using the equation and procedure for C-index scores, described in the measures subheading of this chapter, to determine career congruence. Similarity of prestige rankings were calculated by producing a correlation score for the difference (change) in prestige rankings given to the occupational pairs by the sample, and established prestige rankings for the occupations according to Stevens & Hoisington. Pearson's

correlations were calculated to examine the relationship between prestige rankings and ethnic identity. An analysis of variance (ANOVA) was used to compare male and female congruence scores. The major analysis for this study was a multiple regression analysis to examine the predictive strength of prestige, ethnic identity, and family influence on career congruence and traditionality.

1. What significant differences are there between men and women in cultural values (cultural pride) and family expectations (informational support, family expectations and family values/beliefs) and their relationship to occupational congruence and prestige?

For this research question an analysis of variance (ANOVA) was conducted to examine the relationship between male and female groups in the sample on occupational congruence, prestige, cultural values and family influence. Participant's occupational congruence scores served as the dependent variable for one analysis. Participant's prestige scores served as the dependent variable for one analysis. Participant's scores on the cultural values scores served as the dependent variables for another analysis. Participant's scores on the family influence subscale served as the dependent variables for the final analysis. Specifically, significance levels of differences in the means of multiple variables between male and female participants were compared. An ANOVA is used to reduce type I error while comparing multiple groups. The F statistic provided evidence for rejection of the null hypothesis, the null being that the group means are the same. Specifically, the null is that there is no difference in the mean scores of males and females in the sample on career congruence. The null was rejected as the ANOVA

analyses demonstrated significant differences in career congruence scores between males and females in the sample.

Assumptions with ANOVA

ANOVA maintains several assumptions in order to be used appropriately, ensure the validity of the data and the proper interpretation of the analysis. First, the dependent variable must be continuous. Career congruence is a continuous variable because it is an interval variable, the difference between a career congruence score is meaningful. As described previously in the assumptions of regressions, homogeneity of variances and normality of the data were also examined to ensure reduction of type I and type II errors.

2. Can individual prestige rankings, cultural pride and familismo, informational support, family expectations and family values/beliefs be used to predict occupational traditionality for Latino/a males and females?
3. Can individual prestige rankings, cultural pride and familismo, informational support, family expectations and family values/beliefs be used to predict occupational congruence for Latino/a males and females?

For these two research questions multiple regression analysis was conducted to examine the predictive nature of the independent variables on the dependent variable, and determine the percentage of the variance accounted for in scores on the dependent variable by the independent variables when holding all others constant. The independent variables for both of these questions are: prestige scores, calculated as the difference between participant's prestige scores and established prestige scores, cultural pride and familismo scores, which are the participant's scores on the corresponding subscales on the Latino/a Values Scale, and informational support,

family expectations, and vales/beliefs, which are the participant's scores on the corresponding subscales of the FIS. The dependent variable is career traditionality for question 1, and was calculated by identifying United States Bureau of Labor Statistics percentages of Latinos/as in given occupations, and assigning that percentage as a raw score to participants consistent with their identified preferred occupation. For question 2 the dependent variable is career congruence, which was calculated using the c-index as described in the measures section of this chapter. The equation that was used in the multiple regression for question 1 was: $\hat{Y}$= (Prestige)X_1 + (Cultural pride)X_2 + (Familismo)X_3 + (Informational Support)X_4 + (Family Expectations)X_5 + (Vales/Beliefs)X_6 + β_0 where $\hat{Y}$ is the traditionality score of a participant. The equation that was used in the multiple regression for question 2 was: $\hat{Y}$= (Prestige)X_1 + (Cultural pride)X_2 + (Familismo)X_3 + (Respeto)X_4 + (Informational Support)X_5 + (Family Expectations)X_6 + (Vales/Beliefs)X_7 + β_0 where $\hat{Y}$ is the career congruence score of a participant.

These equations and analysis were be conducted for both the male proportion of the sample and the female proportion of the sample in order to produce results that can be interpreted with differences in gender. Regression was used in order to facilitate interpretations that lend themselves to prediction of occupational congruence and satisfaction, and traditional career choices, when considering Latino/a career choices and cultural and family influences. Regression also allowed for modeling of the relationship between cultural and family influences in the sample, which is important in addressing the research questions that focus primarily on how cultural and family expectations frame perspectives about work and work choices. The regression analysis was carried out in stepwise fashion with the variables being inputted in the following order: Cultural Pride and Familismo, Family Information Expectations and

Values/Beliefs, and then Prestige. The rationale for a stepwise regression is based on the unavailability of extant research examining these variables causally.

4. Does prestige mediate the relationship between cultural pride and traditionality for Latino/a males and females?

For question #4 a regression equation with mediation was conducted. Mediation is the process by which the relationship between an independent variable (Cultural Pride) and a dependent variable (Traditionality) is also explained by the influence of another variable, the mediator (Prestige), which is also influenced by the independent variable (Cultural Pride) and accounts for some variance of the outcome on the dependent variable. The relationship between the Cultural Pride and Traditionality variables, in a mediation model, is already understood and theoretically significant (People do what they are proud of). The hypothesis is that the addition of a Prestige variable will help better explain the existing relationship, and can statistically demonstrate a percentage of the variance accounted for by Prestige and Cultural Pride. Mediation is additive, mediation seeks to further explain variance and expand the relationship in a model and does not change the relationship between the independent variable and the dependent variable.

Assumptions in Multiple Regression

It is important to examine assumptions to ensure validity of the data and correctness of data interpretations. Several assumptions were examined, and scatterplots of the residuals are provided in order to visually examine assumptions. First, the appropriateness of a linear relationship between the variables was determined by examining the scatterplot and discerning the shape of the relationship. A Lowess line can also be added to the scatterplot of residuals in order to examine the linear characteristics of data. This allows for the discernment of outliers, which is important because regression analysis is sensitive to the effect of outliers (Stevens,

2007; Cohen, Cohen, West & Aiken, 2003). Outliers can shift the regression slopes, and disrupt statistical analysis. Furthermore, outliers can affect assumptions and threaten the validity of the data. Outliers can skew the normality of the data, and disrupt the linear relationship (Stevens, 1984). Mahalanobis distance was calculated for the predictors using SPSS, Mahalanobis distance tells us the distance of a variable from the center most case of the predictor variable (Stevens, 1984).

Second, assessing the normality of the data was performed to ensure the validity of the data, check for skewness or kurtosis, avoid difficulties in calculating confidence intervals, and reduce the probability of type I or type II errors. SPSS was used to produce a frequency histogram of the standardized residuals; this histogram demonstrated the shape of the distributions for examination. Additionally, SPSS was used to produce a Q-Q plot which is a scatterplot that demonstrates a fitted normal curve. Both visual representations of the data can be examined for normality.

Third, homoscedasticity (homogeneity of variances) was examined to determine if the residuals are randomly scattered. This helped determine if the variance in standard errors and standard deviations are similar across all levels of the independent variable (Cohen et. al. 2003), which helps insure that confidence intervals are not too narrow and thus increase type I error. SPSS was used to produce a scatterplot of residuals that can be visually examined to determine the shape of the residuals around the value of 0. If the scatterplot shows some clustering, narrowing or widening of the residuals then heteroscedasticity may be present. Heteroscedasticity can distort the analysis and increase the possibility of type I error. SPSS can perform further tests to confirm the violation of this assumption if the visual examination provides evidence to suggest heteroscedasticity.

Finally, multicollinearity is an important assumption to test in order to ensure that the independent variables of prestige, ethnic identity, and family influence are independent of each other. This is important in regression analysis, as independent variables that are not independent of each other will have their slopes affected by each other and result in unstable predictions (Stevens, 2007; Cohen et. al., 2003). This will cause difficulties in interpretation of the data, as regression slopes should be interpreted when holding all else constant. In order to test for multicollinearity SPSS was used to create a correlation matrix for the independent variables, tolerance was calculated using the formula $T = 1 - R^2$ to determine if tolerance is greater than 0.25 to demonstrate low multicollinearity (Cohen et. al, 2003), and the variance inflation factor (VIF) was calculated using the formula VIF = 1/T. SPSS can also perform a Durbin-Watson test to assess multicollinearity.

CHAPTER IV: RESULTS

Introduction

The purpose of this study was to explore how different cultural and societal variables that effect Latino/a populations, such as cultural values and prestige, can impact career choices. A data set of Latino/a participants were incentivized through the Amazon Turks survey service to complete a survey that included instruments that measured career interests, cultural values, family influence, and prestige. This chapter explores the results of the survey and the accompanying instruments, and further interprets the findings as they relate to the research questions where applicable.

Data Actions

The total participant data that was collected was cleaned in order to eliminate participant data that did not meet the criteria for analyzation according to the requirements of the research questions. The original male dataset contained 966 entries. Of these 311 were deleted for choosing not to complete the survey, 3 chose not to consent to the release, and 168 chose female instead of male for the survey. Of the remaining 487, 152 chose "Not Latino" and 97 chose "over 36 years old" which resulted in their deletion from the dataset. Of the remaining 238, 54 entries were deleted due to incorrect inputs, such as putting their name in their occupation, unintelligible inputs, such as gibberish or foreign languages for qualitative data, and indistinguishable majors, for example, any majors inputted as numbers or initials that did not match any known academic majors, or degree information that was not specified. The final total for males in the dataset was 184. The original female dataset contained 1056 entries. Of these 145 were deleted for choosing not to complete the survey, 1 chose not to consent to the release, and 178 chose male instead of female for the survey. Of the remaining 731, 297 chose

"Not Latina" and 127 chose "over 36 years old" which resulted in their deletion from the dataset. Of the remaining 307, 106 entries were deleted due to incorrect inputs, such as putting their name in their occupation, or unintelligible inputs, such as gibberish or foreign languages, for qualitative data, and indistinguishable majors, for example, any majors inputted as numbers or initials that did not match any known academic majors, or degree information that was not specified. The final total for females in the dataset was 201.

Data was rewritten and interpreted such that initials or abbreviations were written in full, information was truncated or shortened in order to be standardized, and data was clarified and cleaned up to omit unnecessary information. For example, the major "CS" was written out as Computer Science; professional titles were standardized such that the profession titles of software developer/application developer/user interface designer/software designer etc. are all listed as "software developer"; occupational titles provided by participants were rewritten and matched to a professional title that most closely meets the description from the O*Net website, for example, 5th grade teacher was made into elementary school teacher; social media coordinator was made into public relations specialist; and participants who included their name or other unnecessary data in the fill in boxes along with their professions and/or majors had that data removed. Finally, all data was standardized by being written in the same manner (capitalized and spelled the same).

Demographic Characteristics

The participants' demographic information in the complete dataset was assessed using descriptive statistical techniques. Frequencies (n) and percentages (%) of the sample characteristics are presented in Table 1.

Table 1

Demographic Characteristics

Variable	*Female (n = 201)*		*Male (n = 184)*	
	n	%	*n*	%
Education				
Associate's Degree	12	5.97	11	5.98
Bachelor's Degree	143	71.1	134	72.8
Master's Degree	54	26.8	47	25.5
Specialized Master's Degree	5	2.49	4	2.17
Vocational Degree	4	1.99	3	1.63
Doctorate Degree	6	2.99	6	3.26
Ethnicity				
Puerto Rican	18	9.00	6	3.30
Mexican	31	15.4	27	14.7
Dominican	4	2.00	5	2.70
Cuban	10	5.00	6	3.30
Brazilian	5	2.50	2	1.10
South American	66	32.8	63	34.2
Caribbean	10	5.00	8	4.30
Central American	57	28.4	67	36.4
Age				
18-23	15	7.50	9	4.90
24-29	93	46.3	92	50.0
30-35	93	46.3	83	45.1

Scoring and Reliability

Internal reliability of the survey items was assessed using Cronbach's alpha. The results are presented in Table 2, which shows the number of items for each construct, as well as the alpha coefficient for both the female and male samples.

Table 2

Internal Reliability

Construct	No. of Items	Female α	Male α
Family Influence			
Informational Support	8	.917	.871
Family Expectations	6	.863	.862
Financial Support	3	.786	.753
Values/Beliefs	3	.810	.766
Latino/a Value			
Cultural Pride	10	.569	.409
Familismo	5	.692	.639

For both male and female samples, the construct of Informational Support demonstrated high internal reliability, with alpha coefficients of .917 and .871, respectively. The construct of Family Expectations also showed good internal reliability for both groups, with alpha

coefficients of .863 for females and .862 for males. The constructs of Financial Support and Values/Beliefs had lower but acceptable internal reliability coefficients for both groups, with alpha coefficients ranging from .753 to .810.

The constructs of Cultural Pride and Familismo showed lower internal reliability coefficients for both male and female samples. Specifically, the alpha coefficients for Cultural Pride were .569 and .409 for females and males, respectively. The alpha coefficients for Familismo were .692 for females and .639 for males.

Overall, the survey items demonstrated good to acceptable internal reliability. The constructs of Cultural Pride and Familismo were an exception, which may require further refinement in future studies.

Descriptive statistics were calculated for the constructs for both the female and male samples. The means, standard deviations, standard errors of the means, minimum and maximum values, skewness, and kurtosis values are presented in Table 3.

Table 3

Descriptive Statistics

	M	*SD*	SE_M	Min	Max	Skewness	Kurtosis
Female							
Traditionality	10.108	6.004	0.431	0	49	2.911	14.509
Prestige	0.138	0.289	0.021	-0.39	0.87	0.531	-0.429
Informational Support	4.438	0.957	0.069	1	6	-1.009	1.645
Family Expectations	4.328	0.995	0.071	1	6	-0.809	0.651

Values/Beliefs	4.352	1.097	0.079	1	6	-0.867	0.685
Financial Support	4.478	0.991	0.070	1	6	-0.926	1.277
Cultural Pride	2.624	0.365	0.026	1.2	4	0.679	3.099
Familismo	3.068	0.480	0.034	1.4	4	-0.491	0.275
Male							
Traditionality	10.786	3.684	0.275	5.7	24.4	1.463	2.919
Prestige	0.037	0.254	0.019	-0.44	0.78	0.659	0.011
Informational Support	4.337	0.845	0.063	1	6	-0.578	1.006
Family Expectations	4.341	0.942	0.070	1	6	-1.079	2.084
Values/Beliefs	4.408	0.963	4.266	1	6	-1.124	1.737
Financial Support	4.341	0.973	0.073	1	6	-0.844	0.989
Cultural Pride	2.532	0.327	2.484	1.3	4	1.213	5.952
Familismo	3.015	0.479	0.036	1	4	-1.05	2.408

For the female sample, the mean score for Occupational Traditionality was 10.108 (SD = 6.004) with a range from 0 to 49. The construct of Prestige had a mean score of 0.138 (SD = 0.289) and a range from -0.39 to 0.87. The mean score for Informational Support was 4.438 (SD = 0.957) with a range from 1 to 6. The construct of Family Expectations had a mean score of 4.328 (SD = 0.995) with a range from 1 to 6. The mean score for Family Values/Beliefs was 4.352 (SD = 1.097) with a range from 1 to 6. The mean score for Financial Support was 4.478 (SD = 0.991) with a range from 1 to 6. The construct of Cultural Pride had a mean score of 2.624 (SD = 0.365) with a range from 1.2 to 4. Finally, the construct of Familismo had a mean score of

3.068 (SD = 0.480) with a range from 1.4 to 4. The skewness value was positive for the construct of Cultural Pride (0.679), indicating a slight right skew, and the kurtosis value was high for the construct of Occupational Traditionality (14.509), indicating a high peak and heavy tails.

For the male sample, the mean score for Occupational Traditionality was 10.786 (SD = 3.684) with a range from 5.7 to 24.4. The construct of Prestige had a mean score of 0.037 (SD = 0.254) and a range from -0.44 to 0.78. The mean score for Informational Support was 4.337 (SD = 0.845) with a range from 1 to 6. The construct of Family Expectations had a mean score of 4.341 (SD = 0.942) with a range from 1 to 6. The mean score for Values/Beliefs was 4.408 (SD = 0.963) with a range from 1 to 6. The mean score for Financial Support was 4.341 (SD = 0.973) with a range from 1 to 6. The construct of Cultural Pride had a mean score of 2.532 (SD = 0.327) with a range from 1.3 to 4. Finally, the construct of Familismo had a mean score of 3.015 (SD = 0.479) with a range from 1 to 4. The skewness value was positive for the construct of Cultural Pride (1.213), indicating a moderate right skew, and the kurtosis value was high for the construct of Occupational Traditionality (2.919), indicating a high peak and heavy tails**.**

Correlations

Females

A correlation analysis was conducted to examine the relationships between the study variables for female participants. The results are provided in Table 4.

Table 4

Correlations Between Constructs Under Study for Females

	Traditionality	Prestige	Informational Support	Family Expectations	Financial Support	Values/ Beliefs	Cultural Pride	Familismo
Traditionality	--							
Prestige	-0.013	--						
Informational Support	0.039	-0.067	--					
Family Expectations	0.063	-.245***	.608***	--				
Financial Support	0.037	-0.069	.841***	.483***	--			
Values/Beliefs	0.118	-0.093	.575***	.714***	.485***	--		
Cultural Pride	-0.04	.296***	.178*	0.062	.179*	.179*	--	
Familismo	.150*	0.064	.470***	.440***	.440***	.479***	.207**	--

*p<.05, **p<.01, ***p<.001

As shown in Table 4, results demonstrated that there was a significant positive correlation between Traditionality and Familismo ($r = .150$, $p < .05$), but not between Traditionality and any other constructs. There was significant positive correlation between Cultural Pride and Prestige ($r = .290$, $p < .001$). Additionally, there was a significant positive correlation between Informational Support and Family Expectations ($r = .608$, $p < .001$), Financial Support and Family Expectations ($r = .483$, $p < .001$), Financial Support and Informational Support ($r = .841$, $p < .001$), Financial Support and Values/Beliefs ($r = .485$, $p < .001$), and Values/Beliefs and Family Expectations ($r = .714$, $p < .001$). Finally, there was a significant positive correlation between Familismo and Informational Support ($r = .470$, $p < .001$), Financial Support ($r = .440$, $p < .001$), Values/Beliefs ($r = .479$, $p < .001$), Family Expectations ($r = .440$, $p < .001$) and Familismo ($r = .207$, $p < .01$).

Males

A correlation analysis was conducted to examine the relationships between the study variables for female participants. The results are provided in Table 5.

Table 5

Correlations Between Constructs Under Study for Males

	Traditionality	Prestige	Informational Support	Family Expectations	Financial Support	Values/ Beliefs	Cultural Pride	Familismo
Traditionality	--							
Prestige	0.136	--						
Informational Support	-0.103	-.151*	--					
Family Expectations	-0.144	-.261***	.800***	--				
Financial Support	-0.143	-.262***	.785***	.775***	--			
Values/Beliefs	-0.058	-.165*	.827***	.728***	.737***	--		
Cultural Pride	0.069	0.118	.356***	.224**	.234**	.272***	--	
Familismo	0.015	0.054	.684***	.629***	.585***	.597***	.245***	--

*p<.05, **p<.01, ***p<.001

As shown in Table 5, Traditionality was not significantly correlated with any of the other constructs. Family Expectations was negatively correlated with Prestige ($r = -0.261$, $p < .001$) and positively correlated with Informational Support ($r = 0.800$, $p < .001$). Informational Support was negatively correlated with Prestige ($r = -0.151$, $p < .05$), and positively correlated with Values/Beliefs ($r = 0.827$, $p < .001$), indicating that participants who received more informational support tended to be less concerned with prestige, and more likely to hold strong cultural values and beliefs. Cultural Pride was positively correlated with all variables except Traditionality and Prestige, with significant positive correlations found with Informational Support ($r = 0.356$, $p < .001$), Family Expectations ($r = 0.224$, $p < .01$), Financial Support ($r = 0.234$, $p < .01$), and Values/Beliefs ($r = 0.272$, $p < .001$). Similarly, Familismo was positively correlated with all variables except Traditionality and Prestige, with significant correlations with Informational Support ($r = 0.684$, $p < .05$), Financial Support ($r = 0.585$, $p < .001$), Values/Beliefs ($r = 0.597$, $p < .001$), and Cultural Pride ($r = 0.245$, $p < .001$).

Summary

Results demonstrated some similarities and differences between the male and female samples. In both samples, there was no significant correlation between Traditionality and Prestige. Additionally, significant positive correlations were found between Cultural Pride and Family Influence variables including Informational Support, Financial Support, Values/Beliefs, and Familismo. However, there were some notable differences between the male and female samples. In the female sample, Traditionality was only significantly correlated with Familismo, while in the male sample, Traditionality was not significantly correlated with any of the other constructs. These findings suggest that the relationships between cultural variables and

occupational congruence may differ between male and female samples, highlighting the importance of considering gender when examining the intersection of culture and career.

RQ1: What significant differences are there between men and women in cultural values (cultural pride) and family influences (informational support, family expectations and family values/beliefs) and their relationship to occupational congruence and prestige?

Independent-samples t-tests were conducted to compare the mean scores of male and female participants on the study variables of interest. In cases where the assumption of homogeneity of variances was not met (Traditionality) a Welch t-test was used. The results are presented in Table 6.

Table 6

Independent Samples T-test

Variable	Male (n = 184)		Female (n =201)		t	df	p	D
	M	*SD*	*M*	*SD*				
Traditionality	10.809	3.636	10.244	6.114	1.113	330.449	0.267	0.111
Prestige***	0.037	0.254	0.138	0.289	-3.574	371	<.001	0.37
Informational Support	4.334	0.844	4.454	0.967	-1.289	383	0.198	0.132
Family Expectations	4.334	0.945	4.343	1.004	-0.091	383	0.928	0.009
Values/Beliefs	4.402	0.962	4.367	1.104	0.337	383	0.737	0.034
Financial Support	4.346	0.968	4.478	0.991	-1.315	383	0.189	0.134
Cultural Pride**	2.531	0.323	2.624	0.362	-2.661	383	0.008	0.272
Familismo	3.019	0.478	3.073	0.489	-1.097	383	0.273	0.112

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

*p<.05, **p<.01, ***p<.001

There was a significant difference between males and females in terms of prestige, with males reporting lower levels of prestige "alignment" than females ($t(371) = -3.574$, $p < .001$, $d = 0.37$). However, there were no significant differences between males and females in terms of informational support ($t(383) = -1.289$, $p = 0.198$, $d = 0.132$), family expectations ($t(383) = -0.091$, $p = 0.928$, $d = 0.009$), Values/Beliefs ($t(383) = 0.337$, $p = 0.737$, $d = 0.034$), or Financial Support ($t(383) = -1.315$, $p = 0.189$, $d = 0.134$).

There was a significant difference in levels of cultural pride, with males reporting lower levels of cultural pride than females ($t(383) = -2.661$, $p = 0.008$, $d = 0.272$). Finally, there was no significant difference between males and females in terms of familismo ($t(383) = -1.097$, $p = 0.273$, $d = 0.112$).

Overall, the results present some differences between males and females in terms of cultural variables and family influence, with males reporting lower levels of cultural pride and prestige alignment than females. However, there were no significant differences in terms of family influences or other cultural variables.

RQ2: Can individual prestige rankings, cultural pride and familismo, informational support, family expectations and family values/beliefs be used to predict occupational traditionality for Latino/a males and females?

The traditionality score was found to be positively skewed with high kurtosis, indicating that the distribution of the data was not normal. To address this issue, a square root transformation was applied to the traditionality score before it was used in the regression model. This transformation

helped to reduce the skewness and kurtosis of the data, making the distribution more normal and suitable for use in the regression analysis. The square root transformation is a common method for transforming positively skewed data, as it is easy to interpret and does not substantially alter the relationship between variables. In addition, it can help to improve the validity and reliability of statistical analyses by making the data more normally distributed and reducing the influence of outliers. By transforming the traditionality score before using it in the regression model, the results are likely to be more accurate and trustworthy, which can aid in drawing meaningful conclusions from the analysis. Normality was checked through histograms and normal P-P plots of standardized residuals, with minor deviations from normality deemed non-problematic.

Before interpreting the results of the regression models, several assumptions were checked, including outliers, linearity, homoscedasticity, and normality. Linearity was confirmed through significant correlations and scatter plot visualizations. Homoscedasticity was assessed by inspecting plots of standardized residuals versus predicted values, revealing approximate homoscedasticity.

Female

A hierarchical regression analysis was conducted to examine the extent to which cultural variables and family variables predict occupational traditionality for female participants.

Table 7

Stepwise Regression Results for Predicting Traditionality Scores for Females

	B	*SE*	*95% CI LL*	*95% CI UL*	*t*	*P*
Block 1: R^2= 0.062						
(Constant)	2.017	0.601	0.832	3.202	3.358	<.001

Cultural Pride	-0.222	0.193	-0.602	0.159	-1.15	0.252
Familismo***	0.518	0.146	0.23	0.807	3.54	<.001
Block 2: R^2= 0.086						
(Constant)	2.053	0.623	0.823	3.283	3.293	0.001
Cultural Pride	-0.235	0.195	-0.62	0.15	-1.203	0.23
Familismo**	0.454	0.17	0.118	0.789	2.666	0.008
Informational Support	-0.2	0.144	-0.484	0.083	-1.396	0.165
Family Expectations	-0.005	0.104	-0.211	0.2	-0.052	0.958
Values/Beliefs	0.161	0.093	-0.023	0.345	1.723	0.087
Financial Support	0.092	0.127	-0.159	0.343	0.725	0.47
Block 3: R^2= 0.088						
(Constant)	2.01	0.629	0.769	3.25	3.197	0.002
Cultural Pride	-0.2	0.204	-0.603	0.202	-0.982	0.328
Familismo	0.466	0.172	0.127	0.805	2.714	0.007
Informational Support	-0.195	0.144	-0.479	0.09	-1.352	0.178
Family Expectations	-0.021	0.108	-0.234	0.191	-0.2	0.842
Values/Beliefs	0.162	0.093	-0.022	0.347	1.737	0.084
Financial Support	0.086	0.128	-0.166	0.338	0.675	0.501
Prestige	-0.156	0.261	-0.671	0.359	-0.597	0.551

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

*p<.05, **p<.01, ***p<.001

The results revealed that Block 1, with Familismo and Cultural Pride as predictors, was a significant predictor of Traditionality (F(2, 191) = 6.335, p = 0.002), explaining 6.2% of the variation. Block 2, with the addition of Family Expectations, Financial Support, Values/Beliefs, and Informational Support, was also a significant predictor (F(6, 187) = 2.931, p = 0.009), explaining an additional 2.4% of the variation. Block 3, which included all the predictors plus Prestige, was also a significant predictor (F(7, 186) = 2.555, p = 0.016), explaining an additional

0.2% of the variation. However, the increase in additional variability explained from Block 1 to Block 2, and Block 2 to Block 3, were insignificant ($p>.05$). Although the predictors included in these Blocks are statistically significant in predicting Traditionality, each subsequent Block does not show a significant improvement in predictive power.

In Block 1, the predictor variables are Familismo and Cultural Pride. The R-squared value is 0.062, indicating that only 6.2% of the variation in Traditionality can be explained by these two variables. The regression equation is Traditionality = 2.017 - 0.222(Cultural Pride) + 0.518(Familismo). Only Familismo was a significant predictor of Traditionality at the 0.05 level.

In Block 2, the predictor variables are Familismo, Cultural Pride, Family Expectations, Financial Support, Values/Beliefs, and Informational Support. The R-squared value increases to 0.086, with an additional 2.4% of the variation in Traditionality being explained. However, only Familismo remains a significant predictor at the 0.05 level.

In Block 3, the predictor variables are the same as Block 2 with the addition of Prestige. The R-squared value increases slightly to 0.088, but none of the variables are significant interpredictors at the 0.05 level.

Overall, these results suggest that Familismo is the most important predictor of Traditionality among the variables included in this analysis. The other variables do not significantly contribute to the explanation of the variance in Traditionality.

Male

A hierarchical regression analysis was conducted to examine the extent to which cultural variables and family variables predict occupational traditionality for male participants. The results are presented in Table 8.

Table 8

Stepwise Regression Results for Predicting Traditionality Scores for Males

	B	*SE*	*95% CI LL*	*95% CI UL*	*t*	*P*
Block 1: R^2= 0.005						
(Constant)	2.932	0.357	2.227	3.637	8.211	<.001
Cultural Pride	0.118	0.125	-0.129	0.365	0.941	0.348
Familismo	0.004	0.085	-0.165	0.173	0.047	0.963
Block 2: R^2= 0.058						
(Constant)	2.95	0.355	2.249	3.65	8.311	<.001
Cultural Pride	0.175	0.129	-0.079	0.429	1.359	0.176
Familismo	0.205	0.113	-0.018	0.428	1.813	0.072
Informational Support	-0.092	0.106	-0.301	0.118	-0.865	0.388
Family Expectations	-0.095	0.076	-0.245	0.055	-1.246	0.214
Values/Beliefs	-0.071	0.072	-0.212	0.071	-0.982	0.328
Financial Support	0.081	0.075	-0.066	0.228	1.087	0.278
Block 3: R^2= 0.059						
(Constant)	2.961	0.357	2.256	3.666	8.289	<.001
Cultural Pride	0.167	0.131	-0.091	0.426	1.28	0.202
Familismo	0.193	0.118	-0.04	0.426	1.635	0.104
Informational Support	-0.092	0.106	-0.302	0.118	-0.866	0.388
Family Expectations	-0.089	0.078	-0.243	0.064	-1.148	0.252
Values/Beliefs	-0.066	0.073	-0.211	0.078	-0.906	0.366
Financial Support	0.081	0.075	-0.067	0.228	1.084	0.28
Prestige	0.061	0.172	-0.278	0.4	0.355	0.723

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

*p<.05, **p<.01, ***p<.001

In Block 1, the predictive model was not significant ($F(2,176) = 0.485$, $p = 0.617$), and the R-squared value was low ($R^2 = 0.005$). Specifically, the constant was a significant predictor of occupational traditionality ($B = 2.932$, $SE = 0.357$, $t = 8.211$, $p < .001$), while neither cultural pride nor Familismo were significant predictors.

In Block 2, family influence variables were added to the model. This model was also not significant ($F(6,172) = 1.763$, $p = 0.109$) but explained more variance in occupational traditionality ($R^2 = 0.058$), although this increase was insignificant ($p>.05$). None of the cultural or family variables were significant predictors of occupational traditionality, although Familismo approached significance ($B = 0.205$, $SE = 0.113$, $t = 1.813$, $p = 0.072$).

In Block 3, prestige was added to the model. This model was also not significant ($F(7,171) = 1.522$, $p = 0.163$) and explained slightly more variance in occupational traditionality ($R^2 = 0.059$), although this increase was not significant ($p>.05$). None of the cultural or family variables were significant predictors.

Overall, the results suggest that none of the cultural or family variables were significant predictors of occupational traditionality, although Familismo showed a trend towards significance. However, the models only explained a small amount of variance in occupational traditionality.

Summary

The results of the study suggest that cultural and family factors play a different role in predicting occupational traditionality for males and females. For females, Familismo was found to be the most important predictor of Traditionality. In contrast, none of the cultural or family variables were significant predictors of occupational traditionality for males, although Familismo

approached significance. These results suggest that Familismo may have a stronger influence on occupational traditionality for females, while other factors may be more important for males. Additionally, the models only explained a small amount of variance in occupational traditionality for both males and females, suggesting that there are likely other factors beyond cultural and family influences that contribute to occupational choices.

RQ3: Can individual prestige rankings, cultural pride and familismo, informational support, family expectations and family values/beliefs be used to predict occupational congruence for Latino/a males and females?

Initially, the research methodology proposed the use of multiple regression analysis to address the research question: *Can individual prestige rankings, cultural pride and familismo, informational support, family expectations, and family values/beliefs be used to predict occupational congruence for Latino/a males and females?* However, due to unforeseen limitations in the data obtained from the O*NET Interest Profiler, it was not possible to conduct the planned multiple regression analysis. The data constraints prevented the accurate calculation of three-letter Holland interest codes for the majority of participants, which in turn hindered the application of the originally intended statistical approach. Consequently, alternative analyses were employed to address the research question while acknowledging the limitations posed by the available data.

Out of the 385 participants (184 males and 201 females), only 10 had sufficient differentiation in their RIASEC interest scores to calculate a Holland code for their interests. A breakdown of these participants is provided in Table 9.

Table 9

One-Way ANOVAs

Gender	Occupation	Occupational Code	Individual Interest Code	C-Index
Male	General and Operations Manager	ECS	ECI	15
Female	Software Quality Assurance Analysts and Testers	ICR	IRE	13
Male	Network and Computer Systems Administrators	IRC	ISE	9
Male	Electrical and Electronic Engineering Technologists and Technicians	RIC	ISC	9
Female	Preschool Teacher	SA	SCE	9
Female	Writer	EAC	SAE	7
Female	History Teacher, Postsecondary	SIA	RAC	4
Male	Software Engineer	ICR	RAS	3
Male	Accountant	CEI	IAS	3
Female	Waiters And Waitresses	SEC	AIE	2

A total of 105 participants had a clear maximum interest RIASEC score. Consequently, each participant was assigned their maximum RIASEC score as their Holland code, resulting in a one-letter Holland code rather than the typical three-letter code. A scoring system parallel to the C-

index was employed to assess congruence between participants' maximum interest RIASEC codes and their professional Holland codes. Participants were assigned a score of 3 if their maximum interest RIASEC matched the first letter of their profession's Holland code, a score of 2 if it matched the second letter, a score of 1 if it matched the third letter, and a zero score if their interest Holland code did not match any letters in their profession's Holland code. This approach yielded scores of 0, 1, 2, or 3.

Based on these scores, participants were classified into three congruence categories: low congruence (score of 0), medium congruence (scores of 1 or 2), and high congruence (score of 3).

A chi-square test of independence was used to assess the potential association between gender and occupational congruence, with the latter being determined by the alignment of established occupational codes and individual interest codes. A significant association would suggest that the degree of occupational congruence may be influenced by an individual's gender, highlighting potential disparities between males and females in the alignment of their interests with their chosen professions. This, in turn, could contribute to a better understanding of the factors affecting occupational congruence in various professional settings. The results are presented in Table 10.

Table 10

Chi-Square Test

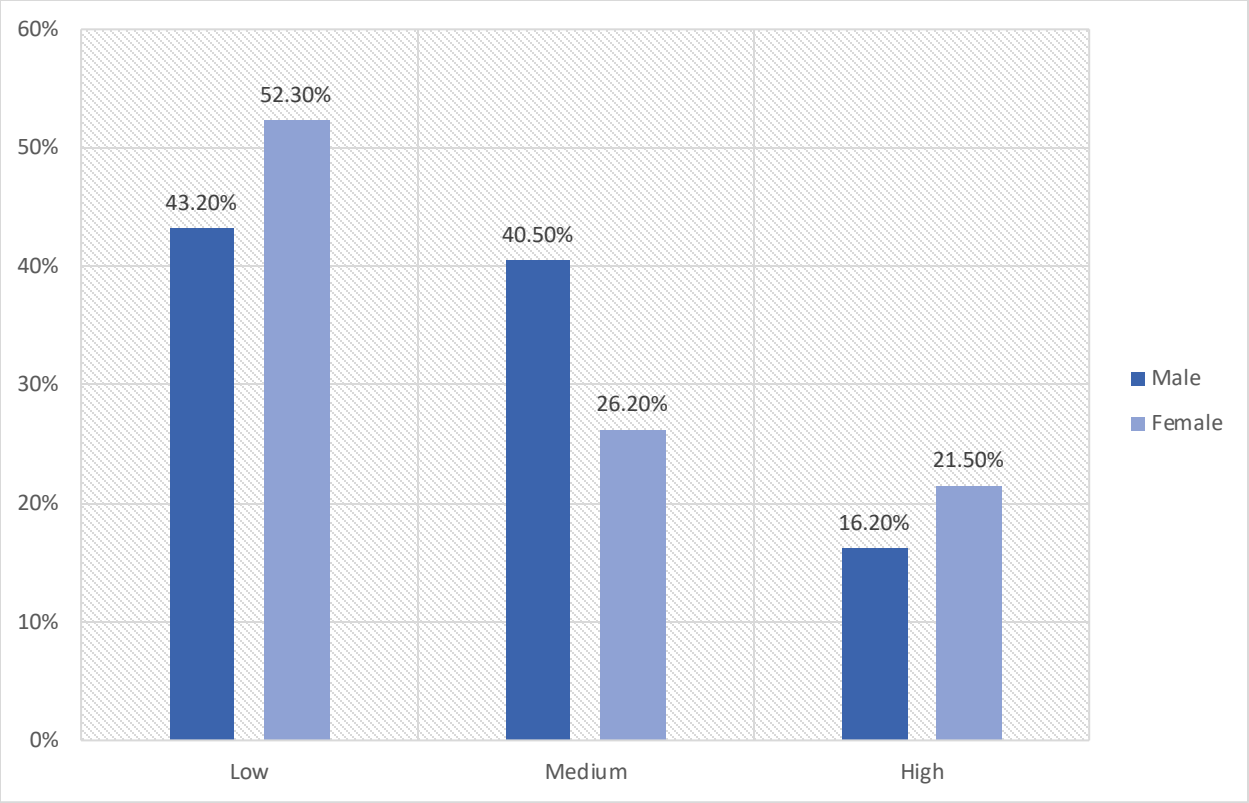
Congruence	Male		Female		$\chi^2(2)$	*p*	*Cramer's V*
	N	%	*n*	%			
Low	16	43.2	34	52.3	2.291	.318	0.150

Medium	15	40.5	17	26.2
High	6	16.2	14	21.5
Total	37	100.0	65	100.0

The results revealed no significant association between congruence and gender, $\chi 2(2) = 2.291$, $p = .318$, Cramer's $V = 0.150$. Specifically, 43.2% of males (n = 16) were classified as having low congruence, 40.5% (n = 15) as having medium congruence, and 16.2% (n = 6) as having high congruence. For females, 52.3% (n = 34) were classified as having low congruence, 26.2% (n = 17) as having medium congruence, and 21.5% (n = 14) as having high congruence. Figure 1 provides a visual depiction of the results.

Figure 1

Occupational Congruence vs Gender



Given the newly employed congruence scoring system, which classified participants into three congruence categories—low congruence (score of 0), medium congruence (scores of 1 or 2), and high congruence (score of 3)—the resulting congruence scores were deemed unsuitable for multiple regression analysis. Nevertheless, both multiple regression and Poisson regression were explored using the raw congruence scores of 0, 1, 2, and 3, as they could be considered count variables. Unfortunately, the results did not reveal any significant associations, and the amount of variance in the congruence scores explained by the predictor variables was negligible.

In response to these findings, it was determined that a bivariate analysis assessing the unadjusted effects of the Prestige, Informational Support, Family Expectations, Values/Beliefs, Financial Support, Cultural Pride, and Familismo on occupational congruence would be more appropriate. While this approach may not provide the same level of detail as multiple regression, it can still

serve as a valuable exploratory analysis, offering insights into the relationships between occupational congruence and the variables of interest.

To examine the differences in Prestige, Informational Support, Family Expectations, Values/Beliefs, Financial Support, Cultural Pride, and Familismo scores across low, medium, and high congruence categories, one-way analysis of variances (ANOVA) were conducted. Given that the results of the chi-square test of independence revealed no significant association between gender and occupational congruence, it was deemed appropriate to conduct subsequent analyses using the data from both males and females collectively. This approach was taken to enhance statistical power, as the sample sizes per congruence category were relatively small when separated by gender.

Homogeneity of variance assumptions were met for all variables, ensuring the validity of the one-way ANOVA results. When significant differences were found among congruence categories, Tukey's post hoc tests were conducted to further investigate the pairwise comparisons and identify the specific differences between the groups. The results are presented in Table 11.

Table 11

One-Way ANOVAs

Variable	Low (n = 50)		Medium (n =32)		High (n = 20)		F	$df1$, $df2$	p	η^2
	M	*SD*	*M*	*SD*	*M*	*SD*				
Prestige*	0.160	0.300	0.175	0.293	0.355	0.320	3.177	2, 97	.046	.061
Informational** Support	4.455	0.850	4.500	1.013	3.669	0.949	6.124	2, 99	.003	.110
Family Expectations**	4.140	1.019	4.620	0.981	3.517	1.100	7.187	2, 99	.001	.127
Values/Beliefs*	4.380	1.024	4.427	1.038	3.700	0.979	3.792	2, 99	.026	.071
Financial	4.527	0.960	4.490	1.061	3.650	1.095	5.769	2, 99	.004	.104

Support**										
Cultural Pride	2.606	0.421	2.666	0.415	2.565	0.505	0.356	2, 99	.701	.007
Familismo	3.048	0.470	3.050	0.552	2.960	0.549	0.241	2, 99	.786	.005

*p<.05, **p<.01, ***p<.001

The results indicated a significant differences across occupation congruence groups for prestige, $F(2, 97) = 3.177$, $p = .046$, $\eta^2 = .061$, informational support, $F(2, 99) = 6.124$, $p = .003$, $\eta^2 = .110$, family expectations, $F(2, 99) = 7.187$, $p = .001$, $\eta^2 = .127$, values/beliefs, $F(2, 99) = 3.792$, $p = .026$, $\eta^2 = .071$, and financial support, $F(2, 99) = 5.769$, $p = .004$, $\eta^2 = .104$. There were no significant differences in cultural pride, $F(2, 99) = 0.356$, $p = .701$, $\eta^2 = .007$, and familismo, $F(2, 99) = 0.241$, $p = .786$, $\eta^2 = .005$, across the three levels of occupation congruence.

Tukey's post hoc tests were conducted to further investigate the significant differences found in the one-way ANOVA. The results revealed that for prestige, there was a significant difference between low ($M = 0.160$, $SD = 0.300$) and high ($M = 0.355$, $SD = 0.320$) occupation congruence groups ($p = .043$), with the high group having higher prestige scores. However, no significant differences were found between low and medium ($p = .976$) or medium ($M = 0.175$, $SD = 0.293$) and high ($p = .101$) occupation congruence groups.

Regarding informational support, significant differences were found between low ($M = 4.455$, $SD = 0.850$) and high ($M = 3.669$, $SD = 0.949$) occupation congruence groups ($p = .005$), as well as between medium ($M = 4.500$, $SD = 1.013$) and high groups ($p = .006$), with both low and medium groups having higher informational support scores. No significant difference was found between low and medium occupation congruence groups ($p = .975$).

For family expectations, there was a significant difference between medium ($M = 4.620$, $SD = 0.981$) and high ($M = 3.517$, $SD = 1.100$) occupation congruence groups ($p < .001$), with the

medium group having higher family expectations scores. No significant differences were found between low (M = 4.140, SD = 1.019) and medium (p = .101) or low and high (p = .060) occupation congruence groups.

In terms of values/beliefs, there was a significant difference between low (M = 4.380, SD = 1.024) and high (M = 3.700, SD = 0.979) occupation congruence groups (p = .035), with the low group having higher values/beliefs scores. No significant differences were found between low and medium (p = .977) or medium (M = 4.427, SD = 1.038) and high (p = .037) occupation congruence groups.

For financial support, significant differences were found between low (M = 4.527, SD = 0.960) and high (M = 3.650, SD = 1.095) occupation congruence groups (p = .004), as well as between medium (M = 4.490, SD = 1.061) and high groups (p = .013), with both low and medium groups having higher financial support scores. No significant difference was found between low and medium occupation congruence groups (p = .986).

Concerning cultural pride, no significant differences were found between any pairs of occupation congruence groups (low vs. medium: p = .819, low vs. high: p = .933, medium vs. high: p = .699).

Finally, for familismo, no significant differences were found between any pairs of occupation congruence groups (low vs. medium: p = 1.000, low vs. high: p = .793, medium vs. high: p = .812).

RQ4: Does prestige mediate the relationship between cultural pride and traditionality for Latino/a males and females?

The mediation effect of Prestige between Cultural Pride and Traditionality was not analyzed or produced. Cultural Pride was found to be an insignificant predictor of Traditionality, and Prestige was also found to be an insignificant predictor of Traditionality. In the hierarchical regression analysis, neither Cultural Pride nor Prestige had a significant direct effect on Traditionality, as both their beta coefficients were not statistically significant ($p > .05$). In mediation analysis, it is necessary to establish a significant direct effect between the predictor and the outcome variable before testing for a possible mediating effect. Therefore, in the absence of a significant relationship between Cultural Pride and Traditionality, it is not appropriate to proceed with testing the mediation effect of Prestige.

CHAPTER V: DISCUSSION

Introduction

This chapter provides a review of the findings for this study while relaying the relevant details with regards to the research questions posed within the study. Additionally, concerns regarding the study methodology, commentary on limitations of the study, and suggestions for future research are provided. Finally, the purpose of the study is further explored along with extrapolation from observations about the data, research questions, and results. The main objective of this study was to expand on research that considers and integrates multiple factors that contribute to career decision making, specifically, how different cultural factors that apply distinctly to those of Latino/a decent can be used to enhance our understanding of career decision making. Vocational research, despite the growing population of Latino/a people in the United States, continues to be limited in terms of occupational choice and career development (Arbona, 1990; Flores et. al., 2006; Flores & O'Brien, 2002; Fouad, 1995).

Much of the existing research, normed on white populations in the United States, may miss the influence of cultural variables on career cognition and behavior, which researchers have already noted can provide greater understanding for minority populations (Byars-Winston, Fouad & Wen, 2015; Fouad & Kantamneni, 2008). While many cultural factors like family influence, gender difference, and cultural values have been explored in vocational research with Latinos/as, perspectives on the concept of prestige, and the impact that perspective has on career decision making, is an area that is lacking in the scholarship. This study sought to reconcile existing research on prestige, and methods of examining the influence of prestige on career decision making, with research on cultural variables and family influence that has been used with Latino/a populations to examine their influence on career development.

Interpretation of Findings

Descriptive Statistics

The total participant population of 385, the combined population of males (184) and females (201) was satisfactory to meet the power requirements of the study. However, it was an unfortunately low percentage of the total participant data that was collected. Given the total gathered male dataset of 966, and the total gathered female dataset of 1056, merely 20% of the total data that was collected was satisfactory for use in the study. This resulted in several issues for the analysis which are discussed in the results chapter, and here in their respective research question summaries. The proportions of the dataset demonstrated what was expected, with the majority of the dataset over the age of 23 to coincide with the requirement to be a college graduate (92% of females, 95% of males). The majority of the participants endorsed bachelor's degree (71% of females, 72% males), and there was a good proportion of master's degrees (27% of females, 26% of males) endorsed; along with doctoral degrees and specialized master's degrees, about a one third of the sample was post graduate degrees. This resulted in a much larger range of post-secondary education than expected, though it may not be representative of the population of Latinos/as in the United States with higher education degrees.

The ethnicity percentages in the dataset somewhat matched proportions of the Latino/a population in the United States populations at large according to extant census data. For the female dataset Puerto Ricans (9%), Dominicans (2%) and Cubans(5%) match their percentages with their proportion of the Latino/a population in the United States according to the census data; Mexicans (15%) was too low as their proportion in the U.S. population accounts for roughly 60% of the total Latino/a population; and Central American (28%) and South American (32%) were too high with their census percentages being at roughly 10% and 7% respectively (United

States Census Bureau, 2019). For the male dataset only Dominicans (2%) match their percentages with their proportion of the Latino/a population in the United States according to the census data; Puerto Ricans (3%), Cubans(3%),and Mexicans (14%) was too low as their proportion in the U.S. population accounts for roughly 9%, 5% and 60% respectively of the total Latino/a population; and Central American (36%) and South American (34%) were too high with their census percentages being at roughly 10% and 7% respectively (United States Census Bureau, 2019). The percentages of the larger dataset, before cleaning and eliminating unusable participant data, may have been closer to ethnic trends in the U.S. population.

Question #3 on the demographic questionnaire that requests information about degrees earned allowed participants to select all degrees they earned. This resulted in educational degree information that exceeded 100% for the sample; participants with multiple degrees were counted more than once for educational level, each degree they endorsed was counted. It is possible that the higher education requirements of the survey influenced the proportions of the ethnic identity of the sample. While a larger percentage of the Latino/a population in the United States is Mexican American, they may also represent a larger portion that have not achieved higher education degrees. Census and education percentages are not representative of immigrants coming from Latin America that may already have post-secondary degrees before immigrating to the United States and/or may have their immigration sponsored by companies and institutions because of those higher degrees. Technological assess for the survey, and interest in participation, may be influenced by higher education achievement.

The large percentage of South American and Central American participants may be accounted for by their willingness to participate in the survey, whereas the significantly low percentage of Mexican participants can reflect an unwillingness to participate. Consider that

census data is gathered confidentially and does not require as many identifiers as an MTurk worker enrollment requirement, and that MTurk is a job for many participants to earn extra money; participation can be skewed based on these motivating factors. Finally, the proportion of diversity variables among the participants in this study, much higher non-Mexican Latino/a participants and generally more highly educated, can yield important information for consideration when examining the measures used in the study that by and large were normed on samples significantly different than the sample for this study.

RQ1

Independent t-test were performed to examine the differences between males and females in the sample on the variables of interest for this study which included the components of the Latino/a Values Scale (LVS) and the Family Influence Scale (FIS) as well as Prestige and Traditionality. There was a significant difference between males and females on prestige; males reported lower prestige scores, thus less alignment with the white male sample on which the prestige variables were normed, while females were more aligned with the white male sample on which the prestige measure is normed (Walker & Tracey, 2012). When considering that prestige scores were shown to be different than white samples with African American samples of both males and females (Walker &Tracey, 2012), we might expect for other non-white samples to also differentiate from the norm. However, this might be evidence to support the idea that since Latino/a populations are mutli-racial, in addition to multi-ethnic, they may perceive less barriers to occupational achievement and attainment than comparative minority samples. Latinos/as are able to identify as white on census data and may perceive occupational variables, like prestige, through a similar lens as their white peers. Additionally, Latino/a research has utilized samples that are more heavily Mexican and Mexican American, in proportion with this ethnicity in the

population of the United States; this study was more representative of other Latino/a ethnic groups.

There were significant differences in cultural pride between males and females in the sample, with males reporting less cultural pride, but not by a large margin. The differences between males and females due to cultural variables was not shown here as strongly as expected. The opposite was true, males showing lower prestige scores and lower cultural pride, which may suggest that males may be more culturally attached than females who, due to opportunities and interventions informed by feminism and progressivism, have greater opportunities than historically to pursue vocational interests where cultural variables are less involved. Given that prestige is a social desirability construct, females may be more inclined to aspire to dominant culture perspectives, thus finding themselves more aligned with white samples. Unfortunately we must interpret these findings with caution given the reliability issues discussed in the reliability section of the limitations of this study in this chapter.

RQ2

Stepwise analysis was conducted with the variables as seen in the results chapter of the study, producing blocks within the model that can be examined; the rationale for a stepwise regression is based on the unavailability of extant research examining these variables causally. The Latino/a Values Scale (LVS) with Familismo and Cultural Pride was a significant predictor for females, FIS with family expectations, financial support, values/beliefs and informational support was also significant for females, and Prestige was a significant predictor for females. However, little improvement in predictive power occurred as a result of adding predictor variables to the blocks in the model for females, the difference in variability was not significantly. Throughout the analysis, Familismo was the variable of note that seemed to

account for the most variation and thus remain a significant predictor of traditionality in the model. However, this was only in the first two blocks of the model; by the time Prestige is added to the model in block 3 there are no significant predictors for occupational traditionality in females. Extant research posits that higher ethnic identity endorsements, and higher egalitarian/non-traditional gender role attitudes may contribute to greater confidence for women in encountering the effects of racism and sexism in the process of career exploration, thus influencing their beliefs on career development (Flores & O'Brien, 2002; Gushue & Whitson, 2006).

The same hierarchical regression analysis was performed on the male sample, resulting in a model with blocks that can be examined as seen in the results chapter of this study. Throughout the model the LVS variables were not a significant predictor for males, neither was the FIS variables, and neither was Prestige. Unfortunately, none of the variables showed any impact on predicting traditionality in males. While the data showed some marginal influence of Familismo, it did not rise to statistical significance and, given the concerns about the reliability of Familismo, particularly with the male part of the sample, it is difficult to take away any significant interpretation from these results that is not simply that the variables did not predict traditionality. This is not entirely unexpected, as research looking into nontraditional career choices in males showed that family influences such as the father's nontraditional career choice and the nontraditional career interest of the subject would result in predictive power of nontraditional choices (Flores et. al., 2006). It is likely that a stronger influence of family and culture would, instead of pushing males in the direction of traditional choices, support their interest and development in nontraditional choices (Flores et. al., 2006; Kim, Fouad & Lee, 2018).

The study did show differences in male and female samples in how the variables impact traditionality choice. Although many of the variables were not significant, the difference between males and females, particularly in demonstrating significant impact of the predictive power of the variables, was clear in the data. However, in both males and females, the data supports the outlook that there are other variables outside of family and cultural influence that most likely have a greater impact on traditionality. With regards to the findings on Familismo, this concept encompasses the desire to succeed on behalf of the family, to be a caregiver and provider. Many of the immigrant groups in a Latino/a sample, 1st and 2nd generation Latinos/as in the United States, may need to go out and earn to support their families here and outside of the country. They would place more emphasis on getting a job where they can be successful/persistent instead of engaging in competitive fields where racism, sexism, availability of opportunity, financial investment, etc. may present significant barriers and block their ability to provide. This may contributes to traditional choices.

RQ3

Though originally intended to be a multiple regression model that would examine prestige, Latino/a values and family influence as a predictor for occupational congruence, due to the difficulties in obtaining the accurate variables for the analysis, and the issues with the data in this sample, it was necessary to approach this question differently for the analysis and a one-way ANOVA and chi-square test was performed. The data constraints prevented the accurate calculation of three-letter Holland interest codes for the vast majority of participants; the three letter Holland codes are integral in determining career interest as well as calculating a C-Index score (Brown & Gore, 1994). The C-Index score, as indented by the development literature based off the three letter Holland code, was a necessary variable for the analysis as it was

originally designed in this study. Without the ability to differentiate between interest domains, and rank interest areas, the three letter Holland code cannot be determined and does not yield meaningful information without inter interest values that are different (Holland, 1997).

Of the participants in this sample, only ten met the criteria for a fully differentiated three letter Holland code; those participants and their respective Holland codes and C-Index scores was presented in table 9 of the results chapter of this study in order to demonstrate the original intention of the study and what variables and relationships were endeavored to be acquired. In order to analyze the extant data in this study, a simplified method was employed that is informed by the C-index where participants were classified into three congruence categories: low congruence (score of 0), medium congruence (scores of 1 or 2), and high congruence (score of 3). The determination of their score is based on how their predominant interest matched the three-letter score of their occupation; this is discussed in more detail in the results chapter of this study and the C-index limitations of this chapter. While this approach is a simplification informed by the C-index it is still a significant limitation in the study and is discussed further in the limitations section of this chapter. Additionally, of the full data set in this study (m=184, f=201), which was used in the analysis of the other research questions, only 102 (m=37, f=65) participants had a clearly distinguishable predominant interest. Regardless of any appropriate manipulation to the interest scores, the distinguishing factor of predominant interest is necessary for congruency to be meaningful (Eggerth & Andrew, 2006). The reduction in the overall number of the total sample for this analysis resulted in a significant loss of power for the study.

The chi-square test that was performed in the study was used to assess the potential association between gender and occupational congruence, and possibly identifying disparities between males and females in the alignment of their interests with their chosen professions.

However, there was no significant association between congruence and gender demonstrated in this data. This both agrees with and contradicts research that has shown gender differences, and no gender differences, when it comes to career congruence (Kantamneni & Fouad, 2013; Tracey, 2010). However, other studies that have looked at gender and career congruence have used much more sophisticated and meaningful congruence scores and have not looked at Latino/a samples. While the overarching critique in this study would be the issues with the congruence scores, there may be observations about Latino/a population gender differences that are missed in this analysis. Finally, the data showed a significant percentage of the participants were assigned low congruence which, according to the method used in this study, means their predominate interest did not match the first or second letter in their occupational code. This overall low congruence throughout the dataset could be improved by more meaningful congruence scores, as the C-Index's three letter requirement allows for more medium level congruence when the second and third letters match.

An ANOVA was performed on the data following the execution of the chi-square test. After confirming the lack of relationship between gender, and in order to supplement power concerns already noted, the sample was reintegrated between males and females. The ANOVA conducted showed significant differences in congruence across the following variables: prestige, informational support, family expectations, values/beliefs, and financial support. Familismo was notably absent from the variables that demonstrated significance in the ANOVA given the impact familismo had in the other analyses within this study, particularly traditionality, which invite questions about the relationship between traditionality and career congruence. It may be that adhering to familismo values result in traditional career choices in order to fulfill requirements within the family to carry on traditions, expand family businesses, and/or support the family,

while career congruence is more associated with independence and western cultural values (Fouad & Kantamneni, 2013). Cultural values, the other component of the LVS, were also not significant in this procedure, and may demonstrate further concerns about the LVS usage in this study.

This provides additional support in considering how family influences contribute towards career congruency, and how the FIS more appropriately captures the concepts of cultural and family values due to its greater efficacy in vocational research (Postolache, 2022). Post hoc analysis on prestige also showed significant differences between high congruency and low congruency groups, but no significant differences between medium congruency and low or high groups. This fits with other research on prestige that continues to find relationships between prestige and career congruency (Tracey, 2010). There were significant differences between low and high congruence groups, and medium and high congruence groups for informational support. These results can be used to deduce that individuals who endorse higher prestige occupations are more knowledgeable and particular about their career choices, thus making career choices that fall into greater congruence with their interest and abilities, with informational support helping to inform choices and contributing to social desirability (prestige). Family expectations showed significant differences between medium and high congruency groups, with medium showing higher family expectation scores; this can inform hypotheses that attribute career choices to family expectations (Fouad et. al., 2010). Ideal occupational interests, and corresponding career choices, are eschewed in order to meet family expectations, honor the family, and/or contribute to the collective. Values/beliefs showed significant differences between low and high congruency groups, with low showing higher values/beliefs scores. Similar to family expectations, this finding helps to support perspectives that hold career choices commensurate

with matching family values and beliefs above those of society at large (e.g. Social desirability [Prestige]) (Fouad et. al., 2010). Finally, there were significant differences between low and high congruence groups, and medium and high congruence groups for financial support, with the lower and medium groups having higher financial support scores. Financial support indicates that the family has provided some resources to pursue education and career, as well as perceptions of the family as supportive (Fouad et. al., 2010). It would be consistent with findings in this study where participants who endorsed higher family values and expectations to make occupational choices based on family expectations, instead of congruence, in response to family financial support and resources towards pursuit of certain career opportunities. They may feel indebted to their family for whatever support they are receiving, or this support could be contingent upon pursuing career opportunities determined by the family.

Limitations of the Study

Reliability

It is important to examine reliability concerns in all research in order to assure that interpretations of findings are accurate and that the strengths of the measures continue to inform further research (Schmitt, 1996). Reliability coefficients for the measures in this study were strong and, in some cases, robust ($\alpha > .90$); the Family Influence Scale reflects comparable coefficients to similar research studies (Postolache, N., 2022). However, the Latino/a Values Scale subscale of Cultural Pride showed reliability coefficients below what is generally acceptable in the literature. Here we will explore some of the determinations contributing to low reliability on the Latino/a Values Scale (LVS), and the justification for its use in this study. When a measure presents lower reliability coefficients than are readily accepted in the literature ($\alpha < .70$), we can accommodate lower reliability scores than are generally accepted when

meaningful examination of some domain within the research is still served by the measure (Capielo Rosario, Lance, Delgado-Romero & Domenech Rodríguez, 2019.; Schmitt, 1996). The LVS subscales provide researchers with an opportunity to examine enculturation in relation to specific cultural values that distinguish Latinos/as on various outcomes and processes (Najar, N.S., 2019).

The LVS continues to be an interesting alternative or addition to more established cultural values measures, like the Acculturation Rating Scale for Mexican Americans (ARSMA), that is showing up in more research looking at Latino populations (Capielo Rosario .et. al., 2019; Najar, N.S., 2019). This is because the ARSMA was developed specifically for use with Mexican Americans, and those studies looked at more pan-Latino/a samples, where a measure like the ARSMA may miss the nuance of cultural values and enculturation endorsements that differ within groups in the Latino/a population. This study sought to do exactly that, find a way to look at cultural variables beyond the use of the ARSMA. Additionally, as discussed in the descriptive statistics area of this chapter, the sample for this study was significantly lower in representation of Mexican Americans than both the other studies that have utilized the LVS and the ARSMA, and the source study by Kim et. al (2009) where the LVS was developed (Capielo Rosario et. al., 2019; Najar, 2019). The reliability scores for familismo and cultural pride, while below .70 in this study, are still relatively close to .70 (.69 and .56 for females respectively); similar to results found in other studies that have utilized the measure, where scores like .71 and .76 for the subscales were recorded (Najar, 2019). Mean scores are also similar to other studies that have used the LVS subscales (Najar, 2019).

The survey that was executed in this study, and the demographic variables of the participants in the study, can also glean information that can explain low reliability scores. The

population sample in this study was significantly different from the samples in both the development of the LVS and other studies that have utilized the measure (Kim et. al., 2009; Najar, 2019). As discussed in the descriptive statistics area of this chapter, and in the data actions section of chapter four, the original number of participants that had data that was gathered was over 900 for both males and females. That number was drastically truncated in order to have data that was usable for the study, whereas the previously mentioned studies had samples in the 200 range to begin with, with comparatively small entry eliminations, and vastly different ethnic percentages (Kim et. al., 2009; Najar, N.S., 2019). The surveys used in those studies were also notably less arduous. Those studies noted that participation generally took ten to twenty minutes, whereas the minimum timeline for participation in this study was roughly twenty minutes. Research that examines reliability issues with MTurk samples has shown that attentiveness can impact reliability scores (Fleischer, A., Mead, A. D., & Huang, J., 2015). The LVS came at the end of a longer than usual survey, that may have contributed to participant fatigue, where respondents were not as attentive, particularly to items that would be reverse scored. Mturk issues are discussed further in the limitations of the study.

Reliability concerns can often be ameliorated by scoring techniques and item removal from the measure. In order to examine the effect of troubleshooting the reliability coefficients, some small investigations were done to determine if impactful changes should be made. In order to examine the impact of removing items on the reliability coefficients in the study, a simple removal and observation was done. By removing the item "One should work to preserve the language of one's ethnic group" a minimal increase in reliability from 0.569 to 0.578 was found. Similarly, for the male sample, removing the item "One should never lose one's language of origin" leads to a slight increase in reliability from 0.409 to 0.430. These changes, although in

the desired direction, are not substantial. With regards to the scale without item analysis, removal of items only has marginal impact on reliability for both males and females.

When considering the reliability concerns for the LVS in this study, reverse scoring is impacting the scale's reliability. There are five items on the scale that are reverse scored. These items were reverse scored before assessing reliability and calculating the composite score, as described in the development article (Kim et. al., 2009). Examining the reliability for the full scale, including all items without reverse scoring, gives a reliability of 0.750 for males and 0.821 for females, which is satisfactory, and markedly higher than current reliability scores, however, it is not theoretically within the framework of the original authors and the source study (Kim et. al., 2009). The meaningfulness of the data that is not reversed scored, based on the wording of the questions, has significantly different interpretations. While the scale's reliability is relatively low reversed scored, it is clear in the development article, as well as just reading the content of the items, that reverse scoring is required because of the positive phrased and negative phrased items (Kim et. al., 2009; Najar, N. S., 2019).

As previously stated, the ethnic diversity of the samples utilized in the development of the LVS, as well as the samples of successful studies utilizing the LVS, showed greater Mexican American representation and ethnic ranges similar to the United States population percentages, and acceptable reliabilities with Mexican Americans and Puerto Ricans in specific studies (Capielo Rosario et. al., 2019; Kim et. al., 2009; Najar, N.S., 2019). In order to further examine the possibility of the impact of within group differences, as well as consider the efficacy of reliability scores in previous research that used the LVS with different Latino/a ethnic populations, a simple reliability estimate was done with the different ethnicities in this study to examine the reliability coefficients for the purposes of discussion. The Central American, South

American, and Mexican participants were used as separate groups, and the Puerto Rican, Cuban and Dominican participants were grouped together into the Caribbean ethnic group. When reliability was calculated for these groups the following conclusions were found.

For both males (n=25) and females (n=42) in the Caribbean group, good internal reliability was demonstrated on the construct of cultural values with alpha coefficients of 0.757 and 0.775 respectively, with an overall alpha of 0.766 (n = 67). For both males (n=27) and females (n=31) in the Mexican group, lower but improved reliability was demonstrated on the construct of cultural pride with alpha coefficients of 0.631 and 0.62 respectively, with an overall alpha of 0.625 (n = 58). For both males and females in the South American and Central American groups, unacceptable reliability was demonstrated with the following values respectively: Male (α = -0.17, n = 63), Female (α = 0.21, n = 66), Overall (α = 0.071, n = 129) and Male (α = 0.248, n = 67), Female (α = 0.528, n = 57), Overall (α = 0.397, n = 124). For both males (n=25) and females (n=42) in the Caribbean group, high internal reliability was demonstrated on the construct of familismo with alpha coefficients of 0.818 and 0.801 respectively, with an overall alpha of 0.805 (n = 67). For both males (n=27) and females (n=31) in the Mexican group, good reliability was demonstrated on the construct of familismo with alpha coefficients of 0.732 and 0.712 respectively, with and overall alpha of 0.731 (n = 58). For both males and females in the South American and Central American groups, unacceptable reliability was demonstrated with the following values respectively: Male (α = 0.417, n = 63), Female (α = 0.546, n = 63), Overall (α = 0.483, n = 129) and Male (α = 0.68, n = 67), Female (α = 0.599, n = 67), Overall (α = 0.652, n = 124)

Based on these coefficients, the reliability of the Cultural Values scale appears to be relatively stronger among Caribbean and Mexican participants, while it is lower and

unacceptable among South American and Central American participants. The reliability coefficients suggest that the differences in cultural values among different Latino/a ethnic groups are more pronounced, with varying levels of internal consistency across groups, while the differences in familismo are comparatively less pronounced. This reliability analysis indicates that the LVS demonstrates acceptable reliability for the Caribbean and Mexican groups, but lower (and sometimes unacceptable) reliability for the South American and Central American groups when used in research, which is supported by findings and usage in other research (Capielo Rosario et. al., 2019; Kim et. al., 2009; Najar, 2019). Potential future research could focus on further validating the reliability and validity of the Latino/a Values Scale (LVS) for Latino/a ethnic groups who are not Caribbean or Mexican. Exploring the underlying cultural factors that contribute to the variations in cultural values within different Latino/a ethnic groups could provide valuable insights into the complexities of cultural identity and values among diverse populations.

Given the alignment with the development article, it was determined that utilizing the Latino/a Values Scale as the authors intended would be the best execution of the measure. This data can be useful to examine with the caveat that reliability is low therefore the use of the LVS is a limitation of the study, as well as a significant impact on the generalizability of the findings. While the purpose of this study was not to improve upon the measures, it is still valuable to continue to test measures in various study settings with different populations to continue to build on scholarship; undesirable outcomes in research still yield important information for future research.

Recruitment

Multiple authors throughout multiple disciplines of science have utilized Amazon Mechanical Turk (MTurk) to recruit participants and execute research studies, particularly in 2020 during the height of the COVID pandemic, there are still advantages and disadvantages to be considered with using MTurk participant samples (Follmer, Sperling & Suen, 2017; Landers & Behrend, 2015). MTurk samples have been found to be within reasonable and acceptable limits of use, not significantly better or worse than traditional convenience samples like university students (Fleischer, Mead & Huang, 2015). However, MTurk does present unique concerns that are sometimes accounted for in other convenience sampling methods like within, reliability concerns, validity concerns, and technological concerns (Fleischer, Mead & Huang, 2015). Participants may lie on the surveys in order to meet the requirements for recruitment, and receive compensation (Landers & Behrend, 2015).

When the data for this study was reviewed and processed, there was evidence that participants were dishonest about multiple recruitment requirements despite the safeguards MTurk has in place to protect against unwanted workers completing a survey. For example, some participants took the survey and were barred from completing it after answering a critical question that eliminated them from the study; they may have chosen not to identify as Latino/a, or elected an age outside the range of interest. However, they would just retake the survey again and this time identify a Latino/a in order to continue the survey. This was evident by identifying data that inattentive participants provided in the fill in boxes, like their name, which allowed for identification of duplicate entries in the dataset. Which raises the question of inattentiveness in general; participants may be trying to complete the surveys as quickly as possible for the compensation and may lack attentiveness in their responses, inputting of data in fill boxes, and

accurate responses to reverse scored items. For example, some participants who were removed from the study provided inconsistent information like endorsing receipt of a PhD or master's degree without also endorsing a bachelor's degree, and a significant amount of participants were removed for undifferentiated interests scores.

This can harm validity, reliability, and greatly impacts the interpretations of the study and the meaningfulness of the data and relationships within (Fleischer, Mead & Huang, 2015; Landers & Behrend, 2015). This was demonstrated in this study from the consequential truncation of the total participants with usable data for the study, the impact on reliability coefficients, and the significant loss of power in the study due to unusable/incomplete/undifferentiated data. Finally, while samples collected through MTurk may be more diverse, which we see in this study with the wider ethnic diversity of the respondents, they do not guarantee representativeness (Follmer, Sperling & Suen, 2017). Which is demonstrated in the percentages of Latino/a ethnicities in this study aside from Mexican American (the dominant Latino/a ethnicity in the United States).

Data

In addition to the commentary throughout this chapter that presents caution for consideration with regards to the data, some noteworthy observations about the trends in the data are presented here. In this dataset most of the professions provided by participants were in business and technology, with some percentage in the service industries. The participants in the dataset endorsed few to no manufacturing professions or trade profession, which are shown in labor statistics to account for a significant percentage of Latino/a employment in the United States (United States Department of Labor: Bureau of Labor Statistics, 2016). It is possible that the lack of manufacturing and trade representation, as well as the low percentage of the sample

that identified as Mexican American, may indicate less interest in participating in the survey. Manufacturing and trade jobs require more time and labor, leaving less time and motivation to be involved in a lengthy research project. There is also the consideration that desirable participants may not have ready access to computers, particularly a personal computer in the home, in order to participate in this study and be on MTurk.

The amount of data that needed to be removed from the total sample was consequential. Given the screening process provided by the HIT on Amazon MTurk, it was unexpected for such a large percentage of the total gathered data to be unsatisfactory for analysis in the study. Much of the variance of occupations was lost because of the amount of participants that needed to be removed from the data set. The dataset was nested mainly within technology, business, and service occupational sectors, there was little representation of typically artistic/creative occupations and typically realistic/hands-on occupations. This may have resulted in a loss of participants who had greater interest variance, diversity, and differentiation. The various interests of participants within different occupational clusters may have provided greater variance in the data, as well as different responses to the measures, particularly, prestige scores may have been more greatly impacted by those with interests in and representation of careers that are generally in the lower prestige categories. Particularly for artistic/creative and realistic/hands-on occupations, where career decision making may be stronger due to the passion and dedication often required in these fields (e.g. visual artist, dancer, artisan), as opposed to the general availability of business/service/technology occupations in modern society, stronger interest differentiation may have been demonstrated by these participants that were less represented in the sample.

The lack of specificity of participant data may have sacrificed nuance in the analysis. For example, administrator and administrative assistant are different occupational titles with individual Holland codes for calculation of congruence. However, unless specified by participants, it is impossible to know if someone who is an administrative assistant identified themselves as an such or as an administrator on the survey. Accordingly, the calculation of their occupational congruence will be impacted. Another example is if a participant fails to specify components of their occupational title, such as not identifying themselves as a manager or supervisor or director within their field. Therefore, participants may have been attributed an occupation with a different traditionality score, different population representation, different category within the occupational outlook handbook, and more or less prestige based on missing information. Finally, while Tracey and other researchers of occupational prestige continue to advance the study of prestige in career development, it is not trivial that the prestige rankings are from the 1987 research by Stevens and Hoisington. Still used in academic literature almost 40 years later, the development and source material cannot account for shifts in the perception of prestige over the past 4 decades and three generations.

C-Index Scores

The C-index requires that participants demonstrate differentiated interest areas to receive a full three letter Holland code that can be calculated against the Holland code of their occupation. Without clear preferences in their interests, it is not possible to assign Holland codes. The O*Net interest profiler short form was used in this study to ascertain participant interest scores as a function of their endorsement of the different interest domains defined by Holland, the RIASEC domains are represented in the short form by ten questions per domain. Differentiation between the interest areas occurs when certain domains yield higher results on the

short form out of ten, for example, a score of eight or nine in a domain would show high interest, but only in relation to another interest that would score lower. A participant who scores eight or nine in four or five different domains would not show high differentiation as defined in chapter three of this dissertation. For example, if a participant scores nine in the investigative domain, seven in the social domain, and six in the artistic domain, with the other interest areas scoring less than six, we would have clearly differentiated Holland code for that individual of ISA. The Holland code for psychologists is ISA, so someone with that Holland code who is also a psychologist would have high congruence. Their congruence score, when calculated using the C-index proposed by Brown and Gore described in chapter three of this document, would be eighteen.

Because the short form only allows 10 questions to help determine the level of interest in a domain, the variation and range between domains is smaller and thus more difficult to differentiate when they are similar. The O*Net interest profiler long form is thirty questions per interest area, and therefore it is much easier to differentiate a range of one to thirty versus one to ten. The short form was used in this study in order to reduce the length of the survey, and to reduce participant fatigue. Unfortunately, the short form made it more difficult to find participants who showed enough variance in their interest areas to have a clearly defined Holland code assigned to them. Many participants scored similarly throughout the six interest domains, so it is not possible to yield a three letter Holland code when four or more interest areas have the same endorsement level, thus it is not possible to calculate a C-Index score as proposed. The alternative method used in this study was a simplified version. A participant with a score of six in the investigative domain, as long as all the other domains are less than six, would have investigative assigned as their primary interest area. In the example of the psychologist with the

Holland code ISA, the participant's interest area matches the first letter of their occupational code resulting in an assignment to High congruence in this study. If the participant's primary interest area did not match the first letter, then we would consider the second letter or the third letter to determine medium or low congruence. Eggerth and Andrew wrote how the O*Net can often present difficulties in obtaining three letter Holland codes, particularly because it can produce two letter and even single letter Holland codes when taken directly from the website that hosts the measure; additionally, they discuss the Strong Interest Inventory as well, all to emphasize that a method for dealing with Holland codes of less than three letters is important (2006).

However, these authors also admit that the C-Index by which Brown and Gore calculates interest congruency is still the best method, yields the best results, and that their method of calculation with Holland codes of unequal length (e.g., 2x2, 3x1, etc.) still must grapple with the question of how elevated a Holland code should be to be considered salient (Eggerth & Andrew, 2006). Additionally, other authors and researchers have discussed how Eggerth and Andrews' method may be overly complex, ultimately unnecessary in the scheme of better/stronger research and research models, and more salient with work that focuses more on practical applications of congruence for counseling/guidance (Gore & Brown, 2006; Tinsey, 2006).

Recommendations for Future Research

While the theoretical basis for the realization of this study was sound, there were multiple concerns that resulted from the execution of this study under the limitations presented by sample and data obstacles. It would be important moving forward to address methods in which these limitations can be improved. Consideration of mixed methods is one such solution, as the qualitative components of mixed methods research may help to glen more meaningful self-

reports with more nuance, specificity, and differentiation. Consider that, in practice, the O*Net is not designed to be taken independently of guidance. It provides multiple resources to help participants understand their results, research and explore the meaning of their results, and most importantly, interpret and refine their results. For example, data collected in this study where there was no differentiation in career interest would result in some differentiation in light of guidance and instruction for participants to further differentiate their interests to evoke a clear primary secondary and tertiary interest domain. This is done frequently in career counseling settings, thus the opportunity to engage the participant qualitatively can improve the data and reliability issues in this study.

Qualitative engagement would have been better for distinctions in responses like professions and college major. Professions were difficult to collect with self-report given that people used abbreviations or other titles that are not in the occupational outlook handbook. "Educator" could be a K-12 teacher, a seminar or workshop facilitator, or a professor; these are distinct occupations with unique Holland codes, and there is a significant difference between these professions in terms of interest areas, skills, training, etc Incorporation of qualitative methodology may have yielded better results for the interest inventory, holland codes, and occupational congruence. Research also supports the idea that qualitative methods may produce more desirable results when examining values variables (McLafferty, Slate & Onwuegbuzie, 2010). The components of the LVS, values and familismo, had issues with reliability, and values did not produce significant results for some of the research questions in this study. The same is true for components of the FIS, although that measure did better in the analysis for this study.

More importantly, vocational psychology must continue to build on the concepts explored in this study and expand on the scholarship herein. While the Family Influence Scale has been

shown to produce satisfactory research in career development, this study is one of the first and few to utilize the FIS with Latino/a populations (Postolache, 2022). The Latino Values Scale has also been used in psychology research, particularly in examining help seeking behavior for Latinos/as, and instead of the ARSMA-II which has been normed on Mexican Americans (Capielo Rosario .et. al., 2019; Najar, 2019). However, this is the first study that utilized the LVS in a vocational psychological research context. It should also be of note to researchers assessing Latino/a populations that the differences in ethnic and racial identity, and the significant differences within groups of Latino/a identity, makes the population far more nuanced to study than the more "monolithic" racial/ethnic groups in the United States. For example, Puerto Ricans often have a different relationship with the culture of the United States given that they are part of the country and are familiar with the government, the currency, the systems, the law, and the unique benefits of citizenship. Within group differences are very important to take into consideration in Latino/a research. In this study we discussed several: the differences in racial variance between Latinos/as, the differences of perceptions and attitudes informed by country of origin, and the consistency of constructs and measures that can be differentiated by ethnic group. This can inform future directions for research as we consider how mixed methods can be explored so to can mixed design to examine between group and within group differences with Latino/a populations. This may also account for the strength of Latino/a research that focuses on Mexican samples, that research is more prolific, stronger, and suggests that focusing on one group within the Latino/a diaspora can be more effective in research.

Implications

Research has shown that one of the most important contributors to men's well-being is job satisfaction (Kim, Fouad & Lee, 2018). Studies that have explored variables that impact

men's occupational choices have shown that understanding vocational behavior in men has positive effects that extend throughout multiple domains in their lives. Because of the importance placed on work, particularly for traditional men, investigating what informs those traditional choices such as cultural values, is integral in facilitating both the well-being of men and their families. Concordantly, there remains limited research and information for practitioners who are working with men making nontraditional choices (Flores et. al., 2006), so research that explores career development of non-traditional occupations is also important. Historically males were the standard group on which research was done, and female-only studies focused on feminine specific influences and variables, fortunately not only has the field rigorously investigated influences on women's career decision making, but it has expanded research to different groups racial/cultural/ethnic with both men and women (Flores & O'Brian, 2002; Kim, Fouad & Lee, 2018). The importance of studying women's career development is invaluable, especially when considering the strides that women have made in the workforce. Therefore it is important to continue to examine how variables like prestige, that have limited research, and are theoretically juxtaposed to men, can be observed in a new light that provides contemporary perspectives on women's career development. In this study we observed how females in this dataset were more aligned with their white peers than their male cohorts.

This study was unable to observe or examine generational influences on the variables. The age ranges in the survey should have captured Millennials mainly with Gen Z represented in the lowest age ranges (18-23), but the data did not show that scores in those age ranges contributed any differently to the data than the rest of the age ranges. It would be interesting to capture prestige and congruence data with Gen Z, and newer generations, given that perspectives on work and occupations, as well as what is considered prestigious and impactful within one's

community, is changing with the generations. Witness Gen Z aspiring to be occupations that did not even exist when most of the prestige and career congruence literature was developed like "influencer", "reality celebrity" or "streamer". Therefore, improving upon and expanding measures of prestige and occupational congruence will continue to be important moving forward in both the field of vocational psychology and career/academic guidance for all ages. Particularly with multicultural populations that may demonstrate lower than desired retention rates, graduation rates, and employment rates, refining our understanding of choices and how to guide choices is an important function of the field. Science technology engineering and mathematics (STEM) occupations are stricter with training requirements, specific degree requirements, and the financial investment necessary to pursue those careers than liberal arts counterparts. Therefore, congruency of interest becomes much more important to contribute towards retention in schools, greater representation of diverse groups within underrepresented fields (e.g. women in STEM), and overall growth in those sectors. Academic and career advisors must not only consider career development and goals while in school, but after graduation, in order to be successful and impactful, instead of focusing on how to usher students through a curriculum and help them graduate without incorporating an understanding of their motivations to enter certain fields. Encouraging students to explore and pursue occupations that better match to their interests and values. Understanding how perceptions of prestige can focus, or shift attention away from, obtainable goals can assist in successful career trajectory. Prestige is a fascinating variable that informs career perception and career choice, and with ever growing industry, desirability for higher education, and demand in the workforce, examining how perceptions of what is socially desirable in career choice will yield important information that can only benefit the working population at large.

Conclusion

These findings fit with the hypotheses of this study, as cultural variables, particularly family influences, were shown to be significant in samples with differentiated congruence scores, and prestige was significant with regards to career congruence. While the strength of the measures, power of the sample, and issues with the procedures do not allow for the same interpretation intended in the hypotheses, the study still provides data that raises questions and invites further exploration.

Unfortunately, because prestige and cultural pride were not found to be significant predictors of traditionality, thus no relationship existed between the variables, it was not possible to explore a mediation relationship between them and prestige was not examined as a mediator for traditional occupational choices. Arguably the most unique contribution this study could have made was left unobtained and may have been in no small part due to data concerns. However, frustrations in academic research can still produce valuable information to future researchers and inspire more refined studies, better developed questions, and stronger measures and methods. Prestige research continues to be challenging, and there continues to be limited scholarship that exists in this area. There is hope that continued attempts will be inspiring, and that more questions to be asked and prestige to get more attention in the career development literature.

While it is important to receive all findings with consideration of limitations and room for improvement, what we can see is that many variables beyond interests have an impact on career choices. While cultural variables have not always been given the attention needed in the research, research that explores their influence on career development shows that the field may overlook vital information that can be used in the development of interventions and the provision

of counseling when cultural effects are taken into account. Findings from this study, and post hoc analysis of reliabilities, suggests that ethnicity may be more important than "race" for Latinos/as, since differences in the reliability of the measures and results about traditionality (which, considering census data, means predominantly Mexican) show that within group differences are not only statistically significant, but integral when utilizing certain measures and instruments.

It should not be minimized that, while there were difficulties with the measures, there was still significant data that was found that determines familismo as an important cultural concept in career development. This is substantial, considering it is among the first research looking at familismo in vocational psychology. Career development interventions and research often take a western approach to individual and individualistic decision making processes, the influence of familismo with Latino/a populations shows that decision making is often not individual and results as a function of the needs of the family above and beyond expectations. Concordantly, examining family influence with Latinos in vocational psychology contributes to this as well as demonstrating important unique perspectives on career decision making within the expectations of the family. Consequentially, career interventions with Latinos/as need to strongly consider the impact, expectations, and role of the family when exploring career decision making.

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APPENDIX A: CONSENT TO PARTICIPATE IN ONLINE RESEARCH USING MTURK

University of Wisconsin – Milwaukee

Consent to Participate in Online Survey Research Using MTurk

Study Title: Latino Career Choice and Prestige: Examining Prestige, Cultural Values and Family Influence in Predicting Career Choice

Person(s) Responsible for Research:

Nadya Fouad, Ph.D.

Principle Investigator

Professor of Counseling Psychology

Department of Educational Psychology

University of Wisconsin—Milwaukee

Edwin Ramos, M.S.

Student Co-Principle Investigator

Doctoral Student in Counseling Psychology

Department of Educational Psychology

University of Wisconsin—Milwaukee

Study Description: The purpose of this study is to investigate the influence of factors that can predict career choice for Latinos/as. There remain gaps in the literature when examining cultural variables with Latino/a populations in regards to career choice. The study will seek to examine how various social-cultural variables such as prestige, cultural pride, and family influences can influence career choices. The study will examine traditional career choices and explore how representation of Latinos/as in vocational fields is predicted by cultural variables like: cultural pride, familismo, informational support, family expectations and values, and prestige. The study will also examine how cultural variables contribute to career congruence, an integral component of Holland's vocational typologies, by gathering data regarding career choices and assessing career congruence. Prestige is an important aspect of exploring occupational choice; however, research in support of prestige as a key ingredient in occupational choice is not fully substantiated in the psychological literature. Vocational research into the influences of cultural variables on an individuals' career cognitions and behavior can provide greater understanding about Latinos/as' career choices and inform vocational interventionists and researchers about the cultural context in perceptions and decision making about work.

Risks / Benefits: Risks to participants are considered minimal. Collection of data and survey responses using the internet involves the same risks that a person would encounter in everyday use of the internet (i.e. breach of confidentiality, hacking, identity theft, etc.) The researchers have taken every reasonable step to protect your confidentiality, however, there is always the possibility of interception or hacking of the data by third parties that is not under the control of the research team. There are no costs or fees associated with participation. Benefits of participating include payment from Amazon Mechanical Turk in the form of $0.25 per person.

Limits to Confidentiality Researchers will have access to your Mechanical Turk worker ID which may be able to be linked to your Amazon public profile page that may have personal information attached to it. Amazon will have access to your Mechanical Turk ID and personal information (social security number, IP address, bank account information, etc.) and would be able to link it to your survey responses if the survey is created using MTurk internal software. MTurk worker IDs will not be shared with anyone and will be used solely for the purposes of distributing compensation. Worker IDs will be removed from the dataset after reaching the collection goal and completing the dataset. Data will be retained on the Amazon and Qualtrics severs and will be deleted within 3 years of the completion of the research study. However, data may exist on backups or server logs beyond the timeframe of this research project.

Data transferred from the survey site will be saved on a password protected computer for no more than three years. Dr. Nadya Fouad and Edwin Ramos are the only individuals who will have access to the data collected by this study, and any reports generated from the data will be deidentified and in the form of aggregate statistics. However, the Institutional Review Board at UW-Milwaukee, or appropriate federal agencies like the Office for Human Research Protections, may review this study's records. All study results will be reported without worker ID so that no one viewing the results will ever be able to match you with your responses.

Voluntary Participation: Your participation in this study is voluntary. You may choose to not answer any of the questions or withdraw from this study at any time without penalty. Your

decision will not change any present or future relationship with the University of Wisconsin Milwaukee or Amazon.

Who do I contact for questions about the study: For more information about the study or study procedures, contact Edwin Ramos at ramos8@uwm.edu

Who do I contact for questions about my rights or complaints towards my treatment as a research subject? Contact the UWM IRB at 414-229-3173 or irbinfo@uwm.edu

Research Subject's Consent to Participate in Research:

By entering this survey you are indicating that: you have read the consent form, you are age 18 or older, and that you voluntarily agree to participate in this research study. Please make sure that you have read and agree to Amazon's Mechanical Turk participant and privacy agreements as these may impact the disclosure and use of your personal information.

Thank you!

APPENDIX B: DISSERTATION SURVEY

Latino Career Dissertation

Start of Block: Default Question Block

Q1 Please provide the name/title of your current profession.

_____

Skip To: End of Survey If Condition: Please provide the name/tit… Is Empty. Skip To: End of Survey.

Q2
Please provide the academic major(s) in which you have earned degrees in higher education.

If you have several degrees, please provide the academic major for all degrees.

_____

Skip To: End of Survey If Condition: Please provide the academic… Is Empty. Skip To: End of Survey.

Q3 Please select all higher education degrees you have completed

- [ ] Associate's Degree (1)
- [ ] Bachelor's Degree (2)
- [ ] Master's Degree (3)
- [ ] Specialized Master's Degree (4)
- [ ] Vocational Degree (5)
- [ ] Doctorate Degree (6)

Skip To: End of Survey If Condition: Please select all higher ed... Is Equal to 0. Skip To: End of Survey.

Q4 Please select an ethnic identity

- ○ Puerto Rican (1)
- ○ Mexican (2)
- ○ Dominican (3)
- ○ Cuban (4)
- ○ Brazilian (5)
- ○ South American (6)
- ○ Carribean (7)
- ○ Central American (8)
- ○ Not Latino/a (9)

Skip To: End of Survey If Please select an ethnic identity = Not Latino/a

Q5 Please select a gender identity

- ○ Male (1)
- ○ Female (2)
- ○ Transgender (3)
- ○ Non-Binary (4)
- ○ Other (5)

Q6
Please select your age group

- ○ 18-23 (1)
- ○ 24-29 (2)
- ○ 30-35 (3)
- ○ 36 and Above (4)

Skip To: End of Survey If Please select your age group = 36 and Above

Q7
The **following 6 questions ask you about** what you like to do in different areas.

Place a check in the box by the activities you would like to do.
Do not think about how much education/training is needed or how much money you will make.

- [ ] Build kitchen cabinets (1)
- [ ] Lay brick or tile (2)
- [ ] Repair household appliances (3)
- [ ] Rise fish in a fish hatchery (4)
- [ ] Assemble electronic parts (5)
- [ ] Drive a truck to deliver packages to offices and homes (6)
- [ ] Test the quality of parts before shipment (7)
- [ ] Repair and install locks (8)
- [ ] Set up and operate machines to make products (9)
- [ ] Put out forest fires (10)

Q8
Place a check in the box by the activities you would like to do.

Do not think about how much education/training is needed or how much money you will make.

- [ ] Develop a new medicine (1)
- [ ] Study ways to reduce water pollution (2)
- [ ] Conduct chemical experiments (3)
- [ ] Study the movement of planets (4)
- [ ] Examine blood samples using a microscope (5)
- [ ] Investigate the cause of a fire (6)
- [ ] Develop a way to better predict the weather (7)
- [ ] Work in a biology lab (8)
- [ ] Invent a replacement for sugar (9)
- [ ] Do laboratory tests to identify diseases (10)

Q9
Place a check in the box by the activities you would like to do.

Do not think about how much education/training is needed or how much money you will make.

- [ ] Write book or plays (1)
- [ ] Play a musical instrument (2)
- [ ] Compose or arrange music (3)
- [ ] Draw pictures (4)
- [ ] Create special effects for movies (5)
- [ ] Paint sets for plays (6)
- [ ] Write scripts for movies or television shows (7)
- [ ] Perform jazz or tap dance (8)
- [ ] Sing in a band (9)
- [ ] Edit movies (10)

Q10
Place a check in the box by the activities you would like to do.

Do not think about how much education/training is needed or how much money you will make.

- [ ] Teach an individual and exercise routine (1)
- [ ] Help people with personal or emotional problems (2)
- [ ] Give career guidance to people (3)
- [ ] Perform rehabilitation therapy (4)
- [ ] Do volunteer work at a non-profit organization (5)
- [ ] Teach children how to play sports (6)
- [ ] Teach sign language to people who are deaf or hard of hearing (7)
- [ ] Help conduct a group therapy session (8)
- [ ] Take care of children at a day-care center (9)
- [ ] Teach a high-school class (10)

Q11
Place a check in the box by the activities you would like to do.
Do not think about how much education/training is needed or how much money you will make.

- [ ] Buy and sell stocks and bonds (1)
- [ ] Manage a retail store (2)
- [ ] Operate a beauty salon or barber shop (3)
- [ ] Manage a department within a large company (4)
- [ ] Start your own business (5)
- [ ] Negotiate business contracts (6)
- [ ] Represent a client in a lawsuit (7)
- [ ] Market a new line of clothing (8)
- [ ] Sell merchandise at a department store (9)
- [ ] Manage a clothing store (10)

Q12
Place a check in the box by the activities you would like to do.

Do not think about how much education/training is needed or how much money you will make.

- [ ] Develop a spreadsheet using computer software (1)
- [ ] Proofread records or forms (2)
- [ ] Install software across computers on a large network (3)
- [ ] Operate a calculator (4)
- [ ] Keep shipping and receiving records (5)
- [ ] Calculate the wages of employees (6)
- [ ] Inventory supplies using a hand-held computer (7)
- [ ] Record rent payments (8)
- [ ] Keep inventory records (9)
- [ ] Stamp, sort, and distribute mail for an organization (10)

Q13 This is a list of various different occupations. For each occupation, choose the number from 1 (not at all prestigious) to 7 (very prestigious) that describes that kind of work. **Focus on *how prestigious the occupation is to you*** **to select your answer**.

	1 Not at all Prestigious (1)	2 (2)	3 (3)	4 Somewhat Prestigious (4)	5 (5)	6 (6)	7 Very Prestigious (7)
Pastor (1)	○	○	○	○	○	○	○
Author (2)	○	○	○	○	○	○	○
Electrician (3)	○	○	○	○	○	○	○
Librarian (4)	○	○	○	○	○	○	○
Financial Analysts (5)	○	○	○	○	○	○	○
Sales Clerk (6)	○	○	○	○	○	○	○
Physician (7)	○	○	○	○	○	○	○
Chef (8)	○	○	○	○	○	○	○
Building Contractor (9)	○	○	○	○	○	○	○
Architect (10)	○	○	○	○	○	○	○
Bank Teller (11)	○	○	○	○	○	○	○
Real Estate Agent (12)	○	○	○	○	○	○	○
Barber/Hairdresser (13)	○	○	○	○	○	○	○
Photographer (14)	○	○	○	○	○	○	○

Biologist (15)	○	○	○	○	○	○	○
Telephone Operator (16)	○	○	○	○	○	○	○
Insurance Agent (17)	○	○	○	○	○	○	○
Politician (18)	○	○	○	○	○	○	○
Teacher (19)	○	○	○	○	○	○	○
Musician (20)	○	○	○	○	○	○	○
Auto Mechanic (21)	○	○	○	○	○	○	○
Administrative Assistant (22)	○	○	○	○	○	○	○
Accountant (23)	○	○	○	○	○	○	○
Cashier (24)	○	○	○	○	○	○	○
Lawyer (25)	○	○	○	○	○	○	○
Dance Choreographer (26)	○	○	○	○	○	○	○
Forester (27)	○	○	○	○	○	○	○
Electrical Engineer (28)	○	○	○	○	○	○	○
Data Entry Keyer (29)	○	○	○	○	○	○	○

Department Store Manager (30)	○	○	○	○	○	○	○
Waiter/Waitress (31)	○	○	○	○	○	○	○
Interior Design (32)	○	○	○	○	○	○	○
Veterinarian (33)	○	○	○	○	○	○	○
Bill Collector (34)	○	○	○	○	○	○	○
School Superintendent (35)	○	○	○	○	○	○	○

Q14 Please consider the influence of your family of origin in determining your selections for the following questions. Please select to what degree you agree or disagree with the following statements

	1 Strongly Disagree (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 Strongly Agree (6)
My family shared information with me about how to obtain a job (1)	○	○	○	○	○	○
My family discussed career issues with me at an early age (2)	○	○	○	○	○	○
My family showed me how to be successful in choosing a career (3)	○	○	○	○	○	○
My family showed me what was important in choosing a career (4)	○	○	○	○	○	○
Watching my family work give me confidence in my career (5)	○	○	○	○	○	○
My family provided guidance on which careers would be best for me (6)	○	○	○	○	○	○
My family has given me information about obtaining education/training (7)	○	○	○	○	○	○
My family supported me asking career-related questions (8)	○	○	○	○	○	○
My family expects me to select a career that has a certain status (9)	○	○	○	○	○	○

My family expects me to make career decisions so that I do not shame them (10)	○	○	○	○	○	○
My family is only willing to support me financially if I choose a career of which they approve (11)	○	○	○	○	○	○
My family expects that my choice of occupation will reflect their wishes (12)	○	○	○	○	○	○
My family expects people from our culture to choose certain careers (13)	○	○	○	○	○	○
My family's career expectations for me are based on my gender (14)	○	○	○	○	○	○
Because my family supports me financially, I can focus on my career development (15)	○	○	○	○	○	○
If I wanted to get additional education after high school, my family would provide financial support (16)	○	○	○	○	○	○
If I were to experience a difficult career situation, my family would support me financially (17)	○	○	○	○	○	○

My family expects that I will consider my religion/spirituality when making career decisions (18)	○	○	○	○	○	○
My family explained how our values and beliefs pertain to my career choices (19)	○	○	○	○	○	○
My family expects my career to match our family's values/beliefs (20)	○	○	○	○	○	○

Q15 Please consider how you view your own cultural values when responding to the following statements. Please select to what degree you agree or disagree with the following statements.

	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
One does not need to be loyal to one's cultural origin (1)	○	○	○	○
One does not need to follow one's cultural customs (2)	○	○	○	○
One's bond with one's cultural group must be very strong (3)	○	○	○	○
One does not need to maintain one's cultural traditions (4)	○	○	○	○
One must preserve one's cultural heritage (5)	○	○	○	○
One does not need to preserve the customs of one's cultural background (6)	○	○	○	○
One does not need to practice one's cultural celebrations (7)	○	○	○	○
One should work to preserve the language of one's ethnic group (8)	○	○	○	○
One should never lose one's language of origin (9)	○	○	○	○
One must be proud of one's cultural group (10)	○	○	○	○

Q16 Please consider how you view your own cultural values when responding to the following statements. Please select to what degree you agree or disagree with the following statements.

	Strongly Disagree (1)	Disagree (2)	Agree (3)	Strongly Agree (4)
One should never bring shame upon one's family (1)	○	○	○	○
A woman must be a source of strength for her family (2)	○	○	○	○
A mother must keep the family unified (3)	○	○	○	○
A woman is considered the backbone of the family (4)	○	○	○	○
A man must provide for his family financially (5)	○	○	○	○

End of Block: Default Question Block

Table 1
Latino/a Values Scale: Item Analysis (by Ethnicity) and Factor Analysis (by Study)

	Item Analyses (Study 1)					Factor Analyses					
	LA (n = 29)		EA (n = 34)			PCA (Study 1, n = 147)			CFA (Study 2, n = 231)		
Item	*M*	*SD*	*M*	*SD*	*t*	*M*	*SD*	Loading	*M*	*SD*	Loading
Component 1: LVS–Cultural Pride											.47
One does not need to be loyal to one's cultural origin.[a]	1.83	0.76	2.65	0.65	–4.63	1.97	0.73	–.78	2.02	0.80	–.64
One does not need to follow one's cultural customs.[a]	1.76	0.74	2.53	0.71	–4.23	2.08	0.74	–.76	2.32	0.85	–.57
One's bond with one's cultural group must be very strong.	2.79	0.77	2.32	0.64	2.64	2.70	0.74	.75	2.68	0.78	.58
One does not need to maintain one's cultural traditions.[a]	1.76	0.79	2.71	0.76	–4.85	1.98	0.83	–.75	2.10	0.83	–.57
One must preserve one's cultural heritage.	3.52	0.74	2.59	0.74	4.96	3.22	0.74	.74	3.20	0.69	.75
One does not need to preserve the customs of one's cultural background.[a]	1.83	0.89	2.68	0.64	–4.40	1.94	0.76	–.72	2.09	0.80	–.72
One does not need to practice one's cultural celebrations.[a]	1.93	0.84	2.62	0.74	–3.45	2.10	0.79	–.63	2.19	0.77	–.44
One should work to preserve the language of one's ethnic group.	3.41	0.57	3.32	0.53	4.27	3.24	0.72	.58	3.29	0.73	.62
One should never lose one's language of origin.	3.83	0.38	2.41	0.82	8.52	3.37	0.71	.55	3.19	0.83	.62
One must be proud of one's cultural group.	3.69	0.47	2.71	0.84	5.62	3.50	0.66	.43	3.23	0.77	.48
Component 2: LVS–Simpatía											.77
One does not need to always avoid conflict with others.[a]	2.24	0.83	2.76	0.78	–2.58	2.28	0.80	–.68	2.79	0.70	–.23
One does not need to always be cordial to others.[a]	2.00	0.71	2.50	0.50	–3.26	2.02	0.71	–.64	2.37	0.77	–.25
One must not offend others.	3.07	0.70	2.44	0.75	3.42	3.01	0.73	.62	2.80	0.88	.50
A woman does not need to successfully endure all adversity.[a]	2.38	0.78	2.76	0.56	–2.20	2.30	0.74	–.54	2.65	0.76	–.05

Table 1 (continued)

	Item Analyses (Study 1)					Factor Analyses					
	LA (n = 29)		EA (n = 34)			PCA (Study 1, n = 147)			CFA (Study 2, n = 231)		
Item	*M*	*SD*	*M*	*SD*	*t*	*M*	*SD*	Loading	*M*	*SD*	Loading
A woman should sacrifice everything for her family.	2.31	0.85	1.82	0.80	2.35	2.37	0.85	.48	2.24	0.88	.44
One should never offend one's elders.	3.10	0.72	2.65	0.88	2.22	3.09	0.75	.45	2.82	0.83	.47
Component 3: LVS–Familismo											.86
One should never bring shame upon one's family.	3.38	0.68	2.71	0.63	4.09	3.22	0.66	.74	2.88	0.79	.46
A woman must be a source of strength for her family.	3.21	0.62	2.79	0.64	2.59	3.08	0.68	.63	2.95	0.75	.59
A mother must keep the family unified.	3.14	0.69	2.53	0.71	3.44	3.07	0.73	.38	2.72	0.78	.73
A woman is considered the backbone of the family.	3.40	0.75	2.56	0.66	4.72	3.21	0.74	.58	2.94	0.78	.56
A man must provide for his family financially.	2.98	0.81	2.56	0.66	2.29	3.01	0.85	.46	2.53	0.89	.50
Component 4: LVS–Espiritismo											.79
One does not need to trust a higher being.[a]	2.00	0.93	2.62	0.89	–2.70	2.08	0.82	–.67	2.29	0.91	–.39
One does not need to have faith in premonitions.[a]	2.38	0.82	3.03	0.74	–3.27	2.38	0.71	–.65	2.58	0.76	–.49
A woman should be the spiritual leader in the family.	2.78	0.86	2.00	0.70	3.89	2.72	0.74	.41	2.45	0.89	.71
Items that did not load onto any component											
One should be able to question one's elders.[a]	3.03	0.63	3.35	0.60	–2.06						
A man's strength comes from being a good father and husband.	3.00	0.71	2.41	0.74	3.20						
One does not need to be emotionally affectionate to familiar individuals.[a]	1.79	0.73	2.26	0.75	–2.52						
One's successes should be attributed to one's family.	2.62	0.78	2.21	0.77	2.13						
One does not need to always present oneself as likeable to others.[a]	2.55	0.63	2.92	0.62	–2.28						

(continued)

APPENDIX D: FAMILY INFLUENCE SCALE

Table 2. Family Influence on Career Development Scale Factor Loadings (Pattern Coefficients)

Items	Factor 1	Factor 2	Factor 3	Factor 4
1. My family shared information with me about how to obtain a job	.85			
2. My family discussed career issues with me at an early age	.84			
3. My family showed me how to be successful in choosing a career	.81			
4. My family showed me what was important in choosing a career.	.79			
5. Watching my family work gave me confidence in my career	.74			
6. My family provided guidance on which careers would be best for me	.71			
7. My family has given me information about obtaining education/training	.65			
8. My family supported me asking career-related questions	.63			
9. My family expects me to select a career that has a certain status		.77		
10. My family expects me to make career decisions so that I do not shame them		.76		
11. My family is only willing to support me financially if I choose a career of which they approve		.75		
12. My family expects that my choice of occupation will reflect their wishes		.75		
13. My family expects people from our culture to choose certain careers		.73		
14. My family's career expectations for me are based on my gender		.60		
15. My family expects me to contribute financially to my career education and training			.85	
16. Because my family supports me financially, I can focus on my career development			.82	
17. My family has not been able to financially support my career decisions				
18. If I wanted to get additional education after high school, my family would provide financial support			.70	
19. If I were to experience a difficult career situation, my family would support me financially			.51	
20. My family expects that I will consider my religion/spirituality when making career decisions				.98
21. My family explained how our values and beliefs pertain to my career choices				.71
22. My family expects my career to match our family's values/beliefs				.60

Note: Factor 1 = Informational Support; Factor 2 = Family Expectation; Factor 3 = Financial Support; Factor 4 = Values/Beliefs.

APPENDIX E: OCCUPATIONAL PRESTIGE SCALE

Occupational Prestige Scale

There is a list of various different occupations. For each occupation, choose the number from 1 (not at all prestigious) to 7 (very prestigious) that describes that kind of work. Focus on *how prestigious the occupation is to you*. Please place your response to the space to the right of each occupation and respond to all occupations.

Not at all Prestigious		Somewhat Prestigious		Very Prestigious		
1	2	3	4	5	6	7

1. Pastor ___
2. Author ___
3. Electrician ___
4. Librarian ___
5. Financial analysts ___
6. Sales clerk ___
7. Physician ___
8. Chef ___
9. Building contractor ___
10. Architect ___
11. Bank teller ___
12. Real estate agent ___
13. Barber/Hairdresser ___
14. Photographer ___
15. Electrician ___
16. Biologist ___
17. Telephone operator ___
18. Insurance agent ___
19. Politician ___
20. Teacher ___
21. Musician ___
22. Auto mechanic ___
23. Administrative assistant ___
24. Accountant ___
25. Cashier ___
26. Lawyer ___
27. Dance choreographer ___
28. Forester ___
29. Electrical engineer ___
30. Data entry keyer ___
31. Department store manager ___
32. Waiter/Waitress ___
33. Interior Design ___
34. Veterinarian ___
35. Bill collector ___
36. School superintendent ___

APPENDIX F: O*NET INTEREST PROFILER SHORT FORM

O*NET INTEREST PROFILER SHORT FORM

Read the 60 work activities below. Place a check in the box by the activities you would like to do. **Do not** think about how much education/training is needed or how much money you will make! Count the number of checks for each shaded section and write that total in the box to the right of each section. These are your scores for each interest area.

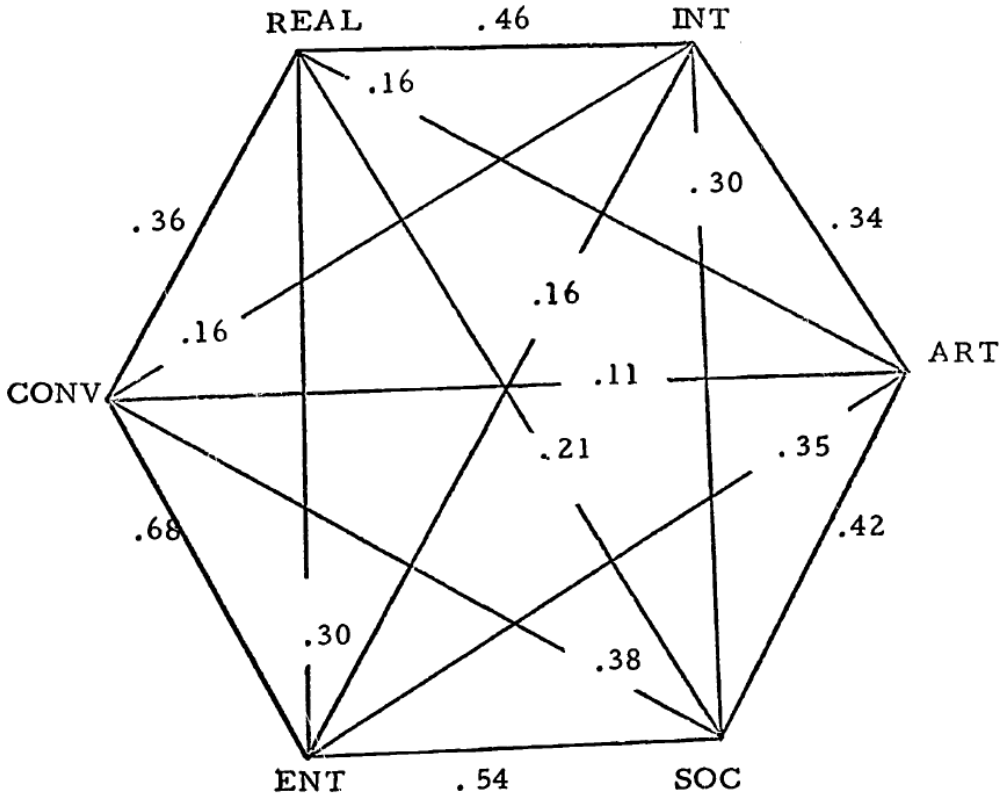
☐ Build kitchen cabinets	☐ Drive a truck to deliver packages to offices and homes	
☐ Lay brick or tile	☐ Test the quality of parts before shipment	
☐ Repair household appliances	☐ Repair and install locks	**Total**
☐ Raise fish in a fish hatchery	☐ Set up and operate machines to make products	
☐ Assemble electronic parts	☐ Put out forest fires	
	Realistic checks =	
☐ Develop a new medicine	☐ Investigate the cause of a fire	
☐ Study ways to reduce water pollution	☐ Develop a way to better predict the weather	
☐ Conduct chemical experiments	☐ Work in a biology lab	**Total**
☐ Study the movement of planets	☐ Invent a replacement for sugar	
☐ Examine blood samples using a microscope	☐ Do laboratory tests to identify diseases	
	Investigative checks =	
☐ Write books or plays	☐ Paint sets for plays	
☐ Play a musical instrument	☐ Write scripts for movies or television shows	
☐ Compose or arrange music	☐ Perform jazz or tap dance	**Total**
☐ Draw pictures	☐ Sing in a band	
☐ Create special effects for movies	☐ Edit movies	
	Artistic checks =	
☐ Teach an individual an exercise routine	☐ Teach children how to play sports	
☐ Help people with personal or emotional problems	☐ Teach sign language to people who are deaf or hard of hearing	
☐ Give career guidance to people	☐ Help conduct a group therapy session	**Total**
☐ Perform rehabilitation therapy	☐ Take care of children at a day-care center	
☐ Do volunteer work at a non-profit organization	☐ Teach a high-school class	
	Social checks =	
☐ Buy and sell stocks and bonds	☐ Negotiate business contracts	
☐ Manage a retail store	☐ Represent a client in a lawsuit	
☐ Operate a beauty salon or barber shop	☐ Market a new line of clothing	**Total**
☐ Manage a department within a large company	☐ Sell merchandise at a department store	
☐ Start your own business	☐ Manage a clothing store	
	Enterprising checks =	
☐ Develop a spreadsheet using computer software	☐ Calculate the wages of employees	
☐ Proofread records or forms	☐ Inventory supplies using a hand-held computer	
☐ Install software across computers on a large network	☐ Record rent payments	**Total**
☐ Operate a calculator	☐ Keep inventory records	
☐ Keep shipping and receiving records	☐ Stamp, sort, and distribute mail for an organization	
	Conventional checks =	

In the boxes below, write the names of the interest areas with the three highest scores. The first box is your highest or primary interest. If there are ties, choose the interest with activities that you think are the best fit for you.

1 ____ 2 ____ 3 ____

Sponsored by the U.S. Department of Labor, Employment & Training Administration. Developed by the National Center for O*NET Development (v1)

APPENDIX G: HOLLAND CORRELATION HEXAGON



APPENDIX H: ASSUMPTION TESTING AND SCATTERPLOTS

RQ2: Assumption Testing (Females)

The following needs to be assessed before proceeding with interpreting the results of a multiple linear regression; (a) unusual observations/outliers, (b) interpreting linearity, (c) testing for homoscedasticity, (d) checking for normality, and (c) multicollinearity.

Unusual observations/outliers although there were observations with standardized residuals slightly greater than |3| when included in the regression models, Cook's distance for all observations were below the recommended threshold of 1. However, for thoroughness, these observations were removed and the regression model run again. The results of the model did not change given the inclusion vs exclusion of outliers and therefore they were retained in the data set for analysis.

Interpreting linearity is tested in two ways;

1. Establish if a linear relationship exists between the dependent and independent variables collectively by plotting a scatterplot of the studentized residuals against the unstandardized predicted values.
2. Establish if a linear relationship exists between the dependent variable and each independent variable, using partial regression plots between each independent variable and the dependent variable.

Figure 1

Studentized Residuals Against the Unstandardized Predicted Values

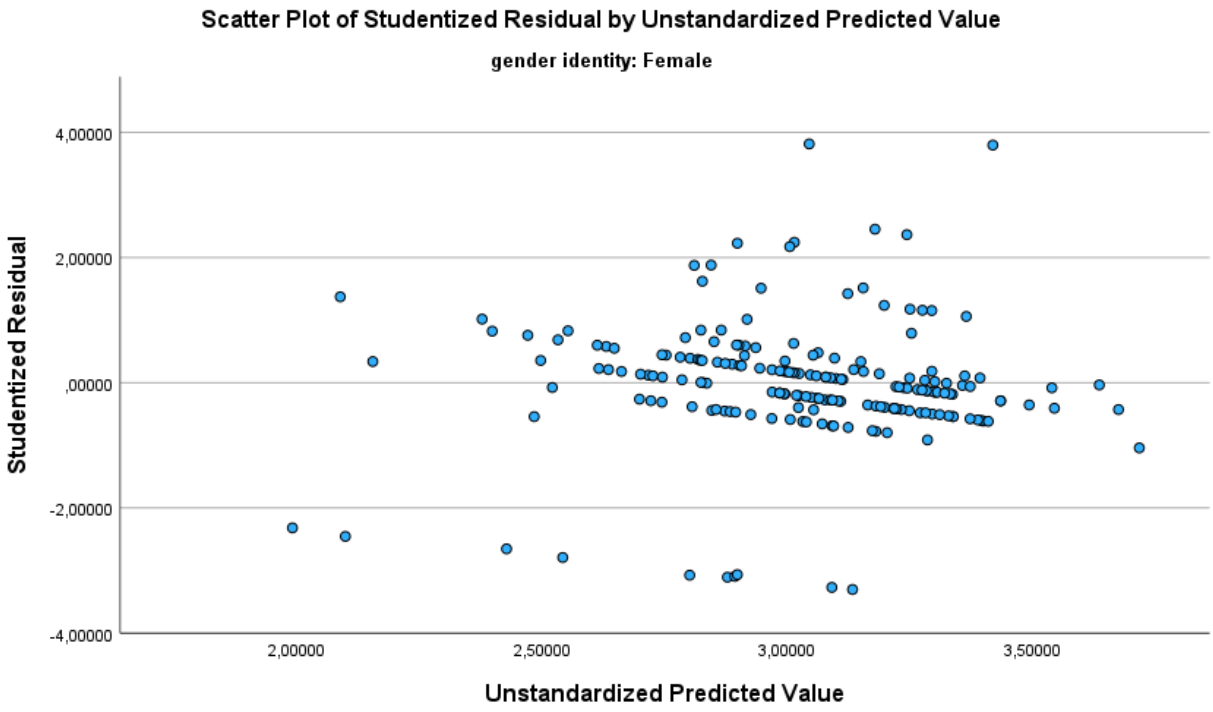
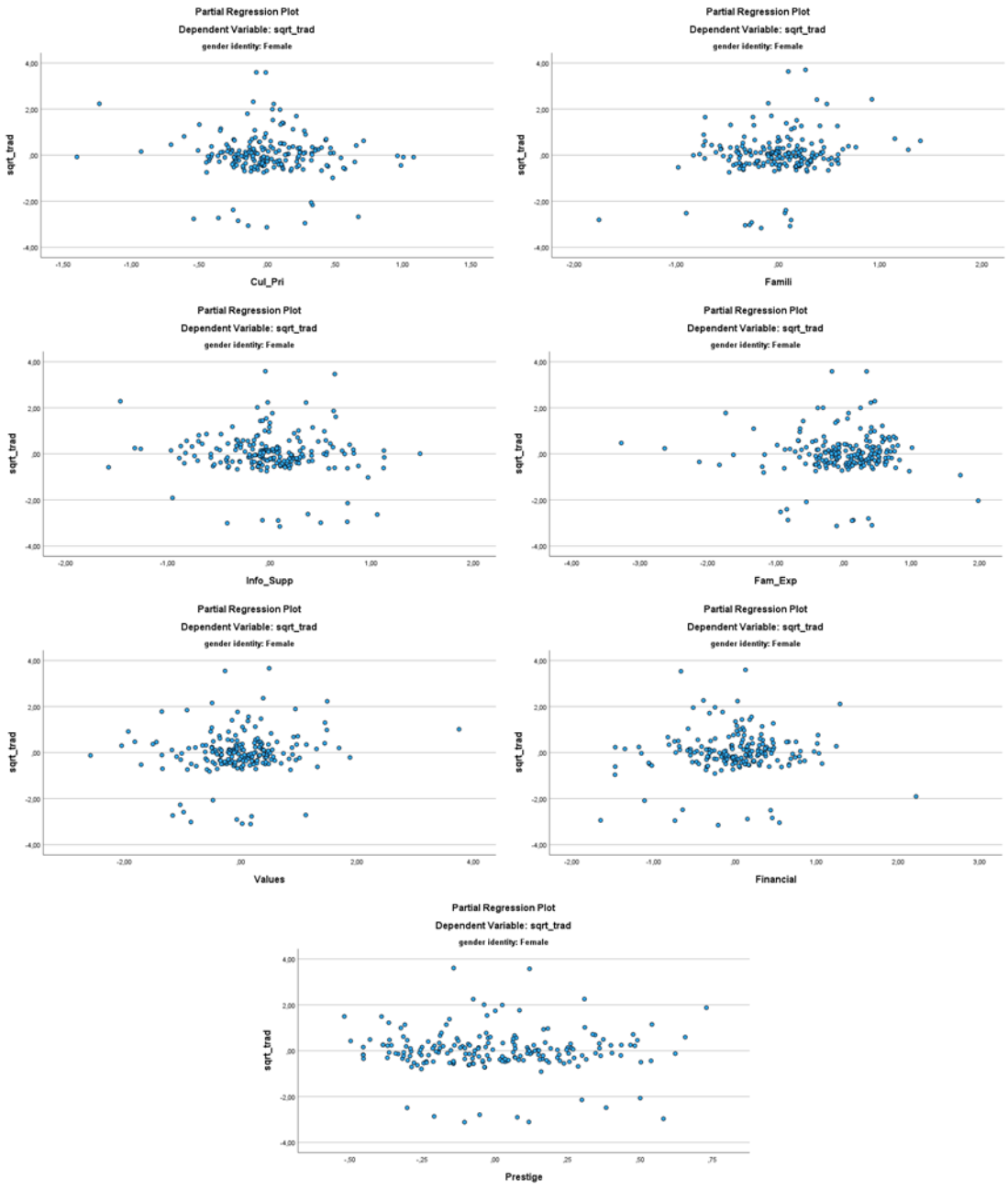


Figure 2

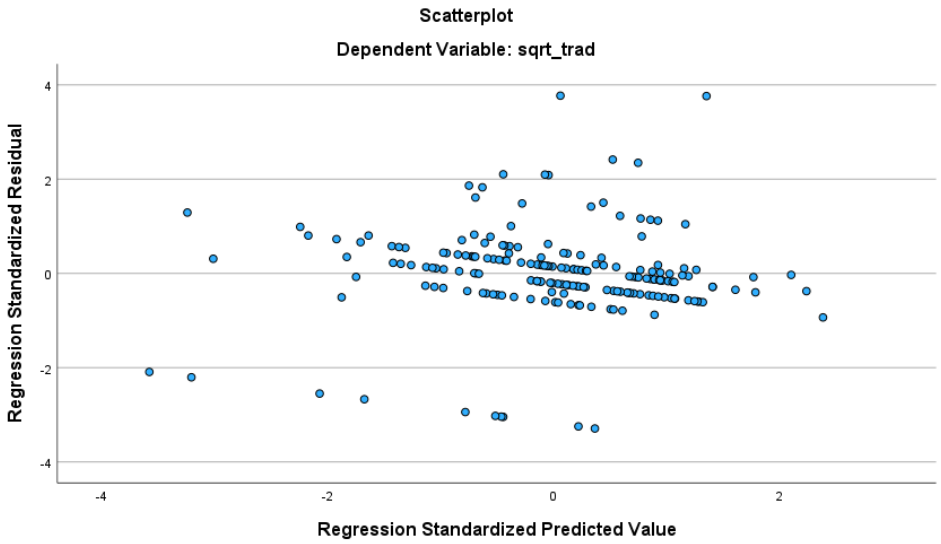
Partial Regression Plots



Testing for homoscedasticity is assessed by visual inspection of a plot of standardized residuals versus standardized predicted values in Figure 3. If there is homoscedasticity, the spread of the residuals will not increase or decrease as the predicted values increase. There was approximate homoscedasticity.

Figure 3

Standardized Residuals Versus Standardized Predicted Values



Checking for normality is assessed by visual inspection of a histogram of the standardized residuals as well as a normal P-P plot presented in Figure 5. The mean and standard deviation have values of approximately 0 and 1, respectively. Although some deviation from normality is present, they are not large enough to be worrisome.

Figure 4

Histogram of the Standardized Residuals

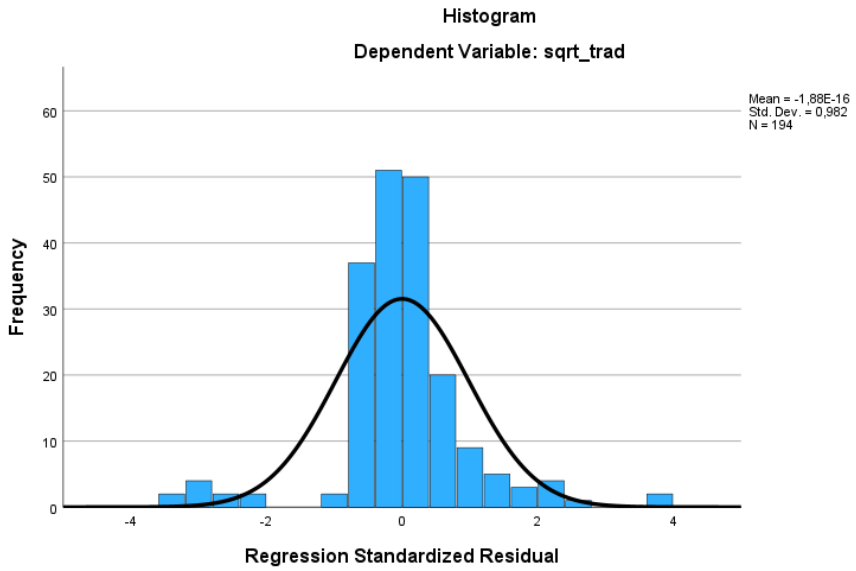
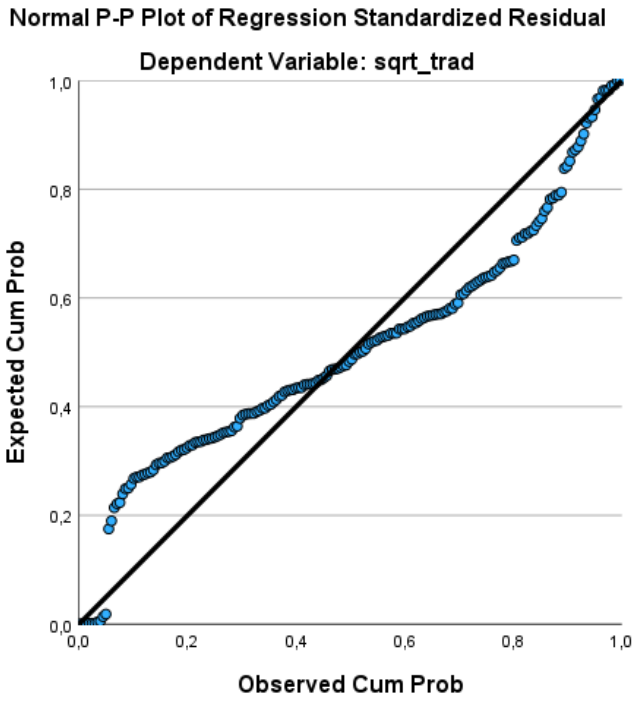


Figure 5

Normal P-P Plot



Multicollinearity was not present, as determined by all VIF values well below the threshold of 10.

Excluded Variables[a,b]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics		
						Tolerance	VIF	Minimum Tolerance
1	Info_Supp	-,048[c]	-,604	,546	-,044	,792	1,262	,776
	Fam_Exp	,042[c]	,539	,590	,039	,822	1,217	,783
	Values	,122[c]	1,532	,127	,110	,774	1,292	,756
	Financial	-,006[c]	-,073	,942	-,005	,819	1,220	,803
	Prestige	-,055[c]	-,750	,454	-,054	,913	1,096	,871
2	Prestige	-,046[d]	-,597	,551	-,044	,825	1,212	,246

a. gender identity = Female

b. Dependent Variable: sqrt_trad

c. Predictors in the Model: (Constant), Famili, Cul_Pri

d. Predictors in the Model: (Constant), Famili, Cul_Pri, Fam_Exp, Financial, Values, Info_Supp

RQ2: Assumption Testing (Males)

The following needs to be assessed before proceeding with interpreting the results of a simple linear regression; (a) unusual observations/outliers, (b) interpreting linearity, (c) testing for homoscedasticity, and (d) checking for normality.

Unusual observations/outliers although there were seven observations with standardized residuals slightly greater than |3| when included in the regression models, Cook's distance for all observations were below the recommended threshold of 1. However, for thoroughness, these observations were removed, and the regression model run again. The results of the model did not change given the inclusion vs exclusion of outliers and therefore they were retained in the data set for analysis.

Interpreting linearity is tested in two ways;

3. Establish if a linear relationship exists between the dependent and independent variables collectively by plotting a scatterplot of the studentized residuals against the unstandardized predicted values.
4. Establish if a linear relationship exists between the dependent variable and each independent variable, using partial regression plots between each independent variable and the dependent variable.

Figure 1

Studentized Residuals Against the Unstandardized Predicted Values

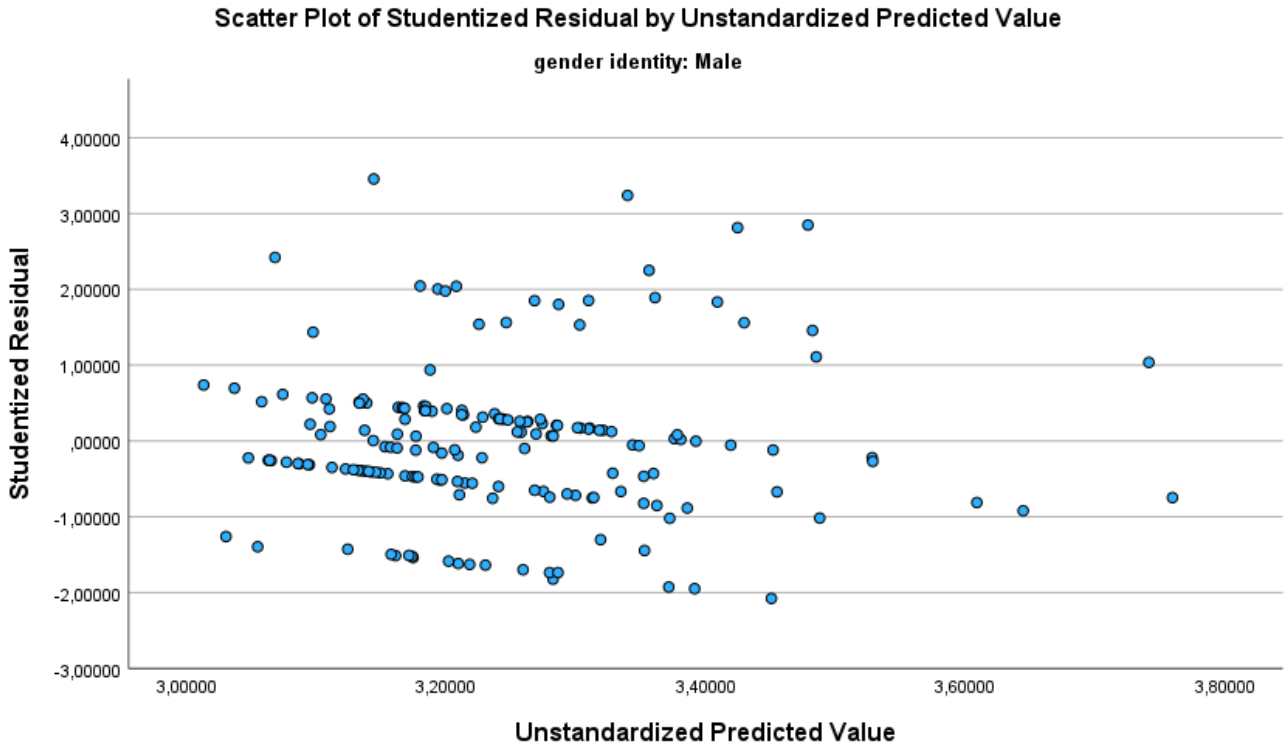
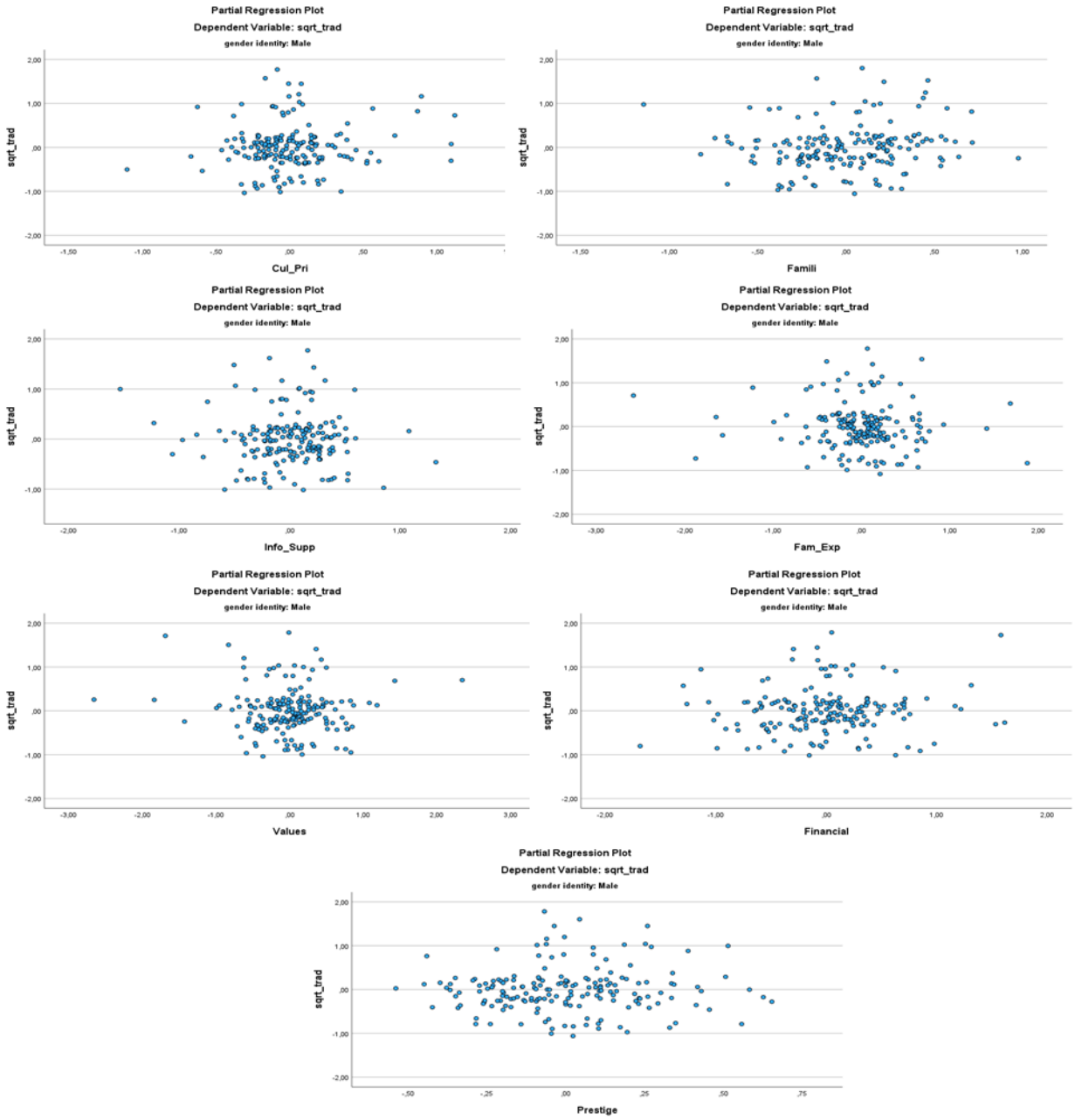


Figure 2

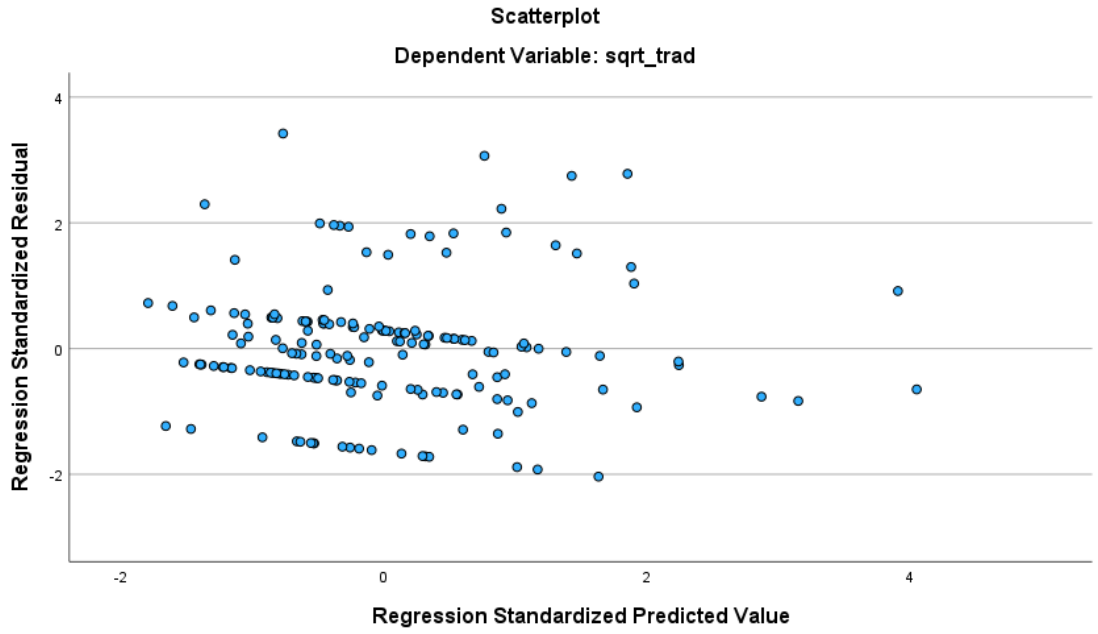
Partial Regression Plots



Testing for homoscedasticity is assessed by visual inspection of a plot of standardized residuals versus standardized predicted values in Figure 3. If there is homoscedasticity, the spread of the residuals will not increase or decrease as the predicted values increase. There was approximate homoscedasticity.

Figure 3

Standardized Residuals Versus Standardized Predicted Values



Checking for normality is assessed by visual inspection of a histogram of the standardized residuals as well as a normal P-P plot presented in Figure 5. The mean and standard deviation have values of approximately 0 and 1, respectively. Although some deviation from normality is present, they are not large enough to be worrisome.

Figure 4

Histogram of the Standardized Residuals

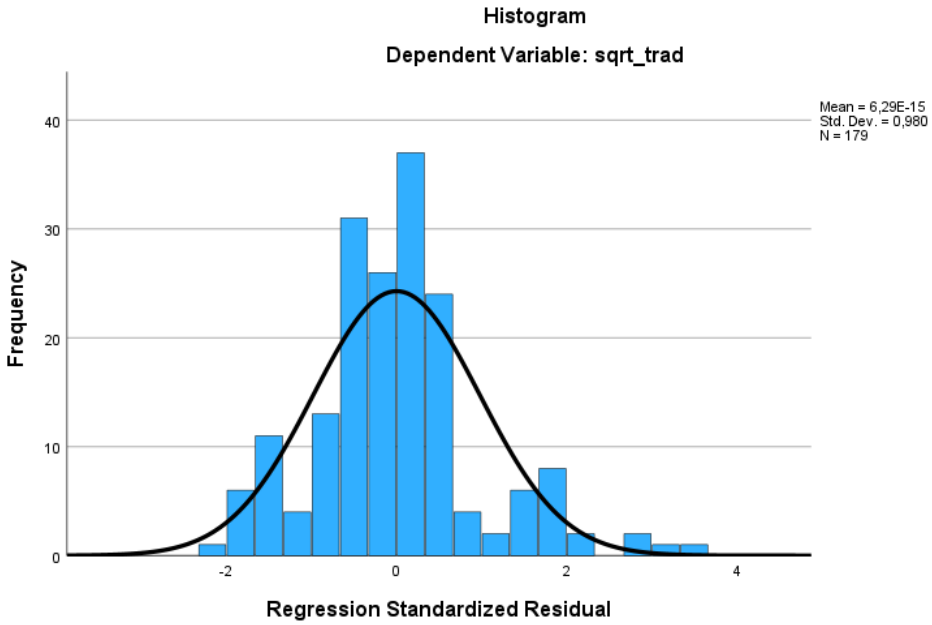
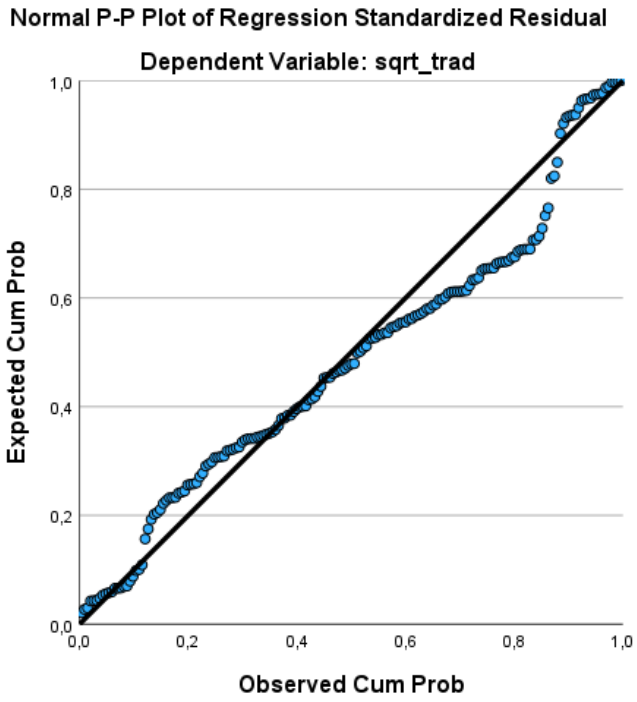


Figure 5

Normal P-P Plot



Multicollinearity was not present, as determined by all VIF values well below the threshold of 10.

Excluded Variables[a,b]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics: Tolerance	VIF	Minimum Tolerance
1	Info_Supp	-,243[c]	-2,316	,022	-,172	,501	1,997	,501
	Fam_Exp	-,255[c]	-2,685	,008	-,199	,606	1,650	,599
	Values	-,228[c]	-2,497	,013	-,186	,656	1,524	,652
	Financial	-,115[c]	-1,217	,225	-,092	,634	1,578	,634
	Prestige	,115[c]	1,523	,129	,114	,985	1,015	,927
2	Prestige	,029[d]	,355	,723	,027	,807	1,240	,190

a. gender identity = Male

b. Dependent Variable: sqrt_trad

c. Predictors in the Model: (Constant), Famili, Cul_Pri

d. Predictors in the Model: (Constant), Famili, Cul_Pri, Values, Financial, Fam_Exp, Info_Supp