5-23-2022

The Role of Sociocultural Factors on the Relationship Between (Un)Employment and Well-being of LatinX Emerging Adults During Covid-19

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THE ROLE OF SOCIOCULTURAL FACTORS ON THE REALTIONSHIP BETWEEN (UN)EMPLOYMENT AND WELL-BEIING OF LATINX EMERGING ADULTS DURING COVID-19

A dissertation submitted in partial fulfillment of

the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

PSYCHOLOGY

by

Chantal Nichole Martinez

2022

To: Dean Michael R. Heithaus
College of Arts, Sciences and Education

This dissertation, written by Chantal Nichole Martinez and entitled The Role of Sociocultural Factors on the Relationship between (Un)Employment and Well-being of LatinX Emerging Adults During COVID-19, having been approved in respect to style and intellectual content, is referred to you for judgment.

We have read this dissertation and recommend that it be approved.

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Date of Defense: May 23, 2022

The dissertation of Chantal Nichole Martinez is approved.

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Vice President for Research and Economic Development
and Dean of the University Graduate School

Florida International University, 2022

DEDICATION

I dedicate this dissertation to my mom. It is because of her unwavering support, encouraging words, unconditional love, and belief in me that I have evolved into the resilient woman I am today.

So, thank you mom, you were right -

“I GOT THIS!”

ACKNOWLEDGMENTS

There are many who helped me through this doctoral journey, it is with my pleasure that I would like to take a moment to show my deepest gratitude.

A sincere thank you to my McNair family. Specifically, I would like to thank Boise States McNair director Gregory Martinez and program coordinator Sarah Ritter. The two of you are a huge reason I decided to pursue higher education. Sarah, you taught me so much in the two years I spent in the program. You have such a nurturing and charismatic way of guiding students to develop and prepare for academic success. I hope you know just how big of an inspiration you are to so many students. I can proudly say I will forever be thankful for the opportunity to be a McNair scholar and a McNair fellow.

Next, I would like to thank my outstanding mentor Dr. Asia Eaton. I will never forget meeting you on my interview day and thinking "wow can I be her when I grow up?". Within minutes I knew there was absolutely no one else in the world I would rather have as a mentor. Fast forward 5 years later and here I am still so thankful I let my instincts guide me with one of the most important decisions of my graduate career. You have shown me what a true leader is, how to prioritize selfcare, and most importantly you have guided me through this process with patience, support, honesty, and empathy. It is because of you that I have exceeded and grown as a scholar.

I would like to thank FIU's brilliant faculty and my wonderful committee members - Dr. Stephens, Dr. Hayes, and Dr. Weinstein. Thank you for your support and contributions to making this dissertation something I will forever be proud of. My experience at FIU has been a pleasure because of the support I received from each of you. A big thanks to the Society for the Psychological Study of Social Issues (SPSSI) for

granting me a scholarship that funded part of this dissertation and allowed me to pay LatinX individuals who faced hardships during the COVID-19 pandemic. I am proud to be a part of such a great community that focuses on social justice research.

A genuine thanks to my huge cohort, Aniqa and Natalie. I couldn't have asked for a better support network and shoulders to cry on (I wish I was kidding). Thank you for always building me up when I was down and for all the laughter in between. I'm not sure I would have made it past year one if it wasn't for the two of you. I can't wait to see what the future holds for us beyond these academic walls. I would also like to thank the 2017 PWR labs manager Daniela – my bestie. Showing up to the very first lab and instantly having a friend in you made my life so much better. I will forever be grateful for all the family holidays you let me crash.

I want to thank my parents and brother for always encouraging me to chase my dreams, even if it meant moving to the opposite side of the country. I am beyond blessed to have such a strong family support system. I will always owe and dedicate my successes to the three of you.

A special thanks to my partner, Sammy. You have supported me through this whole journey and encouraged me to finish, all while showing me the most unconditional love. I appreciate you always listening to my academic rants and pretending like you know what "Industrial Organizational Psychology" is. You came into my life when I needed you the most and now, most importantly, you get to call me Dr. Telly!

Lastly, I want to give thanks to all my other friends and family who constantly encouraged me to be my best self. Without each of you this journey would have been much harder. I am so pleased to be wrapping up this chapter of my life and leaving this

program with a lot more knowledge, many new relationships, and the first in my family to receive a Doctorates degree. I'm just getting started.

ABSTRACT OF THE COLLECTED PAPERS DISSERTATION

THE ROLE OF SOCIOCULTURAL FACTORS ON THE REALTIONSHIP BETWEEN (UN)EMPLOYMENT AND WELL-BEIING OF LATINX EMERGING ADULTS DURING COVID-19

by

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Florida International University, 2022

Miami, Florida

Professor Asia A. Eaton, Major Professor

The coronavirus (COVID-19) pandemic and resulting recession have brought significant challenges for organizations and revealed deep-seated inequalities for employees of color. LatinX individuals, in particular, have experienced high rates of unemployment compared to their White and Black American counterparts and returned to work at a slower rate (BLS, 2020; 2021). As a result, organizational psychologists have been called to action to help understand the economic and psychological impacts of the recession on worker outcomes (e.g., unemployment, mental well-being). The objective of this collected papers dissertation is to a) take a culturally humble and strength-based approach to examine how the emerging adult LatinX community's well-being has been affected by sudden involuntary unemployment and job insecurity due to the global pandemic and b) understand the role of sociocultural factors (e.g., familism, gender ideologies, and ethnic identity) and resilience on the effects of these work stressors. Contemporary, accurate, and interpretable methods of data analysis informed by Hair and his colleagues were employed (Hair et al., 2017; Hair et al., 2019; Hair et al., 2020).

The first paper tested the moderating role of familism (e.g., familial obligation, familial support) and gender ideologies (e.g., Machismo, Caballerismo, and Marianismo), on the association between unemployment and health during the pandemic. Machismo and Caballerismo moderated the relationship, with higher traditional gender role beliefs acting as a protective factor for employed men and as a risk factor for involuntary unemployed men.

The second paper implemented a longitudinal design to assess the protective role of ethnic identity and resilience on the relationship between job insecurity and well-being. Covid related job insecurity is related to lower levels of job satisfaction, and higher levels of anxiety and depression. Higher levels of individual resilience were related to lower levels of anxiety. Lastly, ethnic identity showed to exert its effects through the moderating role of resilience on the job insecurity and anxiety relationship. Taken together the findings from these studies will help inform policy and practice on how job loss and insecurity affect the working lives and well-being of those from marginalized communities and the need for culturally relevant development opportunities and interventions.

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ABBREVIATIONS AND ACRONYMS

AOS	Anglo Orientation subscale
BLS	Bureau of Labor Statistics
CDC	Center for Disease Control
CI	Confidence Interval
COVID-19	Coronavirus
CPS	Current Population Survey
GRC	Gender Role Conflict
LOS	Latino Orientation Subscale
SEM	Structural Equation Modeling
WHO	World Health Organization

I. COLLECTED PAPERS INTRODUCTION

On March 11, 2020 the World Health Organization (WHO) declared Coronavirus (i.e., COVID-19) a global pandemic. Social distancing and quarantine guidelines were mandated to help stop the spread of the deadly virus, leaving millions of Americans unemployed and without job security. As unemployment rates skyrocketed, individuals were left with few answers for when they would return to work. Over a year later, the labor market has yet to make a full recovery. As of April 2021, there are still 9.8 million Americans without jobs- 4 million more unemployed Americans compared to pre-pandemic rates in February 2020 (Bureau of Labor Statistics, 2021).

The economic crises from COVID-19 revealed deep-seated inequalities for individuals from marginalized backgrounds, women, employees in lower-wage jobs, and younger workers (Pew Research, 2021; Pew Research Center, 2020b). For example, job loss and return to work rates have been a pronounced challenge for LatinX emerging adults (18-29 years old) compared to their White counterparts (e.g., White emerging adults) and to their older counterparts (e.g., Latinx older adults). These experiences of unemployment have led to greater job insecurity and worse psychological health outcomes (e.g., symptoms of anxiety and depression) (Ganson, et al., 2020). Researchers and practitioners are therefore called to investigate what resources LatinX emerging adult employees are using to cope with the negative workplace experiences (i.e., unemployment and job insecurity) that resulted from the global pandemic.

It has been well established in the literature that unemployment causes poor psychological health (Paul & Moser, 2008) and that people of color often have higher unemployment rates and lower wages than their White counterparts (Bureau of Labor

Statistics, 2019). However, less is known about the role of sociocultural values in the experience of unemployment during a global pandemic. The first study in this dissertation expands on the current unemployment literature by exploring the moderating effects of cultural values specific to LatinX emerging adults during the first year of COVID-19. Specifically, we seek to examine the role of familism and gender role beliefs on the relationship between unemployment and psychological and physical health outcomes, using the theory of emerging adulthood (Arnett, 2000).

Study two in the collected papers applies the theory of emerging adulthood (Arnett, 2000) and the cognitive-transactional model of stress and coping (Lazarus, 1991, 1993), and extends this investigation by exploring resilience and ethnic identity as moderating the relationship between job insecurity and well-being during COVID-19. This paper will take a strength-based approach to understand the culturally-specific personal factors (e.g., resilience and ethnic identity) LatinX emerging adults possess in the face of work-related adversity during the pandemic. Using a longitudinal design, we will a) establish temporal precedence with the other variables of interest b) give a clearer understanding on resilience c) understand the role of resilience in the workplace and d) advance the knowledge on the relationship between ethnic identity and resilience specific to LatinX. Furthermore, to the authors knowledge very few studies, if any at all, have examined how ethnic identity can potentially exert its effects on the job insecurity and health outcomes relationship through resilience.

A recent study explored the role of resilience on the relationship between perceived stress during the pandemic and negative psychological health outcomes (Havnen et al., 2020), and found that resilience had a direct and indirect effect on

perceived stress and symptoms of depression during COVID-19. Specifically, individuals with high levels of resilience reported lower levels of depression compared to those who reported low levels of resilience. These findings corroborate with other studies on the moderating role of resilience in stressful life events (Anyan & Hjemmdal, 2016).

Furthermore, ethnic identity has been shown to act as a buffer on psychological adjustment to stress (Shelton, et al., 2005), and LatinX individuals often report significantly higher levels of ethnic identity compared to their White counterparts (Clauss-Ehlers et al., 2006). While existing studies have established resilience as a mediator and moderator on stress and health outcomes during the pandemic, they have yet to address the role of ethnic identity on this process and in relation to job insecurity.

For the foreseeable future, the COVID-19 pandemic has changed the workforce. It is essential that I-O psychologist and practitioners work to preserve a healthy workforce and safeguard the health and well-being of marginalized employees during times of stress and job insecurity (Rudolph & Zacher, 2021). Thus, the aim of the collected papers is to understand the working experiences and strengths of communities most impacted by the pandemic, and to create recommendations that will lead to a more equitable workforce.

II. STUDY 1: THE ROLE OF SOCIOCULTURAL VALUES IN THE RELATIONSHIP BETWEEN SUDDEN INVOLUNTARY UNEMPLOYMENT AND PSYCHOLOGICAL HEALTH AMONG LATINX EMERGING ADULTS

The COVID-19 pandemic has negatively impacted the work lives of millions of Americans. The Washington Post, amongst many other major newspapers published articles with titles like "The covid-19 recession is the most unequal in modern U.S. history" or "Young workers hit hard by the COVID-19 economy: Workers ages 16–24 face high unemployment and an uncertain future" (Gould & Kassa, 2020; Long et al., 2020). According to the Bureau of Labor Statistics, from 1948 to 2020 unemployment rates in the United States averaged 5.75%, and hit an all-time record high of 14.70% in April 2020 (Bureau of Labor Statistics, 2021 [BLS], 2020).

COVID-19 has also exacerbated the inequalities people from marginalized backgrounds experience in the labor market. In particular, LatinX[1], African American, and 18-29 year olds have higher rates of unemployment than their White counterparts, both prior and during the pandemic (BLS, 2020). These percentages are similar to the 2009 recession unemployment rates, in which the high frequency of unemployment among emerging adults (18-29) was labeled a public health concern (McGee & Thompson, 2015).

To be specific, nearly 50% of LatinX individuals (compared to 33% of all U.S. adults) reported that they or someone in their household directly experienced

[1] The term LatinX refers to individuals of Latin American origin who self-identity with Latin American descent (used as a gender-neutral or non-binary alternative to Latino/a and Latin@ (Salinas & Lozano, 2019).

unemployment or income loss as a result of the pandemic (Pew Research Center, 2020). Furthermore, 18-19 year olds, followed by 20-24 year olds, report the highest unemployment rates amongst all adult age groups (BLS, 2020). LatinX emerging adults experienced a compounded effect of these disparities, reporting higher unemployment rates than older LatinX adults and compared to emerging adults of other racial-ethnic backgrounds (BLS, 2021). Part of this may be due to the fact that age and racial disparities exist in the availability of remote working accommodations; these accommodations are more often for White collar jobs in which young people and those from marginalized racial-ethnic backgrounds are underrepresented (BLS, 2020; Kantamneni, 2020). Specifically, a survey done by Pew Research (2020) reports that only 26% of LatinX workers hold jobs that could be teleworked compared to 44% of Whites, 48% of Asian Americans, and 34% of Blacks.

It is evident that vulnerable populations in the U.S, especially LatinX emerging adults, are experiencing more severe work and economic consequences of COVID-19 than their counterparts (Kantamneni, 2020). Heeding the call for Industrial Organizational psychologists to "engage in research that fully examines how the COVID-19 pandemic is affecting vulnerable communities" (Kantamneni, 2020), this paper looks to better understand what factors buffer or exacerbate the negative effects of sudden involuntary unemployment during a crisis. The overall goal of this project is four-fold. First, we sought to examine how the emerging adult LatinX community in the U.S. well-being has been affected by sudden involuntary unemployment due to the global pandemic. Second, we examined the role of LatinX cultural values in the relationship between unemployment and health, examining both protective and risk factors from a

culturally-humble and strength-based approach. Third, we tested theoretical frameworks about LatinX emerging adults' well-being from a prediction perspective (Hair et al., 2019). Fourth, we employed contemporary, accurate, and interpretable methods of data analysis informed by Hair and his colleagues (Hair et al., 2017; Hair et al., 2019; Hair et al., 2020).

Literature Review

Emerging Adults

The COVID-19 pandemic has major implications for the lives of emerging adults. In the U.S., the stage of emerging adulthood occurs between adolescence and adulthood, during the ages of 18-29 (Arnett, 2000). The experience of emerging adulthood has shifted over the years, veering from a linear path of family formation to becoming a phase of self-actualization in education and career, marking it as a phase of financial independence (Breen & Buchmann, 2002; Sironi, 2018). Economic crises during this stage in life tend to limit opportunities (e.g., for employment, education) and make it more difficult for emerging adults to experience this developmentally-critical period of independent role exploration (Arnett, 2000; Morch, 1995).

Past recessions that result in high rates of unemployment have shown to be especially detrimental to emerging adults, as they are often less experienced and more likely to be fired compared to older workers. The current pandemic recession in the U.S. is no exception, with 25.3% of emerging adults being affected by involuntary unemployment as of May 2020, substantially more than any other age group (Pew Research, 2020a). A major contributing factor is that nearly half of emerging adult workers (48%) hold positions in industries that are at higher risk for losing their job (e.g.,

transportation, retail trade, accommodation, childcare, food services, and drinking places) (Pew Research, 2020b).

Unemployment

The term "unemployment" refers to when an individual is actively looking for and willing to work but is unable to find work. Unemployment rates in the United States are measured each month by the Bureau of Labor Statistics using the Current Population Survey (CPS). There are about 60,000 eligible households in the sample, and unemployment rates are determined by dividing the number of unemployed individuals by the number of individuals in the labor force (BLS, 2014). At the broadest level, unemployment can be broken down into two forms – voluntary and involuntary.

Voluntary unemployment is when an able individual willingly chooses to leave their place of work even though there is work available to them. Contrary, involuntary unemployment is when an able individual is willing to work but is fired or laid off from their job (i.e., unwillingly). In the case of the COVID-19 pandemic, millions of Americans were involuntarily unemployed.

Unemployment and Health

The relationship between unemployment and psychological, physical, and behavioral impairment is well documented. Employment is a protective factor against stress and ill health, affording meaning and structure to one's life (Ross & Mirowsky, 1995). Meanwhile, the unemployed are prone to psychological distress, including anxiety, depression, frustration, anger, guilt, stress, and mental health hospital admissions, as well as physical distress, evinced through higher rates of chronic disease and unhealthy behaviors (Dean & Wilson, 2009; Pharr et al., 2012).

Paul and Moser's (2008) meta-analysis results show that a) unemployment is not only correlated with psychological distress but is also a cause of it, and b) the average number of individuals dealing with psychological distress is more than double (34%) for the unemployed compared to the employed (16%). Additional research reveals a significant association between unemployment and unhealthy behaviors (e.g., binge drinking, smoking, drug use) and poor physical health (e.g., somatization, more doctor visits, took more medications) (Dooley et al., 1992; Grayson, 1993; McKee-Ryan et al., 2005). McGee and Thompson (2015) built on this work to discuss the distress of unemployment for emerging adults specifically. They found that unemployed emerging adults were three times more likely to report depression compared to employed emerging adults.

Based on findings such as those from Paul and Moser (2009) and McKee-Ryan et al., (2005) we expect to replicate the following basic finding:

H1: Involuntary unemployment will have a negative relationship with psychological and overall physical health among LatinX emerging adults.

Moderators of the relationship between unemployment and health

A variety of work and individual difference characteristics are known to moderate the relationship between unemployment and health. In terms of work characteristics, individuals who experience longer periods of unemployment report worse psychological health compared to those who experience unemployment for less than six months (Eriksson, et al., 2010; Pharr et al., 2012). Paul et al. (2009) also found that gender and occupational status moderate the distressing effect of unemployment on individuals, with men and blue collar-workers reporting higher levels of impaired mental health than

women and White collar workers. Likewise, Artazacoz et al., (2004) found that unemployment had stronger negative effect on men's mental health compared to women's mental health. They explained that the gender differences are a result of family responsibilities and social class. Since men are traditionally given the primary provider role, then such family responsibility increases the negative effects of unemployment on their psychological health. Whereas women can rely on the homemaker and nurturant role to buffer the unemployment and mental health relationship.

Furthermore, prior research indicates the significance of testing sociocultural factors as moderators to help recognize the most distressed groups of the unemployed (Paul & Moser, 2009). For example, research shows persons from individualistic societies tend to feel more personal responsibility over their failures (e.g., unemployment), a heightened sense of distress over job loss, and have less strong social networks to rely on, compared to collectivistic cultures, ultimately leading to worse mental health outcomes (Hofstede, 2001; Martella & Maass, 2000). Another study found that parenting, holding a stable relationship, and living proximity to family moderates the negative relationship between unemployment and mental health (Russo, Decataldo, & Terraneo, 2021). These findings also showed that the moderating effects of parenting roles was gendered, in that being invested in parenting roles more strongly mitigated the unemployment-mental health relationship for females compared to males. The authors conclude by stating that family roles and responsibilities are contributors to the gendered differences often found in the unemployment literature. Thus, gender stereotypical roles may affect the significance of employment on well-being.

Taken together these findings suggest that more research is needed to understand how sociocultural factors can influence the employment-mental health relationship. Because emerging adulthood is a time when identity formation becomes an active project, and personal and cultural values crystalize (Sánchez et al., 2010), it is especially important to understand how LatinX sociocultural factors contribute to the experience of involuntary unemployment.

LatinX Sociocultural Factors

Sociocultural factors are environmental conditions within cultures and societies that have the potential to operate as both risk and protective factors. Examples of sociocultural factors include family support, socioeconomic status, culture, religion, and family structure. The "LatinX" culture includes a heterogeneous population of people inclusive of Cuban, Puerto Rican, Mexican, and other subgroups, that share common language, values, and culture (Noe-Bustamante, 2019). As with every culture, cultural values play an essential role in shaping LatinX's thoughts, behaviors, and beliefs. For example, one of the most common cultural characteristics for LatinX is language. Approximately 34.8 million LatinX's speak Spanish in the U.S. (Gonzalez-Barrera & Lopez, 2013). Cuisine, religion, and family values are other common cultural characteristics that unite LatinX individuals.

Strong family ties are one robust value in LatinX culture (Sabogal et al., 1987). For example, familism (or familismo) is a cultural ideology commonly seen in LatinX cultures which puts importance on loyalty, trust, reciprocity, support, and solidarity among family members (Campos et al., 2014; Calzada et al., 2013; Sabogal et al., 1987). Familism is a multidimensional construct consisting of three components: structural,

behavioral, and attitudinal. Attitudinal familism is the most prominent cultural value discussed throughout the literature and consists of three facets: family obligations (financial support, caregiving), family support (dependability, unity, and emotional closeness among family members), and family as a referent (belief that one's behaviors should be in line with familial expectations) (Calzada et al., 2013).

Recent work suggests that familism can act as both a protective factor and risk factor, as well as mediator and moderator, in relation to psychological health of LatinX individuals (Calzada, Tamis-LeMonda, & Yoshikawa, 2012; Katiria Perez & Cruess, 2014; Losada, et al., 2010; Zeiders et al., 2013). In situations when financial strains are high, like unemployment, it is possible that certain aspects of familism (i.e., family obligation) may add stress to the individual and function as a risk factor (Calzada et al., 2013). This may be especially true during emerging adulthood, when family obligations tend to increase as young adults work towards self-sufficiency and financial independence (Arnett, 2000). Being unable to financially contribute to one's family, or achieve financial independence to avoid burdening one's family, may be especially detrimental for emerging adults. Thus, this study will examine the role of familism obligation and its potential to exacerbate the unemployment-mental health relationship.

On the other hand, the family support aspect of familism may function as a protective factor in the relationship between unemployment and well-being. One study found that in a sample of Mexican-origin adolescents, over an eight-year span, an increase in familism support was related to lower levels of depressive symptoms (Zeiders et al., 2013). Much of the literature regarding familism support focuses on the role it has on caregiving and mental health outcomes. Falzarano et al., (2021) found that familism

and social support tend to be protective factors against adverse caregiving outcomes such as depression. These findings were corroborated by Losada et al., (2010) study that showed familism support had a positive impact on caregiving distress when the family is viewed as a source of support. Moreover, Losada et al., (2010) concluded with stating "the importance of conceptualizing familism as a multidimensional construct with both positive and negative effects on caregivers emotional distress". Furthermore, it is important to note that a recent meta-analysis found the link between familism and internalizing outcomes varied across developmental stage, with the largest effect found in early adolescence (Cahill et al., 2021). Taken together these studies suggest further examination of familism as a multidimensional construct and the potential protective factor familism support has on emerging adults' mental health.

Accordingly, we use a strength-based approach to understand how certain aspects of familism (familism support) can create conditions and opportunities that enable the individual to positively adapt to adverse events like unemployment (McCashen, 2005; Perez-Brena et al., 2018). Strength-based approaches have their roots in social work and counseling (Corcoran, 2011). These approaches encourage scholars to understand positive attributes of a person or a group rather than focusing on only the negative attributes (Stoerkel, 2021). For example, a recent study presents a conceptual model integrating multiple systems (cultural, relational, interpersonal, behavioral), and both a cultural and strength-based approach to understand the inequalities LatinX youth face in the United States (Davis, Carlo, & Maiya, 2021). The findings from this study show that a variety of systems (i.e., familism, acculturative stress) can act as protective factors in stressful events. Consequently, the authors highlight the need for more research on

cultural characteristics that can exacerbate or mitigate stressful experiences of LatinX communities.

In the present research, we test the following hypotheses related to familism, unemployment, and health among LatinX emerging adults:

H2: Higher perceived familial support will attenuate the negative relationship between unemployment and psychological and physical psychological health among LatinX emerging adults.

H3: Higher perceived familial obligation will exacerbate the negative relationship between unemployment and psychological and physical health among LatinX emerging adults.

Another common set of LatinX cultural values that may have relevance for the employment-health link among emerging adults includes the gender role norms of *machismo and marianismo*. Machismo and marianismo are intertwined sociocultural scripts that help rationalize gender roles and how women and men interact and relate within LatinX culture (Lopez, 2002). Like gender roles in other cultures (Eagly, 1987), machismo and marianismo scripts support a patriarchal power structure (Nunez et al., 2016). The machismo construct consists of both positive and negative masculine traits exhibited by men in the LatinX culture. Traditional machismo is the most commonly studied construct that is defined by hyper-masculinity, dominance, aggression, reserved emotions, and sexism (Niemann, 2004). In recent years', however, researchers have shed light on the positive attributes of machismo, labeled *caballerismo,* which encompasses bravery, honor, treating others with respect, and physical strength (Wester, 2008). Thus,

this paper will use a broader framework to conceptualize LatinX masculinity ideology (Stephens & Eaton, 2014).

On the other hand, marianismo is described by traits that reflect female gender roles in the LatinX culture. The term marianismo stemmed from Roman Catholicism, based on the honor of feminine virtues, and was first used by Evelyn Stevens (1973) in her essay "Marianismo: The other Face of Machismo". Marianismo emphasizes the role of women as the family pillar, encompassing traits of spirituality, chastity, and the act of being virtuous and subordinate to others (Niemann, 2004). Furthermore, marianismo is associated with traditional gender role beliefs, such that LatinX women are expected to provide emotional and physical support for the children, as well as partake in majority of the domestic work within the home.

Machismo and certain aspects of marianismo (family and spiritual pillar dimensions) have been linked to higher levels of negative cognitions and emotions (i.e., anxiety) (Nunez et al., 2016). Such traditional gender roles rely on the premise that masculine identity is linked to being the provider for the family and holding employment, while feminine identity is associated with family and home-centered behaviors. Less is known about the relationship between machismo and marianismo gender role ideologies and involuntary unemployment. However, findings from a UK household longitudinal survey revealed that women who hold traditional gender role attitudes deal with loss of employment better than men and women with egalitarian attitudes (Longhi et al., 2017). Furthermore, masculine identity in Western societies is associated with having a job, and thus becomes threatened by job loss (McFayden, 1995). Consequently, there is the

potential for harsher stigmatization amongst unemployed men compared to women (Kulik, 2000).

For this reason, this study will focus on the impact that machismo, caballerismo, and marianismo have on the relationship between involuntary unemployment and mental health outcomes among LatinX emerging adults during COVID-19. Specifically, we predict that:

H4: Higher machismo values will exacerbate the negative relationship between involuntary unemployment and psychological and physical health among males.

H5: Higher marianismo values will attenuate the relationship between the unemployment and psychological and physical health among women participants.

We leave open the possible relationship between Caballersimo and the unemployment-health link. Caballersimo might attenuate the negative relationship among these constructs for men, as it is related to being strong for one's family and acting dignified (Pardo, 2017). On the other hand, because Caballersimo is about being a family provider, it may make the stresses from unemployment worse. Accordingly, we use a culturally-humble approach by examining the full range of LatinX masculinity rather than simply looking at the stereotypical masculinity found throughout much of the literature (Yeager & Bauer-Wu, 2013). Furthermore, it is not our intention to assume a relationship between the caballarismo identity and the variables of interest, considering there is little to no prior research on this relationship.

Proposed Study

The primary goals of this research is to understand how cultural values may have affected the link between unemployment and health among LatinX emerging adults

during the pandemic. In this quantitative study, we will assess familism and gender role ideologies as moderators of the effect of unemployment due to COVID-19 on LatinX emerging adults' psychological and physical health, including depression, anxiety, physical health, and perceived stress. It is our goal to better understand the experiences of the LatinX community during the COVID-19 pandemic so that we can help create solutions and inform organizations and policy makers. Lastly, we proactively use a modern statistical analysis approach that supports the progression of the field of psychology to move away from dichotomous thinking and towards a more holistic understanding of data (Abdulai & Owsusu-Anshah, 2014; Bryman, 2007; Cumming & Calin-Jageman, 2016; McShane & Gal, 2017).

Methods

Participants

Participants were recruited from a large, public, community-based southeastern Hispanic-serving university (61% Hispanic), in August 2020 of the COVID-19 pandemic in the U.S. Recruitment was done through the university's Department of Psychology research participation system (SONA), which provides a panel of university respondents willing to participate in surveys in exchange for extra credit. Participants anonymously took part in the online study using a Qualtrics survey software link. Eligibility requirements specified that participants needed to be between the ages of 18-29 years old, currently living within the United States, fluent in English, self-identifying as LatinX/Hispanic, and being employed or unemployed as a result of COVID-19.

Procedures

On the first page of the online survey, participants were informed that the survey was regarding their employment experiences during the COVID-19 pandemic. Information describing the study, compensation, and researcher contact information was also included. Participants then consented to participate in the study. Lastly, instructions on how to receive compensation were provided, followed by a thank you note. All study procedures and materials were approved by the Florida International University institutional review board (#IRB-20-0152).

Measures

Employment Status. For this study, to be considered as involuntary unemployed the participant had to answer "Unemployed" to the following question "What is your current employment status?" and "Yes" to "Are you unemployed due to reasons related to COVID-19 pandemic?". Thus, an individual was considered to be involuntarily unemployed only if they reported to be unemployed and to have lost their job because of the pandemic. Participants who reported they were employed were categorized as employed and participants who reported unemployed not related to COVID-19 were not included in the sample.

Familism. To assess familism, we used Sabogal and colleagues' (1987) familism scale. The scale consists of 14-items, and measures a) family obligation, b) family as a source of support, and c) family as a referent. Example items for family obligation include "One should help economically with the support of younger brothers and sisters" and "I would help within my means if a relative told me that she/he is in financial difficult". Family as a support items include "When someone has problems, s/he can

count on help from his/her relatives" and "When one has problems, one can count on the help of relatives". Items are scored on a 5-point Likert scale to indicate agreement or disagreement (1 = strongly disagree and 5 = strongly agree), to represent familism obligation and family as a source of support. Higher scores indicate higher familism. The Cronbach's alpha coefficient for the familism obligation scale was $\alpha = .87$ and familism support was $\alpha = .86$.

Machismo. Arciniega et al.'s (2008) bidirectional 20-item Machismo Measure (MM) was used to assess both *traditional machismo* (describing hyper masculinity and negative machismo traits) and *caballersimo* (describing family centered and positive behaviors). Responses were measured on a 7-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). Sample items include "The bills (electric, phone, etc.) should be in the man's name" (*traditional machismo*) and "The family is more important than the individual" (*caballersimo*). The items were averaged to create the two subscales (traditional machismo and caballersimo), with higher scores indicating higher Machismo. The Machismo Measure (MM) has been shown to be able to discriminate between caballersimo and traditional machismo, and is also correlated with aggression, antisocial behaviors, or affiliation and problem-solving coping (Arciniega, et al., 2008). Internal consistency reliability in the current sample was $\alpha = .83$ (*traditional machismo*) and $\alpha = .84$ (*caballersimo*).

Marianismo. Castillo et al.'s (2010) Marianismo Beliefs Scale assesses the extent that LatinX females "believes she could enculturate and practice the cultural values that comprise the construct of marianismo." The scale consists of 24-item and five subscales: a) family pillar, b) virtuous and chaste, c) subordinate to others, d) silencing self to

maintain harmony, and e) spiritual pillar. To capture overall endorsements of LatinX Marianismo beliefs the scale was modified so that every question began with "Latinas" followed by the question. Participants rated items on a 4-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Example items include "Latinas keep the family unified" and "Latinas should not express her needs to her partner." The Cronbach's alpha for this sample was $\alpha = .91$.

Physical Health. A 14-item Physical Health Questionnaire was used to measure somatic symptoms within the last month (Schat et al., 2005). The scale contains 4 domains of physical health: gastrointestinal problems, headaches, sleep disturbances, and respiratory illness. Example items include "How often have you experienced headaches?" and "How often have you had difficulty getting to sleep at night?". Participants indicated how they have been feeling in the last month on a 7-point Likert scale (1 = Not at all to 7 = All of the time). All items were then reverse coded and were averaged to create an overall physical health score, with higher scores indicating less gastrointestinal problems, headaches, sleep disturbances, and respiratory illnesses (i.e., better physical health). The reliability analysis for this study showed a Cronbach's alpha coefficient of $\alpha = .87$ for the overall physical health score.

Depressive symptoms. The short nine-item version of the Center for Epidemiologic Studies Depression Scale (Martens et al., 2006) was used to measure particpants' depression within in the last month. Participants rated items (e.g., "I felt sad", "I felt lonely", and "I felt depressed" on a 5-point Likert scale, 1 (never) to 5 (always). The scores were averaged to create an overall depression score, with higher scores equating to more depression experienced in the last month. The Center for

Epidemiologic Studies Depression Scale has been shown to have convergent, discriminant, and internal consistency reliability of $\alpha = .92$ (Ying et al., 2019). The reliability analysis for this study revealed an $\alpha = .88$ Cronbach's alpha.

Anxiety. The short 10-item version of the Spielberger Trait Anxiety Inventory (STAI; Spielberger et al., 1968) was used to measure general state and trait components of anxiety (Zsido et al., 2020). Responses were measured on a 4-point Likert scale, 1 (not at all) to 4 (very much so). Sample items include "I feel upset" and "I feel that difficulties are piling up so that I cannot overcome them." The two subscales were scored so that higher scores indicated higher feelings of anxiety either "right now, at this moment" (state anxiety) or "in general" (trait anxiety). The Cronbach's alpha for this sample was $\alpha = .87$ for both scales.

Acculturation. We measured acculturation as a potential control variable, as research has shown that higher levels of acculturation tend to diminish familial obligations and perception of family as a referent, but not familism support (Sabogal et al., 1987). The Acculturation Rating Scale for Mexican Americans-II (ARMSA-II) examines the acculturation process using cultural orientation (Cuellar, 1995). The 30-item measure consists of two subscales: Latino Orientation Subscale (LOS) and Anglo Orientation subscale (AOS). An example LOS item is "I like to identify myself as a Mexican", and an example AOS is "I enjoy listening to English language music." Participants answered on a 5-point Likert scale from 1 (not at all) to 5 (extremely often or almost always). The LOS mean was subtracted from the AOS mean to create a score of linear acculturation along the continuum from very Mexican oriented to very Anglo oriented, per the scale instructions (Cuellar, 1995). Score ranges are as follows: > than -

1.33 (very Mexican oriented), ≥ -1.33 and ≤ -.07 (Mexican oriented to approximately balanced bicultural), > -0.7 and < 1.19 (slightly Anglo oriented bicultural), ≥ 1.19 and < 2.45 (strongly Anglo oriented), and > 2.45 (very assimilated: Anglicized). Cronbach's alpha of the American Orientation was $\alpha = .69$ and Mexican Orientation was $\alpha = .87$.

MacArthur Subjective Status Scale. To assess past (childhood), current, and future (5 to 10 years from now) social class perceptions, Adler et al.'s (2000) MacArthur subjective status scale was used. The scale uses a ladder with 10 rungs to represent where people stand in the United States, with 10 representing people who are best off (those who have the most money, the most education, and the most respected jobs) and 1 representing people who are worst off (those who have the least money, least education, least respected jobs). The 3-item scale asked about past, current, and future social class.

Perceived Stress. Cohen, Kamarck, & Mermelstein's (1983) perceived stress scale was used to assess participants' perceptions of stress. The scale consisted of 10-items. Participants were prompted with the following statement "In the last month, how often have you…" and asked to answer on a Likert scale ranging from 1 (Never) to 5 (Very often). Example items include "Been upset because of something that happened unexpectedly?", "been able to control irritations in your life?", and "felt difficulties were piling up so high that you could not overcome them?". Prior research shows perceived stress is related to anxiety and thus will be controlled for in this study (Racic, 2017) The 10-item scale had Cronbach's alpha of $\alpha = .67$.

Perceived Social Support. Zimet et al.'s (1988) Multidimensional Scale of Perceived Social Support will be used to measure perceived social support. The 12-item scale consists of 3 subscales: a) family, b) friends, and c) significant other. Each subscale

is composed of 4-items with Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). In line with aims of the study, the Family subscale will be presented to participants, an example item of the Family subscale is "My family really tries to help me" (Zimet et al., 1988). Perceived social support is shown to relate to familism support, and thus we will control for it (Campos, 2014). The Cronbach's alpha for this sample was $\alpha = .90$.

Demographics. Participants were asked to report their current and previous employment status, reason for employment change, hours worked per week, change in pay, change in hours, unemployment benefits, stimulus check qualification, age, gender, income, industry, job title, education, living proximity to family, and race. To better understand participants' cultural background, the demographic section included questions about whether English was spoken in their childhood home (Campos, et al., 2014), their country of birth, their parent's country of birth, and the number of siblings they had.

Data Analysis Plan

This section describes and justifies the data analysis plan designed by the researcher to explore the predictive relationships between the employment status and the psychological and physical health of a convenience sample of LatinX emerging adults during the COVID-19 pandemic. The results from this analysis will contribute to the literature by a) adding to the theory on LatinX Emerging Adults, b) understanding the correlates of the COVID-19 pandemic on work, and c) demonstrating that it is possible to conduct credible research in psychology without reporting the results of hypothesis tests using p-values, and instead implementing a casual-predictive approach to SEM (PLS-

SEM) using effect sizes (Hair et al., 2019) and confidence intervals (Cumming & Fidler, 2015).

Path analysis was used to construct statistical models based on one set of empirical cross-sectional survey data. Path analysis is a quantitative procedure designed to identify the relationships between a network of endogenous and exogenous variables displayed in a path diagram (Streiner, 2005). Table 1 defines the exogenous variables (i.e., those not explained by other variables) and the endogenous variables (i.e., those explained by other variables) measured in the survey. All composite variables showed internal consistency reliability, ranging from adequate to good (Cronbach's $\alpha = .67$ to .91).

Table 1

Definitions of Variables

Indicator variable	Function	Level	Number of Items	Range	α	Interpretation of scores
Employment status	PV	Categorical	1	0 or 1	N/A	0 = Unemployed (due to Covid-19 pandemic) 1 = Employed
Physical health	OV	Continuous	14	1 to 5	.87	Higher scores indicate poorer physical health
State anxiety	OV	Continuous	5	1 to 5	.87	Higher scores indicate more state anxiety
Trait anxiety	OV	Continuous	5	1 to 5	.87	Higher scores indicate more trait anxiety
Depression	OV	Continuous	9	1 to 5	.88	Higher scores indicate more depression

Perceived stress	OV	Continuous	10	1 to 7	.67	Higher scores indicate more perceived stress
Familial support	MV	Continuous	3	1 to 5	.86	Higher scores indicate more familial support
Familial obligation	MV	Continuous	6	1 to 5	.87	Higher scores indicate more familial obligation
Machismo	MV	Continuous	10	1 to 7	.83	Higher scores indicate more adherence to machismo beliefs
Caballerismo	MV	Continuous	10	1 to 7	.83	Higher scores indicate more adherence to Caballerismo beliefs
Marianismo	MV	Continuous	24	1 to 7	.91	Higher scores indicate more adherence to marianismo beliefs
American orientation	CV	Continuous	13	1 to 5	.69	Higher scores indicate American orientation
Mexican orientation	CV	Continuous	17	1 to 5	.87	Higher scores indicate Mexican orientation
Acculturation (American minus Mexican orientation)	CV	Continuous	1	-1.85 to 2.00	N/A	Higher positive scores indicate more acculturation toward American culture
Social support	CV	Continuous	12	1 to 7	.90	Higher scores indicate more social support

Note: PV = exogenous predictor variable; OV = endogenous outcome variable; MV = exogenous moderating variable; CV = exogenous covariate or control variable; N/A = not

applicable (because the variable was not measured with multiple items). *Health status was originally measured using an illogical response format (i.e., 1 = best score and 5 = worst score) which was the opposite direction of scoring to all the other 5-point Likert scales (where 1 = lowest score and 5 = highest score). To ensure that all the Likert scales were measured in the same logical direction, the health status scale was reverse scored, so that 1 = worst physical health, 5 = best physical health).

Research Questions

The purpose of using path analysis was to explore the cross-sectional survey data collected from a convenience sample of LatinX emerging adults during the COVID-19 pandemic in order to address the following research questions:

RQ1: How much does involuntary unemployment directly predict the psychological and physical health of LatinX emerging adults during the COVID-19 pandemic?

RQ2: How much does familial support moderate the potential effect of involuntary unemployment on the psychological and physical health of LatinX emerging adults during the COVID-19 pandemic, after controlling for acculturation and social support?

RQ3: How much does familial obligation moderate the potential effect of involuntary unemployment on psychological and physical health in LatinX emerging adults during the COVID-19 pandemic, after controlling for acculturation?

RQ4a: How much does machismo moderate the potential effect of involuntary unemployment on the psychological and physical health of men LatinX emerging adults during the COVID-19 pandemic, after controlling for acculturation?

RQ4b: How much does Caballerismo moderate the potential effect of involuntary unemployment on the psychological and physical health of men LatinX emerging adults during the COVID-19 pandemic, after controlling for acculturation?

RQ5: How much does marianismo moderate the potential effect of involuntary unemployment on the psychological and physical health of women LatinX emerging adults during the COVID-19 pandemic, after controlling for acculturation?

These open-ended research questions defined non-directional relationships between specified exogenous and endogenous variables in a specified target population. It is imperative for the theoretical framework underpinning the quantitative research paradigm to be shifted away from spurious dichotomous thinking, toward the answering of open-ended questions starting with "How much does…?" that reflect the essence of statistics (Cumming & Calin-Jageman, 2016).

Hypotheses

After reviewing the literature, the researcher decided not to formally present the results of testing the proposed hypotheses (H1-H5) using inferential statistics. The following citations are presented to justify that decision. First, the hypotheses demanded a dichotomous (i.e., yes or no) outcome; but statisticians are "moving away from any form of dichotomous or categorical reasoning" (McShane & Gal, 2017, p. 893). Second, "focusing attention on a hypothesis may prevent researchers from noticing other phenomena that might be important to study" (Fraenkel & Wallen, 2018, p. 46). Third, "Stating a hypothesis may lead to a bias, either conscious, on the part of the researcher" who may be "tempted to arrange the procedures or manipulate the data in such a way as to bring about a desired outcome" (Fraenkel & Wallen, 2018, p. 46). These three reasons may explain why it is alleged that some findings based on hypothesis testing published by researchers in social psychology are false (Jussim, 2016).

Statistical Significance

For nearly a century, researchers have applied the concept of statistical significance based on arbitrary conventional thresholds with no theoretical justification (e.g., $p < .05$) to interpret the results of hypothesis tests (Hurlbert et al., 2019); however, the current data analysis plan does not condone the use of *p*-values, for the following published reasons. One: the estimation of *p*-values assumes random (not convenience) sampling (Hirschauer et al. 2020) and "it is pointless to estimate the *p*-values for non-random samples" (Filho et al., 2014, p. 31). Two: proposals to ban *p*-values were first published over 25 years ago (Chia, 1997; Hunter, 1997; Krant, 1999; Loftus, 1996) and these proposals have been implemented by many scientists in the last decade (Amrhein & Greenland, 2018; Carlin, 2016; Gelman, 2017; Hurlbert et al., 2019; McShane & Gal, 2017; McShane et al., 2018; Wasserstein et al., 2016; 2019). Imbens (2021) reviewed literature from a variety of fields (e.g., economics, social sciences, public health) concluding that researchers must reduce their emphasis on statistical significance, and a recent survey of over 800 scientists in more than 50 countries agreed that "It's time for statistical significance to go" (Amrhein et al. 2019, p. 1). Three: the formal policy statements issued by the American Statistical Association (Wasserstein & Lazar, 2016, p. 129-133) to which all researchers in the USA are implored to comply, assert that "By itself, a p-value does not provide a good measure of evidence regarding a model or hypothesis." Accordingly, the data analysis plan designed for the current study is compliant with following ASA guidelines. [2]

[2] "Don't base your conclusions solely on whether an association or effect was found to be "statistically significant" (i.e., the *p*-value passed some arbitrary threshold such as p

Even though Wasserstein et al. (2019, p.1) asserted that we are "moving to a world beyond $p < .05$)" many researchers do not adhere to the ASA guidelines and continue to support the utility of hypothesis tests with *p*-values, mainly because they were taught these methods in school (Wassertein et al., 2016; Goodman, 2019; Hurlbert et al., 2019). Many statisticians have proposed that the teaching of statistical significance to students at all educational levels must be phased out (Goodman, 2019; Sczucs & Ioaniddis, 2017; Wasserstein et al., 2019), but a quantitative research paradigm shift is imperative in the 21st century before such reform is possible (Carlin, 2016). The current study aims to contribute to this reform by demonstrating that it is possible to conduct credible research in social psychology without reporting the results of hypothesis tests using p-values.

Effect Sizes

A survey of articles ($N = 137$) published in the *Psychonomic Bulletin & Review, and Journal of Experimental Psychology: General, and Psychological Science,* revealed that in 72% of the articles, failure to find statistical significance (e.g., $p > .05$) was misinterpreted, because the authors concluded erroneously that the results indicated no effect (Aczel et al., 2018). However, a *p*-value does not measure an effect; nor does a *p*-value reflect the strength, importance, or relevance of a potentially causal relationship (Ferguson, 2016; Kelley & Preacher, 2012; Leppink et al., 2016; Wasserstein & Lazar,

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< .05); Don't believe that an association or effect exists just because it was statistically significant"; Don't believe that an association or effect is absent just because it was not statistically significant; Don't believe that your p-value gives the probability that chance alone produced the observed association or effect or the probability that your test hypothesis is true; Don't conclude anything about scientific or practical importance based on statistical significance (or lack thereof)". Wasserstein et al. (2019, p.1)

2016; 2019). Consequently, in the current study, effect sizes were computed and interpreted in preference to *p*-values. The effect sizes answered the research questions by demonstrating how much the predictions concerning the psychological and physical health of the participants reflected practical significance, meaning whether the predictions were "useful in the real world" (Kirk, 1996, p. 746); or whether the predictions exhibited clinical significance, referring to their relevance in the context of healthcare research (Rangnathan et al. 2015).

The effect sizes were indicated by R^2 (the proportion of the variance in the endogenous variables explained by the models). The interpretation of the effect sizes took into account that a plethora of medical, biological, genetic, physical, chemical, environmental, social, cultural, and behavioral factors are directly or indirectly responsible for explaining substantial inequities in the mental and physical health of defined groups of people within different target populations (World Health Organization, 2018). A large number of additional risks that compromise mental and physical health have been associated with the COVID-19 outbreak (Javed et al., 2020). It is impossible to explore the impact of all these factors in one survey. It was only possible to explore the potential effects of a few potential causal factors within a few selected groups of people in a small convenience sample drawn from one population. The proportion of the variance in the measures of physical and mental health of the LatinX emerging adults explained by their employment status and other sociocultural factors was therefore expected to be very small, relative to the effects of the hundreds of other simultaneous causal factors that were not measured in this study.

Reasons for Choosing PLS

PLS is reputed to be superior for exploratory research, particularly if the model has not previously been well specified, and if the model includes both variables and reflective constructs (Hair et al., 2017; Lowry & Gaskin, 2014; Sarstedt et al., 2016). A formative variable is a potential causal factor, measured without error, usually at the categorical level, using three or less survey items, and coded with integers (e.g., voluntary unemployment, where 0 = unemployed by reasons related to COVID-19; 1 = employed during the pandemic). A reflective construct is a latent variable, measured with random error, using a continuous level scale created as a linear combination of multiple survey item scores (e.g., psychological health, physical health, familism, and acculturation). Thus, PLS was selected in this study because the models include formative and reflective variables (Simonetto, 2012; Hair et al., 2017).

Exploratory approaches such as PLS path analysis enable researchers to acquire new insights into difficult problems associated with sensitive social issues that have not previously been well researched (e.g., the impact of the COVID-19 on the health of a target population). The disadvantage of exploratory research is that it rarely provides definitive answers to research questions, and so the conclusions of exploratory research may remain uncertain (Babbie, 2012; Butler, 2014; Stebbins, 2001). Nevertheless, exploratory research is valuable to identify predictive relationships between variables that may ultimately feed into confirmatory research. “We need both exploratory and confirmatory” because “finding the question is often more important than finding the answer” (Tukey, 1980, p. 23). Scheel et al. (2020) concluded that it was necessary to shift the focus of psychology to exploratory research in order to “tie together many loose ends

of psychology's reform movement and help us to develop strong, testable theories." The need for more research is considered further in the Recommendations section of the Discussion chapter.

Testing the Assumptions of Path Analysis

Path analysis is similar to structural equation modeling (SEM) because it involves the construction and calibration of a flow diagram to define a network of relationships between multiple endogenous and exogenous variables; however, unlike SEM, path analysis does not involve confirmatory factor analysis to evaluate the loading coefficients of multiple indicators (e.g., questionnaire item scores) to identify the latent variables. Each variable in path analysis must be reliably measured using a single indicator, and must have been validated by previous research (Fidelis & Sunday, 2018).

The main assumptions specific to path analysis are that all the relationships between the exogenous and endogenous variables are linear and additive, and can be defined by a nested series of regression equations; furthermore, the paths between the variables have only one direction, symbolized by single-headed arrows, implying no feedback mechanisms (Fidelis & Sunday, 2018). One of the reputed advantages of PLS path analysis is that it is not compromised by violating the theoretical assumptions of other modeling methods applied in social science, such as multiple linear regression and CB-SEM (Puteh & Ong, 2017). Vinzi et al. (2010, p. 48) stated that "no strong assumptions (with respect to the distributions, the sample size and the measurement scale) are required. This is a very interesting feature especially in those application fields where such assumptions are not tenable, at least in full. On the other side, this implies a lack of the classical parametric inferential framework." Several researchers (e.g., Jannoo

et al., 2014) have evaluated the performance of PLS under conditions of normality and non-normality, and concluded that deviation from normality does not compromise the results, so long as the sample size is large enough (e.g., $N > 50$).

Multicollinearity (i.e., the correlation or dependency between two or more continuous level predictor, moderating, mediating, or controlling variables) compromise the results of path analysis (Wong, 2013). In the event of multicollinearity, the individual effects of each variable are confounded, because the path coefficients of each variable are controlled simultaneously in combination with the path coefficients of other variables (Yoo et al., 2014). A simplistic diagnostic test (e.g., Variance Inflation Factor > 5) has been proposed to indicate multicollinearity, but this "rule of thumb" is not reliable (O'Brien, 2007). If two or more predictor or moderator variables in the path analysis were found to be dependent on each other (e.g., the correlation between social support and familial support; and the combined effects of perceived stress and trait anxiety on state anxiety) then they were linked together to form a hierarchical chain (Wetzels et al., 2009).

Sample Size and Power Analysis

Power analysis software such as G*Power does not compute the minimum sample size to conduct PLS path analysis (Faul et al., 2009). Hair et al. (2017) proposed the minimum R^2 method to estimate the sample size required to create a meaningful model using PLS (assuming 80% power and 95% confidence limits to indicate the precision of the path coefficients). This method is based on the maximum number of arrows pointing toward the endogenous constructs or latent variables in the flow diagram, and the minimum effect size (R^2). In the current study, the maximum number of arrows

was six but the minimum R^2 was unknown. Table 2 indicates that if the maximum number of arrows = 6, then the required sample size ranges from $N = 39$ (when the effect size is large) to $N = 157$ (when the effect size is small). Hair et al. (2021) suggested that the minimum R^2 method underestimates the minimum sample size when the effect size is very small (< .10). Because very small effect sizes were expected in the current study, it was imperative that the actual sample size ($N = 330$) was in excess of the minimum requirements indicated in Table 2.

Table 2

Sample Size Recommendations for PLS Path Analysis (Adapted from Hair et al., 2017)

Maximum number of arrows pointing at the constructs	Minimum R^2			
	.10	.25	.5	.75
2	110	52	33	26
3	124	59	38	30
4	137	65	42	33
5	147	70	45	36
6	157	75	48	39
7	166	80	51	41
8	174	84	54	44
9	181	88	57	46

PLS- SEM Path Analysis Procedure

The following is a stepwise description of the procedure:

Step 1: The ordinal scores for each survey item were imported into SmartPLS and transformed into *Z*-scores so that all the latent variables measured with different scales were standardized using a common scale, in units of standard deviation, with a mean of 0 and a variance of 1.

Step 2: Figures 1 to 5 are the flow diagrams drawn with the graphic user interface of SmartPLS to visualize the relationships between the variables defined in Table 1. Each manifest variable measured is represented by an oval symbol. Employment status is a formative variable, with two nominal categories, coded by 0 = unemployed; 1 = employed. The other oval symbols represent reflective variables that were not measured with a single survey item, but were operationalized by averaging the scores for multiple survey items.

The rectangular symbols represent the interaction terms that reflected the moderating effects. Each term was measured as the product of the primary predictor variable (i.e., employment status) and a potential moderator (e.g., familial support, familial obligations, machismo, or marianismo). The unidirectional arrows represent the standardized partial path coefficients, or ß weights (labelled $ß_1$ to $ß_{34}$) equivalent to the standardized partial regression coefficients in a multiple linear regression model. The symbol β represents the standardized path coefficient after all the variables in the model had been transformed using Z-scores.

Step 3: The PLS algorithm was run, and the path coefficients based on the entire set of data were computed. The ß weights could be directly compared between one path coefficient and another, because they were all measured on a scale ranging from -1 to +1, representing the effect of a change in one standard deviation Every ß coefficient was computed assuming that the effects of all the variables in a model were controlled (i.e., held statistically constant). Because the five models were constructed with different variables, the magnitudes of the path coefficients within each model were not equivalent to each other.

Step 4: The strength of each standardized path coefficient (ß) was evaluated by bootstrapping using 5000 random sub-samples drawn with replacement from the scores for each variable listed in Table 1. Using the Monte-Carlo algorithm, a different sub-set of data was analyzed within each random sub-sample, equivalent to shuffling a pack of cards. The advantages of bootstrapping in the context of research in psychology is that, irrespective of the distribution of the raw data, the asymmetric confidence intervals calculated by bootstrapping are more accurate than the symmetric intervals calculated from one sample based on the normality assumption (Wright, 2009).

Step 5: Bootstrapping facilitated the calculation of the standard error (SE) and 95% confidence interval (CI) of each ß coefficient, estimated by ß ± 1.96 SE. Confidence intervals were computed because they are better than *p*-values to indicate the uncertainty that is inherent in statistical inference (Webster et al., 2018). The interpretation of the 95% CI provided statistical evidence to address the research questions. If the lower and upper limits of the CI had the same sign (either positive or negative), then the ß coefficient reflected a practically significant effect (because all the mean ß coefficients that were captured by bootstrapping within at least 95 out of 100 samples were greater or less than zero). When the lower limit of the CI had a negative sign, and the upper limit had a positive sign, then the ß coefficient represented limited practical or clinical significance (because in at least 95 out of 100 samples, a mean ß coefficient of zero was captured within the upper and lower limits (Cumming & Fidler, 2009; Hoekstra et al., 2012; Webster, 2018).

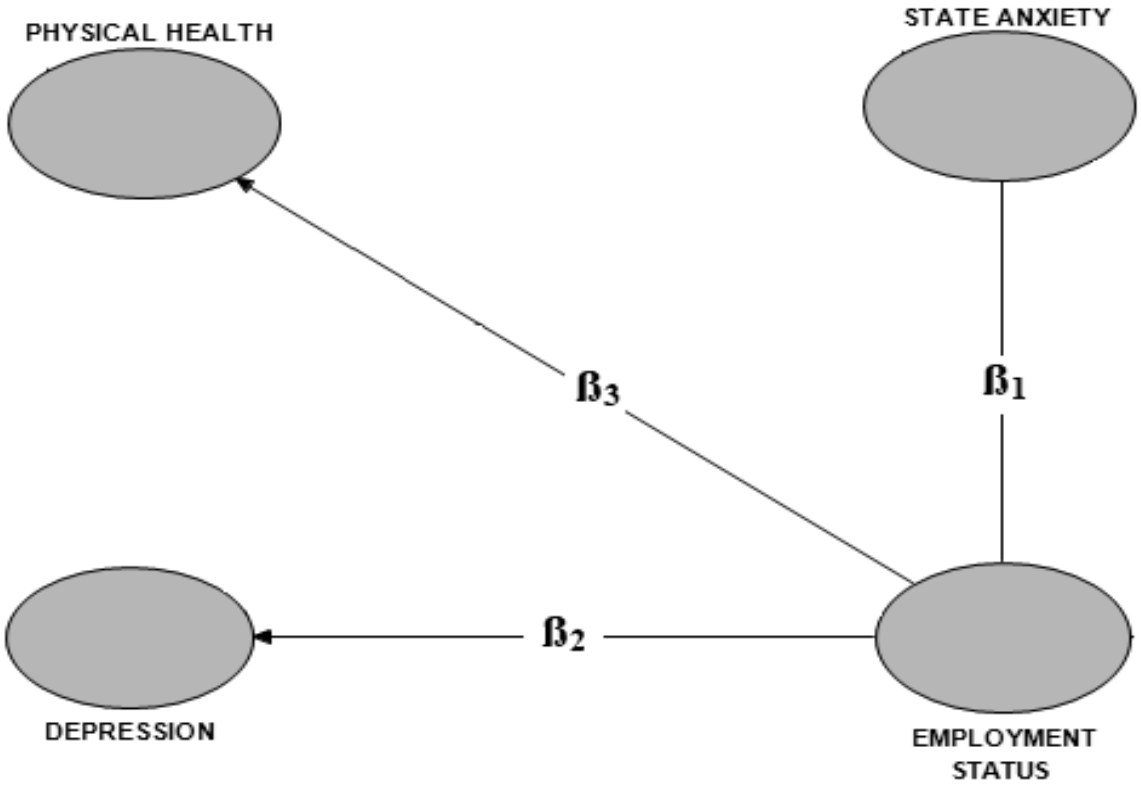
Step 6: The moderating effects were examined. Strong moderation was supported if the bootstrapped 95% CI of the ß coefficient measuring the correlation between the

outcome variable (unemployment) and an interaction term (i.e., the product of a predictor variable and the moderator) did not capture zero. The magnitude of the ß coefficient did not explain the structure of the moderating effect. A scatterplot between the predictor variable and the moderator was drawn, with two fitted regression lines, one for the unemployed, and the other for the employed participants. No moderation was reflected if the two regression lines were parallel, or approximately so. Moderation was reflected if the two regression lines were clearly not parallel, particularly if the two lines crossed each other (Dawson, 2014).

Step 7: According to Hair et al. (2017), the most important criteria to evaluate the quality of a model constructed using PLS are the coefficients of determination (R^2), which represent the amount of explained variance within each endogenous latent variable. The R^2 values also reflected the practical significance the results in the context of research in psychology. The interpretation of R^2 approved by the American Psychological Association (Ferguson, 2016) was applied as follows: $R^2 < .04$ represents a negligible effect; $R^2 = .04$ is the smallest effect size reflecting limited practical significance; $R^2 = .25$ reflects a moderate effect size with adequate practical significance, and $R^2 = .64$ reflects a strong effect size with substantial practical significance. The 95% CI of R^2 were computed using the software developed by Oosterbaan (2020) using Fisher's R to Z transformation. The 95% CI of the R^2 values were interpreted using similar criteria for the 95% CI of the ß coefficients. A practically significant effect was indicated if the lower and upper limits of the 95% CI of R^2 did not capture zero.

Figure 1

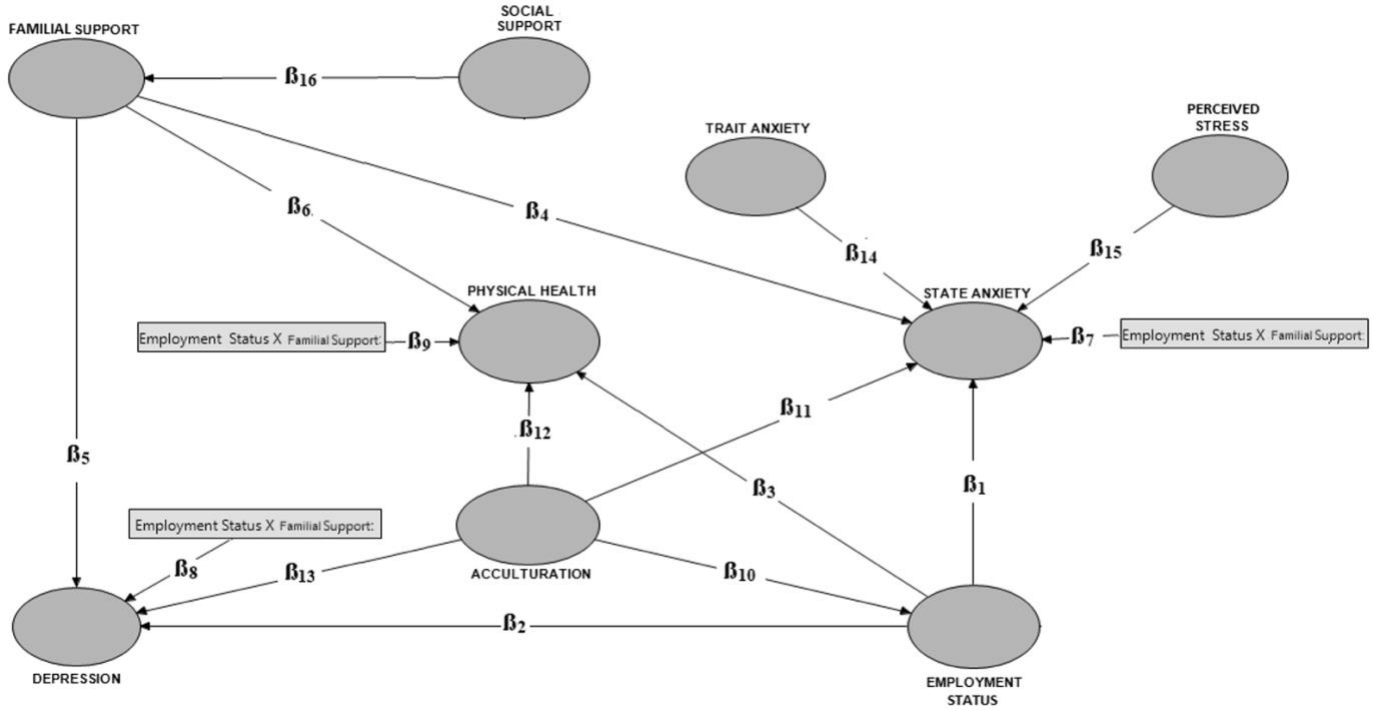
Path Analysis to Address RQ1 (Effect of Employment Status on Mental and Physical Health of Latin X with no Covariates)



Note: ß1, ß2, and ß3 indicate the potential effects of employment status on physical and mental health.

Figure 2

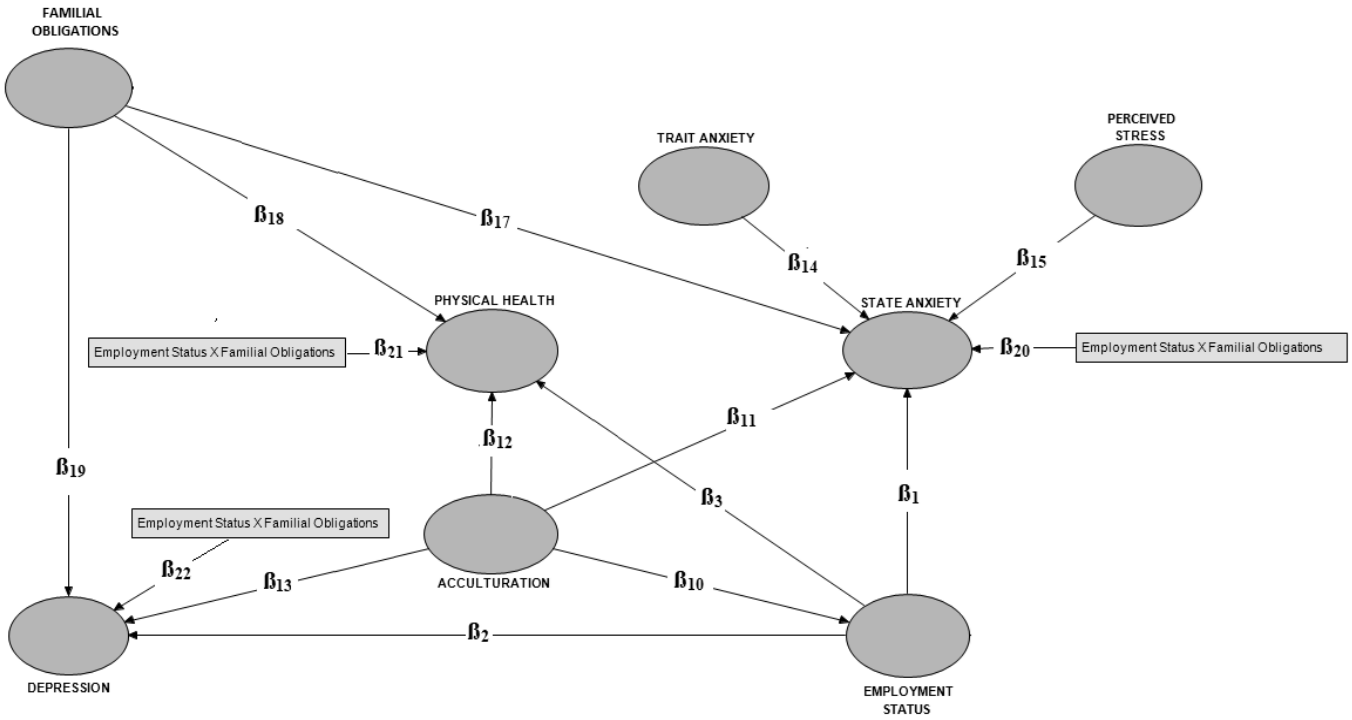
Path Analysis to Address RQ2 (Moderating Effects of Familial Support on Employment and Health of LatinX)



Note: ß4, ß5, and ß6 indicate the potential additive effects of familial support on physical and mental health. ß7, ß8, and ß9 estimate the potential moderating effects of familial support (combined with social support) on the correlations between employment status and physical and mental health. ß10, ß11, ß12, and ß13 indicate the potential effects of acculturation on employment status and mental and physical health. ß14 and ß15 reflect the multicollinearity between trait anxiety, perceived stress, and state anxiety. ß16 reflects the multicollinearity between familial support and social support.

Figure 3

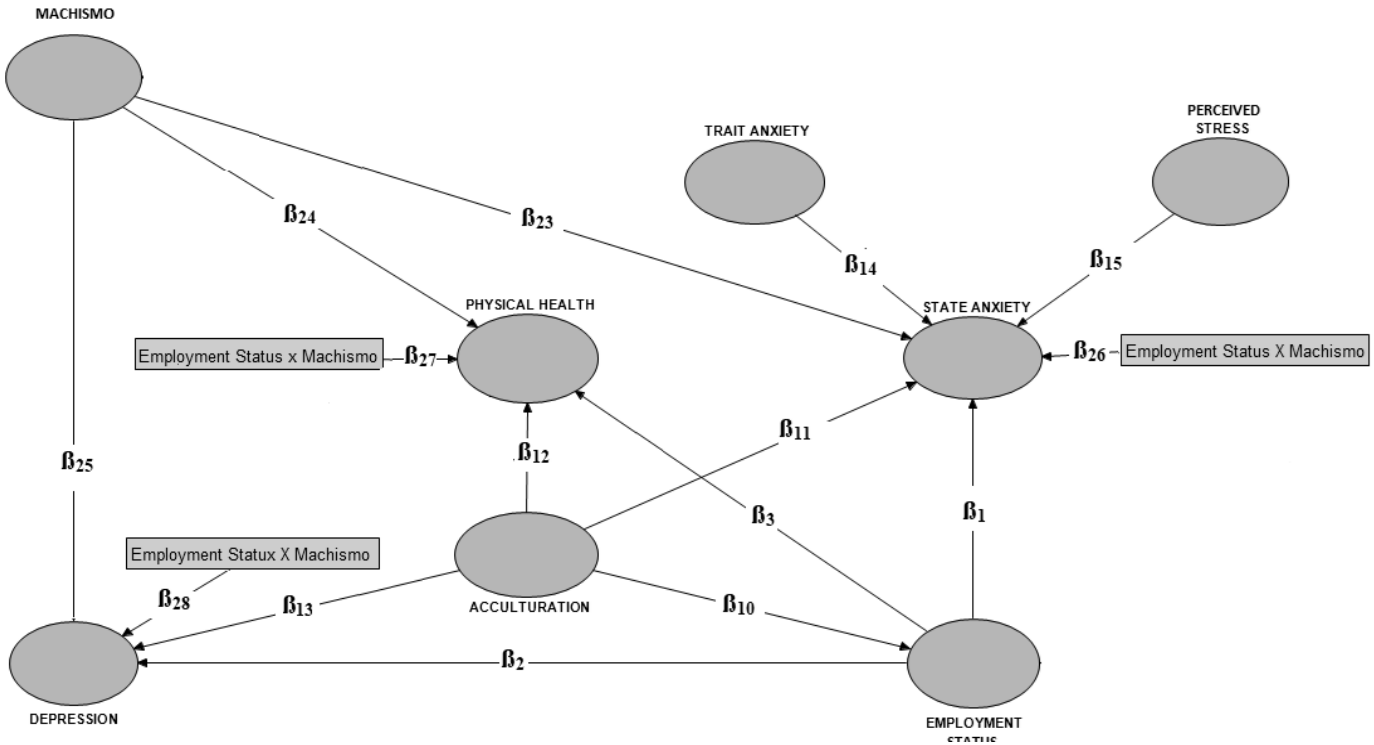
Path Analysis to Address RQ3 (Moderating Effects of Familial Obligations on Employment and Health of LatinX)



Note: ß$_{17}$, ß$_{18}$, and ß$_{19}$ indicate the potential effects of familial obligations on physical and mental health. ß$_{20}$, ß$_{21}$, and ß$_{22}$ estimate the potential moderating effects of familial obligations on the correlations between employment status and physical and mental health across the full sample.

Figure 4

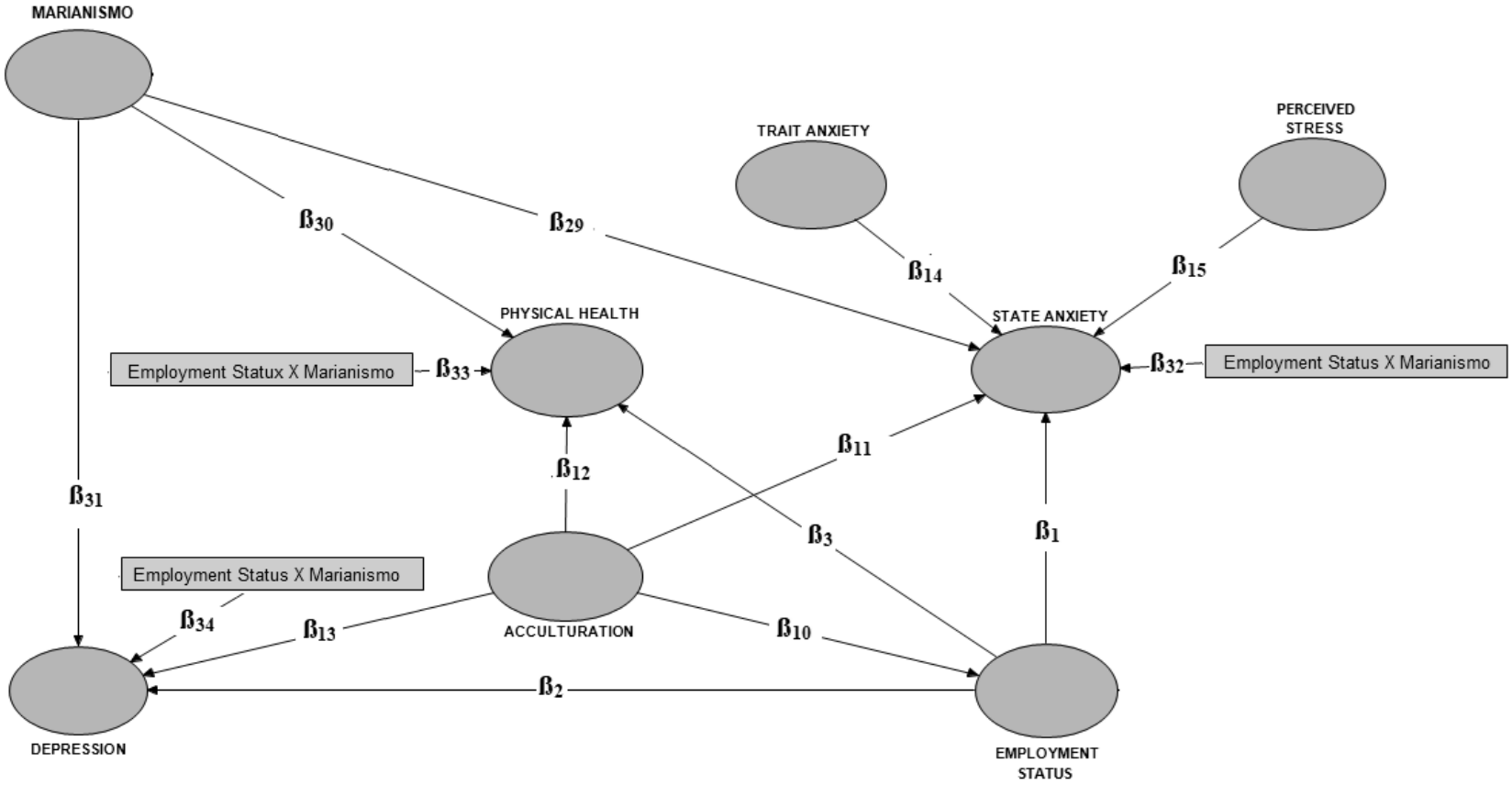
Path Analysis to Address RQ4a(b) (Moderating Effects of Machis0m (Caballerismo) on Employment and Health of Men LatinX)



ß23, ß24, and ß25 indicate the potential effects of machismo on physical and mental health. ß26, ß27, and ß28 estimate the potential moderating effects of machismo on the correlations between employment status and physical and mental health for men.

Figure 5

Path Analysis to Address RQ5 (Moderating Effect of Marianismo on Employment and Health of Women LatinX)



ß29, ß30, and ß31 indicate the potential effects of marianismo on physical and mental health. ß32, ß33, and ß34 estimate the potential moderating effects of marianismo on the correlations between employment status and physical and mental health for women

Descriptive and Comparative Analysis

In addition to addressing the research questions, the categorical demographic and contextual characteristics of the employed vs. unemployed participants were summarized and compared. The purpose was to determine if the demographic and contextual characteristics of the participants were associated with their employment status. The demographics included the participants' gender, age, education, race/ethnicity, country of birth, relationship status, and most recent occupation. The contextual characteristics of the participants were also described, including the relationship between the pandemic and their work hours, income, remote working, unemployment benefits, and stimulus checks. The characteristics of the unemployed and employed participants were compared using Cramer's V, statistic which indicates the strengths of the association (negligible, small, medium, or large) using a cross-tabulation of categorical variables. The interpretation of Cramer's V was based on the threshold criteria listed in Table 3.

Table 3

Interpretation of Cramer's V (Adapted from Rea & Parker, 1992, p. 203)

Cramer's V	Strength of Association
0 to .09	Negligible
.10 to .19	Weak
.20 to .39	Moderate
.40 to .59	Relatively strong
.60 to .80	Strong
.81 to 1.00	Very strong

A descriptive and comparative analysis was also conducted to summarize and compare the continuous level variables listed in Table 1, specifically psychological health, physical health, acculturation, familial obligation, familial support, machismo,

and marianismo. The mean scores ± 95% confidence intervals (CI) were computed for each variable, and compared with respect to employment status and gender. If the 95% CI of two mean scores did not strongly overlap, then it was assumed that in 95 out of 100 samples a mean score of zero was not captured (Cumming & Finch 2005; Cumming, & Fidler, 2009; Hoekstra, et al. 2012). The effect sizes were estimated by Cohen's d, which in the context of clinical psychology, were interpreted as follows: d < .41 represents a negligible effect; d = .41 is the smallest effect size reflecting limited practical significance; d = 1.15 represents a moderate effect size, and d = 2.70 represents a strong effect size (Ferguson, 2016).

Results

Descriptive and Comparative Analysis

The total number of respondents was $N = 334$; however, four participants who reported their gender as "nonbinary" or "other" were excluded, because of the need to address two research questions by comparing men and women. Therefore, the final sample size used for statistical analysis was $N = 330$ participants. Table 4 compares the demographic categories of the participants, classified by employment status, including effect sizes (Cramer's V). The sample was dominated by employed women ($n = 227$, 68.8%) and unemployed women ($n = 64$, 19.4%) compared to employed men ($n = 30$, 9.1%) and unemployed men ($n = 9$, 2.7%); however, the association between gender and employment status was negligible. The ages of the emerging adults were 18 to 28 years ($M = 21.63$; $SD = 2.22$). The sample was dominated by the 21 to 25 years age-group among both the employed ($n = 154$, 68.8%) and unemployed groups ($n = 40$, 12.1%). The association between age and employment status was negligible. Their highest level of

education ranged from some high school to postgraduate degree. The sample was dominated by participants who had received some college education among both the employed (*n* = 140, 42.4%) and unemployed groups (*n* = 42, 12.7%) with a negligible association between educational level and employment status.

The group differences in race/ethnicity were also negligible, because both the employed group (*n* = 188, 57.0%) and unemployed group (*n* = 54, 16.4%) were dominated by participants who exclusively identified as Hispanic (LatinX). The race/ethnicity of the remainder included Hispanic (LatinX) combined with "other" comprising African, Hawaiian, European, North American Indian, Alaska Native, or South American Indian, with employed group (*n* = 69, 20.9%) and unemployed group (*n* = 19, 5.8%). The sample was dominated by participants who were born in the USA among both the employed group (*n* = 186, 56.4%) and the unemployed group (*n* = 60, 18.2%). The remainder were born in Cuba, South America, Puerto Rico, or the Dominican Republic. Only a weak association was found between the countries of birth and employment status. The most frequent relationship status was single in the employed group (*n* = 122, 37.0%) or "in a relationship" in the unemployed group *(n* = 36, 1.9%). The association between the countries of birth and employment status was negligible. Most of the employed participants (*n* = 204, 61.8%) and unemployed participants (*n* = 66, 2.0%) lived with their immediate families. There was only a weak association between living with immediate family and employment status. A negligible association was found between the employment status and the recent of occupations of the participants. The conclusion is that the negligible or weak associations between the demographics and

employment status would not explain inequities in the participants' mental or physical health.

Table 4

Demographic Categories of Participants (N = 330), Classified by Employment Status

Category	Employed (*N* = 257)		Unemployed (*N* = 73)		Cramer's *V*	
	n	%	*n*	%		
Gender						
Men	30	9.1	9	2.7	.01	negligible
Women	227	68.8	64	19.4		
Age (Years)						
18 to 20	89	27.0	30	9.1	.06	negligible
21 to 25	154	46.7	40	12.1		
26 to 29	14	4.2	3	.9		
Highest level of education						
Some high school	1	.3	0	.0	.08	negligible
High school graduate	44	13.3	14	4.2		
Some college	140	42.4	42	12.7		
Trade/technical/vocational	2	.6	0	.0		
College graduate	65	19.7	16	4.8		
Some postgraduate work	2	.6	0	.0		
Post graduate degree	3	.9	1	.3		
Race/Ethnicity						
Hispanic	188	57.0	54	16.4	.01	negligible
Hispanic and Other (Mixed)	69	20.9	19	5.8		
Country of birth						
USA	186	56.4	60	18.2	.13	weak
Cuba	34	1.3	10	3.0		
South America	33	1.0	3	.9		
Puerto Rico	3	.9	0	.0		
Dominican Republic	1	.3	0	.0		
Relationship status						
Single	122	37.0	33	1.0	.09	negligible
In a relationship	120	36.4	36	1.9		
Married	13	3.9	2	.6		
Live with immediate family						
Yes	204	61.8	66	2.0	.12	weak
No	53	16.1	7	2.1		
Most recent occupation						
Sales and related	52	15.8	13	3.9	.08	negligible
Education, instruction, library	45	13.6	13	3.9		
Healthcare practitioner/technical	34	1.3	6	1.8		

Office and administrative support	21	6.4	5	1.5
Food preparation and serving	21	6.4	16	4.8
Healthcare support	16	4.8	3	.9
Personal care and service	14	4.2	5	1.5
Other occupations	14	4.2	6	2.3
Arts, entertainment, sports, media	12	3.6	3	.9
Business and finance	7	2.1	1	.3
Legal	7	2.1	0	.0
Life, physical, and social science	6	1.8	0	.0
Community and social service	5	1.5	1	.3
Management	3	.9	1	.3

Table 5 compares the current socioeconomic status (SES) of the participants, classified by employment status. The most frequent ordinal level of SES was 5 in the employed group (*n* = 66, 2.0%) with the same level in the unemployed group (*n* = 23, 4.8%). There was only a weak association between SES and employment status. The conclusion is that the association between the SES and employment status of the participants would not explain inequities in the participants' mental and physical health.

Table 5

Socioeconomic Status of Participants (N = 330) Classified by Employment Status

Category	Employed (*N* = 257)		Unemployed (*N* = 73)		Cramer's *V*	
	n	%	*n*	%		
1 (lowest socio-economic status)	1	.3	0	.3	.17	weak
2	0	.0	1	2.7		
3	23	7.0	9	3.0		
4	41	12.4	10	7.0		
5	66	2.0	23	4.8		
6	59	17.9	16	2.7		
7	45	13.6	9	.9		
8	15	4.5	3	.6		
9	2	.6	2	.0		
10 (Highest socio-economic status)	5	1.5	0	.30		

Table 6 compares the acculturation level of the participants, classified by employment status. The most frequent ordinal level was II (Hispanic orientated) in the employed group (*n* = 177, 53.6%) with the same level in the unemployed group *(n* = 53, 16.1%). There was only a weak association between acculturation level and employment status. The conclusion is that the association between the acculturation level and the employment status of the participants would not explain inequities in the participants' mental and physical health.

Table 6

Acculturation Level of Participants (N = 330) Classified by Employment Status

Category		Score	Employed (*N* = 257)		Unemployed (*N* = 73)		Cramer's *V*	
			n	%	*n*	%		
I	Very Hispanic oriented	< -1.33	31	9.4	4	1.2	.10	weak
II	Hispanic oriented	-1.33 and ≤ .07	177	53.6	53	16.1		
II	Slightly Anglo oriented	> .07 and <	42	12.7	15	4.5		
I		1.19						
I	Strongly Anglo oriented	≥1.19 and < 2.5	7	2.1	1	.3		
V								
V	Very assimilated, Anglicized	> 2.5	0	.0	0	.0		

Table 7 compares the categorical characteristics of the participants in the context of their activities in the COVID-19 pandemic.

Table 7

Contextual Characteristics of Participants (N = 330) Classified by Employment Status

Category	Employed (*N* = 257)		Unemployed (*N* = 73)	
	n	%	*n*	%
Work hours have decreased since the pandemic				
Yes	139	53.9		
No	118	45.7		

Reduction in pay due to the pandemic	82	31.8		
	175	67.8		
Able to do job remotely (at own home)				
Entirely	49	19.0		
Partially	48	18.6		
Not at all	160	62.0		
Filed for unemployment benefits (i.e., pay)				
Yes			42	57.5
No			30	41.1
No reply			1	1.4
Received unemployment benefits				
Yes			37	88.1
No			5	11.9
No reply			31	42.5
Qualify for the stimulus check				
No			35	47.9
Maybe (not sure)			22	3.1
Yes			16	21.9
Received the stimulus check				
No			55	75.3
Yes			18	24.7

Most of the employed participants reported that their work hours had decreased since the pandemic (*n* = 139, 53.9%); they had a reduction in pay due to the pandemic (*n* = 175, 67.8%); and they were not able to do their jobs remotely (*n* = 160, 62.0%). Most of the unemployed participants reported that they had filed for unemployment benefits (*n* = 42, 57.5%) and they had received benefits (*n* = 37, 88.1%). However, less than half of the participants did not qualify for the stimulus check (*n* = 47.9%) and had not received a stimulus check.

Table 8 compares the mean scores for the continuous level variables defined in Table 1 (psychological and physical health, acculturation, familial obligations, familial support, machismo, caballerismo, and marianismo), classified by employment status. The

lack of overlap between the CI indicated that in at least 95 out of 100 samples the mean score for depression was greater among the unemployed group (*M* = 2.96) than among the employed group (*M* = 2.75). The CI of the mean scores for the other 12 variables overlapped between the two groups, reflecting that in at least 95 out of 100 samples a mean score of zero was captured. Applying Ferguson's (2016) the effects of employment status (Cohen's d = .00 to .26) were negligible and reflected that the differences in the health and socio-cultural factors between unemployed vs. employed participants appear to have little or no practical significance.

Table 8

Descriptive Analysis of Mental Health, Physical Health and Sociocultural Factors

Variable	Unemployed (*N* = 73)				Employed (*N* = 257)				Cohen's d
	M	*95% CI*		*SD*	*M*	*95% CI*		*SD*	
Depression	2.96	2.80[a]	3.11[a]	.67	2.75	2.64[a]	2.85[a]	.84	.26[b]
State Anxiety	1.85	1.67	2.01	.74	1.72	1.63	1.82	.77	.17[b]
Trait Anxiety	2.42	2.24	2.60	.77	2.37	2.27	2.47	.85	.06[b]
Perceived Stress	4.79	4.66	4.93	.58	4.63	4.54	4.72	.73	.23[b]
Physical Health	3.43	3.21	3.64	.91	3.43	3.30	3.55	1.02	.00[b]
Familial obligations	3.88	3.70	4.07	.79	3.64	3.53	3.76	.95	.26[b]
Familial support	4.02	3.84	4.21	.80	3.87	3.75	3.98	.95	.16[b]
Social support	5.49	5.28	5.71	.92	5.42	5.28	5.57	1.18	.06[b]
American orientation	3.38	3.29	3.49	.42	3.41	3.36	3.47	.42	-.07[b]
Mexican orientation	3.90	3.76	4.04	.59	3.98	3.89	4.06	.64	-.13[b]
Acculturation	2.15	2.02	2.28	.57	2.08	2.01	2.16	.62	.11[b]
Caballerismo	5.57	5.38	5.76	.81	5.53	5.39	5.66	1.08	.04[b]
Machismo	3.69	3.53	3.85	.68	3.69	3.60	3.78	.75	.00[b]
Marianismo	1.84	1.74	1.93	.40	1.81	1.74	1.87	.53	.06[b]

Note: [a] 95% CI did not capture zero. [b] Effect size is negligible.

RQ1: Direct Effect of Involuntary Unemployment

How much does involuntary unemployment directly predict the psychological and physical health of LatinX emerging adults during the COVID-19 pandemic? Table 9 presents the results of the path analysis to address RQ1, showing the descriptive statistics (*SE* and 95% CI) for each ß coefficient in Figure 1 in descending order of strength. Table 10 presents the R^2 values, reflecting the proportions of the variance in the endogenous variables explained by the model. The only path with 95% CI not capturing zero was Employment →Depression ($ß_2$ = -110). Therefore, when the Employment Status changed from 0 (unemployed) to 1 (employed) the standardized Depression score declined, on average, by -.110 units. The R^2 value indicated that Employment Status explained only 1.2% of the variance in Depression. The direct effects of Employment Status on State Anxiety (ß = -.067) and Physical Health (ß = -.001) with 95% CI capturing zero were negligible, and the R^2 values were less than the threshold value (ß = .04) to indicate practical significance.

Table 9

Path Coefficients for RQ1

	Path	ß	SE	Lower 95% CI	Upper 95% CI
2	Employment →Depression	-.110	.048	-.203	-.016*
1	Employment Status →State Anxiety	-.067	.054	-.173	.039
3	Employment Status →Physical Health	-.001	.051	-.101	.100

Note: * 95% CI did not capture zero

Table 10

Effect Sizes for RQ1

Endogenous Variable	R^2	95% CI		Effect Size
Depression	.012	.001	.053	Negligible to Small
Physical Health	.000	.000	.000	Zero
State Anxiety	.004	.000	.029	Negligible

The answer to RQ1 is that unemployment was a weak predictor of depression in this set of participants during the pandemic. The R^2 value with 95% CI almost capturing zero reflected a negligible to small effect size, which does not indicate practical or clinical significance. The effect of unemployment on state anxiety was negligible, and the effect of unemployment on physical health was zero. However, is important to consider that model did not take into account the effects of other sociocultural factors. Therefore, more variables must be added to the model, so that its predictions more realistically represent the effects of unemployment on the physical and psychological health of the participants.

RQ2: Moderating Effect of Familial Support

How much does familial support moderate the potential effect of involuntary unemployment on the psychological and physical health of LatinX emerging adults during the COVID-19 pandemic, after controlling for acculturation, social support, and perceived stress. Table 11 presents the results of the path analysis to address RQ2, in descending order of the ß coefficients, using the variables in Figure 2. Table 12 presents the R^2 values.

Table 11

Path Coefficients for RQ2

Path		ß	SE	Lower 95% CI	Upper 95% CI
14	Trait Anxiety → State Anxiety	.514	.045	.425	.939*

16	Familial Support → Social Support	.245	.058	.131	.359*
15	Stress →State Anxiety	.144	.112	-.075	.363
1	Employment Status →State Anxiety	.123	.285	-.436	.681
13	Acculturation →Depression	.059	.051	-.041	.159
3	Employment Status →Physical Health	.057	.257	-.448	.561
12	Acculturation →Physical Health	.038	.052	-.064	.140
11	Acculturation →State Anxiety	.017	.045	-.071	.105
10	Acculturation →Employment	-.032	.055	-.139	.076
8	Employment x Familial Support →Depression	-.048	.282	-.600	.504
9	Employment x Familial Support →Physical Health	-.065	.282	-.618	.487
2	Employment Status →Depression	-.071	.263	-.587	-.444*
6	Familial Support →Physical Health	-.135	.116	-.362	.091
4	Familial Support →State Anxiety	-.182	.168	-.511	.147
7	Employment x Familial Support →State Anxiety	-.184	.305	-.781	.414
5	Familial Support →Depression	-.284	.110	-.501	-.068*

Note: * 95% CI did not capture zero

Table 12

Effect Sizes for RQ2

Endogenous Variable	R^2	95% CI		Effect Size
State Anxiety	.341	.258	.424	Moderate
Depression	.108	.052	.179	Small
Familial Support	.060	.020	.118	Negligible to Small
Physical Health	.028	.004	.073	Negligible to Small
Employment	.001	.000	.019	Negligible

The strongest path coefficients (with 95% not capturing zero) reflected the dependency between Trait Anxiety → State Anxiety (ß = .514) and between Familial Support and Social Support (ß = .245). This dependency explained why the two types of anxiety and two types of support were linked together and not entered into the model as independent predictors. The only other strong ß coefficient (with 95% CI not capturing zero) was for the path between Familial Support →Depression (ß = -.284). Therefore,

when the standardized Familial Support score increased by one unit, the Depression score declined, on average, by -.284 units.

The effect of Employment Status on Depression in the model to address RQ2 with moderators and covariates (ß = - .071) was weaker than in the first model to address RQ1 (ß = -.110) with no extraneous variables. The reason for the reduction in the ß coefficient between the first and second models was partialling out. This process occurs when two exogenous variables (e.g., Unemployment Status and Familial Support) are joint predictors of an endogenous variable (e.g., Depression). When two or more predictors act in combination, they control each other, and their ß coefficients are reduced in magnitude compared to when the variables act alone. The effects of Unemployment and Acculturation on the psychological and physical health of the participants were negligible to small, (ß = -.182 to .059) with 95% CI capturing zero.

The answer to RQ2 is that familial support did not strongly moderate the potential effect of involuntary unemployment on the psychological and physical health of the participants, after controlling for acculturation and social support. The small negative path coefficients for the interaction terms created as the product of Employment Status x Familial Support (ß = -.048 to - .184) with 95% CI capturing zero, and the low effect size (R^2 = .060, with 95% CI not capturing zero) indicated that the effects of Familial Support were negligible to very small and reflected limited practical significance.

RQ3: Moderating Effect of Familial Obligation

How much does familial obligation moderate the potential effect of involuntary unemployment on psychological and physical health in LatinX emerging adults during the COVID-19 pandemic, after controlling for acculturation? Table 13 presents the

results of the path analysis to address RQ3, in descending order of the ß coefficients, using the variables in Figure 3. Table 14 presents the R^2 values. The strongest path coefficients (with 95% not capturing zero) reflected the dependency between Trait Anxiety → State Anxiety (ß = .556). The only other strong ß coefficient (with 95% CI not capturing zero) was for the path between Employment Status → Depression (ß = -.121). Therefore, when the Employment Status changed from 0 (unemployed) to 1 (employed) the standardized Depression score declined, on average, by -.121 units. The effects of Unemployment and Acculturation on the psychological and physical health of the participants were negligible to small, (ß = -.032 to .068) with 95% CI capturing zero.

Table 13

Path Coefficients for RQ3

Path		ß	SE	Lower 95% CI	Upper 95% CI
14	Trait Anxiety → State Anxiety	.556	.040	.478	.633*
22	Employment x Obligations → Depression	.080	.055	-.027	.188
13	Acculturation → Depression	.068	.056	-.042	.178
12	Acculturation → Physical Health	.043	.054	-.064	.150
11	Acculturation → State Anxiety	.023	.045	-.066	.112
21	Familial Obligations → Physical Health	.022	.060	-.095	.139
21	Employment x Obligations → Physical Health	.012	.054	-.093	.118
3	Employment → Physical Health	.001	.050	-.096	.098
20	Employment x Obligations → State Anxiety	-.003	.250	-.493	.487
19	Familial Obligations → Depression	-.006	.055	-.115	.102
10	Acculturation → Employment	-.032	.055	-.139	.076
20	Familial Obligations → State Anxiety	-.040	.121	-.277	.198
1	Employment → State Anxiety	-.062	.234	-.519	.396
15	Stress → State Anxiety	-.080	.043	-.164	.004
2	Employment → Depression	-.121	.049	-.217	-.025*

Note: * 95% CI did not capture zero

Table 14

Effect Sizes for Endogenous Variables in Table 13

Endogenous Variable	R^2	95% CI		Effect Size
State Anxiety	.334	.251	.417	Moderate
Depression	.023	.002	.065	Negligible to Small
Physical Health	.003	.000	.031	Negligible

The answer to RQ3 is that familial obligations did not strongly moderate the potential effect of involuntary unemployment on the psychological and physical health of the participants, after controlling for acculturation. The small negative path coefficients for the interaction terms created as the product of Employment Status x Familial Obligation (ß = -.003 to .080) with 95% CI capturing zero, and the effect sizes close to zero indicated that the moderating effects of familial obligations were negligible to very small, and reflected limited practical significance.

RQ4a: Moderating Effect of Machismo for Men

How much does Machismo moderate the potential effect of involuntary unemployment on the psychological and physical health of men LatinX emerging adults during the COVID-19 pandemic, after controlling for acculturation? Table 14 presents the results of the path analysis to address RQ4, in descending order of the ß coefficients, using the variables in Figure 4, with Machismo as the moderating variable. Table 15 presents the R^2 values reflecting small to moderate effect sizes. This model contained nine strong path coefficients with 95% CI not capturing zero.

Table 14

Path Coefficients for RQ4a using Machismo as the Moderating Variable for Men

Path		ß	*SE*	Lower 95% CI	Upper 95% CI
14	Trait Anxiety → State Anxiety	.451	.045	.363	.539*
28	Employment x Machismo → Depression	.307	.048	.214	.401*
24	Machismo → Physical Health	.267	.067	.136	.398*
26	Employment x Machismo → State Anxiety	.226	.042	.144	.308*
3	Employment → Physical Health	.213	.043	.129	.296*
27	Employment x Machismo → Physical Health	.212	.042	.129	.294*
23	Machismo → State Anxiety	.105	.051	-.005	.205
11	Acculturation → State Anxiety	.091	.048	-.004	.185
1	Employment → State Anxiety	.073	.049	-.023	.170
12	Acculturation → Physical Health	.009	.044	-.077	.095
25	Machismo → Depression	-.003	.061	-.123	.117
15	Stress → State Anxiety	-.020	.042	-.003	.063
13	Acculturation → Depression	-.132	.046	-.220	-.041*
10	Acculturation → Employment	-.159	.049	-.255	-.063*
2	Employment → Depression	-.193	.039	-.270	-.115*

Note * 95% do not capture zero

Table 15

Effect Sizes for Endogenous Variables in Table 14

Endogenous Variable	R^2	95% CI		Effect Size
State Anxiety	.345	.262	.428	Moderate
Depression	.138	.075	.181	Small
Physical Health	.105	.050	.174	Small

This model reflected the effects of unemployment and acculturation on the psychological and physical health of the men participants, and the moderating effects of Machismo. The strong path coefficients indicated that when the participants were employed then Depression decreased (ß = -.193) and Physical Health increased (ß = .213) compared to unemployed participants. The strong negative path coefficient (ß = -.132) for Acculturation → Depression among the men participants indicated that higher levels of

acculturation alleviated or attenuated the effects of unemployment on Depression. When the standardized Acculturation score (toward the American culture) increased by one unit, then Depression score decreased, on average, by - .132 units.

Moderating effects were reflected by the strong positive path coefficients between Employment Status x Machismo → Depression (ß = .307); Employment Status x Machismo → State Anxiety (ß = .226); and Employment Status x Machismo → Physical Health (ß = .212). The scatterplots fitted with linear regression lines in Figures 6, 7, and 8 visualize the moderating effect of Machismo on the relationships between Depression and Employment Status.

Figure 6 shows that, among the employed men participants, the Depression scores decreased when Machismo was stronger; however, among the unemployed participants, the depression scores increased when the Machismo was stronger.

Figure 6

Moderating Effect of Machismo on the Relationship between Depression and Employment Status for Men

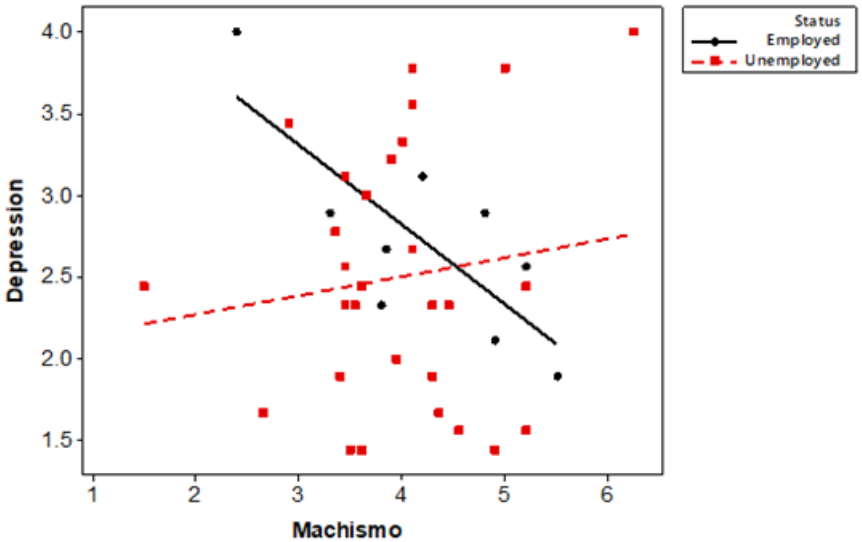


Figure 7

Moderating Effect of Machismo on the Relationship between State Anxiety and Employment Status for Men

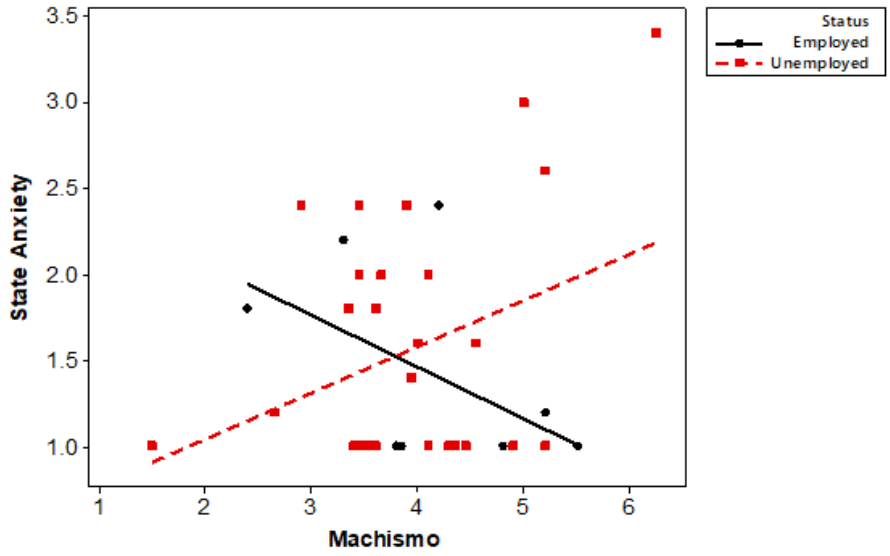


Figure 8

Moderating Effect of Machismo on the Relationship between Physical Health and Employment Status for Men

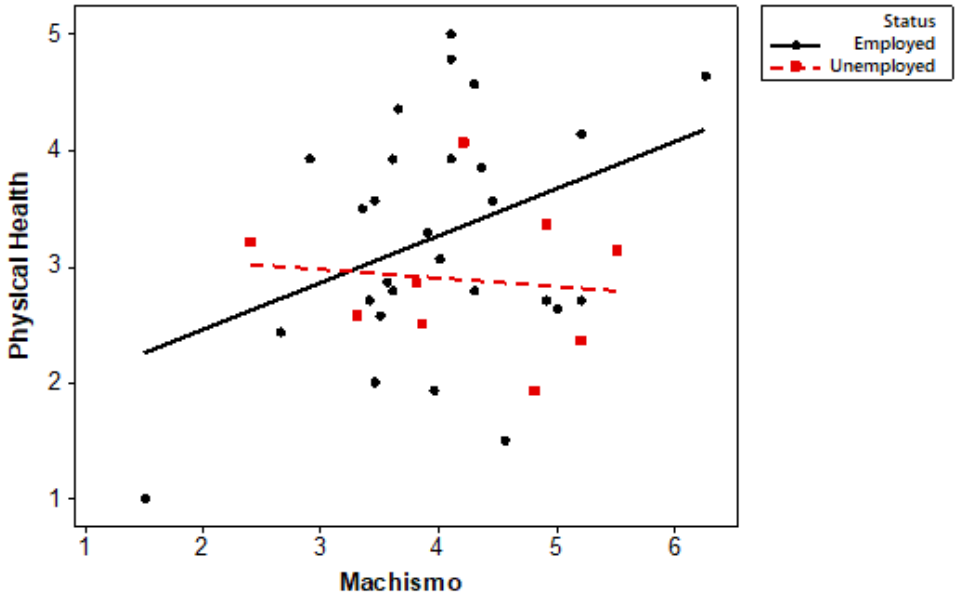


Figure 7 shows that, among the employed men participants, the State Anxiety scores decreased when Machismo was stronger; however, among the unemployed participants, the State Anxiety scores increased when the Machismo was stronger. Figure 8 shows that, among the employed participants, the Physical Health scores increased when Machismo was stronger; however, among the unemployed participants, the Physical Health scores decreased when Machismo was stronger.

RQ4b: Moderating Effect of Caballerismo for Men

How much does Caballerismo moderate the potential effect of involuntary unemployment on the psychological and physical health of men LatinX emerging adults during the COVID-19 pandemic, after controlling for acculturation? Table 16 presents the results of the path analysis to address this question in descending order of the ß coefficients, using the variables in Figure 4, with Caballerismo as the moderating variable. Table 17 presents the R^2 values reflecting small to moderate effect sizes. This model contained eight strong path coefficients with 95% CI not capturing zero. This model reflected the effects of unemployment and acculturation on the psychological and physical health of the men participants, and the moderating effects of Caballerismo. A strong negative path coefficient indicated that when the participants were employed then Depression decreased (ß = -.196). The strong negative path coefficient (ß = -.138) for Acculturation → Depression among the men participants indicated that higher levels of acculturation alleviated or attenuated the effects of unemployment on Depression. When the standardized Acculturation score (toward the American culture) increased by one unit, then Depression score decreased, on average, by - .138 units. Moderating effects were reflected by the strong positive path coefficients between Employment Status x

Caballerismo → Depression (ß = .385); Employment Status x Caballerismo → State Anxiety (ß = .239); and Employment Status x Caballerismo → Physical Health (ß = .209).

The interactions plots displayed in Figure 9, 10, and 11 visualize the structure of the moderating effects of Caballerismo on the relationships between Employment Status and both the Psychological and Physical Health of the men participants.

Table 16

Path Coefficients for RQ4b using Caballerismo as the Moderating Variables Among Men

Path		ß	*SE*	Lower 95% CI	Upper 95% CI
28	Employment x Caballerismo → Depression	.385	.041	.305	.465*
27	Employment x Caballerismo → Physical Health	.239	.039	.163	.315*
26	Employment x Caballerismo→ State Anxiety	.209	.037	.136	.282*
3	Employment → Physical Health	.163	.164	-.158	.484
24	Caballerismo → Physical Health	.157	.059	.041	.273*
23	Caballerismo → State Anxiety	.091	.090	-.085	.267
14	Trait Anxiety → State Anxiety	.087	.043	.003	.171*
1	Employment → State Anxiety	.073	.048	-.021	.167
11	Acculturation → State Anxiety	.073	.047	-.019	.165
12	Acculturation → Physical Health	.061	.049	-.035	.157
15	Stress → State Anxiety	-.016	.041	-.096	.064
25	Caballerismo → Depression	-.059	.048	-.153	.035
13	Acculturation → Depression	-.138	.041	-.218	-.058*
10	Acculturation → Employment	-.158	.048	-.252	-.064*
2	Employment → Depression	-.196	.037	-.269	-.123*

Note * 95% do not capture zero

Table 17

Effect Sizes for Endogenous Variables in Table 16

Endogenous Variable	R^2	95% CI		Effect Size
State Anxiety	.343	.107	.582	Moderate
Depression	.138	.003	.382	Small

Physical Health	.120	.001	.360	Small

The moderating effects of Caballerismo on the health of the men participants paralleled the moderating effects of Machismo. Figure 9 shows that, among the employed participants, the Depression scores decreased when Caballerismo was stronger; however, among the unemployed participants, the depression scores increased when Caballerismo was stronger. Figure 10 shows that, among the employed participants, the State Anxiety scores decreased when Caballersimo was stronger; however, among the unemployed participants, the State Anxiety scores increased when Caballerismo was stronger. Figure 11 shows that, among the employed participants, the Physical Health scores increased when Caballerismo was stronger; however, among the unemployed participants, the Physical Health scores decreased when the Caballerismo was stronger.

Figure 9

Moderating Effect of Caballerismo on the Relationship between Depression and Employment Status for Men

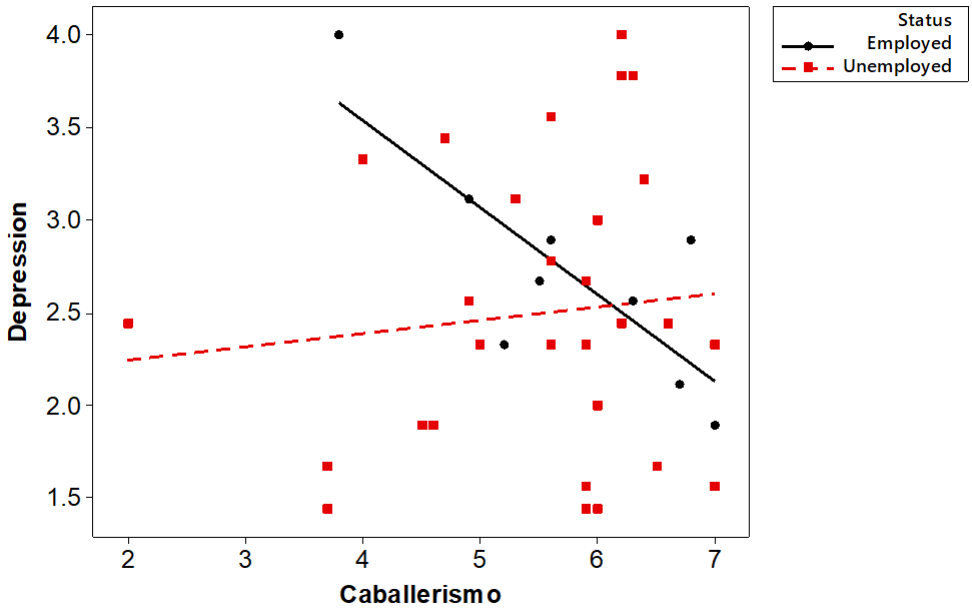


Figure 10

Moderating Effect of Caballerismo on the Relationship between State Anxiety and Employment Status for Men

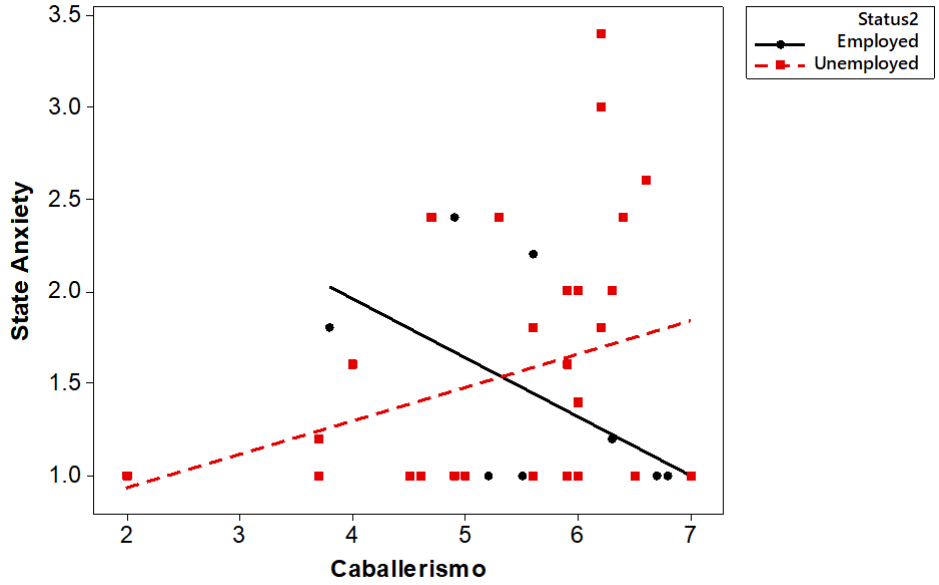
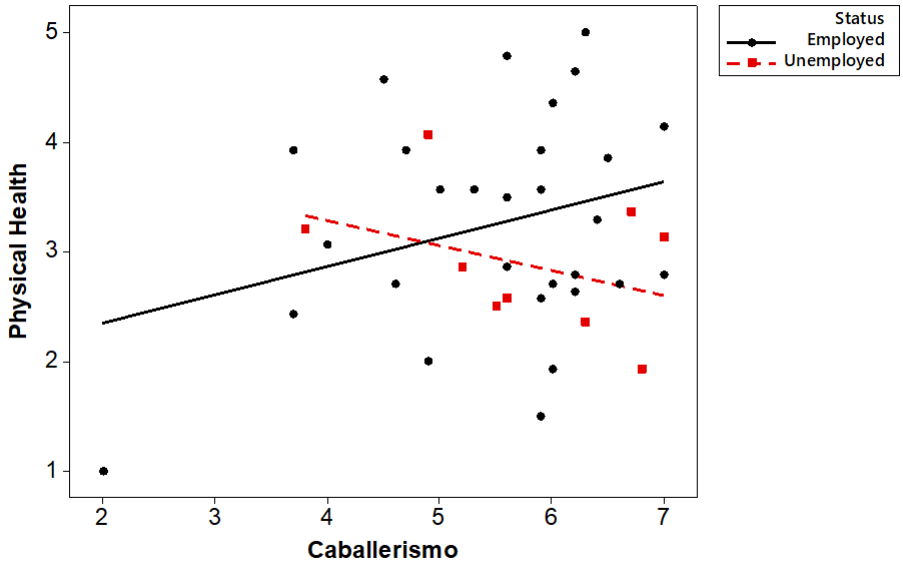


Figure 11

Moderating Effect of Caballerismo on the Relationship between Physical Health and Employment Status for Men



The answer to RQ4 is that Machismo and Caballerismo had strong moderating effects with practical significance on the relationships between Employment Status and both the Physical and Psychological Health of the men participants.

RQ5: Moderating Effect of Marianismo for Women

How much does marianismo moderate the potential effect of involuntary unemployment on the psychological and physical health of women LatinX emerging adults during the COVID-19 pandemic, after controlling for acculturation? Table 16 presents the results of the path analysis in descending order of the ß coefficients, using the variables in Figure 5. Table 17 presents the R^2 values.

This model, using Marianismo as a moderator, reflected the effects of unemployment and acculturation (toward the American culture) on the psychological and physical health of the women participants. These effects were indicated by the negative path coefficients not capturing zero for Employment Status → Depression (ß = -.107); and the positive path coefficients not capturing zero for Marianismo → Physical Health (ß = .149) and Acculturation → Depression (ß = .127). Therefore, if the women participants were unemployed, their Depression score declined, on average, by - .107. If the standardized Acculturation score increased by one unit, the Depression score increased, on average, by .127 units, and if the standardized Marianismo score increased by one unit, the Physical Health score increased, on average by .149 units.

Table 16

Path Coefficients for RQ5:

Path		ß	SE	Lower 95% CI	Upper 95% CI
14	Trait Anxiety → State Anxiety	.543	.041	.463	.623*

29	Marianismo → Physical Health	.149	.061	.029	.269*
13	Acculturation → Depression	.127	.057	.016	.238*
12	Acculturation → Physical Health	.065	.054	-.042	.172
32	Employment x Marianismo → State Anxiety	.057	.047	-.035	.148
11	Acculturation → State Anxiety	.029	.046	-.060	.118
29	Marianismo → State Anxiety	.011	.049	-.086	.108
34	Employment x Marianismo → Depression	.002	.046	-.088	.092
3	Employment → Physical Health	-.016	.052	-.118	.086
10	Acculturation → Employment	-.016	.057	-.127	.094
31	Marianismo → Depression	-.023	.049	-.119	.074
33	Employment x Marianismo → Physical Health	-.042	.054	-.148	.065
1	Employment → State Anxiety	-.080	.047	-.172	.012
15	Stress → State Anxiety	-.104	.043	-.188	.020
2	Employment → Depression	-.107	.049	-.204	-.010*

Note * 95% do not capture zero

Table 17

Effect Sizes of Endogenous Variables in Table 16

Endogenous Variable	R^2	95% CI		Effect Size
State Anxiety	.337	.254	.420	Moderate
Depression	.028	.004	.073	Negligible to Small
Physical Health	.026	.003	.070	Negligible to Small

The answer to RQ5 is that Marianismo did not strongly moderate the potential effect of involuntary unemployment on the psychological and physical health of the participants, after controlling for acculturation. The small negative path coefficients for the interaction terms created as the product of Employment Status x Marianismo (ß = -.042 to .057) with 95% CI capturing zero, and the effect sizes close to zero indicated that the moderating effects of Marianismo were negligible to very small, and reflected limited practical significance.

Discussion

The overall goal of this study was to give scholars and practitioners insight to work related experiences of marginalized individuals and to better understand what factors buffer or exacerbate the negative effects of sudden involuntary unemployment during a pandemic. The author used contemporary methods of data analysis to help better understand the effects sociocultural values (e.g., familism, gender ideologies) have on this relationship, specific to LatinX emerging adults. The findings from this study partially supported the research predictions and will help shed light on relationship between LatinX masculinity ideologies and well-being during employment hardships.

In the present study, we found employment status alone was not a strong predictor for physical and psychological health of the participants. This finding was contrary to McGee and Thompson's (2015) study which revealed unemployed emerging adults were 3 times (i.e., odds ratio) more likely to report depressive symptoms compared to employed emerging adults. Nonetheless, they recommend the need for scholars to explore moderators on this relationship, because distinct samples of emerging adults may experience unemployment and distress differently (i.e., stigmas related to unemployment).

Moreover, familism obligation and familism support showed to have little practical significance as a moderator on the relationship between involuntary unemployment and well-being of the participants. It could be that familism is more salient at different stages in lifespan development (Cahill, et al., 2021). Conversely, Machismo and Caballerismo were found to have strong moderating effects with practical significance on the relationships between employment status and both the physical and psychological health

of the men participants. Lastly, Marianismo was not a strong moderator for the relationships among women participants. To the authors knowledge this is one of the first studies to examine the relationship between LatinX gender ideologies and involuntary unemployment at any point in time or during a pandemic. Consequently, a broad framework for LatinX masculinity and an exploratory approach was implemented to help acquire new insights into the targeted population.

The data suggest that our research questions regarding the buffering effects of traditional Machismo, controlling for acculturation, were supported, and had small to moderate effects on the relationship between employment status and well-being (i.e., psychological, and physical health) during the COVID-19 pandemic. We found that among employed men participants, depression and anxiety scores decreased and physical health increased when Machismo was stronger; however, among the unemployed participants, the depression and anxiety scores increased and physical health decreased when Machismo was stronger. These findings can be explained by the socially constructed expectations assigned to individuals based on their gender given at birth. For example, gender role beliefs are attributions that men and women follow based on societies definitions of traditional "masculinity" and "femininity." Such traditional gender roles have been shown to affect individuals career aspirations and achievements (Valenzuela, 1993), perceived differential abilities (Spencer, Steele, & Quinn, 1999), occupational status (Deaux & Lewis, 1984) and internalization of gender norms (O'Neil, 2014).

Furthermore, our findings could reflect gender role conflict (GRC). A phenomenon described by O'Neil (2014) as "a psychological state in which socialized gender roles

have negative consequences on the person or others." Perhaps the unprecedented times of COVID-19 placed extra strain on LatinX men who experiences involuntary unemployment. Since unemployment for a man would go against traditional gender roles, potentially leading to experiencing GRC within (O'Neil, 2014). This would explain why the interaction between employment status and Machismo had effects on levels of depression, anxiety, and physical health. When traditional gender role norms (i.e., being employed and thus being able to provide for oneself and family) were experienced by the LatinX men participants, Machismo acted as a protective factor on the employment - health relationship. Yet, when the participants experienced involuntary unemployment because of the pandemic, Machismo acted as a risk factor.

By using research questions, we left the possibility of Caballerismo, and the unemployment-health relationship open to interpretation. Our findings for this study revealed parallel findings to the buffering effects of Machismo. When Caballerismo was stronger, employed participants levels of depression and anxiety decreased, and physical health increased; however, among the unemployed participants, the depression and anxiety scores increased, while physical health decreased, when Caballerismo was stronger. It could be that both Machismo and Caballerismo are tied to traditional gender roles for LatinX men and therefor function similarly when such norms are violated or deviated from. Whether Machismo or Caballerismo act as a protective or risk factor depends on the situation and alignment, or misalignment, with the cultural expectations to be a provider for the family. It seems that employment status, LatinX men sociocultural values, and psychological health are correlates and there is a need for additional research on this relationship.

On the other hand, Marianismo showed to have little to no significant buffering effects on the unemployment-health relationship. Noteworthy, we did find that for women who reported higher levels of Marianismo reported better physical health (ß = .149) (i.e., higher scores indicated less reports of poor physical symptoms). Physical health symptoms included sleep disturbances, headaches, gastrointestinal problems, and respiratory infections. These findings are opposing to a study that examined the writing on "marianismo" by Latinas publishing in the US and found that adherence to the gender script was associated with serious health risk (Norat, 2015). Clearly there is an association between marianismo and health outcomes that requires further examination. However, in relation to involuntary unemployment during the COVID-19 pandemic a potential explanation for the lack of buffering effects could be that since LatinX traditional gender roles rely on the premise that the men are the breadwinners and the women are the homemakers, involuntary unemployment is less of a gender role conflict strain for LatinX women compared to men.

Surprisingly, neither familism support nor familism obligation had a moderating effect on the employment – health relationship, after controlling for social support and acculturation. An important interpretation of this studies analysis is that the sample was predominately women (n = 291). A recent systematic review and meta-analysis (Cahill, et al., 2021) found that primarily female samples resulted in smaller effects of familism values, contrary to prior findings (Campos, et al., 204; Lorenzo-Blanco, et al., 2012). It could be that familism isn't as salient in LatinX women as previously thought. Furthermore, to the authors knowledge this is one of the first studies to look at the role familism has on the employment-health relationship – especially during a pandemic. We

leave open the possibility that developmental stage (Cahill et al., 2021) and presence of a moderator variable between familism and psychological health (Valdivieso-Mora et al., 2016) or between familism and employment status, could be a reason for the lack of buffering effects. The protective and risk factors familism has on the LatinX community is still an emerging body of literature and will require further investigation.

Implications

Taken together these findings help us understand how sociocultural factors influence the LatinX unemployed-mental health relationship during a global pandemic. Although men were the lowest sample size (n = 39), our decision to use PLS path analysis allowed us to examine a targeted population with a smaller sample size. We do however recognize that we must be cautious with the inferences we make with these findings, implementing an exploratory approach allows us to use inductive reasoning to a) generate hypotheses and b) further predict theory. Nonetheless, the implications from our study show that Traditional LatinX gender roles are still prevalent and can be both protective and risk factors to psychological and physical health in times of stress (i.e., a pandemic and job loss). Examining such sociocultural factors and the influence they have on mental and physical health can help practitioners provide better services for the LatinX community.

Furthermore, we hope to expand the knowledge base on the working experience of LatinX individuals by establishing casual relationships between concepts and taking an exploratory approach (Scheel et al., 2020). Future researchers should continue to establish the functional form of these relationships and work to recognize what factors affect the employment-health relationship for marginalized individuals. Much of the

research on this targeted population is still evolving and the long-term effects of the pandemic are unknown. There is a need for more exploratory approaches to identify predictive relationships between variables that may ultimately feed into confirmatory research. Especially for sensitive social issues that are not well researched. As these relationships evolve it will help develop theory for future confirmatory relationships, specific to marginalized employees.

Limitations

Although we were very intentional with the methodology of our study there were still limitations. First, our study specifically sought out LatinX emerging adults, since they were disproportionality affected by the pandemic, which makes our findings not generalizable to other populations. Second, because where the sample was collected our sample was dominated by employed females (n = 227, 68.8%) and unemployed females (n = 64, 19.4%), meaning that it is difficult to ensure the results from our study are not biased and we must be critical of the conclusions we draw from the small male sample size (employed males n = 30, 9.1% and unemployed males n = 9, 2.7%). Furthermore, we were purposeful about recruiting emerging adults (ages 18-29) and had a sample of all college students. Results could be more severe for adults who are full-time employees and are not in school. Research shows that employment is a part of identity (Gini, 1998) and when an individual does not have school, nor is a part-time employee, it is likely that the negative consequences of loss of employment are more severe. Future research should look at different developmental stages.

The external validity of this research was threatened because, due to potential sampling bias, the convenience sample did not necessarily represent the target population

(i.e., LatinX emerging adults) with respect to all of this population's essential demographic and contextual characteristics (Stangor, 2015). The internal validity of this research was threatened because the existence of causal relationships could only be inferred but not proven by path analysis. Causal relationships assume that the antecedent causal factors were measured first, before the realization of the subsequent effects or outcomes. It is not possible using cross-sectional survey data collected at one time to prove definitively that an antecedent factor, such as employment status, is a direct or indirect cause of a subsequent effect, such as the physical and mental health of a target population (Bollen & Pearl, 2013). Nevertheless, it is a common practice to use the word "effect" loosely in path analysis to describe a potential causal relationship, even though the relationship may not be causal in reality (Fidelis & Sunday, 2018).

III. STUDY 2: THE BUFFERING ROLE OF RESILIENCE AND ETHNIC IDENTITY ON THE RELATIONSHIP BETWEEN COVID-RELATED JOB INSECURITY AND ATTITUDINAL AND HEALTH OUTCOMES AMONG LATINX EMERGING ADULTS OVER TIME

The COVID-19 pandemic has destabilized work globally, creating job loss and insecurity for millions of employees (Wilson, et al., 2020; EPI, 2020). One of the groups most affected by the negative economic and work consequences of the pandemic in the U.S. are LatinX[3] young adults (Bureau of Labor Statistics, 2020). Studies show that young adults and LatinX individuals have lost jobs at a much faster rate, and returned to work at a slower pace compared to their White counterparts (EPI, 2020). These disparities are further exacerbated by the fact that, prior to the pandemic, LatinX and emerging adult (18-29 years old) employees were often paid less, were less likely to have access to health care (e.g., less access to job-related benefits), and were more likely to hold positions in industries that are at higher risk for job loss (e.g., transportation, retail trade, accommodation, childcare, food services, and drinking places) (Flores, et. al., 2019; Pew Research, 2020b).

While LatinX emerging adults are often characterized as "at-risk" for losing their jobs, emerging literature suggests that many members of this group possess and develop protective characteristics that help them adapt and deal with adverse life events (Cardoso & Thompson, 2010; Zaretsky & Clark, 2019). Specifically, researchers are beginning to examine the individual, cultural, and environmental characteristics marginalized and

[3] The term Latinx refers to individuals of Latin American origin who self-identity with Latin American descent (used as a gender-neutral or non-binary alternative to Latino/a and Latin@ (Salinas & Lozano, 2017).

vulnerable individuals possess that relate to higher levels of resilience in the face of adversity (Shoss, Jiang, & Probs, 2018; McLarnon & Rothstein, 2013). For example, ethnic identity has been associated with both increased levels of resilience and psychological well-being in ethnic minority groups (Lee, 2005; Hurwich-Reiss, 2015; Clauss-Ehlers, Yang, & Chen, 2006). A more recent study found that the relationship between perceived stress during the COVID-19 pandemic and depression was moderated by resilience (Havnen, et al., 2020).

The purpose of this paper is to take a strength-based approach to the study of how COVID-19 related job insecurity is affecting the work lives and wellbeing of LatinX emerging adults, and what culturally-specific protective factors may buffer the negative effects of job insecurity. Specifically, we consider the role of ethnic identity and resilience as protective factors in the relationship between job insecurity and attitudinal, behavioral, and health outcomes at two different time points. We use the theoretical frameworks of emerging adulthood and the cognitive transactional model of stress to guide our understanding of this topic, predicting that emerging adult LatinX individuals with a high regard to their ethnic identity membership will also have high levels of personal resilience and the two will serve as a buffer in the relationship between job insecurity and anxiety, depression, and job satisfaction during the COVID-19 pandemic. Our goal is to advance the literature on the effects of job insecurity by using a longitudinal design to establish temporal precedence in the relationship between job insecurity, culturally-specific protective factors (ethnic identity and resilience), and work and life outcomes in this population. In addition, we use contemporary statistical analysis to explore the relationships from a prediction perspective (Hair et al., 2019).

A large body of research on resilience has discussed the necessity of more longitudinal studies (Bryan, O'Shea, & Macintyre, 2019; Fisher & Ragsdale, 2019). For example, Britt et al. (2016) recommended that in order to better understand resilience it is crucial that researchers clarify the role of time. Considering that resilience is associated with individual characteristics and the adaptation process, we believe implementing a lagged design will help establish the temporal precedence of personal resilience relative to later well-being. Furthermore, to the authors knowledge very few studies, if any, have examined how ethnic identity relates to job insecurity and health outcomes relationship through resilience.

Literature Review

Emerging Adults

The theory of emerging adulthood describes a distinct period of development spanning the ages of 18-29 (Arnett, 2000). Emerging adulthood is viewed as a new stage in life between adolescence and adulthood, often experienced by individuals in their twenties living in industrialized societies. The theory was developed in the early 2000s as to help understand the effects of the economic and social changes in the late 20th century (e.g., globalization, economic restructuring, technology revolution, feminist movement) on young adult development (Arnett, 2000). Individuals in this age group were theorized to be in a distinct transitional stage, defined by an increase in the need for post-secondary education attainment. Accordingly, this led to traditional markers of entering adulthood such as parenthood, marriage, leaving home, and career transitions occurring later in life, departing from past generations. Entering the workforce and developing a professional

identity are among the most challenging aspects of this stage (Grosemans, Hannes, Neyens, & Kyndt, 2020).

Adding to this developmental challenge is the sociohistorical challenge of the COVID-19 pandemic to all workers. The pandemic created a global economic downturn that was felt especially strongly among LatinX emerging adults (Pew Research, 2020a; Pew Research, 2020b). Gould, Perez, and Wilson (2020) state that, as a group, LatinX emerging adults faced higher COVID-19 death rates, were less likely to have a work from home option during COVID, and were most likely to have lost their job during the pandemic compared to their White counterparts. Moreover, the Bureau of Labor Statistics (2020) reported that their classification of races was not mutually exclusive, meaning that "White" was defined as "White, any ethnicity." As a result, many unemployed LatinX emerging adults were likely to be counted in the White unemployment group and thus there is an even larger unemployment gap between White and LatinX workers.

Unfortunately, unprecedented unemployment rates don't only affect the unemployed. Those still employed during high rates of unemployment tend to also experience adverse outcomes. According to a recent study, individuals still employed during the COVID-19 pandemic tended to experience an increase in job insecurity and greater symptoms of depression and anxiety (Wilson et al., 2020). These findings were further corroborated by Ganson et al. (2020) who found approximately half of their emerging adult (18-26 years old) sample either experienced direct or household employment loss, or were expecting direct or household employment loss in the near future. Moreover, they found a significant association between unemployment, expected unemployment and symptoms of poor mental health among emerging adults. Both, direct

or household employment loss and expected (i.e., in the near future) direct or household employment loss was positively related to anxiety, depression, worry, and loss of interest (Ganson et al., 2020).

Together these findings raise a multitude of questions and concerns regarding LatinX emerging adults' health and work-related outcomes during the pandemic. What resources are these individuals using to cope with job insecurity, and what characteristics influence their response to job insecurity? Following Probst, Jiang, and Benson's (2014) comprehensive model of job insecurity, we propose that individual characteristics and socioeconomic conditions will influence employee response to job insecurity. We will use Lazarus and Folkman's (1987) cognitive-transactional model of stress as a framework to help guide our understanding of this group's experience with job insecurity during a time of heightened stress, economic recession, and a pandemic.

Job Insecurity Within the Cognitive-Transactional Model of Stress

Job insecurity can be defined as a perceived threat of job loss and the worries related to that threat. This uncertainty about the future of one's job can be short term or long term. The construct is most often understood as a subjective phenomenon that is "in the eye of the beholder" (Sverke & Hellgren, 2002). That is, independent of an objective job loss threat, an individual can still be concerned about the continuity of their job. Interestingly, research tends to show that subjective perceptions of job insecurity are more highly correlated with employee health-related outcomes (e.g., physical health, psychological distress, and job stress) than objective job insecurity (Probst, 2003). Thus, subjective job insecurity is categorized as one of the many stressors at work that has the potential to cause psychological and physical harm.

Furthermore, job insecurity has been defined as both a unidimensional and multidimensional construct. The latter consists of quantitative (e.g., threat to future job loss) and qualitative (e.g., threat to loss of current job features) components. Although dependent on situational factors and outcome variables, research shows validity in both measures of job insecurity (Reisel & Banai, 2002). For example, Ashford et al. (1989) found that their multidimensional measure of job insecurity explained more variance in outcomes than global measures of job insecurity. On the other hand, Reisel and Banai (2002) found that a multidimensional measure of job insecurity does not necessarily demonstrate psychometric advantages over a global measure of job insecurity. They also found that qualitative job insecurity was a better predictor of attitudinal and behavioral outcomes (e.g., commitment, trust, and job search behavior) compared to quantitative job insecurity. Because research shows mixed evidence on the best operationalization of job insecurity, this study will focus on both qualitative and quantitative job insecurity.

Probst, Jiang, and Benson's (2014) comprehensive model identifies variables at the individual, occupational, organizational, and societal levels that influence an individual's perceptions of job insecurity. For example, they discuss how trait-like individual difference variables (e.g., locus of control, self-efficacy, affectivity, spirituality, and cultural values) have been shown to moderate perceptions of job insecurity. They argue that such variables are important to understand because they can moderate the relationship between perceived job insecurity and negative affective, attitudinal, and cognitive outcomes. Furthermore, their model acknowledges that perceptions and reactions to job insecurity can "vary within and across individuals and may differ over occasions and time." Thus the cognitive-transactional model of stress and

coping theory lends a framework to understand and to examine specific cultural relevant variables that could act as buffers for LatinX emerging adults during the COVID-19 pandemic.

Lazarus and Folkman's (1987) cognitive-transactional model of stress and coping explains stress as a process with primary and secondary appraisals. The theory posits that there is a transaction that occurs between the individual and the environment and that stress occurs when there is an imbalance between demands and resources. For example, an employee may become stressed after evaluating the security of their job and considering what is at stake if they lose their job (e.g., finances to pay for a house or provide for a family). In other words, the individual first appraises the situation and considers whether it is harmful, threatening, or challenging.

Following the first appraisal, individuals engage in secondary appraisal in which they evaluate both internal and external resources that they can employ to deal with the stressor. Thus, the cognitive-transactional model of stress and coping proposes that the perception and response to a stressor (e.g., job insecurity) will vary depending on the individual and may change over time. Whether the stressor will be perceived as stressful or not is a result of the individual's characteristics (e.g., resilience, abilities, identity) and ability to cope (problem and emotional based) with the adverse event.

We use these two comprehensive models of stress to guide our understanding of how emerging adult LatinX individuals are potentially using culturally-specific individual difference characteristics, such as ethnic identity and individual resilience, as a buffer mechanism against perceived job insecurity and related attitudinal, behavioral, and mental health outcomes during the COVID-19 pandemic at two different time points.

Job Insecurity and Outcomes

The relationship between job insecurity and psychological and physical health outcomes has been well documented in the last two decades (Sverke et al., 2002). Job insecurity is known to have both direct and indirect effects on a multitude of affective, behavioral, and cognitive outcomes. Cheng and Chan's (2008) meta-analysis revealed that job insecurity is consistently and most often negatively correlated with psychological health, somatic health, work performance, job satisfaction, organizational commitment, trust, and job involvement and positively related to turnover intentions. Furthermore, longitudinal studies collectively find strong evidence for normal causation (i.e., job insecurity influences outcomes) between perceived job insecurity and poor psychological well-being (Witte, Pienaar, & De Cuyper, 2015). In other words, their review explains that "job insecurity influences health and well-being over time, and not the other way around" (Witte, Pienaar, & De Cuyper, 2015, p. 18).

These findings have been further supported by recent studies that examine COVID-19 related job insecurity and mental health outcomes. For example, Wilson et al. (2020) found that employed individuals who experienced higher levels of job insecurity during the COVID-19 pandemic reported greater depressive symptoms. They also found that financial concern mediated the relationship between job insecurity due to COVID-19 and feelings of anxiety (but not depression). Ganson et al. (2020) revealed similar findings, showing that 38% of emerging adults (18-26 years old) in their sample were anticipating personal or household employment loss, and were two-to-six times more likely to show symptoms of worry, anxiety, depression, and loss of interest, compared to individuals who reported no concern for future loss of employment. Furthermore,

Alcover et al. (2020) reported both perceived job insecurity and financial threat were associated with poorer psychological health and are moderately buffered by perceived social support in relation to network size, during the first month of the pandemic. Taken together these recent studies indicate that emerging adults are experiencing heightened levels of job insecurity and mental health concerns amidst the COVID-19 pandemic. Thus, to better understand the experiences of LatinX emerging adults our first research question is:

> **RQ1a:** To what degree do the changes in quantitative job insecurity (JIS) predict changes in the levels of well-being (job satisfaction, anxiety and depression) among LatinX emerging adults during the COVID-19 pandemic, after controlling for acculturation?
>
> **RQ1b:** To what degree do the changes in qualitative job insecurity (MQJIS) predict changes in the levels of well-being (job satisfaction, anxiety and depression) among LatinX emerging adults during the COVID-19 pandemic, after controlling for acculturation?

Resilience in the Workplace

Although there is ample evidence relating perceived job insecurity to undesirable outcomes, there is not always a realistic solution for unemployment, furlough, lay-offs, and downsizing, especially during a global economic and health crisis. Thus, practitioners and industrial-organizational (IO) psychologists must work to understand and support individuals most affected during these devastating times. In particular, IO psychologists could take a strength-based approach to investigate and promote the resources and coping mechanisms individuals already employ to deal with adverse life events. As

recommended by scholars, taking a strength-based approach, and incorporating culturally relevant, intrapersonal factors (i.e., resilience, acculturation stressors), and human developmental perspectives will allow for scholars to get a more holistic view of the experiences of marginalized communities (Davis, Carlo, and Maiya's, 2021; Gennetian et al., 2021). An emerging body of literature has begun to investigate different individual characteristics that buffer the effects of perceived job insecurity and related emotional, behavioral, and cognitive outcomes (Shoss, Jiang, & Probs, 2018; Havnen et al., 2020; Seligman, 2011). Yet less is known about culturally relevant factors, specific to the LatinX community.

To the authors knowledge, there has been no studies that have examined the buffering role of culturally-relevant variables such as individual resilience and ethnic identity in relation to job insecurity and mental health outcomes. Nevertheless, previous research has shown that for ethnic minorities, a high regard for one's ethnic identity is associated with positive health outcomes, higher levels of individual resilience, and can act as a buffer in stressful life events (Clauss-Ehlers et al., 2006; Yip & Fuligni, 2002). As a result, we propose that ethnic identity, through resilience, has a buffering role on later job insecurity and emotional, behavioral, and cognitive outcomes.

As mentioned earlier, the cognitive transactional theory of stress posits that an event is perceived as stressful when an individual believes that they do not have the capacity or proper resources available to help cope and adapt to adverse events (Lazarus, 1991, 1993). This theory has helped guide organizational researchers to not only investigate risk factors associated with work stressors (e.g., job insecurity) but also explore the protective factors employees use to cope and adapt in these stressful

situations. In particular, the construct "resilience" has gained attention from both academic researchers and applied practitioners. Resilience has been defined in a multitude of ways throughout the literature, and although there seems to be a lack of consensus, this study seeks to understand the role *individual* resilience has on the relationship between job insecurity and health outcomes, and its relationship with ethnic identity.

Individual resilience, often referred to as personal resilience, is defined as an individual's ability to cope, recover, bounce-back or adjust following an adverse event or misfortune, encompassing affective, behavioral, and cognitive components (Garcia-Dia, et al., 2013, as cited in Rees, et al., 2015; McLarnon & Rothsetin, 2013). Thus, resilient people are known to "positively adapt" following a significant adverse event and often develop effective coping mechanisms. It is important to note what constitutes as a "significant adversity" and "positive adaptation." Significant adversity is defined as an unfortunate event or circumstance. Past research has shown that high unemployment rates and epidemics are associated with higher levels of job insecurity, and thus constitute a significant adverse event (Probst, Jiang, Benson, 2014; Anderson & Pontusson, 2007). Furthermore, positive adaptation is considered to be "the ability to maintain or regain mental health, despite experiencing adversity" (Herrman, et al., 2011). We seek to examine individual resilience through a multitude of outcomes including, mental health, job attitude, and work behavioral outcomes (e.g., anxiety, depression, job satisfaction) at two separate time points.

Moreover, although there are measures of resilience that consider the social and contextual features in someone's environment that potentially make them more resilient

(Bryan, O'Shea, & MacIntyre, 2019; McLarnon & Rothsetin, 2013), for the purpose of this study only individual resilience (e.g., affective, behavioral, and cognitive) will be examined. However, considering research shows that social support and individual resilience have similar effects on well-being over time (Li et al., 2021) and that some scholars consider social support to be part of resilience (i.e., individual characteristics, processes, and support systems define resilience), we will control for social support. In line with this rationale, higher level of resilience will lead to an individual's sense of well-being being restored following the experience of an adverse event (e.g., job insecurity as a result of COVID-19).

RQ2: To what degree does resilience of LatinX emerging adults predict the changes in well-being (job satisfaction, anxiety, and depression) during the COVID-19 pandemic, after controlling for social support and acculturation.

Ethnic Identity and Resilience

A key aspect of the conceptual model of resilience is that personal characteristics play a role in the resilience process. This has further been discussed by Hartmann et al. (2019, p. 919) who states "resilience- promoting factors refer to personal or environmental characteristics, which are present irrespective of an individual's experience of adversity, but which can buffer the negative effects of adversity or foster resilience mechanisms during adverse experiences." Thus, we seek to understand both the direct and indirect effects of resilience on the relationship between job insecurity and anxiety, depression, and job satisfaction. Moreover, we explore the potential predictive and protective role of ethnic identity on the resilience relationship.

The concept of Ethnic Identity was introduced by Phinney (1990), based on the work of Erikson (1968) and Marcia's (1966, 1980) operationalization of identity development. Their work was foundational in that it focused on the development of identity in adolescence through *exploration* and *commitment*. Phinney advanced this framework by focusing on an additional dimension: the process of ethnic identity formation. Ethnic identity refers to the quality of an individual's sense of self that is affiliated with their ethnic group membership, and the feelings, thoughts, and behaviors that accompany that self-concept. Research shows the construct of ethnic identity is multidimensional, dynamic, and involves the process of development through a combination of experiences and actions starting in adolescence and extending into later stages of life (Phinney & Ong, 2007).

For ethnic minority populations, early stages of research on ethnic identity focused on the various ways in which individuals identified with their ethnicity (i.e., ethnic membership) and the negative outcomes associated with identifying as an ethnic minority (e.g., higher levels of stress and lower levels of mental health) (Clark et al., 1999; Karidner & Ovesey, 1951). As ethnic identity models advanced, research began to show that having a positive sense of one's ethnic identity (i.e., a positive view about your ethnic membership), and viewing it as an important part of one's self-concept, were both directly and indirectly associated with higher levels of psychological health (Phinney, 1996; Shelton, et al., 2005; Rowley et al., 1998).

For example, Yip and Fuligni's (2002) two-week diary study found that Chinese adolescents who reported moderate to high levels of ethnic salience consistently reported higher levels of psychological well-being and positive feelings. On the other hand, they

found adolescents who reported lower levels of ethnic identity salience had lower psychological well-being. In general, it was found that differences in ethnic identity achievement buffered the relationship between daily stressors and anxious feelings, after controlling for self-esteem. Taken together this research indicates that having a high regard for one's ethnic identity may act as a buffer in the relationship between everyday stressors and psychological health outcomes.

An emerging, but scarce, body of literature has explored the potential role ethnic identity has on the resilience process. Clauss-Ehlers et al. (2006) sought to understand how ethnic and gender identity foster resilience amongst a group of racially diverse women. They found a significant positive relationship between ethnic identity search and resilience, and discussed the potential role of the community involvement aspect related to ethnic identity as a buffer against stress (Clauss-Ehlers et al., 2006). They concluded by emphasizing the importance of considering other variables, such as social support, as a guide into better understanding "what works for different people" (Lopez et al., 2002, p. 135).

Furthermore, Zaretsky and Clark (2019) found a significant difference in levels of ethnic identity strength amongst different ethnic groups. As a result, they discussed the need for more research examining the relationship between ethnic identity and resilience considering both constructs might manifest more in some ethnic groups and not others. Although these findings are promising, their sample only included 3.4% (N = 11) LatinX individuals. Similarly, many of the studies in this domain of research combine ethnic groups and make inferences on how ethnic identity and resilience are related without accounting for each individual ethnic group. This is problematic in that there is a great

deal of variability between ethnic minorities and the value they place on their ethnic membership (Sellers et al., 1997; Shelton et al., 2005). For this reason, this study seeks to further understand the relationship between ethnic identity and resilience, specific to LatinX emerging adults.

The presented body of literature points to the idea that ethnic group membership has the potential to predict resilience for many reasons, thus we find it important to understand how the strength of ethnic group identity relates to resilience. However, just being a member of a particular ethnic group can also make you resilient through certain kinds of social support, which we will control for.

> **RQ3:** To what degree does higher levels of ethnic identity among LatinX emerging adults predict higher levels of individual resilience during the COVID-19 pandemic, after controlling for social support and acculturation?

Buffering Role of Resilience and Ethnic Identity on the Adverse Consequences of Job Insecurity

Considering that this study seeks to understand experiences specific to LatinX emerging adults during the COVID-19 pandemic, we find it imperative to assess the buffering role of resilience and ethnic identity, and further understand how ethnic identity transmits its effects through resilience on the adverse consequences of job insecurity at two separate time points. Following, Fisher et al.'s (2019) recommendation, this study will incorporate a longitudinal design and focus on organizational value outcomes (job satisfaction) and individual value outcomes (anxiety and depression). By using a longitudinal design, we aim to strengthen the inferences that can be drawn from the

findings. Moreover, by simultaneously examining how ethnic identity affects resilience and how resilience, in turn, affects the changes in job insecurity and adverse outcomes relationship, our model allows for a more parsimonious and detailed understanding of the strengths LatinX individuals employ to cope during adverse life events.

To the authors' knowledge this is one of the first studies to address the role ethnic identity has on resilience in work-related contexts. This study is an extension of the first paper in this dissertation, with the larger goal of understanding the work-related experiences of LatinX emerging adults during a pandemic. Furthermore, we seek to understand the potential protective role that ethnic identity has through exerting its effects through resilience, controlling for confounding and other extraneous variables, during a period of extreme unemployment, furloughs, layoffs, and downsizing. The current study will investigate the following research question:

> **RQ4**: To what degree is the ethnic identity of LatinX emerging adults indirectly related, via the moderating effect of resilience, to the relationship between changes in job insecurity and changes in job satisfaction, anxiety, and depression during the COVID-19 pandemic, after controlling for social support and acculturation?

Methods

Participants

Participants for the study were recruited from a large, public, community-based southeastern Hispanic-serving university (61% Hispanic), using SONA and Qualtrics survey software. The survey took place in the months of September and October 2021, of the COVID-19 pandemic. SONA is a university software platform that provides a panel

of college respondents to participate in studies. Participants took the survey online, on their own time, and from their own electronic device. Eligible participants were adult men and women who were employed at least part-time, currently living within the United States, self-identified as LatinX/Hispanic, and are between the ages of 18-29. At Wave 1, one point of extra credit was awarded to participants via SONA. Participants were asked if they were interested in taking the survey again at Wave 2, four weeks later, for two points extra credit and a $10 Amazon E-gift card. If participants agreed to participate in Wave 2, they were asked to provide their email. Four weeks later, participants who signed up to take the survey at Wave 2 were sent an email with a Qualtrics link and asked to complete the survey. Participant's email was only used to link Wave 1 and Wave 2 data and to distribute compensation. Upon completion of the survey at Wave 2, participants were granted 2 points extra credit and sent a $10 E-gift card compensation for their time. Wave 2 offered higher compensation in order to motivate the participant to complete the survey at both time points.

Measurement

Participants first viewed the study qualifications on the SONA Web-based platform, next they accessed the survey through a Qualtrics link provided by the researcher. The first page of the online survey included the adult consent form that discussed details on the study purpose, procedures, duration, risks, benefits, and alternatives. Information describing compensation and researcher contact information was also included. After viewing this information, participants were asked to give their electronic consent to participate in the study.

Next, at Wave 1, participants reported their levels of job insecurity, resilience, ethnic identity, job satisfaction, anxiety, depression, perceived stress, acculturation, social support and followed by demographic items, such as age, gender, race, employment status, remote work, education, and language. At Wave 2, participants again reported their levels of job insecurity, anxiety, depression, and job satisfaction. The end of the study had a thank you note and participants were directed back to SONA (Wave 1) and Qualtrics (Wave 2) where they were provided with information on compensation.

Job Insecurity. The Job Insecurity Scale was used to measure *quantitative* job insecurity. Elst, Witte, and Cuyper's (2014) four-item scale measures participants' responses on a 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree). Example items include: "Chances are, I will soon lose my job," and "I feel insecure about the future of my job." One of the four items is reversed coded, and was re-coded in data analysis; thus, the overall job insecurity score for each respondent was summed and then divided by four. The overall JI score will be between 1-5. Higher scores indicate higher levels of job insecurity. The Cronbach's alpha coefficient for the scale was $\alpha = .83$.

The Brondino et al. (2020) Multidimensional Qualitative Job Insecurity Scale (MQJIS) was used to assess *qualitative* job insecurity. The eight items tap into four dimensions: social relationships ("I worry I might get another supervisor in the future"), employment conditions ("I worry about the growth of my salary"), working conditions ("I am afraid I might soon have to work in a different location or in a different department"), and job content ("I feel insecure about the future content of my job"). Responses were on a 5-point Likert scale ranging from 1 (Strongly disagree) to 5

(Strongly agree). Based on the participant's response value for each item, the scores were summed and then divided by the total number of questions to create a composite score that will fall between 1 and 5 (i.e., higher scores indicate higher levels of job insecurity). The MQJIS revealed a Cronbach's alpha coefficient of $\alpha = .83$.

Resilience. Subscales from the workplace Resilience Inventory (McLarnon & Rothstein, 2013) were used to assess workplace resilience. The 26-item scales encompass an individual's affective ("I can control my emotions"), behavioral ("I push myself very hard to succeed"), and cognitive ("I enjoy reading challenging material") processes. Responses were recorded on a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). Twelve of the 26 items are reverse-coded and were re-coded in data analysis so that higher scores indicate higher levels of resilience. Items in each subscale were summed and then divided by the number of items in that dimension. To calculate the overall resilience score, the items were summed and then divided by 26. Thus, the overall resilience score is between 1 and 5. The Cronbach's alpha coefficient for the workplace Resilience Inventory was $\alpha = .82$.

Ethnic Identity. To measure an individual's ethnic identity, the Multigroup Ethnic Identity Measure - Revised (MEIM-R) (Phinney & Ong, 2007) was used. The scale assesses an individual's exploration and commitment to their ethnic identity through 6-items. Example items include: "I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs" and "I have a strong sense of belonging to my own ethnic group." Items were scored on a 5-item Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Overall ethnic identity was scored by adding the response values from each item and divided by 6, thus values range from 1 to

5, with higher scores meaning higher ethnic identity. Additionally, both subscales exploration and commitment will be examined. Internal consistency reliability in the current sample was $\alpha = .88$ for the overall ethnic identity scale.

Job Satisfaction. A 5-item short index of job satisfaction (SIJS) was used to measure participants' level of job satisfaction (Sinval & Marcoco, 2020). The SIJS has been shown to have adequate validity and reliability. Example items include "I feel fairly satisfied with my present job" and "Most days I am enthusiastic about my work." Two of the five items are reverse coded and were re-coded in data analysis, so that higher scores indicate higher levels of job satisfaction. Responses were recorded on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). An overall job satisfaction score was calculated by summing all five items and dividing by five, so that job satisfaction will range from 1 to 5. The Cronbach's alpha for this sample was $\alpha = .83$.

Anxiety. The generalized Anxiety Disorder inventory (GAD-7; Kertz, Bigda-Peyton, & Bjorjvinsson, 2013) was used to measure general anxiety. The GAD-7 seven-item self-report scale has shown to have sound psychometric properties and external validity (Kertz, Bigda-Peyton, & Bjorjvinsson, 2013). Participants were asked "how often during the last two weeks have you been bothered by the following symptoms." Responses will be measured on a 4-point scale, from 0 (not at all) to 3 (nearly every day). Sample items include "Feeling nervous, anxious or on edge" and "Not being able to stop or control worrying." A total anxiety score was created by summing all 7 items, with higher scores indicating higher levels of anxiety. The reliability analysis for this study showed a Cronbach's alpha coefficient of $\alpha = .89$ for the GAD-7.

Depressive symptoms. The 9-item Patient Health Questionnaire measured participant's levels of depression within the last two weeks (Kroenke, Spitzer, and Williams, 2001). Participants rated items according to how often they have been bothered by any of the following problems (e.g., "Little interest or pleasure in doing things", "Feeling down depressed or hopeless", and "Trouble falling or staying asleep, or sleeping too much" on a 4-point scale, 0 (Not at all) to 3 (Nearly every day). An overall depression score was computed by summing all nine items, higher scores indicate higher depressive symptom severity and an overall depressive score of 10 or above is indicative of major depressive disorder. The reliability analysis for this study revealed an $\alpha = .82$ for Cronbach's alpha.

Perceived Social Support. To measure participants' perceived social support this study, Zimet et al. (1988) Multidimensional Scale of Perceived Social Support was used. The 12-item scale consists of four factor groups relating to different sources of perceived social support: a) family, b) friends, and c) significant others. Each factor is composed of 4-items, and participants were asked to respond on a 7-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). An overall mean score of perceived social support and individual subscale scores was calculated by adding all the items together and dividing by 12 (overall PSS) or 4 (subscale PSS). Higher scores indicate higher levels of perceived support. The Cronbach's alpha for this sample was $\alpha = .83$.

Acculturation. The 30-item Acculturation Rating Scale for Mexican Americans-II (ARMSA-II) was used to assess the acculturation process using cultural orientation (Cuellar, 1995). The self-rating scale consists of two subscales, a) Mexican Orientation Subscale (MOS) and Anglo Orientation Subscale (AOS). Participants were asked to

respond to questions (e.g. “I speak Spanish”, “I enjoy English language movies”, and “I write (e.g., letters in Spanish”) on a 5-point Likert scale ranging from 1 (Not at all) to 5 (Extremely often or almost always). The AOS scale was calculated by summing the items and dividing by 13, while the MOS score was summed and divided by 17. To obtain a linear acculturation score ranging from very Mexican oriented to very Anglo oriented the mean MOS score was subtracted from the mean AOS score. Cronbach’s alpha of the American Orientation was $\alpha = .77$ and Mexican Orientation was $\alpha = .88$.

Demographics. Participants were asked to report their current employment status within the last year (i.e., during the COVID-19 pandemic), hours worked per week, age, gender, income, industry, job title, education, living proximity to family, and race. To better understand exposure to cultural background, the demographic section included questions about whether English was spoken in their childhood home (Campos, et al., 2014).

Data Analysis Plan

This section describes and justifies the data analysis plan designed by the researcher to explore the longitudinal survey data collected in Wave 1 and Wave 2. The goal of this research is to a) is take a strength-based approach (Davis, Carlo, & Maiya, b) use contemporary statistical analysis (Hair et al., 2019), c) further the knowledge on this topic using a longitudinal design (Bryan, O'Shea, & Macintyre, 2019; Fisher & Ragsdale, 2019), and d) understand the predictive relationships between COVID-19 related job insecurity and wellbeing of LatinX emerging adults, and how ethnic identity and resilience influence that relationship.

Path analysis was performed to explore the longitudinal correlational survey data collected from a convenience sample of LatinX emerging adults during the COVID-19 pandemic. Emphasis was given to examining the effects of temporal precedence (i.e., the within-subjects effects of the changes over time between Wave 1 and Wave 2) to address the research questions. The simplest approach to modeling the changes in the repeated measures of an outcome variable between two occasions using a pretest posttest research design is to assume that the first measure acts as a control for the second measure; therefore, the outcome variable is the Wave 2 score minus the Wave 1 score (Alessandri et al., 2017).

Table 1 defines the variables operationalized by averaging the scores for multiple items. The variables measured in Wave 2 had adequate to good levels of internal consistency reliability (Cronbach's $\alpha = .77$ to .89) similar to the values previously reported for the same variables in Wave 1. Changes in the variables were measured by subtracting the variables measured in Wave 2 from the variables measured in Wave 1.

Table 1

Definitions of Variables

Variable	Wave	Function	Items	Range	Interpretation of scores
Change in quantitative job insecurity (Δ JIS)	Wave 2 minus Wave 1	PV	8	-2.75 to 4.00	Decrease (-) or increase (+) in job insecurity between Wave 1 and Wave 2.
Change in Multidimensional Qualitative job Insecurity (Δ MQJIS)	Wave 2 minus Wave 1	PV	3	-1.25 to 1.88	Decrease (-) or increase (+) in job insecurity between Wave 1 and Wave 2.
Ethnic identity	Wave 1	PV	2	1 to 5	Higher scores indicate more

					ethnic identity (exploration and commitment)
Change in state anxiety	Wave 2 minus Wave 1	OV	9	-1.33 to 1.11	Decrease (-) or increase (+) in state anxiety between Wave 1 and Wave 2.
Change in depression	Wave 2 minus Wave 1	OV	9	-0.89 to 1.22	Decrease (-) or increase (+) in depression between Wave 1 and Wave 2.
Change in job satisfaction	Wave 2 minus Wave 1	OV	5	-2.00 to 3.60	Decrease (-) or increase (+) in job satisfaction between Wave 1 and Wave 2.
Resilience	Wave 1	MV	27	1 to 5	Higher positive scores indicate more resilience
Acculturation	Wave 1	CV	30	-1.85 to 2.00	Higher positive scores indicate more acculturation toward American culture
Social support	Wave 1	CV	12	1 to 7	Higher positive scores indicate more social support from family and friends

Note: PV = exogenous predictor variable; OV = endogenous outcome variable; MV = exogenous moderating or moderating variable; CV = exogenous covariate or control variable.
Uppercase delta (Δ) is the standard international scientific symbol for "change" and Δ X refers to "the change in variable X"

Research Questions

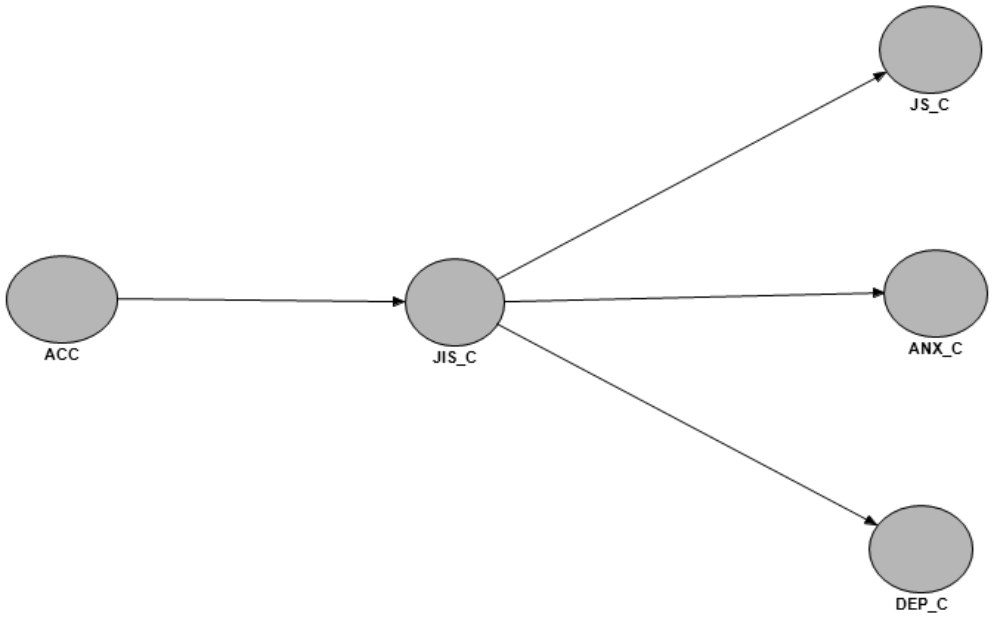
The purpose of using path analysis was to explore the longitudinal correlational survey data collected in Wave 1 and Wave 2 from a convenience sample of LatinX emerging adults during the COVID-19 pandemic to address the following research questions:

RQ1a: To what degree do the changes in quantitative job insecurity (JIS) predict the changes in the levels of well-being (job satisfaction, anxiety and depression) among LatinX emerging adults, after controlling for acculturation?

RQ1b: To what degree do the changes in qualitative job insecurity (MQJIS) predict the changes in the levels of well-being (job satisfaction, anxiety and depression) among LatinX emerging adults, after controlling for acculturation? Figures 1 and 2 are path diagrams drawn using SmartPLS to depict the relationships defined in RQ1(a) and (b).

Figure 1

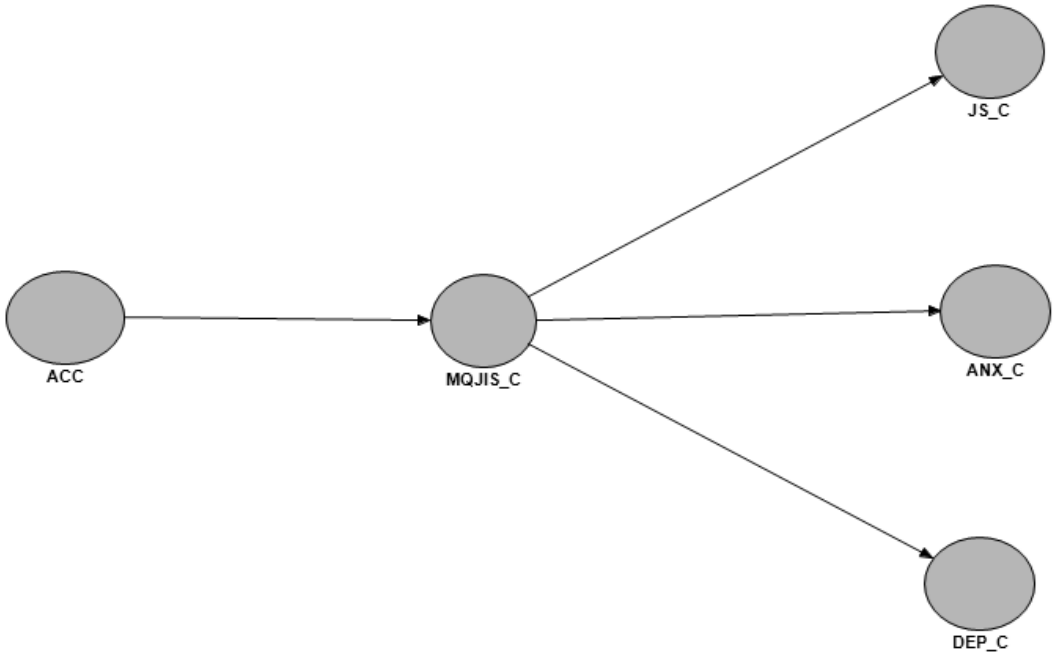
Path Diagram to Address RQ1a (Quantitative Job Insecurity)



Note: JIS_C = Change in quantitative job insecurity; JS_C = Change in job satisfaction; ANX_C = Change in State Anxiety; DEP_C = Change in depression; ACC = Acculturation.

Figure 2

Path Diagram to Address RQ1b (Qualitative Job Insecurity)



Note: MQJIS_C = Change in multidimensional qualitative job insecurity; JS_C = Change in job satisfaction; ANX_C = Change in State Anxiety; DEP_C = Change in depression; ACC = Acculturation.

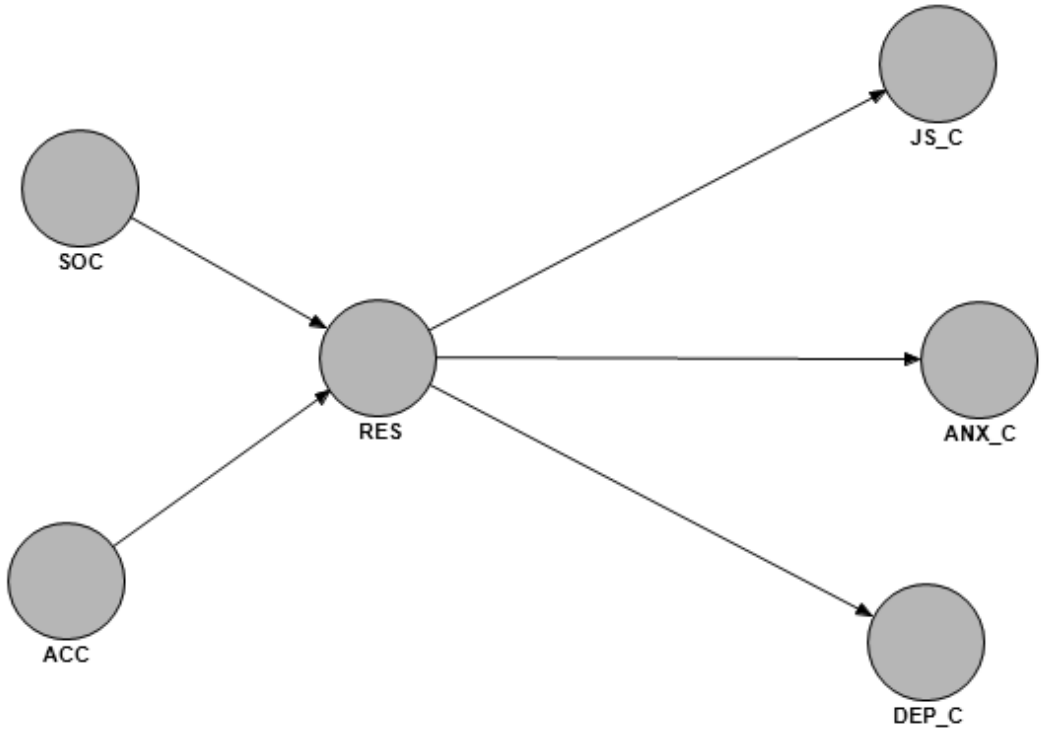
RQ2: To what degree does the resilience of LatinX emerging adults predict the changes in well-being (job satisfaction, anxiety, and depression) after controlling for

social support and acculturation. Figure 3 is a path diagram drawn using SmartPLS to depict the relationships defined in RQ2.

RQ3: To what degree does higher levels of ethnic identity among LatinX emerging adults predict higher levels of individual resilience, after controlling for social support and acculturation. Figure 4 is a path diagram drawn using SmartPLS to depict the relationships defined in RQ3.

Figure 3

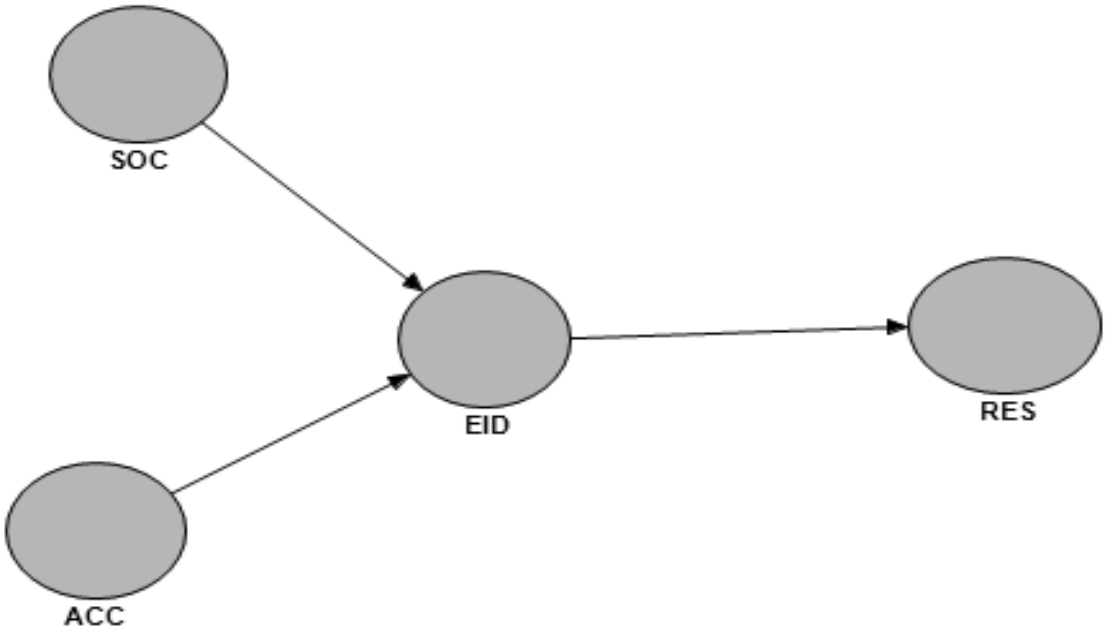
Path Diagram to Address RQ2



Note: RES = Resilience; JS_C = Changes in job satisfaction; ANX_C = Changes in State Anxiety; DEP_C = Changes in Depression; ACC = Acculturation; SOC = Social Support.

Figure 4

Path Diagram to Address RQ3

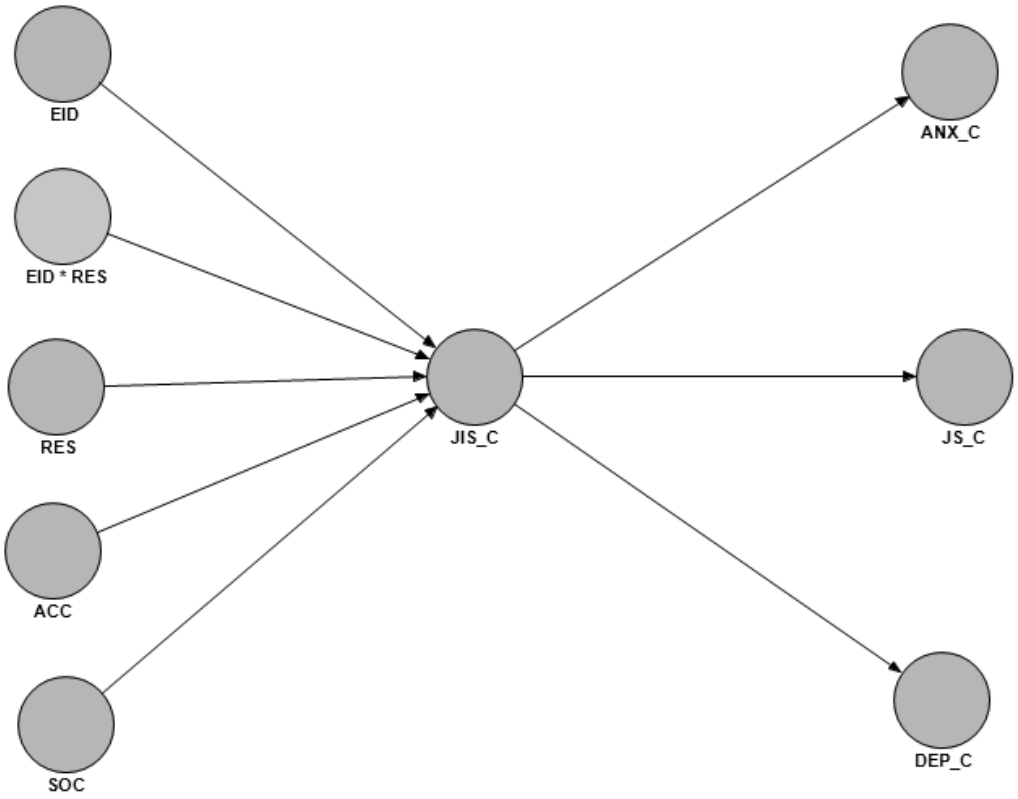


Note: EID = Ethnic Identity; RES = Resilience; ACC = Acculturation; SOC = Social Support.

RQ4: To what degree is the ethnic identify of LatinX emerging adults indirectly related, via the moderating effect of resilience, to the relationship between changes in job insecurity and the changes in job satisfaction, anxiety, and depression, after controlling for acculturation and social support? This question was divided into RQ4(a) for quantitative job insecurity (JIS) and RQ4(b) for qualitative job insecurity (MQJIS). Figures 5 and 6 are path diagrams drawn using SmartPLS to depict the relationships defined in RQ4(a) and RQ4(b).

Figure 5

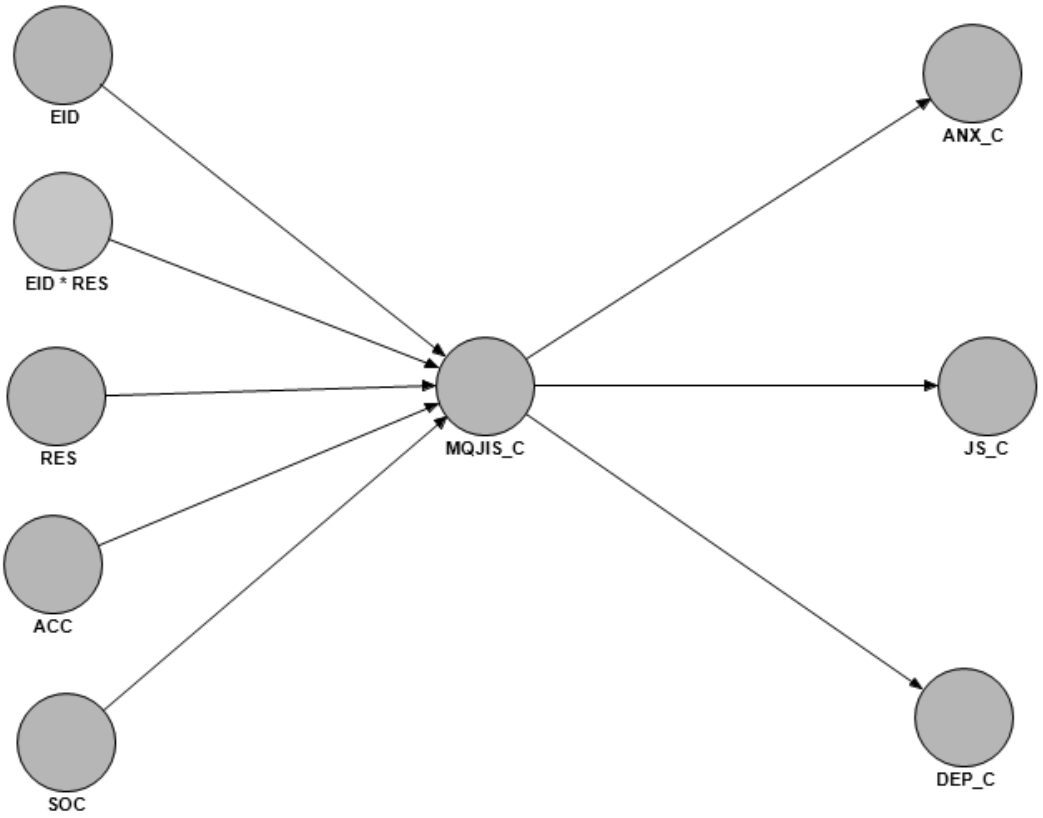
Path Diagram to Address RQ4(a)



Note: Note: EID = Ethnic Identity; RES = Resilience; EID * RES = moderating effect of resilience; JIS_C = Changes in Quantitative Job Insecurity; JS_C = Changes in job satisfaction; ANX_C = Changes in State Anxiety; DEP_C = Changes in Depression

Figure 6

Path Diagram to Address RQ4(b)



Note: Note: EID = Ethnic Identity; RES = Resilience; EID * RES = moderating effect of resilience; MQJIS_C = Changes in Qualitative Job Insecurity; JS_C = Changes in job satisfaction; ANX_C = Changes in State Anxiety; DEP_C = Changes in Depression

Screening and Cleaning of Data

After exclusion of all missing values among the survey data collected in Wave 1 and Wave 2, the total sample size was to $N = 90$. The sample size recommendations for PLS path analysis (see Table 2) indicated that $N = 90$ was large enough to obtain significant results using PLS (with up to 8 arrows in the path model; 80% power; and 95% confidence limits assuming the effect size was moderate ($R^2 = .25$).

Testing the Assumptions of Path Analysis

Prior to answering the research questions, it was essential to test the assumptions and determine the limitations of the data analysis plan. Three conditions must occur in order to establish the assumption of temporal precedence: (1) the cause must occur before the effect (i.e., Wave 1 must occur before Wave 2); (2) the cause and the effect must covary over time (e.g., indicated by correlation, regression, and path coefficients between Wave 1 and Wave 2); and (3) there must be no alternative explanations (Albers & Kratochwill, 2010). Temporal precedence follows the argument "*post hoc ergo propter hoc*" (Latin: "after this, therefore because of this"); assuming that "Since event Y followed event X, then event Y must have been caused by event X." (Summers, 2011).

In order to avoid threats to internal validity, causality and temporal precedence should ideally be established using a rigorously controlled experiment, such as a randomized controlled trial (RCT), after the most relevant covariates and confounding variables have been effectively taken into account (Holder et al., 2019). The researcher did not use an RCT to establish causality. The longitudinal correlational research design based on survey data collected from a non-randomized (convenience) sample using self-report questionnaires may be insufficient to establish temporal precedence.

Differences between Repeated Measures

Temporal precedence assumes that changes over time are not caused by random chance and that meaningful differences can be observed between the variables measured in Wave 1 and those measured in Wave 2 (Summers, 2011). Table 2 presents the summary statistics to describe and compare the mean differences between the scores for the variables measured in Wave 1, specifically Job Insecurity (JI); Multidimensional

Qualitative Job Insecurity (MQJI), Resilience, Job satisfaction, Ethnic identity, Anxiety, Depression and Perceived Stress with the same variables measured in Wave 2. The 95% CI were more appropriate than *p*-values to compare the paired mean scores because, in the context of research in psychology, the interpretation of confidence intervals (CI) is superior to significance testing (Brandstatter & Kepler, 1999; Cumming, 2008; Cumming & Fidler, 2009; Hoekstra et al., 2012; Pandis, 2013).

Table 2

Summary Statistics for Scales Measured in Wave 1 and Wave 2 (N = 90)

Scale	Wave 1		Wave 2			Wave 2 minus Wave 1		
	M	*SD*	*M*	*SD*	Pearsons' *r*	M (Paired differences)	Lower 95% CI	Upper 95% CI
JIS	1.89	0.89	1.77	1.02	.357	-0.12	-0.35*	0.11*
MQJIS	2.78	0.91	2.96	0.88	.715	0.18	0.03	0.32
Resilience	3.72	0.47	3.60	0.46	.662	-0.03	-0.11*	0.05*
Job satisfaction	3.39	0.98	3.37	0.93	.618	-0.02	-0.19	0.16*
Ethnic identity (exploration)	3.95	1.04	3.87	0.93	.716	-0.08	-0.24*	0.08*
Ethnic identity (commitment)	4.20	0.96	4.20	0.92	.648	+0.01	-0.16*	0.17*
Overall ethnic identity	4.07	0.89	4.04	0.85	.700	-0.04	-0.18*	0.10*
State anxiety	0.39	0.51	0.36	0.43	.589	-0.04	-0.13*	0.05*
Depression	0.50	0.56	0.45	0.51	.830	0.05	-0.12*	0.01*

Note * 95% CI captured zero

Table 2 indicates that, with the exception of MQJIS, the limits of the 95% CI of the paired differences between the mean scores were respectively negative and positive. Therefore the 95% CI captured zero (equivalent to declaring that the paired mean scores were not significantly different at the .05 level). The confidence intervals for the differences in the MQJIS between Wave 2 minus Wave 1 (0.03, 0.32) did not capture zero implying that MQJIS was elevated in Wave 2 relative to Wave 1 for at least 95% of the time (equivalent to statistical significance at $p < .05$); however, the mean score (0.18), and the lower limit of the interval (0.03) were close to zero. It is possible that the variance in the within-subject effects between Wave 1 and Wave 2 may be attenuated (i.e., misleadingly low) for several reasons, which are considered next and in the Discussion chapter.

Regression Toward the Mean

It is possible that MQJIS changes over time are caused by random chance. For example, the changes in the mean scores measured between Wave 2 and Wave 1 in Table 2 may be caused mainly by chance, following the effect of the regression toward the mean (Barnett et al., 2004; Bland, 1994; Linden, 2013; Marsh & Hough, 2002; Morton & Torgerson, 2003; Nesselroade et al., 1980; Weeks, 2007). Chiolero et al. (2013) recommended that researchers must identify the effects of regression toward the mean by plotting the baseline values against subsequent changes in the values over time. These plots are displayed in Figures 7 to 11.

Figure 7

Changes in Multidimensional Qualitative Job Insecurity (MQJIS_C) vs. Baseline (W1_MQJIS)

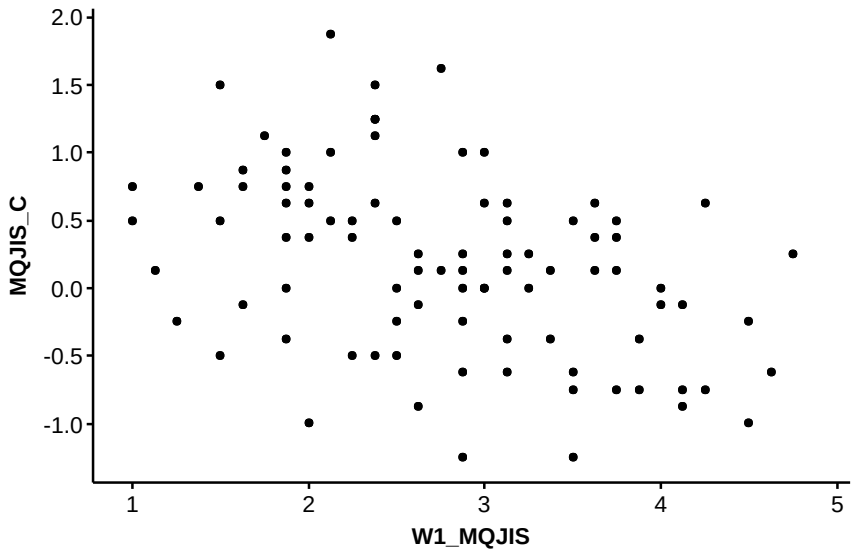


Figure 8

Changes in Quantitative Job Insecurity (JIS_C) vs. Baseline (W1_JIS)

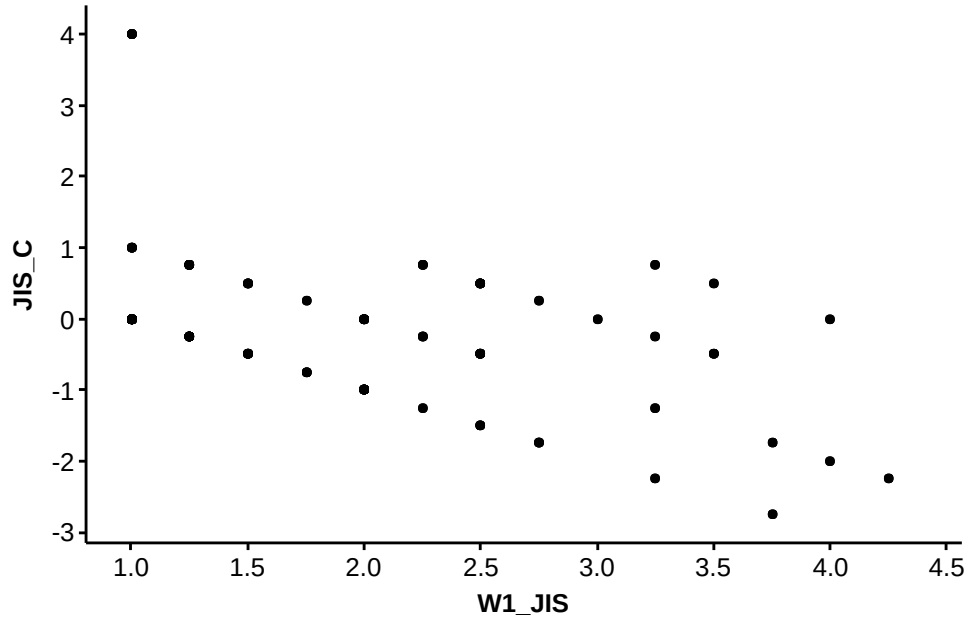


Figure 9

Changes in Quantitative Job Satisfaction (JS_C) vs. Baseline (W1_JS)

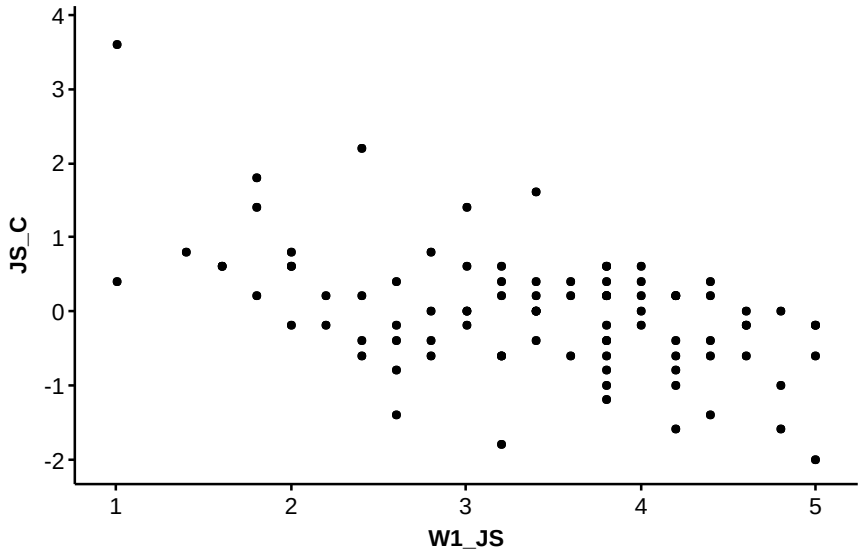


Figure 10

Changes in Anxiety (ANX_C) vs. Baseline (W1_ANX)

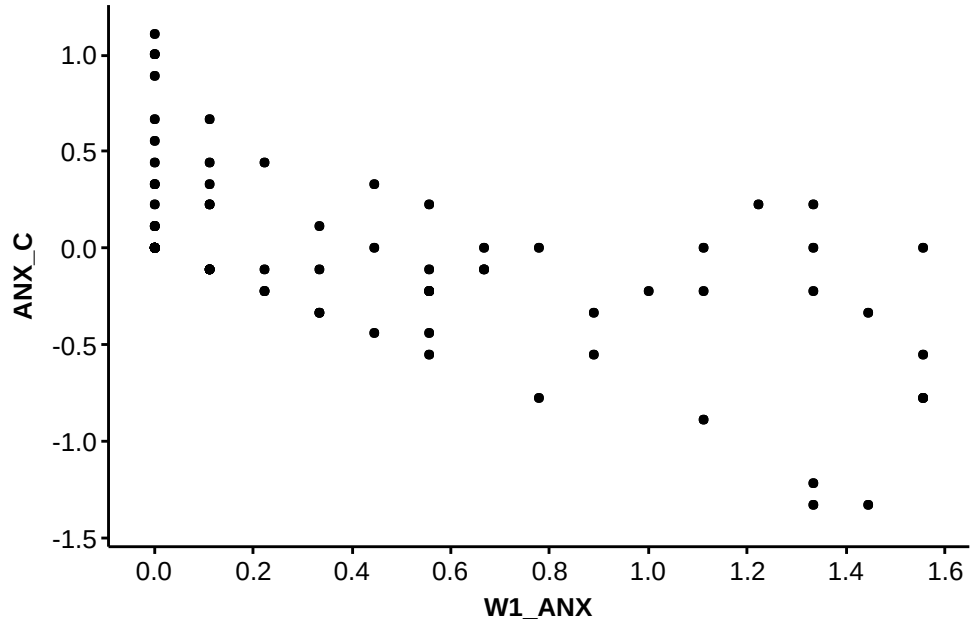
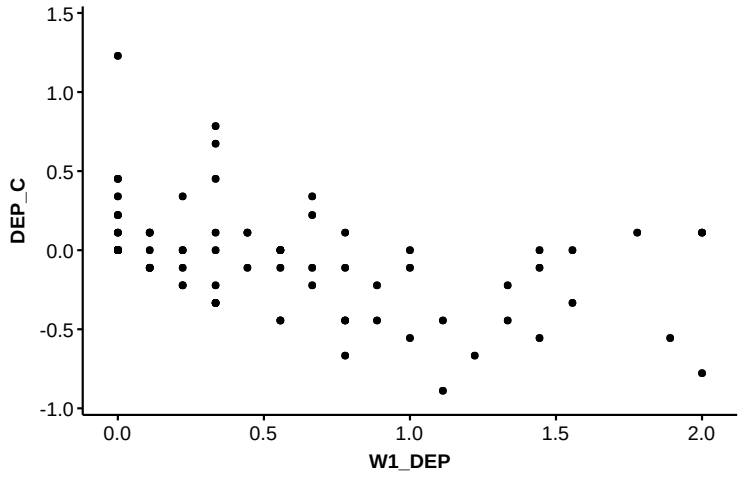


Figure 11

Changes in Depression (DEP_C) vs. Baseline (W1_DEP)



The points located in the top left-hand corners of the scatter plots symbolize the participants with low scores in Wave 1, but who subsequently had higher scores in Wave 2; therefore, the changes in their scores (Wave 2 minus Wave 1) were positive (above zero). The points located in the bottom right-hand corners of the scatterplots symbolize the participants with high scores in Wave 1, but subsequently they had lower scores in Wave 2; therefore, the changes in their scores were negative (below zero). The downward sloping plots reflected the regressions toward small mean values close to zero, resulting from the greater than average scores measured in Wave 1 becoming reduced (by random chance) to smaller values in Wave 2; and from the smaller than average scores measured in Wave 1 becoming elevated (by random chance) toward higher values Wave 2. The positive changes in value were balanced by the negative changes in value so that the overall paired mean differences defined in Table 2 were close to zero.

The distribution patterns of the points in Figures 7 to 11 are typical of the insidious effects of random chance termed regression toward the mean associated with measurement error (Chiolero et al., 2013). Likert scales based on the responses to self-report surveys contain random measurement error for many reasons (Böckenholt, 2017; Choi & Pak, 2005; Meade & Craig, 2012; Rosenman et al., 2011 Wu & Leung, 2017). The effects of regression toward the mean associated with random measurement errors are "ubiquitous phenomena, seducing researchers, policy makers, and practitioners down the path of offering substantive interpretations of statistical artifacts" (Marsh & Hau, 2002, p. 245).

Researchers performing SEM may believe that changes observed sequentially over time may represent meaningful causal relationships, but in reality, the observed changes may simply reflect the meaningless effects of random noise (Bollen & Pearl, 2013). Alternative approaches to the modeling of time-series data are not immune to the insidious and pervasive effects of the regression toward the mean, including Mixed Model Analysis, which attempts to distinguish between random and fixed effects (Twisk, 2019); the Granger causality model, involving the regression of a future outcome variable on a predictor variable lagged to a previous time (Mariusz, 2015); and panel data analysis, involving the use of variables that have both categorical, and time-varying dimensions (Baltagi, 1998; 2021). Consequently, irrespective of the method of data analysis, the assumptions of temporal precedence may be violated because the regression toward the mean is an alternative explanation to explain why the levels of job insecurity, job satisfaction, depression, and anxiety changed between Wave 1 and Wave 2.

Results

Descriptive and Comparative Analysis

Table 3 presents a summary of the demographic characteristics of the respondents in Wave 2, representing a sub-sample (N = 90) of those who participated in Wave 1.

Table 3

Demographic Characteristics of Respondents in Wave 2 (N = 90)

Category	*n*	%
Gender		
Men	5	5.6
Women	85	94.4
Age (Years)		
18 to 20	34	37.8
21 to 25	42	46.7
26 to 30	14	15.6
Relationship status		
Single	43	47.8
In a relationship/married	47	52.2
Currently employed (full time, 40+ hours/week)		
Yes	51	56.7
No	39	43.3
Experience a reduction in pay due to COVID-19 pandemic		
Yes	18	20.0
No	72	80.0
Able to do job remotely (at own home)		
Entirely	11	12.2
Partially	20	22.2
Not at all	59	65.6

The sample was biased by a preponderance of women respondents (*n* = 85, 94.4%). They ranged in age from 18 to 29 years (*M* = 22.27, *SD* = 3.32). The most frequent age-group was 21 to 25 (*n* = 42, 46.7%). All the respondents reported that their ethnicity was Hispanic or LatinX, and most were in a relationship/married (*n* = 47, 52.2%). Over half of the respondents were currently full-time employed (*n* = 51, 56.7%),

while the others reported at least part-time employment (*n* = 39, 43.3%). They had worked at their current organizations for < 1 to 3 years (*M* = 1.62, *SD* = 1.08). The most frequently reported industries were healthcare (*n* = 18, 20.0%); retail sales (*n* = 16, 17.8%); education (*n* = 6, 6.7%); office and administrative (*n* = 6, 6.7%); food preparation/serving (*n* = 5, 5.6%; and other occupations (*n* < 3, 3.3%). Participants worked from 0 to 65 hours per week (*M* = 30.08, *SD* = 12.12). Since the pandemic their working hours had decreased by 2 to 30 hours (*M* = 12.00, *SD* = 7.81). Most of the respondents (*n* = 72, 80.0%) had not experienced a reduction in pay due to the pandemic. The majority of the respondents (*n* = 59, 65.6%) were not able to work remotely at their own home.

The results presented in this section were computed by PLS path analysis using SmartPLS software, as described in the Data Analysis Plan for Study#1. The standard errors (SE) and confidence intervals (CI) of all the path coefficients (ß) were computed by bootstrapping using 5000 random samples drawn from the raw sample data. Noteworthy, it is a common practice to use the word "effect" loosely in path analysis to describe a potential causal relationship, even though the relationship may not be causal in reality (Fidelis & Sunday, 2018).

RQ1 (a): Effects of Quantitative Job Insecurity on Well-Being

To what degree do the changes in quantitative job insecurity (Δ JIS) predict the changes in well-being (Δ job satisfaction, Δ anxiety and Δ depression) among LatinX emerging adults, after controlling for acculturation? Table 4 presents the analysis of the path coefficients computed by PLS path analysis. An increase in Δ JIS predicted a reduction in Δ job satisfaction (ß = -.292) and for 95% of the time the ß coefficient was

captured within the limits of -.561 and - .023. All the other paths had path coefficients close to zero (ß = .024 to .129) with negative and positive confidence limits capturing zero. Acculturation was not a strong covariate because it had only a small effect on Δ job satisfaction (ß = .125) with confidence intervals capturing zero.

Table 4

Path Coefficients for RQ1 (a)

Path	ß	SE	Lower 95% CI	Upper 95% CI
Δ JIS → Δ Job Satisfaction	-.292	.137	-.561*	-.023*
Δ JIS → Δ Anxiety	.024	.180	-.330	.378
Δ JIS →Δ Depression	.129	.123	-.112	.370
Acculturation → Δ Job Satisfaction	.125	.141	-.152	.402

Note: * 95% CI did not capture zero

Table 5 presents the effect sizes (R^2 values of the outcomes) computed by PLS path analysis. Applying Ferguson's (2016) effect size criteria for research in clinical psychology, the effect of the changes in JIS on the changes in job satisfaction was small, ($R_2 < .25$) and the effects on the changes in anxiety and depression were negligible ($R^2 < .04$).

Table 5

Effect Sizes for RQ1 (a)

Outcome Variables	R^2	95% CI		Effect Size
Δ Job Satisfaction	.086	.008	.223	small
Δ Anxiety	.001	.000	.056	negligible
Δ Depression	.017	.000	.018	negligible

The answer to RQ1(a) is that changes in quantitative job insecurity had a small effect on the changes in job satisfaction, but negligible effects on changes in anxiety and depression among LatinX emerging adults, after controlling for acculturation.

RQ1 (b): Effects of Qualitative Job Insecurity on Well-Being

To what degree do the changes in qualitative job insecurity (Δ MQJIS) predict the changes in well-being (Δ job satisfaction, Δ anxiety and Δ depression) among LatinX emerging adults, after controlling for acculturation? Table 6 presents the analysis of the path coefficients computed by PLS path analysis. An increase in Δ MQJIS predicted a reduction in Δ job satisfaction (ß = -.362); increase in Δ anxiety (ß = .252), and an increase in Δ depression (ß = .247). For 95% of the time these ß coefficients did not capture zero. Acculturation was not a significant covariate because it had only a weak controlling effect on Δ job satisfaction (ß = .172) with confidence intervals capturing zero.

Table 6

Path Coefficients for RQ1 (b)

Path	ß	SE	Lower 95% CI	Upper 95% CI
Δ MQJIS → Δ Job Satisfaction	-.362	.096	-.550*	-.174*
Δ MQJIS → Δ Anxiety	.252	.084	.087*	.417*
Δ MQJIS →Δ Depression	.247	.110	.031*	.463*
Acculturation → Δ Job Satisfaction	.172	.098	-.019	.363

Note: * 95% CI did not capture zero

Table 7 presents the effect sizes computed by PLS path analysis. Applying Ferguson's (2016) criteria, the effect of the changes in MQJIS on the changes in job satisfaction, anxiety, and depression were consistently small ($R^2 < .25$).

Table 7

Effect Sizes for RQ1 (b)

Outcome Variables	R^2	95% CI		Effect Size
Job Satisfaction	.131	.028	.280	small
Anxiety	.064	.002	.191	small
Depression	.061	.002	.187	small

The answer to RQ1(b) is that changes in qualitative job insecurity had a small effect on the changes in job satisfaction, anxiety and depression among LatinX emerging adults, after controlling for acculturation.

RQ2: Effects of Resilience on Changes in Well-Being

To what degree does the resilience of LatinX emerging adults predict changes in their well-being (job satisfaction, anxiety, and depression) after controlling for social support and acculturation. Table 8 presents the analysis of the path coefficients computed by PLS path analysis to address RQ2.

Table 8

Path Coefficients for RQ2

Path	ß	SE	Lower 95% CI	Upper 95% CI
RES → Δ Job Satisfaction	-.014	.085	-.180	.152
RES → Δ Anxiety	-.270	.093	-.088*	-.452*
RES →Δ Depression	-.110	.050	-.209*	-.011*
Acculturation → RES	-.243	.104	-.447*	-.039*
Social support → RES	.337	.088	.165*	.509*

Note: * 95% CI did not capture zero

Interpretation of the 95% CI of the path coefficients indicated that an increase in resilience predicted little or no change job satisfaction (ß = -.014); a decrease in Δ anxiety

(ß = -.270), and a decrease in Δ depression (ß = -.110). A high level of acculturation reduced the level of resilience (ß = -.243) whilst a high level of social support increased the level of resilience (ß = .337). The path analysis controlled for the effects of acculturation and social support, meaning that the confounding effects of these two covariates were excluded from the main effects of resilience on the changes in well-being. If the confounding effects of these two covariates were not controlled, then the direct effects of resilience on the changes in well-being would be more difficult to interpret.

Table 9 presents the effect sizes computed by PLS path analysis to address RQ2. Applying Ferguson's (2016) criteria, the effect of resilience on the changes in anxiety was small (R^2 = .073) whilst the effects of resilience on the changes in job satisfaction was zero (R^2 = .000) and the effect on the changes in depression was negligible (R^2 < .04).

Table 9

Effect Sizes for RQ2

Outcome Variables	R^2	95% CI		Effect Size
Δ Job Satisfaction	.000	.000	.000	zero
Δ Anxiety	.073	.004	.204	small
Δ Depression	.012	.000	.036	negligible

The answer to RQ2 is that the resilience of LatinX emerging adults predicted zero changes in job satisfaction, a small reduction in the changes in anxiety and a negligible change in depression, after controlling for social support and acculturation.

RQ3: Effects of Ethnic Identity on Individual Resilience

To what degree does higher levels of ethnic identity amongst LatinX emerging adults predict higher levels of resilience, after controlling for social support and acculturation? The two dimensions of Ethnic identity (exploration and commitment) were multicollinear (i.e., strongly positively correlated with each other) in both Wave 1 and Wave 2, indicated by Pearson's r (88) = .886 and .922 respectively. The 95% CI of the paired mean differences between Ethnic identity (exploration) minus Ethnic identity (commitment) captured zero (*M* = -.01, 95% CI = -0.17, 0.16) in Wave 1 and in Wave 2 (*M* = .08, 95% CI = -0.08, 0.24). Consequently, the two assumed dimensions of ethnic identity could not be distinguished from each other. The overall level of ethnic identity was operationalized by aggregating the scores for exploration and commitment in Wave 1 and Wave 2 (i.e., the average scores for the 6 items with a 5-pont scale in each Wave).

Table 10 resents the analysis of the path coefficients computed by PLS path analysis to address RQ3. The 95% CI of the path coefficients did not capture zero. An increase in ethnic identity predicted an increase in resilience (ß = .115). A high level of social support increased the level of ethnic identity (ß = .240). A high level of acculturation also increased the level of ethnic identity (ß = .314). The path analysis controlled for the effects of acculturation and social support, meaning that the confounding effects of these two covariates were excluded from the main effects of ethnic identity on resilience. If the confounding effects of these two covariates were not controlled, then the direct effects of ethnic identity on resilience would be more difficult to interpret.

Table 10

Path Coefficients for RQ3

Path	ß	SE	Lower 95% CI	Upper 95% CI
Ethnic Identity → Resilience	.115	.056	.004*	.226*
Social Support → Ethnic Identity	.240	.098	.048*	.432*
Acculturation → Ethnic identity	.314	.122	.074*	.554*

Note: * 95% CI did not capture zero

Table 11 presents the effect sizes computed by PLS path analysis to address RQ3. Applying Ferguson's (2016) criteria, the effect of ethnic identity on resilience was negligible (R^2 = .013) with 95% capturing zero. The answer to RQ8 is that although higher levels of ethnic identity of LatinX emerging adults predicted higher levels of individual resilience, after controlling for social support and acculturation, the magnitude of these effects was limited, ranging from zero to very small.

Table 11

Effect Sizes for RQ3

Outcome Variables	R^2	95% CI		Effect Size
Resilience	.013	.000	.098	zero to very small

RQ4: To what degree is the ethnic identify of LatinX emerging adults indirectly related, via the moderating effect of resilience, to the relationship between changes in job insecurity and the changes in job satisfaction, anxiety, and depression, after controlling for acculturation and social support? This question was divided into RQ4(a) for quantitative job insecurity (JIS) and RQ4(b) for qualitative job insecurity (MQJIS).

Table 12 presents the analysis of the path coefficients computed by PLS path analysis to address RQ4(a). The 95% CI of seven out of the eight path coefficients did not capture zero. An increase in ethnic identity predicted an increase in changes in job insecurity (ß = .166). A high level of changes in job insecurity predicted little or no change in depression (ß =.024); however, a high level of changes in job insecurity predicted a decrease in the level of job satisfaction (ß = -.292); and an increase in the level of anxiety (ß = .129). The path analysis controlled for the effects of acculturation (ß = .135) and social support (ß = -.151), meaning that the confounding effects of these two covariates were excluded from the main effects of ethnic identity on job insecurity.

A high level of resilience predicted a decrease in the level of job insecurity (ß = -.232). Ethnic identity had an indirect, via the moderating role of resilience, on the relationship between changes in job insecurity and changes in well-being outcomes (ß = .151) with 95% (.015, .287) not capturing zero. The positive sign of the path coefficient indicated that the effects of job insecurity on changes in wellbeing became stronger when resilience was higher. Table 13 presents the effect size for the moderated effect on the outcome variables. Applying Ferguson's (2016) criteria, the level of ethnic identity had only a small effect, via the moderating effect of resilience (R^2 = .098) with 95% CI (.013, .239) not capturing zero, on the relationship between changes in quantitative job insecurity and anxiety. Ethnic identity had negligible effects, via the moderating effect of resilience (R^2 = .065) with 95% CI (.003, .168) not capturing zero, on the relationship between changes in quantitative job insecurity and job satisfaction, and zero effects on depression (R^2 = .000) with 95% CI (.000, .000).

Table 12

Path Coefficients for RQ4(a)

Path	ß	SE	Lower 95% CI	Upper 95% CI
Ethnic Identity → Δ JIS	.166	.083	.002*	.330*
Δ Job Insecurity →Δ Depression	.024	.020	-.016	.064
Δ Job Insecurity→ Δ Job Satisfaction	-.292	.097	-.483*	-.101*
Δ Job Insecurity →Δ Anxiety	.129	.055	.021*	.237*
Acculturation → Δ JIS	.135	.061	.016*	.254*
Social Support → Δ JIS	-.151	.076	-.301*	-.001*
Resilience → Δ JIS	-.232	.088	-.404*	.060*
Moderating effect of Resilience	.151	.069	.015*	.287*

Note: * 95% CI did not capture zero

Table 13

Effect Size for RQ4(a)

Endogenous variable	R^2	95% CI		Effect Size
Δ Anxiety	.098	.013	.239	small
Δ Depression	.000	.000	.000	Zero
Δ Job Satisfaction	.065	.003	.168	Negligible

Table 14 presents the analysis of the path coefficients computed by PLS path analysis to address RQ4(b) using qualitative job insecurity (MQJIS_C). The 95% CI of six out of the eight path coefficients did not capture zero. An increase in ethnic identity predicted little or no changes in job insecurity (ß = -.083). A high level of changes in job insecurity predicted an increase in anxiety (ß =.252); a decrease in job satisfaction (ß = -.362); and an increase in depression (ß = .247). The path analysis controlled for the effects of acculturation (ß = -.253) and social support (ß = -.014), meaning that the confounding effects of these two covariates were excluded from the main effects of ethnic identity on job insecurity.

A high level of resilience predicted a decrease in the level of qualitative job insecurity (ß = -.225); however, ethnic identity had no effect, via the moderating effect of resilience, on the relationship between changes in qualitative job insecurity (ß = .025) and well-being outcomes, with 95% CI (-.276, .326) capturing zero. Thus, individual moderations were not further tested.

Table 14

Path Coefficients for RQ4(b)

Path	ß	SE	Lower 95% CI	Upper 95% CI
Ethnic Identity → Δ MQJIS	-.083	.050	-.181	.015
Δ Job Insecurity →Δ Anxiety	.252	.095	.066*	.438*
Δ Job Insecurity→ Δ Job Satisfaction	-.362	.099	-.556*	-.168*
Δ Job Insecurity →Δ Depression	.247	.111	.029*	.465*
Acculturation → Δ MQJIS	-.253	.127	-.502*	-.004*
Social Support → Δ MQJIS	.014	.123	-.227	.255
Resilience → Δ MQJIS	-.225	.112	-.444*	-.006*
Moderating effect of Resilience	.025	.153	-.276	.326

Note: * 95% CI did not capture zero

The answer to RQ4 is that the ethnic identity of LatinX emerging adults was indirectly related, via the small moderating effect of resilience, to the relationship between changes in quantitative job insecurity and the changes in anxiety, after controlling for acculturation and social support. However, resilience appeared to have little or no moderating effect on the relationship between the changes in qualitative job insecurity and the changes in the three measures of well-being.

Discussion

The overall goal of this study was to take a strength-based approach and use contemporary statistical analysis to understand how COVID-19 related job insecurity is affecting the work lives and wellbeing of LatinX emerging adults (e.g., job satisfaction, anxiety, depression), at two separate time points during the second year (i.e., September and October) of the pandemic. Moreover, we considered the role that ethnic identity and individual resilience have on these correlates. The findings from this study complement study #1 by giving further insight to the working experiences of LatinX emerging adults and adding to theory regarding this population. By using research questions and an exploratory approach it permitted the researcher to discover new insights regarding the effects of sociocultural factors on different workplace outcomes (anxiety, depression, job satisfaction). Although a causal relationship cannot be inferred from these findings, many of the predicted relationship showed to have an effect and several of the research questions were fully or partially supported.

As a result of the pandemic millions of Americans have lived in fear of losing their job (EPI, 2020). A phenomenon known as job insecurity, which has been linked to a multitude of negative health outcomes during the pandemic (Ganson et al., 2020; Wilson et al., 2020). This study examined how change in qualitative and quantitative components of job insecurity are affecting the life's of LatinX emerging adults, allowing for a more holistic view of these working experiences (Lastad, Tanimoto, & Lindfors, 2021). The relationship of changes in qualitative and quantitate job insecurity on changes in job satisfaction, anxiety, and depression, showed to have unique relationships. Specifically, quantitative job insecurity, which is the threat to future job loss, had a small effect on the

changes in job satisfaction, but negligible effects on changes in anxiety and depression. Thus, as quantitative job insecurity increased job satisfaction decreased, similar to previous meta-analysis findings (Sverke, Hellgren, Näswall 2002). Moreover, changes in qualitative job insecurity (i.e., the threat to loss of current job features) had small but significant effects on the changes in job satisfaction, anxiety, and depression among LatinX emerging adults. As qualitative job insecurity went up job satisfaction decreased, and anxiety and depression increased.

Ultimately, these results show that COVID-19 related job insecurity (i.e., qualitative and quantitative) did relate to the later mental health and job attitudes of this sample. Also, the findings help validate the need for scholars to examine the different role of job insecurity dimensions on workplace outcomes (Callea, Presti, Mauno, & Urbini, 2019). Furthermore, the findings from this study corroborate Urbanaviciute, Lazauskaite-Zabielske, and De Witte's (2021) recent discovery stating that "qualitative job insecurity alone may be powerful enough to bring detrimental outcomes." Often qualitative job insecurity has been overlooked because it is not as obvious of a stressor as quantitative job loss (i.e., the actual threat to job loss), yet in today's unstable work environment, and during employment and economic crises like COVID-19, the potential loss of job features is just as important if not more prevalent.

One potential explanation for this study's findings on the unique relationships of qualitative and quantitative job insecurity could be that the sample population (i.e., mostly consisting of GenZ and Millennials) put more emphasis on equity, transparency, flexibility, and purpose, compared to older generations (Hastwell, 2021). Thus, they are more concerned about equality in pay and lack of transparency in promotion, future

content of the job, growth of salary, and increase in workload, then actual loss of job. Indeed, research shows that Millennials are 3-4 times more likely to leave a job if they aren't receiving fair compensation or experiencing meaningful work, compared to their older counterparts (Hastwell, 2021). Future research should examine how the two dimensions in job insecurity may fluctuate between different age groups.

The data further suggested that, beyond job insecurity, the individual resilience of LatinX emerging adults predicted zero changes in job satisfaction, a small reduction in the changes in anxiety, and a negligible change in depression, after controlling for social support and acculturation. Although only a small effect ($R^2 < .25$) it is important to consider the role resilience can have on levels of anxiety. A recent study looked at a marginalized group of individuals (i.e., refugees in the U.S.) and found that higher levels of resilience was associated with lower levels of anxiety and depression (Poudel-Tandukar, et al., 2019). Likewise, research examining resilience in health care workers during the COVID-19 pandemic, found that higher levels of resilience was associated with lower levels of anxiety. Taken together it is important that organizations and mental care providers recognize the effects that resilience can have on levels of anxiety. Now more than ever marginalized groups of people in the U.S. need support and resources to help them cope with the inequalities the pandemic shed light on (Sevelius, et al., 2020). Providing accessible training and targeted interventions on the emotional, physical, spiritual, cognitive and mental aspects of resilience could be a way for organizations to help their employees cope with the negative consequences of COVID-19.

In addition, the researcher explored the relationship between ethnic identity and individual resilience. The data showed that although higher levels of ethnic identity of

LatinX emerging adults predicted higher levels of resilience, after controlling for social support and acculturation, the magnitude of these effects were limited, ranging from zero to very small. These findings are interesting and provide insight to the confounding role that social support and acculturation have on the relationship between levels of individual resilience and ethnic identity, specific to LatinX emerging adults. Relatedly, a study by Han, Berry and Zheng (2016) found that the effects of cultural identities on resilience was moderated by high or low levels of social support, and furthermore that acculturation strategies predicted levels of resilience for Qiang people (an ethnic group in China) following a significant adverse event (i.e. earthquake).

Accordingly, to not compromise internal validity, both social support and acculturation are critical variables to include in models that examine individual resilience and ethnic identity in the ethnic minority populations. Although findings may vary by ethnic group these findings show that for the LatinX emerging adult population both variables play an important role following a significant adverse event, like that of COVID-19. Furthermore, the relationship with ethnic identity, individual resilience and social support demonstrates how vital it is that organizations and government programs continue to improve social safety net programs for individuals from marginalized backgrounds. As recommended by Sippel et al., (2015) individual resilience is highly depended on social systems that provide a variety of positive social resources.

Lastly, the researcher examined to what degree ethnic identity of LatinX emerging adults was indirectly related, via the moderating effect of resilience, to the relationship between changes in job insecurity and changes in job satisfaction, anxiety, and depression during the COVID-19 pandemic, after controlling for social support and

acculturation. Interestingly, ethnic identity was indirectly related, via the small moderating effect of resilience, to the relationship between changes in *quantitative* job insecurity and the changes in anxiety. However, resilience appeared to have little or no moderating effect on the relationship between the changes in *qualitative* job insecurity and the changes in the three measures of well-being. These findings further corroborate the need for scholars to examine the multi-dimensionality of job insecurity and add to theory on how ethnic identity of LatinX individuals exerts its efforts through resilience on the workplace stressor relationships.

The findings from this study give insight to how LatinX levels of ethnic identity and individual resilience can work together to help cope with negative workplace stressors, such as job insecurity during the COVID-19 pandemic. Furthermore, this data supports Probst, Jiang, and Benson's (2014) model which acknowledges the importance of exploring trait-like characteristics amongst different groups to better understand what variables influence perceptions of job insecurity. For example, the protective and coping mechanisms that White individuals might use when experiencing job insecurity could be different from what a LatinX induvial implements. Thus, this paper is a good first step in understanding how culturally-specific individual difference characteristics can act as protective mechanisms against perceived job insecurity and related attitudinal, behavioral, and mental health outcomes during the pandemic. Future research should continue to explore how ethnic identity and resilience work together to help LatinX individuals get through times of adversity. More specifically the role these characteristics have on other workplaces stressors should be explored in future studies.

Limitations

The results and conclusions of this study based on path analysis of longitudinal data were limited and may be misleading due to factors we delineate in the following section.

Ecological Fallacy

A majority of the studies sample was dominated by women (*n* = 85, 94%), who were LatinX (*N* = 90, 100%), and emerging adults. Similar to study #1 the findings from this study are not generalizable to the overall U.S. population. Furthermore, the ccecological fallacy is a common cognitive bias of many researchers in social science. This cognitive bias occurs when inferences about individuals are made using inferential statistics that apply to a population (e.g., correlation coefficients) based on sample data that have been aggregated for all the individuals within a single group, without classifying those individuals into sub-groups (May et al., 2003; Idrovo, 2011; Subramanian et al. 2009). For example, the statistics reported for the data collected in this study do not apply to the entire population of LatinX emerging adults, but only to certain sub-groups within that population (e.g., females who represented 94.4% of the sample, but 50% of the population).

Response Bias

The study was longitudinal correlational survey which all self-report surveys have limitations. Often responses to all self-report surveys are contaminated by measurement errors because many people consciously or unconsciously tell lies when they answer a questionnaire (Althubaiti, 2016; Böckenholt, 2017; Choi & Pak, 2005; Meade & Craig, 2012; Rosenman et al., 2011; Sedgewick, 2013; Wu & Leung, 2017). The sources of

measurement errors include social desirability bias (e.g., respondents who attempt to display themselves a favorable light); acquiescent responding (e.g., respondents who consistently agree with all the items); extreme responding (i.e., respondents who consistently disagree with all the items); sensitivity bias (i.e., respondents who are unable to answer personal questions), confirmation bias (i.e., a tendency to favor information that strengthens the respondent's beliefs); recall bias (i.e., respondents who are unable to remember their experiences accurately); and information bias (any systematic difference from the truth that arises in the collection and analysis of survey data).

Research Design

Ideally when trying to establish temporal precedence or claim causality a controlled experiment is conducted by a researcher. Thus, it is important to note that a comparison of the self-reported responses of one group of participants between two occasions separated by a fixed interval of time (e.g., Wave 1 and Wave 2) may generate spurious evidence to measure the effects of an event or process that occurs within a specified time period, because there is no control group (Allesandri et al., 2017; Chiang et al., 2020; Hutcheon et al., 2010; Knapp, 2012; Marsden & Torgeson, 2012; Spurlock, 2018; Stratton, 2019). To avoid threats to internal and external validity and generate reliable evidence to determine how a target population responds over time to a specific event or process, it essential to implement a control group research design. This two-group design is superior because it facilitates a direct comparison of the changes in the outcomes among a control group (not exposed to the specific event, or process) versus the changes in the outcomes in an experimental group (exposed to the specific event, or process).

However, it was impossible to measure the changes in the job insecurity, job satisfaction, depression, and anxiety in an experimental group (exposed to the COVID-19 pandemic) versus the changes in a control group (not exposed to the COVID-19 pandemic or White emerging adults). It is not possible to determine if an event or process such as job insecurity during the COVID-19 pandemic was the primary cause of the observed changes in the participants levels of job satisfaction, depression, and anxiety. It is possible that other factors, that were not directly related to the COVID-19 pandemic, may have been responsible for the observed changes between Wave 1 and Wave 2. Because no comparative data were collected to compare the changes in a control group (e.g., between 2017 and 2018, before the COVID-19 pandemic or White emerging adults) with the changes in an experimental group (i.e., between 2020 and 2021, during the pandemic, LatinX emerging adults) the results of this study, in regards to causality, remain inconclusive.

Recommendations for Future Research

It may be possible to collect more meaningful data in the future, to avoid biased responding, for example, by using a bogus survey item, such as: Are you reading this question? If so, then please reply "strongly disagree" On average, about 15% of the respondents will provide a false response to a bogus item (e.g., "agree" or "strongly agree"), implying that they are not reading the question (e.g., due to boredom, fatigue, laziness, carelessness, stupidity, etc.) and all participants who provide false responses must be excluded from the survey (Lavrakas, 2018). Many other methods described in the literature can potentially be used to reduce or eliminate the effects of the limitations that contaminate the results of self-report surveys.

It is important to consider if qualitative methods, underpinned by the social constructivist paradigm, are more appropriate than quantitative methods, underpinned by the positivist paradigm, to understand the impact of the COVID-19 pandemic on the unique lived experiences and feelings of each individual participant (e.g., McKinlay et al., 2021; Dawes et al., 2021). The current research may have benefitted from communicating online with a small group of LatinX participants (about 20 or less) and conducting a thematic analysis of the interview transcripts using qualitative data analysis software (e.g., Nvivo). If a qualitative rather than a quantitative research methodology had been implemented, then a lot more meaningful results applying to each individual participant (rather than a large group of participants) would be generated. The qualitative analysis of interview data (unlike the statistical analysis of quantitative data) would provide a very rich, detailed, and explicit first-hand description and explanation of exactly how and why each unique individual perceived that COVID-19 and unemployment had (or had not) an impact on their mental health and well-being in the last two years.

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SELECT PUBLICATIONS & PRESENTATIONS

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