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**Exploring the COVID-19 Experience of Young Adult Latinos in Rural California:
Insights into Mental Health & The Immigrant Health Paradox**

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2020-21 academic year, Pomona College, Claremont, California



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April 23, 2021

DEDICATION

I dedicate this thesis to my mother, Lorena Plancarte, who continuously encourages me to stay involved in my community.

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Abstract

This study expands the COVID-19 and Latino Immigrants in Rural California (CLIMA) Study at UC Merced by exploring how the mental health of young adult Latinos in rural CA has been affected by the COVID-19 pandemic and comparing the experiences of US-born Latinos to those of Latino immigrants to investigate an Immigrant Health Paradox. A convergent mixed methods design was first employed whereby qualitative and quantitative data was collected concurrently, and then merged. Then, the data collected from young adult Latinos was compared to that from Latino immigrants collected by CLIMA Study to explore the Immigrant Health Paradox in the context of the pandemic. Stressors that young adult, US-born Latinos often faced included: job insecurity, financial challenges, food insecurity, decreased social interaction, fear of COVID-19, challenges with providing or receiving familial support, and challenges with online schooling. The older adult, immigrant participants faced many of the same stressors, however, the data suggest they may have also faced increased responsibilities in regards to childcare, more instances of workplace discrimination, and faced acculturative stress more directly. Study findings may be used by researchers, advocate, policy makers, and like to reduce health disparities among low-income people of color and rural populations. Future studies seeking to conduct a more robust investigation of Latino and Immigrant ‘Mental’ Health Paradoxes should recruit a larger sample, include populations at several different levels of acculturation (e.g., whites, Latino immigrants, second-generation Latinos, etc.), and utilize a bi-directional measure of acculturation.

Keywords: mixed methods, mental health, COVID-19 pandemic, Immigrant Health Paradox, Latino Health Paradox, young adult Latinos

CHAPTER 1: INTRODUCTION

While the novel coronavirus disease 2019 (COVID-19) has upended virtually every aspect of people's day-to-day life, some lives have been much more impacted than others. Emerging data shows that among the most vulnerable individuals are Latinos.¹ As of April 23, 2021, data from the Centers for Disease Control and Prevention (CDC) show that although Latinos represent only 18% of the total US population, they make up 37% of the age-standardized U.S. COVID-19 deaths. In California, the disparities are larger; Latinos make up 39% of the population, but account for 55% of reported COVID-19 cases and 46% of the deaths (The COVID Tracking Project). Vulnerabilities for Latinos in general may arise from several factors including differential exposure, susceptibility, and access to healthcare (Quinn & Kumar, 2014) but for Latino immigrants, whose families experience health, economic, and social exclusions due to local, state, and federal public policies, the vulnerabilities are pronounced. Moreover, research suggests that Latino immigrants living in rural or agricultural regions, as compared to urban, are particularly at risk for the pandemic's effects. In California, nearly half of rural immigrants live in poverty, compared to 39% nationally. They are more likely to be employed in agriculture and service jobs, and, while they have high levels of employment, experience above-average levels of underemployment (Yang, 2009). Additionally, Latino Californians experienced a 36% increase in mortality with an increase of 59% among Latino food/agricultural workers (Chen, Y. et al., 2021). To understand and address the ways which the COVID-19 pandemic has exacerbated the health precarities and economic vulnerabilities that immigrant Latinos in rural counties face, researchers at the University of California Merced (UC

¹ Here *Latino* refers to people in the U.S. with ties to Spanish-speaking regions of Latin America. *Hispanic* denotes people or cultures relating originally to Spain, although its emphasis on Spanish colonialism does not appropriately acknowledge the key roles of indigenous or African cultures in Latin American history (Aguirre-Molina & Molina, 1994).

Merced) have launched the COVID-19 and Latino Immigrants in Rural California (CLIMA) Study. This qualitative study will inform various publications (including policy briefs) and a survey instrument to conduct a statewide assessment of health and economic needs caused by the pandemic. However, two critical lines of research which were beyond the scope of the project were the mental health of young adult Latinos and the Latino and Immigrant Health Paradoxes.

Recent studies suggest that young adult Latinos may be especially susceptible to the mental health effects of the virus. For example, Czeisler et al., (2020) found that Latino respondents and young adults (18-24 years) more commonly reported symptoms of anxiety disorder or depressive disorder, COVID-19–related trauma- and stressor-related disorder (TSRD), substance use, and serious suicidal ideation compared to non-Latino whites and other age groups, respectively. As part of the fastest growing ethnic minority group, young adult Latinos are burgeoning force in the United States. Because they will possess a strong influence on the well-being of the nation for generations to come, it is critical that their mental health be assessed and protected.

The Latino Health Paradox is another key concept which researchers should engage with in regards to the coronavirus pandemic. The Latino Health Paradox is a well-researched phenomenon that suggests Latinos have better or comparable health outcomes in relation to their white counterparts despite their lower on average socioeconomic status. More specifically, the Immigrant Health Paradox suggests that (foreign-born) Latino immigrants have better health outcomes than second generation (non-immigrants), and health outcomes tend to decrease in subsequent generations with the adoption of American culture (Teruya & Bazargan-Hejazi, 2013). Although current research literature has focused on reasons which Latinos are at a disproportionate risk for the virus—contradicting the Latino Health Paradox in terms of physical

health—the topic of Latino or Immigrant Health Paradoxes in regards to mental health during the COVID-19 pandemic has not received as much attention by the research community.

Thus, the purpose of this study is to fill these gaps in the literature by (1) exploring how the mental health of young adult Latinos in rural CA has been affected by the COVID-19 pandemic, and (2) comparing the experiences of US-born Latinos to those of Latino immigrants to investigate a potential Immigrant Health Paradox. To carry out this multi-aimed study, first, a convergent mixed methods design will be employed whereby qualitative and quantitative data will be collected concurrently, and then merged. The qualitative data collected will broadly investigate the mental health of young adult Latinos in rural California through open-ended, semi-structured interviews; and the quantitative data collected will allow for more structured measurement of psychological constructs (e.g., acculturation, familism) which may emerge distinctly in the qualitative data. It would also allow for corroboration between what participants reported in the open-ended qualitative interviews with what they report in closed-ended survey measures. Using both types of data, a clearer picture of the research question may be gained than would be gathered by either datatype separately. To achieve the second aim of exploring the Immigrant Health Paradox in the context of the COVID-19 pandemic, the data collected from young adult Latinos will be compared to the data collected from Latino immigrants as part of the CLIMA Study. The overall goal for this study is to reduce health disparities among low-income people of color and rural populations by gathering rich information on their COVID-19 pandemic experiences that can be used by community health advocates and policy makers to inform health policy.

Mental Health During the Pandemic

Although most research on psychological consequences of the COVID-19 pandemic has found that Latinos, immigrants, and young adults are at a higher risk relative to non-Latino whites, non-immigrants, and other age groups, respectively, other research still suggests that Latinos have an advantage when it comes to coping with the pandemic's effects. A national online survey of 10,368 adults living in the U.S. which explored the relationship between fear of COVID-19, social vulnerabilities, and mental health consequences found that females, Latinos, foreign-born individuals, and families with children, experienced more fear of COVID-19 and more anxiety and depressive symptoms (Fitzpatrick, 2020). In a separate analysis of the same sample, Fitzpatrick, (2020) found that individuals who identify as Black, Latino, female, and those who are younger appeared to be acutely at risk for suicidality during the pandemic, even net of mitigating resources (e.g., strength of social ties, mastery of fate, and a subjective sense of how important religion is in ones' life). In regards to age, Liu et al., (2020) found overall high levels of depression, anxiety, and PTSD symptoms in U.S. young adults (18-30 years) during the COVID-19 pandemic. Somewhat surprisingly, however, Hispanic/Latino young adults were less likely to report high levels of anxiety than their non-Latino white counterparts (Liu et al., 2020). This finding raises questions about whether and how a Latino or Immigrant 'Mental' Health Paradox could apply in the context of the COVID-19 pandemic. To shed light on how Latino cultural factors and other relevant factors may contribute to or protect against negative psychological consequences stemming from the pandemic, my literature review and study will investigate how acculturation, familism, and spirituality and religiosity influence Latino's mental health during the COVID-19 pandemic.

Acculturation

Acculturation, or assimilation, is a cultural phenomenon that has been frequently identified as a risk factor for Latino health, although it may be necessary and even beneficial (e.g., by increasing employment opportunities) (Lara et al., 2005). Often used interchangeably or as subsets of each other (Lawton & Gerdes, 2014), assimilation and acculturation are generally understood to mean a shift away from one's heritage culture towards the mainstream host culture (e.g., its values, attitudes, and behaviors) (Berry, 1997; Gordon, 1964); however, in some instances the concept of acculturation includes the simultaneous process of maintaining one's own host culture, known as enculturation (Calzada & Sales, 2019). Though researchers frequently measure acculturation only through language variables and nativity, many others recognize their limitations and consider additional variables such as media preferences, and length of time in the United States.

To date, only one study has been published which has directly related acculturation to COVID-19–related health outcomes, and none have done so on Latinos specifically. By comparing the COVID-19 mortality of native-immigrant couple dyads in Stockholm, Sweden, Aradhya et al., (2020) explored whether excess COVID-19 deaths among immigrants could be predicted by acculturation. The researchers hypothesized that immigrants partnered with Swedes would share protective factors related to acculturation (e.g., language, lifestyle, norms, understanding of the healthcare system), which would make them less vulnerable to COVID-19 compared to immigrant couples. However, this prediction was not supported; immigrant-native couples had comparable or higher levels of mortality than immigrant-immigrant couples. Thus, researchers concluded that a lack of acculturation did not explain the disproportionate levels of mortality among immigrants in Sweden. Despite these findings, it is important to recognize that these results might not generalize to less acculturated US-born Latinos or foreign-born Latino

immigrants in the United States. Indeed, much research has found that in a U.S. context, attitudes towards immigrants depend largely on county of origin, and immigrants from Latin American countries, Mexico in particular, tend to be perceived most negatively (Lee & Fiske, 2006).

Because there is no study investigating how acculturation in Latinos relates to their mental health during the pandemic, the acculturative stress model, proposed by Berry (2003), can be used to formulate hypotheses. Acculturative stress can be defined as pressures by the host society to acculturate or pressures from immigrant's native community against acculturation. Specific stressors can include the pressures of learning a new language, balancing multiple cultural values, and having to navigate between culturally different ways of daily living (Araujo et al., 2010; Rodriguez et al., 2002). The acculturative stress model suggests that increases in acculturative stress, discrimination, and the decline of protective cultural values are ways which higher acculturation levels can increase Latinos' risk for psychopathology. In particular, several studies have found that acculturation may increase experiences of discrimination by facilitating more frequent interactions with and greater awareness of inequitable practices by the dominant society (Arellano-Morales et al., 2015; Cook et al., 2009; Pérez et al., 2008). During the COVID-19 pandemic, Latinos and immigrants have encountered various discriminatory practices whose consequences may be exacerbated by acculturation. For example, since Latinos are three times more likely to be uninsured compared with non-Latino whites (Berchick et al., 2019), they have likely perceived more instances of insurance-based discrimination during the pandemic, defined as unfair patient treatment by health care providers because of the type of insurance they have or patients' lack of insurance (see, Lillie-Blanton et al., 2000; Thorburn et al., 2010; Weech-Maldonado et al., 2012). Due to the relationship between acculturation, the elimination of language barriers, as well as increased workforce opportunities which have often become unsafe

due to the virus, it is possible that more acculturated Latinos tend to experience discrimination and acculturative stress more frequently than those who are less acculturated during the pandemic. Latinos who can comprehend various information sources in English and who are integrated into the workforce, are likely to have a broader awareness of discriminatory practices and policies which affect them.

At the same time, and contrary to the acculturative stress model, lower levels of acculturation may contribute to negative mental health outcomes in Latinos during the pandemic by increasing acculturative stress (e.g., pressures to acculturate). Indeed, Wasserman et al., (2020) found that acculturative stress is a risk factor for suicidality, a symptom of depression, during the COVID-19 pandemic. Low levels of acculturation may prevent some Latinos from being considered for white-collar jobs with increased opportunities for telework. According to the U.S. Bureau of Labor Statistics, while 30% of non-Latino white workers can telework, the percentage for Latinos is roughly half that percentage (16%) (2019). This inability to work from home during a pandemic may increase COVID-19 fear, acculturative stress and thus negative mental health outcomes. Also, low acculturation may predict greater vulnerability to the virus via language barriers which decrease Latino's ability to understand COVID-19 safety information in English. In a qualitative study which explored a rural Latino community's perception of the COVID-19 pandemic (Moyce et al., 2020), respondents reported receiving their news from Spanish-language television stations, such as Univision, due to difficulty understanding news in English. Since stations such as Univision report on national or global news, less acculturated viewers who choose this more accessible option may often miss critical information about safety regulations in the county where they reside (Lakhani et al. 2020). Furthermore, a number of participants in the same study reported receiving some of their news from social media. This

could be especially harmful for Latinos with low levels of acculturation, both physically and psychologically, because they may struggle to decipher what is credible and what is not, and misinformation has been known to spread fear and dangerous practices in the public. For example, a participant in this study reported viewing a post on social media sharing that “bathing in bleach” on a daily basis could prevent infection from COVID-19. Had participants followed the suggestion they read on social media they may have experienced some serious psychological consequences.

Altogether, the dearth of research investigating the relationship between acculturation and mental health during COVID-19 has hindered robust conclusions. Both high and low levels of acculturation appear to have differing risk factors and protective factors. Thus, this study will seek to fill in this gap by exploring the role of acculturation on Latinos’ mental health during the pandemic.

Familism

Familism, widely considered a primary cultural value, is characterized by strong familial attachment and reliance (Marín & Gamba, 2003; Germán et al., 2009). Its three components identified by Marín and Marín (1991), include perceived obligation to support family, reliance on family for support, and use of family as referents. Although most studies recognize familism as a protective factor for Latinos’ mental health, some have found it to be a risk factor (Perez & Cruess, 2014). Other literature which has analyzed the components of familism separately suggest this may be because some components can be protective (e.g., support), while others cause stress (e.g., familism referent, obligations) (Sayegh & Knight, 2011).

To date, no studies have explicitly explored familism during the pandemic, however, research suggests that it might have some protective effects for Latino university students. In a

study of factors associated with young adults' mental health during the pandemic, Liu et al., (2020) found that social support from family, but not from partner or peers, was associated with low levels of depression and PTSD. Due to Latinos high endorsement of familism (Perez & Cruess, 2014), they might receive greater levels of familial social support and thus protection from depression and PTSD relative to non-Latino whites. Indeed, a different study found that although students from a university in Southern Nevada generally reported worse depression scores and fewer minutes of physical activity after a COVID-19 stay-home-order, Latino students were less likely than non-Latino white students to report worsening depression scores (Coughenour et al., 2020). It is possible that the stay-home-order enabled students to spend more time with their families, thus offering them the protective benefits of familism like familial support.

Yet high familism may increase stress for Latinos who are concerned about their family's ability to with cope the realities and economic effects of the pandemic. For example, in their qualitative study, Moyce et al., (2020) found that respondents reported being concerned about family both abroad and in the United States. One man said,

I get myself thinking about transmission. What's going to happen? Where will I go? I mean, or my mom, who I live with here. Where will I take her? All of that, yeah? If there aren't tests, how would we give her a test? How do I isolate her, you know? (Colombian male, 30 years old)

Other respondents reported being concerned about the pandemic's economic effects on their family, noting that many had lost their jobs and were struggling financially. One woman reported,

Many people aren't getting or pulling in any money into their homes. So, all of this is affecting them. It is affecting you like an emotional problem. (Ecuadorian female, 59 years old)

These contradictory findings are supported by previous studies which have investigated how the individual components of familism influence the mental health of young Latinos. In a sample of adolescents, Zeiders et al. (2013) revealed that greater familism support and referent values, but not familism obligation values, were associated with lower levels of depression symptoms. This indicates that high familism support and referent values may provide Latinos with resources to cope with cultural stressors. Similarly, in a sample of Latino college students, Corona et al. (2017) found that that familism support was significantly related to lower levels of depressive and anxiety symptoms, and psychological distress. Also, higher familial obligation values and traditional gender roles were significantly associated with increased psychological stress. Together these results suggest that higher familism support values may be protective during the pandemic, but individuals with increased familism obligation values may experience higher levels of psychological stress when they are not able to fulfill filial obligations.

This literature highlights the importance of assessing the different components of familism individually in order to identify specific stressors that increase susceptibility to negative mental health outcomes as well as the need for more diverse Latino samples. Thus, the present study will address these issues by assessing how the different components of familism affect Latinos mental health and doing so in under-researched, more diverse Latino samples.

Spirituality & Religiosity

Religiosity and spirituality may be a protective factor during the COVID-19 pandemic for Latinos in particular (Magaña & Clark, 1995). Religiosity is a construct that includes beliefs, practices, and personal devotion relating to religion. It is often measured by participation in religious activities and by assessing the importance of religion to them (Hill & Pargament, 2003; Miller & Thoresen, 2003). Spirituality is similar but distinct from religiosity. Unlike religiosity,

which focuses on participating in organizational elements (e.g., church attendance or specific religious practices), spirituality focuses on nurturing a relationship with God, a Higher power, one's self, community, or one's environment (Campesino & Schwartz, 2006; Moberg 2002).

Although there have been multiple studies conducted on religiosity and spirituality during the pandemic, none have been specific to Latinos. For example, one study which explored psychological distress, coping behaviors, and preferences for support among New York healthcare workers during the pandemic found engaging with faith-based religion and/or spirituality was endorsed as a coping behavior by nearly a quarter of the 657 total participants (23%). However, because Latinos were a minority in the sample (11%), the researchers did not make any conclusions about the popularity of spirituality and religiosity for coping with the pandemic for this population (Shechter et al., 2020). A different study explored the use of religion and spirituality during the pandemic in Brazil, and investigated its association with mental health consequences of social isolation (Luchetti et al., 2020). Results revealed that there was a high use of religious and spiritual beliefs during the pandemic, and this use was associated with better mental health outcomes, specifically higher hopefulness, and less fear, worrying and sadness. They also found that spiritual growth and private religious activities, instead of religious attendance, were the most associated with positive outcomes during social isolation. Since Catholicism is the most popular religion in Brazil, and it is one which many Latinos practice, the results of this study might be somewhat generalizable to Latinos, however the most relevant data for this investigation will still come from studying Latinos in the United States.

Though there is no pandemic-specific study regarding religiosity and spirituality among Latinos, several studies conducted in the past suggest that it may serve as a stronger protective factor for this group compared to non-Latino whites during this time. For example, one study

which examined the differences in spiritual perspectives and practices of Latino and non-Latino young adults recruited from a southwestern university found that Latinos scored significantly higher than non-Latinos in two measures of spiritual perspectives, including a general spirituality scale and one developed specifically for Latino participants. Additionally, self-reported behavioral measures, such as frequency of personal prayer, were also higher among the Latino group (Campesino & Schwartz, 2006). Since, non-Latino whites may rely more on religious congregations for spiritual support (Idler, 2003), this finding indicates that spirituality (not religiosity) may be providing Latinos an advantage in coping with the effects of the pandemic at a time when many places of worship are closed. Moreover, another study which investigated the relationship between spirituality, reduced loneliness, and health in Latinos and non-Latino whites found that spirituality positively impacted mental and physical health via reduced loneliness, and the protective function was greater for Latinos (Gallegos & Segrin, 2019). This finding is particularly notable since high levels of loneliness have been identified as a risk factor for clinical levels of depression, anxiety, and PTSD symptoms during the pandemic (Liu et al., 2020). Taken together, these studies would support a possible Latino and Immigrant Health Paradox for mental health during the coronavirus pandemic.

Current Study

The intent of this study is to (1) investigate specifically how the COVID-19 pandemic has influenced the mental health of young adult, second-generation Latinos in rural California, and (2) to gain insight into a Latino or Immigrant 'Mental' Health Paradox by exploring how their COVID-19 experiences compare to those of Latino immigrants. To achieve these goals, a convergent mixed-methods study (Creswell & Plano-Clark, 2018) design was used to collect new qualitative and quantitative data, and a subsequent comparative research design to

corroborate the newly gathered data on second-generation Latinos to the CLIMA Study's data on Latino immigrants. The questions this study aims to answer include:

- 1) What factors are influencing the mental health of young adult second-generation Latinos and Latino immigrants in rural California?
- 2) How are these communities coping with the effects of COVID-19?
- 3) What role does acculturation play in relation to Latinos' mental health during the COVID-19 pandemic?

Worldview

In selecting and implementing a mixed methods and comparative research design, I embraced multiple worldviews including a transformative worldview, which is at its core pragmatic and inclusive of postpositivist and constructivist worldviews—both worldviews which pragmatists find value in. My identity as a low-income ethnic minority has influenced me to have a salient transformative worldview. I feel a sense of obligation to highlight the voices of disenfranchised communities like my own by building trust with participants and honoring their perspectives and experiences. My transformative orientation has directly influenced my research questions to be ones which advance social justice and health equity by shedding light on the COVID-19 experiences of Mexican American young adults and immigrants from rural and agricultural counties in California.

Furthermore, because my ultimate goal as someone with a transformative worldview is to advance social justice, I have embraced a pragmatic perspective. Having formulated my research questions with a transformative worldview, I collected data utilizing the methods that seem fit to address the social justice issue at hand—qualitative or quantitative. I recognize that qualitative methods do not allow for direct measurements of mental health symptoms and psychological

constructs, and using qualitative data alone may be insufficient to answer the research questions I proposed. On the other hand, I recognize that quantitative methods alone may not provide a deep nuanced understanding of a research topic. Thus, utilizing both quantitative and qualitative data and combining them to gain a broader understanding of the research topic, I have embraced a pragmatic worldview.

Although my underlying worldviews are transformative and thus pragmatic, I approached this research study utilizing a constructivist worldview. In accordance with this worldview, I worked from the “bottom” up in both phases of the project, and use participants’ views to build broader themes and expand or generate theory.

Researcher Reflexivity

Because bias exists in all research, it can occur at each stage of the research process and it is difficult to eliminate. It is my responsibility as a researcher to share my background and acknowledge my own potential biases. I am a third-generation Mexican American college student from Imperial County, CA, USA, one of the recruitment locations. Because my home community was among the most affected by the coronavirus pandemic in the state (Vives, 2020; CDC, 2021) I have become keenly aware of the racial/ethnic group disparities that exist in terms of access to healthcare, workers protections, and COVID-19 cases and deaths. Although my background has shaped the lens through which I have developed this project and will examine the mental health of young adult Latinos in rural counties during the COVID-19 pandemic, I will openly accept and acknowledge the variability in participant’s experiences.

CHAPTER 2: INVESTIGATING THE EFFECTS OF COVID-19 ON THE MENTAL HEALTH OF YOUNG ADULT LATINOS IN RURAL CALIFORNIA

Because SARS Coronavirus-19 is a novel virus, and the population of interest (Latinos living in rural communities) continues to be under-researched, there exists several unknowns. In such situations, it is best to explore qualitatively to learn what questions, variables, and theories, etc. need to be investigated. However, collecting only one type of evidence may limit our understanding of how the virus has affected the mental health of young adult Latinos in rural counties. Although qualitative data can allow us to obtain a detailed understanding of an issue by studying perspectives from a few individuals thoroughly, it limits our ability to obtain discrete measurements of complex psychological constructs. Thus, to address these questions and obtain richer and nuanced results, this study utilized an exploratory convergent mixed methods design which involved collecting qualitative and quantitative data concurrently (Creswell & Plano Clark, 2017). Engaging in multiple forms of data collection allowed for insights that are not accessible through a qualitative or quantitative approach alone.

In the qualitative phase of the study, young adult Latinos from Imperial and Tulare counties participated in semi-structured qualitative interviews about their experiences during the COVID-19 pandemic and their coping strategies. All interviews were recorded, deidentified, and transcribed. Thematic analysis was used to analyze the qualitative data. For the quantitative portion, quantitative measures were verbally administered to assess participants' levels of anxiety, depression, acculturation, and familism. Descriptive statistics were used to analyze the quantitative data. After analysis of both datasets, results were combined to identify any discrepancies and draw more robust conclusions. Combining quantitative and qualitative data was critical to answering the proposed research questions as the qualitative strand provided

nuanced information about the participants experiences, specifically regarding their mental health during the COVID-19 pandemic; and the quantitative strand allowed for corroboration of results and straightforward measurements of abstract concepts such as acculturation. Priority was be given to the qualitative strand as it is critical to first obtain a thorough understanding of the issue at hand and assess the data needs of the community before conducting expansive quantitative studies. Because the relatively small sample size compromises the generalizability of this study's results, the researchers plan for the data gathered from this exploratory, qualitative-based thesis is to inform the development of a quantitative survey measure that can be deployed on a larger scale to obtain generalizable results.

Method

Phase 1: Qualitative Phase

Participants

Eligibility requirements sought participants who: (1) self-identified as having a Latino family background, (2) were second-generation U.S. citizens (e.g., had at least one parent which is foreign-born) (3) were 18-30 years of age, and (4) resided in Imperial or Tulare counties in California at the time of the study. Using purposive sampling methods to target young adults inside and outside institutions of higher education, participants were invited to participate through organizations which have existing relationships with community service providers such as Imperial Valley Equity and Justice, Que Pasa Calexico, Imperial Valley COVID Movement, and Famila Del Valle in Imperial County as well as the Coalition Advocating for Pesticide Safety (CAPS) in Tulare County. Ten community members expressed interest and were followed-up with to confirm eligibility. One community member who expressed interest was a first-generation immigrant who arrived in the U.S. at about age six. Because previous findings

have suggested no immigrant paradox at all for Latinos who arrive in the United States before age six (Alegria et al., 2007), and three second generation participants had lived in Mexico for over 7 years, we decided to include the immigrant participant. One other community member was ineligible and another ultimately refused to participate; thus, a total of 8 people were interviewed.

Materials

The final interview guide has been adapted from that used in the CLIMA Study to include additional questions specific to young adult Latinos. The CLIMA team drew from current evidence of the health, economic, and other inequities faced by Latino immigrants to develop a semi-structured interview guide which would investigate the pandemic's impact on participants' experiences at work, their income, physical and mental health, expenses, and social support. Sample questions include: "What is school like for you right now?" and "What changes in your employment have you experienced since the beginning of the pandemic?" Because the CLIMA interview guide was created in Spanish, it was translated to English by a bilingual research assistant.

Procedure

Ethical approval was obtained from the University of California, Merced Institutional Review Board. In-depth, semi-structured interviews were conducted with second-generation Latinos in two rural California counties (Imperial, in Southern California; and Tulare in Central California). Interviews were conducted by one of two females (both young adult Latinas). Each interviewer was trained by the principal investigator of the CLIMA Study, Maria-Elena de Trinidad Young, MPH, PhD, Assistant Professor of Public Health. Data collection was carried out from February 4th to February 25th 2021. Due to national safety guidelines during the

COVID-19 pandemic, all interviews were conducted over the phone or Zoom Video Communications (<https://zoom.us/>). Participants who expressed interest were screened for eligibility, provided with an overview of the project, and scheduled for a remote interview. After obtaining informed consent, participants were interviewed for approximately 50-70 minutes. Interviews sought to identify how participants' financial circumstances, employment conditions, access to health care and other basic needs changed during the pandemic and how these have shaped their physical and mental health. After the open-ended questions, participants completed a brief survey verbally to collect socio-demographic data. Each participant was compensated for their time and participation with an electronic \$25 Target gift card. If questions were to arise for participants about the study, they were encouraged to contact Maria-Elena de Trinidad Young.

Analysis

To prepare interviews for analysis, they were audiotaped, de-identified, transcribed using GMR Transcription Services, Inc. (<https://www.gmrtranscription.com/>). Interviews were then uploaded to Dedoose (<https://www.dedoose.com/>) for analysis. The primary author coded each transcript in consultation with three other CLIMA Study team members (two undergraduate research assistants and the principal investigator). Inductive codes, which were developed from concepts that emerged from during initial CLIMA Study interviews, were applied to the current interviews. Within categories, codes were divided into super-ordinate (parent codes) and subordinate levels (child codes). Categories included: household and finances, family dynamics, immigration and citizenship, employment and workplace, food, health and healthcare, education, technology and internet, community, culture, stress, region/spirituality, routines, discrimination, policy, and rural communities. Parent codes were added within these categories, and child codes were added within the parent codes. A maximum of two child codes were applied to excerpts;

parent codes were used when a given excerpt could be categorized within more than two child codes. Additional parent codes were developed as needed to capture concepts that emerged from the young adult, second-generation Latinos' experiences, which had not emerged in the CLIMA Study interviews.

As I coded transcripts, I conducted a case-study analysis by compiling quotes from each participant relating to mental health (risk and protective factors, symptoms, etc.), acculturation, familism/family support, and spirituality/religion. These categories were selected to align with quantitative measures utilized in the quantitative phase of the study (e.g., familism and acculturation) and the previous literature reviewed. Once all transcripts were coded, I assessed code application to identify which codes were used most frequently and conducted "co-occurrences" to explore associations between codes and identify patterns in the data. Findings from this analysis would become additional themes presented in the results.

Phase 2: Quantitative Phase

Participants

Because data was collected concurrently, participants for Phase 2 were the same as those in Phase 1.

Materials

Anxiety. For comparability with previously collected CLIMA data, two items from the seven-item Generalized Anxiety Disorder Assessment (GAD-7) (Spitzer et al., 2006) were used to measure anxiety. The measure was available in English and Spanish. The GAD-7 is used as a screening tool and severity measure for generalized anxiety disorder (GAD). On a 4-point scale ranging from 0 = Not at all to 3 = Nearly every day, respondents were asked how often they had been bothered by problems including, "Feeling nervous, anxious, or on edge" and "Not being

able to stop or control worrying” over the last two weeks. Individual scores were compiled to an aggregate score ranging from 0 to 6; higher scores indicated greater anxiety. This measure has been validated in its complete form in primary care and the general population by multiple studies (Löwe et al., 2008; Spitzer et al., 2006).

Familism. Family obligations (6-item) and perceived support from the family (3-item) subscales from the 15-item Familism Questionnaire by Sabogal et al., (1987) were used to assess familism. Both English and Spanish versions were available. In its complete form, the Familism Questionnaire assess respondents’ approach to family relationships through the measurement of three principal construct factors including: (1) family obligations (e.g., “Aging parents should live with their relatives.”), (2) perceived support among family members (e.g., “When one has problems, one can count on the help of relatives”), and (3) the inclusion of family in decision making, or using family as behavioral and attitudinal referents (e.g., “The family should consult close relatives (uncles, aunts) concerning its important decisions”). The selected subscales were prioritized based on relevance during the COVID-19 pandemic. Item responses ranged from 1 = very much in disagreement to 5 = very much in agreement. Means of each subscale were compiled for analysis.

Depression. The Patient Health Questionnaire-2 (PHQ-2; 2-item) was used to measure depressive symptoms (Kroenke et al., 2003, Spitzer et al., 1999). The PHQ-2 was developed to be a self-administered version of the Primary Care Evaluation of Mental Disorders (PRIME-MD), a tool used by health care professionals to screen for common mental health disorders (Tamburrino et al., 2009). On a 4-point scale ranging from 0 = not at all to 3 = nearly every day, the PHQ-2 asks about the frequency of depressed mood (e.g., “Little interest in doing things”) over the past two weeks. Total scores range from 0 to 6. For screening purposes, the authors

suggest a cut-off score of 3, however they note that a cut-off score of 2 would enhance sensitivity. The measure has been validated in three studies and shows great variability in sensitivity (Gilbody et al., 2007).

Acculturation. Acculturation was approximated using the language which the participants interviewed in and the number of years they lived in Latin America. These measures were selected because studies suggest that mental health rates differ based on length of time lived in their native country and age of arrival in the U.S. (Alderete et al., 2000; Alegria et al., 2007; Vega et al., 2004) and because several studies have used predominantly spoken language to estimate acculturation (Cuellar et al., 1980; Griffith 1983; Neff et al., 1987).

Demographics. A brief verbal survey was used to collect socio-demographic information from all participants at the end of the interview. Information collected includes: gender, birth year, occupation status, education level, marital status, county of residence, etc.

Procedure

Directly following the open-ended, qualitative portion of the interview, quantitative survey data was collected from the participants verbally. Participants were introduced to each measure mentioned above and provided with instructions for how they may respond. Demographic information was collected last. Upon completion of the interview, all participants were thanked and compensated \$25 for their time. Following data collection, scores for each measure were individually computed and analyzed alongside demographic information using descriptive statistics.

Analysis

An analysis of the sociodemographic data was completed using descriptive statistics with the quantitative analysis software jamovi (The jamovi Project, 2021) and SPSS (IBM Corp,

2020). Measures of frequency (counts, percent), central tendency (mean), and variation (standard deviation, minimum and maximum variables) were calculated for each measure and demographic data where applicable. Next, a series of Pearson correlations were performed using the current study's data and CLIMA Study data to assess the relationships between anxiety, depression, familial obligation, familial support, and years lived outside the United States.

Integration

Because qualitative and quantitative data were collected to obtain nuanced perspective, both types of data will be merged in the discussion. First the quantitative data will be presented and then the qualitative data. Additionally, results will be organized in ways that reflect the quantitative measures (i.e., familism and acculturation) within the qualitative data.

Aim 1: Quantitative Results

Data was collected from a total of eight participants (see Table 1). The average age of participants was 21.4 years ($SD = 3.1$) (see Table 2). Over half of the sample was single (65.0%; $n = 5$); one participant lived with a partner and the other was married. A majority of participants identified as female (75.0%, $n = 6$), and lived in Imperial County (62.5%; $n = 5$). An even number of participants were interviewed on Zoom and over the phone (50.0%; $n = 4$). All participants received education beyond high school; 62.0% ($n = 5$) of participants earned some college education and 37.5% ($n = 3$) had earned their Associate degree. Half of participants were employed (50.0%; $n = 4$). A minority of participants responded in Spanish only (25.0%; $n = 2$); one participant used Spanish and English interchangeably and the remaining participants (62.5%; $n = 5$) responded almost entirely in English. Four participants had lived outside of the United States; the number of years ranged from 6 to 10 years ($M = 4.1$, $SD = 4.6$) (see Table 5) and occurred at different ages.

Table 1

Characteristics of Participants

Name	Language	Education Level	County	Gender	Age	Years Lived Out. U.S.	Employment	Marital Status
Juanita	Spanish	Some College	Tulare	F	19	10	Unemployed	Single
Pamela	Spanish	Some College	Tulare	F	20	10	Unemployed	Single
Alejandra	Spanglish	Some College	Tulare	F	19	0	Employed	NA
Camila	English	Some College	Imperial	F	18	7	Employed	Single
Isa	English	A.A.	Imperial	F	23	0	Employed	Married
Randy	English	Some College	Imperial	M	27	0	Unemployed	Single
Miguel	English	A.A.	Imperial	M	24	6	Employed	Living with a Partner
Alex	English	A.A.	Imperial	F	21	0	Unemployed	Single

Note: All names are pseudonyms.

Table 2

Sociodemographic Characteristics

	Count	% of total
Gender		
Female	6	75.0
Male	2	25.0
County		
Imperial	5	62.5
Tulare	3	37.5
Employment Status		
Unemployed	4	50.0
Employed	4	50.0
Highest Level of Education		
Some College	5	62.5
Associate's Degree	3	37.5
Language		

Spanish	2	25.0
English	5	62.5
Both	1	12.5
Marital Status		
Single	5	62.5
Living with a Partner	1	12.5
Married	1	12.5
NA	1	12.5

A series of Pearson correlations were performed using the current study’s data and CLIMA Study data to assess the relationships between anxiety, depression, familial obligation, familial support, and years lived outside the United States (see Table 3). Results revealed a significant correlation only between familial obligation and familial support ($r = .488, n=17, p < .05$).

Table 3

Pearson Correlations

	Anxiety	Depression	Obligation	Support	Years Lived Outside U.S.
Anxiety	-				
Depression	0.13	-			
Obligation	-0.09	-0.11	-		
Support	0.10	-0.33	.49*	-	
Years Lived Outside U.S.	-0.19	-0.16	-0.12	-0.11	-

Note: * Correlation is significant at the 0.05 level (2-tailed). $n = 17$

Over a quarter of participants (37.5%; $n = 3$) reported being diagnosed with depression (see Table 4). Three participants (37.5%) also reported a depression score of 3 or greater on the PHQ-2. The mean depression score was 2.0 ($SD = 2.1$) out of a total possible score of 6. Reported scores ranged from 0 to 5 (see Table 5).

Table 4

Frequencies of Mental Health Diagnoses

	Levels	Counts	% of Total
Depression	No	5	62.5
	Yes	3	37.5
Anxiety	No	7	87.5
	Yes	1	12.5

Note: n = 8

A minority of participants reported being diagnosed with anxiety (12.5%; n = 1) (see Table 4), however 50.0% of participants (n = 4) reported a score of at least 3 out of 6 on the GAD-7 measure. The average anxiety score was 2.6 (*SD* = 2.0); reported scores ranged from 0 to 6 (Table 5).

Table 5

Descriptive Statistics

	Mean	S.D.	Min.	Max.
Age	21.4	3.07	18	27
Depression	2.00	2.14	0	5
Anxiety	2.63	2.00	0	6
Obligation	4.08	0.641	3.5	5
Support	3.88	0.853	3	5
Years Lived Outside U.S.	4.13	4.61	0	10

Note: n = 8

The mean familial obligation score was 4.1 (*SD* = 0.64); scores ranged from 3.5 to 5.0 (out of a maximum score of 5). The mean familial support score was 3.9 (*SD* = 0.85); scores ranged from 3 to 5 (see Table 5).

Aim 1: Qualitative Results

In the following, I report on trends and key themes regarding mental health which emerged from the experiences of young adult Latinos from rural counties during the COVID-19 pandemic.

Mental Health Language

There were differences regarding how participants spoke about mental health based on acculturation. Participants who were less acculturated (interviewed in Spanish and lived more years outside of the U.S.) spoke the least about their own mental health, particularly in terms of feelings of anxiety and depression. For example, when asked about mental health, Juanita gave an example of why she thought COVID-19 was a mental health phenomenon:

But my grandparents, they were like very careful. They put on gloves, facemasks, hand sanitizer, they didn't go out. And one day my grandfather said, "No. I don't want you here because- no," he says, "it's not that I don't want you here, it's that I don't want you to get us sick." So, I don't know how it happened, but they got sick. They didn't know how. And I think that it's all mental. Because they were too careful and they all got sick. My grandma, my grandpa, and a son who lives there with them, got sick. And they didn't go out, they protected themselves well. Nothing. And, until now, well, we would always go to buy lunch, we would go to work. And so far, thank God we have not gotten sick. (Juanita, Spanish-speaking, Tulare)

Additionally, when the question was rephrased to ask Juanita how she was feeling emotionally, she responded that she was well and expressed worry for the homeless people and stray animals who have fewer financial resources to meet their basic needs during the pandemic:

Well... I feel good right now. But sometimes I think of – I thank God because right now, me and my family are fine. But for me – sometimes I start thinking about people who live on the streets. Animals, too. It gives me, I don't know, I start thinking sometimes. And, well, I'd like to have a lot of money to help them. (Juanita, Spanish-speaking, Tulare County)

Pamela, also lower in acculturation, had questions regarding what was meant by the term “mental health,” and discussed her relatives’ mental health (rather than her own):

Mental. That's like, like my aunt who suddenly kind of goes away and doesn't come back. Or she forgets things. That kind of mental or how?... I mean, she stays looking at a place, that is, we talk to her and she doesn't answer. I mean, she's going, she's going... She's calm and all of a sudden, she gets mad about everything. I mean, there's no reason why she gets angry and she gets angry. She starts yelling or saying things. No? Suddenly she gets, well yeah, happy.... (Pamela, Spanish-speaking, Tulare County).

Despite a lack of substantive dialogue regarding their own personal mental health, in the post-interview survey, these participants reported having been diagnosed with depression and/or anxiety.

Conversely, participants higher in acculturation tended to mention mental health on their own, discussed it in regards to themselves, and in terms of depressive or anxious feelings. For example, although Randy, a more acculturated participant, did not report having been diagnosed with depression, he explicitly named his feelings of depression:

I drive by the [El Centro Regional Medical Center]. I pass by these gas stations. And you see the signs “You must wear masks” and “Wash your hands at sanitation stations.” And it’s just “Okay. Sure.” Yeah. It’s just really stressful having to – “If you’re not really wearing masks, are you staying away from everyone?” It’s just a constant reminder it’s not ending anytime soon. Yeah. So, I guess I’ve been dealing with depression a little bit. Yeah. (Randy, English-speaking, Imperial County)

Symptoms

In addition to feelings of anxiety, depression, hopelessness and frustration, other negative mental health symptoms participants mentioned include isolating oneself from the community, tiredness/lack of energy, sleeping too much, reduced appetite, and body aches or pains. Randy explained how he distanced himself from his community:

I’ve cut myself off from talking to people physically and going to events even physically. So, I myself consider me very isolated from the community. (Randy, English-speaking, Imperial County)

Both Randy and Isa expressed their reluctance to get out of bed in the morning:

It's usually just not even wanting to get up from the bed in the morning. Bad depression. Yeah. (Randy, English-speaking, Imperial County)

...I have had days where I don't wanna do anything but just sleep and sleep. And I know for me, that's how I know that I'm depressed because I sleep, and I lose track of my days. And I don't eat, and if I go hungry, I don't eat. (Isa, English-speaking, Imperial County)

These mental health symptoms were often tied to physical health issues. When I asked Randy how he had been doing in terms of physical health, he responded:

Poor. Basically, I've gained weight. And I need to remind myself to go up and walk around because my body aches sometimes from laying down so much and sitting in uncomfortable positions...I have to constantly remind myself to shift this position or you need to move. But sometimes because you're constantly here you lay down and don't move. I lose all motivation to do anything.

Additionally, Isa highlights how sometimes, mental health issues manifest as psychosomatic symptoms, such as headaches.

Really take time to listen to your body. If you have a headache, why do you have a headache? You're not drinking water. Are you stressed? If you're stressed [inaudible] do something that makes you happy. And just practice what you preach. (Isa, English-speaking, Imperial County)

Acculturation

Although implicitly, some participants responses revealed acculturation has impacted them during the pandemic. For example, although Randy mentioned he has used English as his primary language for over ten years now, he perceived this shift towards American culture to have lasting effects on his relationship with his immigrant parents. When I asked Randy to tell me more about his relationship to them, he discussed his parents' disapproval of him adopting English as his primary language:

I actually made English my first language now for a decade or so. And they were so offended that I got lots of shouts you need to move up north. After one move, I didn't want to have another one. So, it's kind of a physical between us. There's distance but an emotional one. I still love them and stuff. But when they got sick late last year, it was really bad. I felt really bad for them. I didn't know if they were gonna make it or not. And they're recovering, but I still send them the money that I have leftover.

Other participants have taken up the responsibility to ease their family members' transition into U.S. culture. For example, Juanita recalls how difficult it was for her to navigate a new school system after she moved to the United States from Mexico and shares that she wants to alleviate that stress from her siblings:

Well, no, well sometimes they get angry, I take away the internet from their phones and well "No why are you taking it away!" I don't know what and all that. But at the end of the day, it's for their own good. So they can focus on their classes because, as I tell them, when I got here, I didn't know anything about how to navigate school or anything. And if I would have known, or if I at least had someone else who would have helped me, then I'd know better. So, that's what I try to do. (Juanita, Spanish-speaking, Tulare County)

Similarly, Alex took it upon herself to help her dad process paperwork to earn an income as he quarantined.

Stressors Related to COVID-19

Job Insecurity

Participants faced several negative situations or events during the COVID-19 pandemic which could be risk factors for their mental health. Some key stressors included fear of COVID-19, job and income insecurity, food insecurity, and decreased social interaction. Many participants, including Randy and Alex, reported facing job loss and/or job insecurity during and due to the pandemic.

I was working at a Walmart and at Golden Corral. I was staying there until they closed for COVID. And now, I'm inclined to find work. I'm using unemployment right now for a bit. (Randy, English-speaker, Imperial County)

Well, before the pandemic, I had a job, me, personally, I had a job in an office, and that slowed down a lot. It's an engineering office. So, I was let go. (Alex, English-speaker, Imperial County)

Financial Challenges

For some, a lack of reliable income due to job insecurity contributed to subsequent challenges such as financial, housing, and food insecurity. Randy expressed challenges with having enough money to send to his parents, who also lost their jobs due to COVID-19, after paying his rent using his unemployment benefits:

Basically, not having enough money to send to my parents. Yeah. Because they had COVID recently and they lost their jobs. And my unemployment can't really cover them too much. Anything I have leftover I send to them. (Randy, English-speaker, Imperial County)

When asked about additional expenses, Randy shared that he also used his unemployment benefits to alleviate his food insecurity and on entertainment. He noted he uses entertainment to keep his mind off the pandemic, which he previously expressed, made him feel depressed:

Well, my food stamps doesn't cover everything that I need. So, sometimes it goes to food. But also, a lot – I'm actually invested in entertainment. Yeah. So, Netflix and stuff like that. Anything – I think it's worth keeping my mind off everything going on... And I don't really live a luxurious life. I don't have a need for stuff other than clothes. And they're not worn or torn or anything. So, that's all it goes to. And anything else leftover I send to my parents. (Randy, English-speaker, Imperial County)

Juanita also mentions rent as a her most significant expense. She her described how her family faced housing insecurity after being evicted from their home:

Well, it's the rent. Because the truth is, well, I think the rent is too expensive. We live in a three-room house, but the rooms are very small. And during the pandemic, a year ago, we lived with my grandparents: My mom, me and some uncles/aunts, and the house was big. But it turned out that house had already been taken up by the bank. But the owners kept going – I mean, they went and collected the rent. But the house was already lost. And so the bank sent like a letter saying we had about a month. And then we had to get out. Then, at that time, then there was the pandemic. That was like April. There was the pandemic and, well, there was, there were no houses or apartments or anything., We had to go with an uncle for almost a month. And then my mom went with the lady who rented rooms – houses and apartments. And she had this house. But, this house, the truth is it's very destroyed. The kitchen: they never fixed the drawers. And that's \$1000 plus bills. And, well, it's too small. Because I've seen apartments or houses that are above \$1000 and are very well maintained, but nevertheless, this one is not. And it's unfair to me because we already told the lady, the owner, but she doesn't do anything anyway. (Juanita, Spanish-speaking, Tulare County)

Decreased Social Interactions

Due to the risk that social gatherings present during the pandemic, many participants had decreased their interactions with family and friends and their time outdoors or in public spaces. Increased time indoors and decreased social interaction were key factors which participants mentioned directly impacted their mental health. For example, Camila reported that she did not think the pandemic affected her family's physical health, however, she believed that decreased outings and increased time indoors affected their mental health.

I don't think [the pandemic] has impacted any of us negatively, like our health, apart from maybe mental health because not being able to go out and just being inside all the time, because we do quarantine for the most part. So, yeah, maybe mental health.
(Camila, English-speaking, Imperial County)

Similarly, although Miguel mentioned feeling relatively well in terms of mental health, he stated that his greatest stressors were not being able to engage with friends as frequently and having a repetitive routine:

...Once and a while I get really overwhelmed of staying at home all the time, or just staying within the neighborhood because we still go on walks or whatnot. But yeah. I just wanna see my friends again. I don't know if that makes sense. Especially because everybody's moving up, starting their careers and whatnot that are in this age; and I would like to see them or – that's pretty much it. I just wanna be able to do something with people – than do the same thing every day. Especially because my job, a lot of times, it gets real repetitive, so it would be really nice if I could just change the routine every once and a while. (Miguel, English-speaking, Imperial County)

Fear of COVID-19

Participants also frequently expressed general concerns for contracting the coronavirus; for some, this concern was intense and caused anxious feelings. For example, Isa mentioned how she would feel very anxious and stressed when she was in public spaces where others were not wearing personal protective equipment:

I was going crazy for a little bit with everything because of COVID. And I had a lot of anxiety going to the stores, ugh. Oh, my God. It's the worst. And people that don't wear their masks and it's like oh, my God. I stress out. I overthink everything. And I think for me, it's just become a lot of anxiety. (Isa, English-speaking, Imperial County)

For Randy, this fear of contracting the virus meant he was separated from his parents. He shared that he did not move with his parents to Northern California because he was afraid of contracting COVID-19 on the bus to get there:

I couldn't go that far because I'll be afraid of getting infected by anything along the way because they live way to go up there. When they moved to my aunt's house, they took the Greyhound. Yeah. (Randy, English-speaking, Imperial County)

Others, such as Juanita felt most concerned about contracting the virus at work:

Precisely, last year like in April, March/April, I began working. And I- well, with her; she [my mom] worked in the field. And, she took me with her, and since March until August. And, well, it was hard, it was when COVID started. And we'd go to work and we knew the risks that it posed. But well, at the end of the day, we needed money to get ahead. And well, it has been very difficult these last months. (Juanita, Spanish-speaking, Tulare County)

Online Schooling

Although the transition to online schooling was not mentioned as an explicit source of stress, some participants saw it as unfavorable. Regarding online classes, Alex stated:

I feel like they're complicated because I tend to doze off a lot you could say, being on the computer or learning from a computer is kind of complicated. I feel I'm not really used to it. Especially, with harder classes or health classes that I would take. For example, Nursing 100, it's like math – like, health mathematics. And that was a little complicated for me. And then, I would go to tutoring when the world was normal; there was no pandemic, for math, I would go to the after-class tutoring to get some help. And IVC did provide online tutoring like, one-on-one with the tutor, but I guess that was just me that I didn't really want to do that. (Alex, English-speaking, Imperial County)

Camila also shared how the transition from in-person classes to online schooling allowed her to disengage:

Well, the transition for me had been when I was still in high school, so when I was a senior, and I had really good grades, so I basically gave up when we went into online classes. So, for the rest of my high school, I just didn't do any school work that was online. (Camila, English-speaking, Imperial County)

Other participants witnessed these challenges, although with younger individuals they are responsible for. The struggles that younger cousins or siblings face with online schooling are

challenges that their young adult caretakers take up and often make them stressed. For example, Alejandra expressed:

The kids... Since I'm babysitting, it's really hard for me because they don't get on their Zooms at all, and I get mad at them. They want to watch TV instead of being on Zoom, and the teacher sends me messages saying my cousins are not on. I'm over here cleaning or doing homework, and I get mad at them. I take everything away from them, like the control, and they get mad at me... They're like, you don't want us to have fun, and I'm like, I just want the best for you all. I just want you to turn in your homework, and that's it. I don't want to hear complaints about your teacher. That's what I told them... I feel like a mom. It was really stressful for me because I'm like a mom to them... I have to be on them. (Alejandra, Spanglish-speaking, Tulare County)

Juanita had similar experiences with her younger brothers:

And this time, it was my turn again. To stop them. Tell them about their classes. And so there I am watching them because well, each of them has their own cell phone. And, I remove the internet from their cell phone so they can focus on the computer, on their classes... Sometimes they get mad, well I remove the internet from their phone and well, "No. Why are you taking it away from me!" I don't know what and all that. (Juanita, Spanish-speaking, Tulare County)

Helping children with disabilities may have been particularly stressful. Alejandra shared how she urging the school find support for her cousin for over a year:

I think he has learning disabilities too because he forgets stuff, and he doesn't even try to do his work because he thinks he's dumb and all of that... [the teachers] just say that he doesn't, that he just doesn't want to learn anything, and that they're calling him lazy, just that he struggles but they don't get it. I can't argue with the grown-ups. So I think you have to go to the district and handle that, over there.... It's really hard for us because the schools that I went to when I was a little; It was in Exeter; they gave me a lot of help there. My little cousin goes to Lindsay, I told my aunt, if they don't want to help him out in Lindsay, change him to another school that wants to help him... I'm planning my aunt to change him for school or fight for him. (Alejandra, Spanglish-speaking, Tulare County)

Familism During COVID-19

Family as Referent

Although "Family as Referent" Familism Questionnaire items were not included in the quantitative survey, the interviews revealed participants' experiences with utilizing relatives as behavioral and attitudinal referents during the pandemic. For many participants who used family

as a key source of referent, seeking approval from their family meant they had increased limitations on their social interactions. For example, Alejandra mentioned about her mother: “She doesn’t like being close to people because she’s scared to get sick. She doesn’t let me go out to the mall; she only lets me go out to get food but only in the drive-throughs.” Similarly, when asked about any changes in social interactions with friends, Camila mentioned interacting less with one of her friends because they wanted to honor their parents’ directives.

Yeah. I guess, for example, one of our friends can’t really hang out all the time. Like, it’s very hard to be able to get her out of the house because her parents are really strict, and they always tell her she can go because she’s 18, but she doesn’t like to go when they disapprove of it because it’s just *se te quitan las ganas* [you lose the desire], like you don’t wanna go anymore whenever your parents don’t give you approval. At least, that’s how we are. (Camila, English-speaking, Imperial County)

Camila continued to share a similar personal experience where she sought her parents’ approval to spend time with her friends, but was ultimately denied permission and accepted their decision:

They didn’t give me permission to go eat with two of my friends, but their reason, it didn’t really make sense, because they had let me go out with those two friends probably a week before. And so, then a week later, I asked if I could go with them again, and they said no. And they just said no. I kept on trying to convince them, but they were just like telling me no. So, it was no.

Other participants had more positive experiences with using family as a referent. For example, when Pamela was feeling as though she had contracted COVID-19, she asked her grandmother in Mexico for remedies (and was referred tea and ibuprofen).

Familial Obligation

All participants mentioned providing family members financial, emotional, and material support during the pandemic. For example, Juanita mentioned supporting her mother by helping her siblings with online classes as well as by contributing to the family income as an agricultural laborer and through an informal job making arrangements:

Well, before when me and her were working, because there was a time when my brother who told her, who doesn't catch on to things very well, doesn't like it very much, like this, online classes. So, he had bad grades. And right now, well, we couldn't do anything, because her and I were going to work. But since January, I have not been to work anymore, and now I am the one who wakes him up. And then keep an eye out for him in his classes. And I feed them. I clean the house. The most common thing daughters do. (Juanita, Spanish-speaking, Tulare County)

Alejandra mentioned having similar responsibilities working for her uncle at his nursery, babysitting her cousins, and providing her mother with economic support from her financial aid package:

They don't work a lot of hours, that's what they struggle with a lot. That's why my uncle helps them out a lot. That's why we all live together. I help out my mom whenever I get financial aid; I give her like \$200 or \$300 dollars so she could pay some bills or whatever. I give her money from my babysitting. I give her money to help her out to the house. I help her out to buy food or stuff for the laundry. (Alejandra, Spanglish-speaking, Tulare County)

Isa has provided her mother, siblings, and extended family with emotional and other types of support:

Okay. So, I know I mentioned that my family's divorced. So, when I say my family's divorced, that means that there's a blended family within partners and children of those partners from different marriages and different relationships. So, I've grown, I've kinda grown into those shoes where, "Isa, I need help with – I need help with Victoria. I need help with – I need help with your brother. I need this." And my mom, I guess, our relationship has shifted from mother/daughter to sister kind of. So, whenever there's a concern or something like, for example, right now, distance learning, I have maybe two siblings that are doing distance learning. And I've noticed a behavior change in my 8-year-old little brother, and I've started to see some trends of slight anxiety, not depression, but trends of antisocial and ADHD. So, for me, my role and with the experience that I have with my sister-in-law, I can tell my mom, "Hey, heads up. Heads up. This is not normal, and you need to – you need to get some help, and if you need somebody, I can refer you to this and this person. But just a heads up because that behavior's not normal." (Isa, English-speaking, Imperial County)

Some participants have also been instrumental with helping their family members access COVID-19 relief. When I asked if her father got paid during his quarantine period after he contracted the virus at work, Alex mentioned helping him by translating the necessary documents to access his pay:

The process of paperwork took quite a while, honestly. I was the one that was helping him out because he doesn't really know English or read and write English. So, his work is here established in Brawley, but the headquarters of that company is in Minnesota, so I would email this lady, and she'd be like, "We're going to get back to you." So, after two weeks of being quarantined they sent him his check, or whatever. But they did get it to him, but it took a while. (Alex, English-speaking, Imperial County)

Participants generally had positive attitudes about supporting their relatives. For example, when Camila was asked how she felt about running errands for her dad, she responded, "I mean, I was glad to do it. It's my dad. He does a lot of things for me, so I didn't mind." Juanita had a similarly positive attitude about working to support her mom financially:

Well, personally, I like to work. I like to support my mom. And what I like the most is, well, to help my mom. Having my own money and not asking her. (Juanita, Spanish-speaking, Tulare County).

However, sometimes the pandemic limited the financial or emotional support participants could provide their relatives, making them feel down. For example, as previously mentioned, a key challenge Randy faced was lack of sufficient income or economic resources to support his parents financially. Similarly, Pamela expressed that she had not recently provided her parents in Mexico with financial support due to her job and income insecurity:

It's been some time that I have not helped them financially for the same reason, it's very hard. But I've had these weeks where we've been working well. It's been two weeks that we have had good shifts and well, if we continue this way, there might be more financial support to send over there. (Pamela, English-speaking, Tulare County)

On the other hand, Alejandra highlighted how the pandemic limited her family's ability to provide her family in Mexico with emotional support in person, noting that it was emotionally difficult for them:

My dad lost someone this year; his dad. It was really hard for him. I don't know when my grandpa died; no one knows how he died. He was 93-years-old...we couldn't travel to Mexico because of the pandemic. That was really hard for us. (Alejandra, Spanglish-speaking, Tulare County)

Perceived support from the family

Participants frequently relied on their families for support and used them as mental health resources. For example, Alejandra noted that when she felt depressed, her family would talk to her about life and express their love for her. She also mentioned her mom as a main source of support:

When the pandemic started, my mom would always manage me to get out of my room and I'll always be locked up in there. At some point, I just felt depressed, and I would cry for no reason...My mom; she would just encourage me to go out to help her with flowers and all that. She just wanted to keep me outside to do something. I don't know; she would just always be there for me, for anything. I have my best friend. She's the only person that I'm mostly close with. Then my dad. (Alejandra, Spanglish-speaking, Tulare County)

Isa similarly received emotional support from her husband. When discussing how she strives to maintain good mental health, she mentioned how her husband often helps her “refocus” and encourages her to treat herself:

But I think my husband, he's helped me a lot. He's helped me refocus. I'm like, “Dude, here's a cute purse. Or you wanna go to Sephora? Let's go. You wanna go to Ulta? I'll buy you something.” Him spoiling me is just something that I've learned to appreciate because it really refocuses on *consintiéndose*. I don't know if you understand that word in Spanish. What is the word in English? It's spoiling yourself. (Isa, English-speaking, Imperial County)

For Randy, even a phone call from his relatives was greatly supportive. He mentioned, “Sometimes I need – I'm at a low point and I just need to talk to someone. And when they pick up, it's really helpful.” He qualified, however, that sometimes their discussions become overwhelming due to their focus on the pandemic. In such instances, he attempts to mitigate his stress by changing the topic of conversation; Randy noted, “Well, I talk to them throughout the week – at least three times a week. But less if they're trying to have these conversations [about coronavirus]. I usually shift the subject.” Randy elaborated on the types of conversations he prefers to engage with in order to cope with the pandemic:

“[I'm] Just trying to keep myself from thinking of everything going on...Some of [my family] are real, real, real downers. They have all kinds of statistics and stuff. And I just

like the family to talk about their work stuff and being able to see me and everything. Just anything to keep me entertained.”

Some participants also received instrumental, or tangible support from their relatives. For example, Junita shared how her uncle housed them when they were evicted:

Well yeah, when that thing with the house happened, like I said, we didn't have anywhere to go, well we went with our uncle. And well, we lived with him for a month. Yeah, he gave us like, lodging. (Juanita, Spanish-speaking, Tulare County)

Coping & Extrafamilial Support

Participants who mentioned engaging in social and outdoor activities more often tended to report better mental health. Alex, who scored low in both anxiety and depression, shared how she would keep in touch with friends and family, though, taking additional COVID-19 precautions.

...I feel like I started hanging out with one of – other friends more, the ones that I guess are more carefree. I do hang out with one or two friends more often. We sometimes hang out at the park, or if the restaurants are open, we go out to eat. For the holidays, I went over to one of my friend's houses with her family, since my friends celebrate – so, I went over to one of my friend's houses for Thanksgiving, Christmas, and New Year's. I did go on a road trip with a friend of mine... we went up to Merced, actually. I have family there, we stopped by to say hi to one of my cousins. We went to Santa Cruz to – we just went more like, hiking, outdoorsy. We went to this Shark Fin Cove somewhere by close to Santa Cruz. We kind of camped there, bonfire. That's pretty much – we just stopped by certain places in California... (Alex, English-speaking, Imperial County)

Alejandra, diagnosed with depression, also mentioned spending time outdoors as one way she looks after her mental health, “I like to go to the backyard and look at it because we have cows and goats. I always go outside with them. I spent time with all my animals that we have at our house.”

Others, like Randy, have found social spaces online. When asked about engaging with friends and community, Randy mentioned that although he considers himself isolated from his community, he does play an online game every Sunday with his friends. He elaborated, “It's a

Dungeons and Dragons game. It's a high fantasy game. It's something to keep my mind away from other stuff."

Affirmations were another method of coping which Isa mentioned helped her considerably. She endorsed affirmations as a way to promote positive mental health:

It's the way to go, and I love self-affirmations. Don't tell yourself you're ugly. No. Don't tell yourself that you're stupid. Don't tell yourself that you're dumb. Because you're telling yourself that, and your body after a while and your mind after a while starts to believe those things. And you're telling yourself what to think and what to do and your brain's gonna capture it and register it. And it's really important to change that perspective. Don't let that be the narrative for yourself. And for me at least it's worked a lot, self-affirmations. (Isa, English-speaking, Imperial County)

Isa and Camila also mentioned keeping themselves busy with pleasurable activities and treating themselves as ways they maintain their mental health.

I decorate my home, and I self-reflect everything about my personality into my home, and I just think that's one of the ways that has helped me as a person and has helped me cope with a lot of different things. Plugging myself into activities and forcing myself to do things and change things and move things and decorate things and just even simply going to the store and getting myself a bouquet of roses and putting a vase on my table is enough for me. And it's important to take care of your environment because it's a self-reflection of what's going on with you. And I just think that's how I've managed to cope with every. And keeping myself busy is plugging into different projects and things and thrifting and finding some steals and redecorating or buying an ugly lamp and revamping it with a cute lampshade or throwing a rustic touch on it. (Isa, English-speaking, Imperial County)

I guess, treat myself a lot, so whenever I find spare time after work or anything, I'll go to the store. Like, I'll go to Target or something, and I'll buy things for myself. And it makes me feel good, so you know. (Camila, English-speaking, Imperial County)

Participants also mentioned how their friends have provided valuable instrumental and emotional support. For example, Alejandra shared how her friend helped her with online classes as she handled familial responsibilities such as driving her mother to the doctor:

Me and my friend have this same class, whenever I'm driving she takes the notes, and she sends me a picture, and she explains to me...I know her for almost four years, at Lindsay Highschool. We both go to PC, and her major is also teaching.
Interviewer: So, you two help each other out?

Alejandra: Yeah, whenever she needs help, I help her out or she helps me out. She's good at essays, so I always ask her for help. (Alejandra, Spanglish-speaking, Tulare County).

Camila relies on her friends when there are conflicts within her family:

My friends, like my best friends, they're always there to talk about anything – anything tough that's going on when I can't talk to my family about it. And I'm really close with my friends and their families, so I always know that even their families are gonna be there for me. For example, like an issue that happened with my family this week actually, and I had to stay with my friend for a couple days. So, they offer that kind of support, kind of support that even my extended family doesn't give me. And well, support from my family, just anything. Even if there's conflict, they're always there.

Pamela mentions that her friends provide each other with financial support when they can:

When we can help each other, then yes, but if we can't, well even if we wanted to... One time when a friend was struggling, because of the rent or something like that, if one of us had money, we would help them to – well, we would cooperate and help them sometimes. (Pamela, Spanish-speaking, Tulare County)

In contrast to what was expected, participants did not often mention religion or spirituality as a form of coping with the effects of the pandemic and their mental health.

Alternatively, Camila noted religion as a point of tension within their family. She expressed:

...Some of the things that they [the church group] teach them [her parents] I agree with, like some of the family values, but then my parents, once they started – they've been on this for seven years. And at first, it was really good for them, but now I just kind of feel like they're getting too deep into the church and they weren't really having time for us anymore, like for my sisters and I because they just always had meetings or whatever. And it's just – I don't know. It's a very controversial topic in my family. (Camila, English-speaking, Imperial)

Institutional Support

Several participants benefitted from government safety nets to support themselves and their families. Similar to Randy, who had mentioned sending money from his unemployment check, Alejandra uses Extended Opportunity Program and Services (EOPS), a state-funded support services program designed to assist low-income and educationally disadvantaged students, and financial aid to support her and her mothers' expenses. When asked how she manages her expenses, Alejandra responded:

I get a lot of help from EOPS, and the financial aid. So, whenever I get my financial aid money, I first pay off my class, then my books, and the leftover money, well, I'll give half of the money to my mom. To help her out. This week I'm going to take her to doctors because they're going to see if she needs to get her leg operate on because she can't walk that much. (Alejandra, Spanglish-speaking, Tulare County).

Pamela and Juanita's family uses food stamps and find them helpful. Juanita shared:

My mom gets stamps; they help her a lot. And that's the—I think that's it. And since, right now she's not working, well I think that she's receiving unemployment. But that's just one help... With the stamps, we get food for the week. And so, the stamps are for food. And the unemployment is for the rent. (Juanita, Spanish-speaking, Tulare County).

Similarly, Alejandra mentioned she appreciated receiving food donations from the school, "It was very useful. At some point my mom and my aunt, kind of struggled with money, but with the food donations, they helped them out a lot." The stimulus check also helped Alejandra's aunt and uncle (whom they live with) to pay rent and bills. She stated, "That helped us a lot. All for them. My mom bought me a desk for the school with the stimulus check. Because she doesn't want me to be lying on the bed all day." Juanita mentioned her mother decided to add the stimulus check to their savings, in case of emergencies.

Sometimes participants faced barriers to support. Symptoms of depression can themselves become a barrier to support such as when one distances themselves from the community. For example, when I asked Randy if there what sources of support there were in his community, he replied, "I believe there are in my community, but as I said, I'm not part of the community anymore because I cut myself off." Additionally, Randy expressed distrust of insurance companies and how they treated individuals with diagnosed conditions:

I'm desperately afraid that if I tell them [the insurance company] that I have a mental illness, they'll throw me home because you have these preexisting conditions. Maybe this will create something. They'll either charge me for something or they'll tell me that "Oh, yeah. There's no actual qualified person in your area open right now because of COVID. So, we'll have to send you up north. And the only way to talk to them face-to-face would be through Zoom and stuff like that." And I'm like "That's okay." But with that kinda stuff, I don't feel comfortable talking to a person over anything other than face-to-face. I'm afraid of those things...I only have the suspicion because I've seen stories of other

people walking through this process and basically being screwed over because of insurance people wanna make a buck. (Randy, English-speaking, Imperial County)

Randy also faced difficulties when applying for unemployment:

That's why I was unemployed for a while and I applied for unemployment, which is a difficult procedure because they're supposed to mail this number or confirmation code or something like that in the mail, but I knew that people weren't getting it. And so, found a workaround where if you applied for disability, they will give you that confirmation code or number within their application. So, I got the application. I didn't fulfill it. I didn't say I wanted the policy. But then didn't actually get disability because I'm not. But after that, I was told to get the number and put it on the actual unemployment thing. And it worked. I was able to get it. I found that was a very weird experience... That's what a lot of people had been doing. I'm not sure if it was because of COVID or whatever. A lot of people were not getting their stuff in the mail they were supposed to be getting to get unemployment. Yeah.

Several participants mentioned a variety of barriers to healthcare. Health insurance was a barrier to healthcare that Alejandra faced. She stated, "I don't really go to the doctors... My mom has private insurance; it doesn't cover everything and I don't want to go for unnecessary stuff. We spend \$350." For Randy, the barrier to attending clinic visits was his concerns regarding COVID-19 safety. On the other hand, Miguel felt discouraged from attending the doctor by his work. When asked if he went to the doctor when he got sick, he replied,

No, I didn't have to go to the doctor. What do you call it? So, I only got sick for maybe a week, week and a half. It was a lot of work that I had to do at the time, so I couldn't really – it wasn't in my best interest, in our best interest, to take the time off and then come back because we'll probably fail [inaudible] came back or took the couple days off or whatnot. (Miguel, English-speaking, Imperial County)

Discussion

In this study, I explored the mental health of young adult second-generation Latinos in rural California during the COVID-19 pandemic and the factors that are or may be influencing it.

Mental Health

In regards to the prevalence and severity of depression in the present sample, three participants (37.5%) were diagnosed with depression, and an equal number reported a score of 3

or greater on the PHQ-2.² Although on the surface these numbers suggest congruent evaluation metrics, Camila who scored 5 on the PHQ-2 was not diagnosed with depression, and Randy, who mentioned feelings of depression throughout the interview reported a score of 2 and was not diagnosed. These results suggest that depression may be under diagnosed within young adult Latino populations living in rural/agricultural California. Alternatively, Alejandra who was diagnosed with depression, reported a score of 0 on the PHQ-2. During her interview, Alejandra reported using several coping skills and receiving support from her family and best friend. Analyzing the quantitative and qualitative data together, we might hypothesize that these results indicate the coping skills Alejandra is employing and support she is receiving are effective.

Regarding anxiety: although half of participants reported a score of at least 3 (out of 6) on the GAD-7, only one participant reported being diagnosed with anxiety. This suggests young adult Latinos in rural California are may be underdiagnosed with anxiety. When considering the qualitative data, however, we reveal that participants expressed anxiety in relation to the circumstances related to the COVID-19 pandemic such as contracting the virus. This may indicate that many participants are feeling situational anxiety related to the pandemic. To identify probable cases of dysfunctional anxiety associated with the COVID-19 crisis, Lee (2020) has created the Coronavirus Anxiety Scale, a brief a mental health screener for COVID-19-related anxiety. This screener may be an important measure which helps to distinguish between generalized anxiety and anxiety related to the coronavirus.

One limitation important to note is that the GAD-7 is not intended to be scored using only two measures as was done in the present study. Instead, seven measures are intended to be scored

² The recommended cut-off score suggested by PHQ-2 authors for screening purposes is 3, however, they note a cut off score of 2 would enhance sensitivity.

on a range from 0-21 where 0-4 indicates minimal anxiety; 5-9, mild anxiety; 10-19, moderate anxiety; and 15-21, severe anxiety. Thus, we can only conclude that two participants had at least minimal anxiety and one had at least mild anxiety. We can hypothesize that anxiety scores would have increased with additional measures, and the current scores are an underrepresentation of true anxiety levels.

Acculturation

Participants varied in their level of acculturation to U.S. culture, however, levels were not always clear. Because this study aimed to recruit second-generation Latinos currently living in the United States, it was not anticipated that participants would have lived in Latin America (Mexico) for a significant number of years. After the first interview revealed a participant had lived in Mexico for several years, data on years lived outside of the United States was collected. Half of the participants ($n = 4$) reported having lived in Mexico for a range of 6 to 10 years and at different ages. For some participants, this meant they had lived in Mexico for a majority (Juanita; 52%) or half of their lives (Pamela); this points to acculturation levels comparable to those of immigrant populations living in the United States. Although research studies often use generation status as a measure of acculturation, this study suggests it may not be the best indicator; rather number of years lived in the United States or proportion of life lived in the United States would provide a more accurate measure of acculturation. Moreover, when measuring acculturation, it may be important to note the ages which individuals are living in the United States or Mexico. Research suggests that there is no Immigrant Health Paradox if the individual arrives before the age of 6 (Vega et al., 2004), however, it is not clear whether an Immigrant Health Paradox exists if the individual lives in Latin America for 6 years of their adolescent, adult, or older adult life.

Further obscuring levels of acculturation, a quarter ($n = 2$) of participants used Spanish only during their interview, 62.5% ($n = 5$) of participants responded entirely or almost entirely in English, and the remaining participant responded mostly in English, but frequently switched to Spanish. This highlights that many participants are bicultural or at least felt some level of comfort speaking both languages. To obtain a better measure of participants' acculturation level, which considers enculturation, a bi-directional measure of acculturation should be implemented. This would also be important because holding onto aspects of one's own culture can be protective towards or present risks for Latinos' mental health.

Regardless of these limitations, data collected on acculturation revealed appreciative insights. For example, despite a lack of explicit naming of their own personal mental health, in the post-interview survey the less acculturated (Spanish-speaking) participants reported having been diagnosed with depression and/or anxiety more often (e.g., Juanita and Pamela). This may be because during interviews, questions regarding mental health were often clarified as inquiring about their emotional feelings rather than their somatic feelings. Several studies have suggested that Hispanic/Latino people will often focus on physical symptoms rather than psychiatric symptoms, or emotions during doctor visits (APA, 2017). These participants also tended to divert the focus of the conversation from their own situation to that of others. One reason behind this may be a culturally different focus on their own emotional well-being. In contrast to U.S. culture, which is generally individualistic, Latino culture is collectivistic (Hofstede, 2001). Less acculturated Latinos may focus on the well-being of their family or collective society rather than their own personal well-being. In fact, Isa also perceived this cultural behavior; she notes, "Growing up in a Mexican household, emotions, and discussions weren't always something that was brought up within my household." Thus, this suggests that mental health may be less

stigmatized in U.S. culture, leading those with higher acculturation to speak about it more freely. Additionally, participants who have lived for longer periods of time in the United States may have had more exposure to conversations surrounding individual mental health, anxiety, and depression, and be more prone to speak about mental health using such terms.

Interviews also revealed that acculturation may play a role in participants' mental health during the pandemic. More acculturated participants may find themselves with added responsibilities to help those who are less acculturated navigate a culturally new way of living (e.g., Juanita helping her siblings; Alex helping her father translate documents). By combatting pressures against acculturation, Randy faced tensions in their family that are affecting him during the pandemic. Acculturative stress (i.e., pressures towards/against acculturation) may be one factor which contributes to the mental health of young adult, second-generation Latinos during the pandemic. This finding supports recent literature which found acculturative stress to be a risk factor for suicidality, a symptom of depression, during the COVID-19 pandemic (Wasserman et al., 2020).

Familism

Both the quantitative and qualitative data revealed high levels of familism across factors: familial obligation, family as referents, and perceived family social support. The interview revealed that several participants perceived an obligation to support their families. For example, Alejandra would work at her uncle's nursery, babysit her younger cousins, and drive her mom to physical therapy; Juanita would support her brothers at school and work to help her mom financially; Pamela would work with her aunt and uncle to support her family in Mexico, etc. Although he was not living with his parents, Randy financially supported them by sending them a share of his unemployment benefits

even as he himself was in a precarious financial situation. Participants, such as Camila and Alejandra also shared about how they used their relatives as behavioral referents during the pandemic. They also frequently mentioned relatives as their main sources of emotional and instrumental support. For example, Randy reported receiving emotional support from his aunts, Isa from her husband, Alejandra from her mom. Juanita's family received instrumental support from her uncle in the form of housing.

The qualitative data suggests that while familism can be a protective factor for the mental health of young adult Latinos during the COVID-19 pandemic by providing them with essential support, it may also serve as a risk factor. Several participants mentioned receiving helpful emotional and instrumental support from their relatives. However, participants feelings of obligation to support the family may hinder access to resources that they need themselves, as in Randy's particular situation. The data also suggest that during the pandemic, valuing family as referents can hinder positive mental health outcomes for young adult Latinos if parents are highly restrictive towards social gatherings. Young adult Latinos who had more social interactions with friends tended to have better mental health outcomes.

Moreover, recent studies suggest that Latinas may be more affected by familism values than their male counterparts. A report by the Robert Wood Johnson Foundation which reported that about one in four teenage Latinas have considered suicide, identified familism as a potential contributing factor. Although familism emphasizes a strong family unit, can inhibit Latina teenagers from embracing their own unique independent identity (Aguilar et al., 2017). Although the report mentioned focused on teenage Latinas, this finding likely also applies to young adult Latinas, since studies have shown that

complete identity achievement does not typically occur until mid to late-adulthood (Fadjukoff, 2016).

Stressors related to COVID-19

Key stressors that young adult second-generation Latinos living in rural/agricultural California have faced during the COVID-19 pandemic include: fear of COVID-19, job, financial, and housing insecurity, decreased social interactions, and personal and children's challenges with online schooling. However, many participants linked their stress to living in precarious financial situations due to job loss or underemployment. A recent study found that Latinos were more likely to have experienced a pay cut (40%) or job loss (29%) during the pandemic than the national average (27% and 20%, respectively) (Krogstad et al., 2020). Additionally, the U.S. Bureau of Labor Statistics (BLS) reported that the national unemployment rate rose to 14.7% in April 2020, and that the rate for Latinos was 4% higher than that of non-Hispanic Whites and Blacks (2020). In this study, only half participants reported being employed, and of those, nearly all of them reported being underemployed or not earning enough money to support themselves independently.

One aspect minimally discussed by participants as a stressor or protective factor was romantic relationships. Recent literature has found that relationship quality (but not relationship status) was related to mental health during the COVID-19 pandemic (Pieh et al., 2020). Although demographic survey data revealed that over half of the sample was not married or living with a partner), neither the survey nor the interview inquired about participants' close relationships. Isa, the only participant who was married, mentioned her partner as a key source of social support.

Future research may decide to further investigate the influence of close (romantic) relationships during the pandemic for Latinos living in rural and agricultural California.

Coping/Support

The ways participants have coped with the effects of the pandemic include: engaging in outdoor and social activities, engaging in social spaces online, stating positive self-affirmation, engaging in pleasurable activities, treating themselves, and relying on friends for support. Moyce et al., (2020) identified relying on positive thinking to protect themselves from infection. Although this has also been supported by previous literature (Cobb et al., 2016; Carrion et al., 2017; Loi et al., 2017), participants in this sample did not utilize this as a mechanism to cope with fear of the virus. Instead, one participant mentioned taking vitamin D for prevention. Institutional support (e.g., stimulus check, pandemic EBT, food stamps, and unemployment insurance) has also provided financial assistance which may relieve some financial stress that Latino young adults living in rural/agricultural California are facing.

Although one participant mentioned attending church during the pandemic, religion was not identified as a common coping mechanism among this community. This finding stands in contrast to several studies which suggest that reliance on religion and spirituality is a common health practice and coping mechanism among Latinos (Moyce et al., 2020; Lujan & Campbell, 2006; Reyes-Ortiz et al., 2008; Lerman et al., 2018). In fact, one participant, Camila, even reported how her parents' dedication to organized religion had caused tensions in their family that have continued throughout the pandemic. Previous research suggests Camila's experiences are not an anomaly. In a research review on the mental health of Latino youth, Aguilar et al., (2017) found that Latino

cultural values such as Marianismo, rooted in Catholicism's admiration of the Virgin Mary, may be a factor contributing to the high rates of suicidal ideation among Latina teenagers. Marianismo is the belief that women must be pure, self-sacrificing, pleasant, nurturing and demure (Garcia, 1997). Teenage Latinas are often met with pressure to meet these cultural standards, and this pressure can lead to development of anxiety and depression.

Value of Mixed Methods

This study highlights the value of mixed methods. Corroborating results allowed for deeper insights. Because both quantitative and qualitative measures were used, discrepancies in the way less acculturated Latinos reported on their mental health were able to be identified in the data. For example, although during the interview less acculturated Latinos spoke minimally about their personal mental health, they reported mental health diagnoses and relatively poorer mental health scores in the quantitative questionnaire.

CHAPTER 3: EXPLORING A POTENTIAL IMMIGRANT ‘MENTAL’ HEALTH PARADOX DURING THE COVID-19 PANDEMIC

This section aims to explore whether an Immigrant ‘Mental’ Health Paradox has emerged in the Latino community during the COVID-19 pandemic. To accomplish this goal, this section compares qualitative and quantitative data from young adult, second-generation Latinos collected by Plancarte (2021) to qualitative and quantitative data from older adult, immigrant Latinos collected by through the CLIMA Study at UC Merced during their second data collection period from March 1, 2021 to March 12, 2021 in Fresno County, CA (See Ch1, p.6-7).

Methods

Participants

Participants were recruited from two separate datasets, that collected by Plancarte (2021) (see Ch2, p.23) and another collected by the CLIMA Study team. The CLIMA Study sought participants who: (1) self-identified as Latino, (2) belonged to a mixed status household (3) were 18-55 years of age, and (4) resided in one of the following rural and agricultural regions: San Joaquin Valley and Imperial Valley. Using purposive sampling methods, a total of 11 Latinos from rural regions in the state were recruited through the CLIMA Study team’s network of immigrant service providers, advocates, and scholars (n = 11). Of the eleven participants, only nine completed the follow-up survey (n = 9). One participant refused to complete the survey because they had reservations about sharing their personal information; the other participant was called back to work while completing their interview. Thus, although the qualitative results presented reflect all 11 participants, the quantitative results only reflect the nine participants who completed the survey.

Materials

Materials used included those outlined by Plancarte (2021) for both qualitative and quantitative phases (see Ch 2, p.22 and 24-26).

Procedure

For both datasets, ethical approval was obtained from the University of California, Merced Institutional Review Board. Procedures for the dataset collected by Plancarte (2021) are outlined above (See Ch2, p. 22-23 and 26-27). To gather data for the CLIMA Study, in-depth, semi-structured interviews were conducted with immigrant Latinos in rural California counties including Imperial, Tulare, and Fresno. Each interviewer was trained by the principal investigator of the CLIMA Study, Maria-Elena de Trinidad Young, MPH, PhD, to ensure high-quality data was gathered. An initial wave of data collection was carried out from July 13, 2020 until September 12, 2020 in Imperial and Tulare Counties and a subsequent wave was conducted from March 1, 2021 until March 12, 2021 in Fresno County. Unlike the first wave of data collection, the second wave included quantitative measurements of familism as well as the measures of acculturation and mental health mentioned in Plancarte (2021). Thus, for comparability, only data collected during the second wave was utilized. Due to national safety guidelines during the COVID-19 pandemic, all qualitative and quantitative data were conducted over the phone or Zoom (Zoom Video Communications Inc, 2021). Eligible participants who expressed interest were provided with an overview of the project and scheduled for a remote interview. After obtaining informed consent, participants were interviewed for approximately 60-90 minutes. Interviews sought to identify how participants' financial circumstances, employment conditions, access to health care and other basic needs changed during the pandemic and how these have shaped their physical and mental health. After the open-ended questions, participants

completed a brief survey verbally to collect socio-demographic data and responded to questionnaires on depression, anxiety, acculturation, and familism. Each participant was compensated for their time and participation with an electronic \$25 Target gift card.

Analysis

Qualitative Analysis. Analysis for the dataset collected by Plancarte (2021) are outlined above (See Ch2, p.23-24). To prepare CLIMA interviews for analysis, the interviewer (a graduate student and research assistant at UC Merced, not the main author) produced written memos regarding key topics discussed by the participant. Due to time constraints, these memos were analyzed in place of the interview transcripts. Similar to the qualitative analysis procedures outlined in Plancarte (2021), I recorded themes presented in the memos that aligned with the quantitative measures utilized in the study (e.g., familism and acculturation). I also recorded mental health risk and resilience factors (e.g., stressors, support, coping skills) and symptoms presented in the memos. Often, the memos included time notes regarding when topics emerged. In these instances, I would listen to the recording, transcribe relevant audio snippets, and translate them from English to Spanish using my native Spanish-language knowledge. To confirm accuracy of translation, I consulted with three bilingual and bicultural members of the CLIMA Study team.

Quantitative Analysis. Analysis for the dataset collected by Plancarte (2021) are outlined above (See Ch2., p. 26-27). An analysis of the CLIMA Study's sociodemographic data was completed using descriptive statistics with the quantitative analysis software jamovi (The jamovi Project, 2021) and SPSS (IBM Corp, 2020). Measures of frequency (count, percent), central tendency (mean), and variation (standard deviation, minimum and maximum variables) were calculated for each measure and demographic data where applicable. Independent t-tests

were also conducted to assess whether there were mean differences in familism measures (i.e., support and obligation) and mental health (i.e., anxiety and depression) between samples, gender, and language. Additionally, chi-square tests of independence were performed to examine the relationship between mental health diagnoses and sample.

Aim 2: Quantitative Results

Demographics

The average age of the older adult, immigrant Latino sample (Sample 2) ($M = 46.2, SD = 8.7$) was more than two times the average age of the younger second-generation Latino sample (Sample 1) ($M = 21.4, SD = 3.1$). Unlike Sample 1, where half of participants were interviewed over the phone and 75.0% were interviewed in English, all participants in Sample 2 were interviewed over the phone and in Spanish (one participant responded in Spanglish). Additionally, all participants in Sample 2 resided in Fresno County, and were married. Like Sample 1, a majority of Sample 2 participants identified as female (66.7%, $n = 6$). Sample 2 include more participants who were employed (88.9%, $n = 8$) than Sample 1 (50.0%, $n = 4$). Overall, Sample 1 had more formal education than Sample 2, where a majority of participants did not receive an education beyond high school (88.9%, $n = 8$) and one participant had received their associates degree (See Table 6).

Table 6

Demographics by Sample

Format	Sample 1		Sample 2	
	Count	%	Count	%
Phone	4	50.0	9	100
Zoom	4	50.0	0	0.0
Language				
Spanish	2	25.0	8	88.8
English	5	62.5	0	0.0

Both	1	12.5	1	11.1
County				
Tulare	3	37.5	0	0.0
Imperial	5	62.5	0	0.0
Fresno	0	0.0	9	100
Gender				
Female	6	75.0	6	66.7
Male	2	25.0	3	33.3
Employment				
Unemployed	4	50.0	1	11.1
Employed	4	50.0	8	88.9
Education				
Elementary	0	0.0	3	33.3
Middle	0	0.0	2	22.2
High	0	0.0	3	33.3
Some College	3	37.5	0	0.0
Associates	5	62.5	1	11.1
Marital Status				
Single	5	62.5	0	0.0
Living with Partner	1	12.5	0	0.0
Married	1	12.5	9	100
NA	1	12.5	0	0.0

Mental Health

The mean anxiety score for the Sample 2 was 1.2 (*SD* = 1.0) and 2.6 for Sample 1 (*SD* = 2.0). The mean depression score for Sample 2 was 0.8 (*SD* = 0.7) and was 2.00 for Sample 1 (*SD* = 2.1) (See Table 8). Although the mean anxiety for Sample 2 was less than that of Sample 1, independent t-tests revealed these differences were not statistically significant. Similarly, the mean depression score for Sample 2 was less than Sample 1, but these differences were not statistically significant ($p > .05$). There were also no significant mean differences in anxiety or depression scores between males and females or between languages spoken during the interview ($p > .05$). Additionally, although greater percentage of participants in Sample 2 were diagnosed with anxiety (33.3%) and depression (44.4%) than in Sample 1 (12.5% and 37.5%, respectively)

N	8	9	8	9	8	9	8	9
Age	21.4	46.2	3.1	8.7	18	33	27	66
Depression	2.0	0.8	2.1	0.7	0.0	0.0	5.0	2.0
Anxiety	2.6	1.2	2.0	1.1	0.0	0.0	6.0	3.0
Obligation	4.1	4.0	0.6	0.3	3.5	3.7	5.0	4.5
Support	3.9	4.0	0.9	0.3	3.0	3.5	5.0	4.5
Yrs. Outside U.S.	4.1	18.8	4.6	7.3	0.0	4.0	10.0	31.0

Familism

Sample 2 had a mean familial obligation score of 4.0 (*SD* = 0.3), and Sample 1 had a mean score of 4.1 (*SD* = 0.6). Regarding familial support, the mean score for Sample 1 was 3.9 (*SD* = 0.9) and 4.0 for Sample 2 (*SD* = 0.3) (see Table 8). However, there were no significant differences in mean levels of familial support or familial obligation between the two samples (*p* > .05). There were also no significant differences in mean familism subscale levels between gender and language.

Aim 2: Qualitative Results

In this study, I compared the pandemic experiences of US-born Latinos living in rural and agricultural California (Plancarte, 2021) to those of immigrant Latinos living in similar regions in order to explore a potential Latino ‘Mental’ Health Paradox.

Acculturation

Factors related to acculturation affected the mental health of participants in both samples, although in slightly different ways. U.S.-born participants often perceived responsibilities to reduce the acculturative stress of those less acculturated (e.g., Alex and Juanita), or faced pressures from their family members against acculturation (e.g., Randy). Immigrant participants, on the other hand, have faced acculturative stress in the form of pressures to acculturate (e.g., to

achieve higher wage jobs). Pepe's narrative speaks to these pressures. When asked to provide an example of challenges he had encountered due to language, he responded:

Well, for example, getting a job, right? And having the salary be, let's say, fair. Other times it was the conditions. Also, due to not speaking the language, during those times it would be a bit difficult to get a job and have it pay a fair wage. I think that that was what I struggled with and fought for most, for that. (Pepe, Spanish-speaking, Sample 2, Fresno)

Ultimately, Pepe explained how learning English allowed him to begin his own landscaping business, increase his income, and ease his transition into the United States.

Stressors

Income & Job Insecurity

Income and job insecurity was a key source of stress in both samples. However, Juan spoke to the disparities in job and income insecurity felt by individuals who are undocumented versus those who are U.S. citizens. When speaking about farmworkers who wanted to keep working despite having contracted the coronavirus, he notes:

They worry also about "How will I pay rent? How will I pay the bills?" They're people—well, thanks be to God that I have my documents right, if I don't work, well I can get unemployment and get pay, at the least, well not the same as what I'm earning but, I was using unemployment a lot last year. Because as I'm saying, they laid me off for a long time, but there are people that don't get anything, like those people who are undocumented, and they worry, "How am I going to work if I am sick? How will I pay the bills? How will I buy food for my kids?" I mean, it's a huge worry, and for me as well... (Juan, Spanish-speaking, Sample 2, Fresno)

Working Conditions

A related stressor for some participants in both samples was workplace conditions. For example, Karina shared how she stopped working when she was pregnant after she asked for accommodations in the workplace and did not receive them. Instead, she felt that her employer retaliated against her because she was then tasked with more difficult tasks and was often expected to perform them alone. Karina left the workplace and tried to report the conditions she

experienced but was not able to complete the process due to lack of communication from the OSHA office and lack of information about the process. Similarly, Juan explained that bosses can be very demanding, even at the expense of the workers' well-being:

They make us for example, if it's hot, sometimes they get mad because the workers want to leave early, and they want to get their fruit, and one, well- Also, the law doesn't allow workers to work when its 100 degrees or hotter, but the boss gets mad... (Juan, Spanish-speaking, Sample 2, Fresno County)

In Sample 1, hazards identified in workplace were frequently related to COVID-19. For example, while explaining his job as a first-responder, Miguel mentioned:

I don't know who I pass by or whatever. And even then, even if I have to change, it would take a while because we have all that gear that we wear, so it would have to take a while to take it all off and put it all back again. And also, you have those unfortunate events where people seek help from us because they have COVID, and they need an escort, an ambulance, or an escort to the hospital, and sometimes they're not wearing any PPE, or sometimes we have to perform CPR or chest compressions, AED; whatever it is that we have we to perform, and well, we can't have them with – if they're not breathing, we can't have them with protective equipment. So, we just save a life and – try to save a life, and hopefully we don't get COVID, especially because just have those little masks. We don't even have the face shields or anything like that yet. A lot of us aren't vaccinated yet. So, there's that with my job. (Miguel, English-speaking, Sample 1, Imperial County)

COVID-19 Safety

COVID-19 safety was a main concern for many participants in both samples. For example, in explaining how a trip to the store has changed since the pandemic began Luis expressed,

... now you're going with the fear that a person comes in, comes up to you, and you say no, no, no, "Could that person be infected?" You're thinking about the fear that it might infect you—every day, every moment you go out, you're on the lookout because maybe you'll get infected, maybe you won't. (Luis, Spanish-speaking, Sample 2, Fresno County)

Similarly, when Mimi was asked about her primary concerns at her daycare job, she noted:

Getting infected. Because there were kids who were infected. There were various cases of kids and adults, of the parents who got infected, so my concern was that: to become infected and infect my baby. I was pregnant. I have a baby at home and a teenager so it was difficult to know that I could have brought all that home. If it were up to me, I

wouldn't have worked since the beginning, but well, that's what I'm supporting myself with. So, I couldn't not go. (Mimi, Spanglish-speaking, Sample 2, Fresno County)

Decreased Social Interactions

Participants in both samples longed for more social interactions. For example, in Luis' explanation of how the pandemic has caused changes "as drastic as night and day," he mentioned how he and others miss the social interactions they used to have:

You no longer go out with peace of mind. For example, I used to go to the park to walk, to talk with my friends. Well, all of that ends. You're left alone because you can't even visit your siblings or your cousins or anyone anymore. Because in reality, don't you think that they'll say, "I got infected" or "They might infect you" or "I might infect you," you understand what I'm saying? ...Because really, one does miss the reality of being around family, being around friends. (Luis, Spanish-speaking, Sample 2, Fresno County)

For a new mother of two (Mimi) the social isolation made her pregnancy particularly difficult. She described her second pregnancy as being "very sad" compared to her first two pregnancies due to the isolation. She experienced post-partum depression and feels that having her husband with her was extremely helpful, even though it was financially difficult to be out of work.

Children's Mental and Physical Health

Similar to Alejandra's experience (Sample 1), participants in Sample 2 mentioned being concerned about their children's mental health and trying to find ways to help them cope. For example, Gladys mentioned that she always wants to see her kids happy and tries to do her part in that way. When asked how she felt about her daughter's anxiety, she noted:

Worried, because you never want to see your children in a situation like this. You always want to see them content, happy. You do everything possible to make them content and happy. You do everything you can on your part to make sure that that's what happens and to suddenly see them like this, one thinks without reason, well yeah, it's a little worrying. Rather, very worrying because then you think, you listen to other situations and you say no I don't want my daughter to go through a situation like this. I'd rather do everything I can to fix it in time... Because sometimes one hears other mothers, "oh my son has depression, it's been so long that he's had depression or sometimes he's okay and sometimes bad" and so on. (Gladys, Spanish-speaking, Sample 2, Fresno)

To support her children's mental health, Gladys mentioned that she would spend time with her daughters outside in their yard, go for walks, watch TV, and find ways to exercise at home.

Mimi, Juan, and Juana also felt that their children's behavior was impacted by the pandemic and stay-at-home orders. For example, Mimi noticed that her children's sleep schedules changed, her toddler became easily agitated, and her teenager expressed feeling depressed. Mimi observed him closely to care for him because she was worried, given things that she had heard about depression. To help, she did not limit his videogame playing because she felt it was a good distraction for him.

Juan observed his children's mood sadden because of the financial adjustments he has had to make during the pandemic (e.g., ceasing to pay for his younger daughters' phone and spending on treats and other things). To liven their spirits, he tried to find ways to help his daughters take their minds off the pandemic. He mentioned encouraging his children to play outside, walk in the neighborhood, and giving them things to color and paint. Juan noted that it's hard for him as a dad to see them at home studying; he likes to know that they are leaving the house and seeing them happy:

To see them sad and see them there all day, one feels bad because they are, well, you assume that they are bored right? And then another thing, they're here at the house and sometimes they're just eating, eating and they don't do any exercise, and I had the chance to see them gain weight and that, sometimes I say "*Mija*, go outside and walk, I have some exercise equipment here, do some exercise for half an hour." But if you get home every afternoon and see them there all sitting down and eating, eating chips, eating, eating sodas, eating, eating cookies, that's what I don't like, I don't like that because it's bad for them... (Juan, Spanish-speaking, Sample 2, Fresno County)

Juana also observed weight gain in her children and increased sleep time. Although one of her children mentioned he felt depressed, she believed he was simply "being lazy" and reported she told him to get up and clean to lift his spirits. Her youngest child, on the other hand, was experiencing behavioral issues and was extremely irritable. Her provider referred her child to a

psychologist, who he meets with for in-person sessions once a month. Juana stated that therapy has helped her child tremendously, and that he is a different person.

Relatedly, participants in Sample 2 expressed general concerns about their children's screen time since they noted it could affect their children's sight and levels of physical activity. For example, Juan observed that his children were spending more time on their phones and advised them to limit their screen time: "...sometimes I see them all day with their cellphones, with the computer, "Mijo, leave that alone for a bit, go do something else because it's going to affect your eye sight." To manage this, he proposed implementing schedule for spending time and encourages his younger daughters to play outside and his older children to go for a walk outside. Similarly, Karina supervises her children's screen time and limits their time online because she is also concerned about their eyesight. Lily noticed that her kids are on their phones a lot and are not as active. This is frustrating for Lily because she feels there are no alternatives.

Systemic Response

Participants in both samples expressed dissatisfaction with the systemic response to the pandemic. Luis suggested that the government didn't do what it should have:

Well, many times, the pandemic spread. Because, actually, in my opinion, the government we had before did not take the necessary measures. If they had been taken and if [the government] had enforced the laws, we would not have as many problems as we have, that's the truth. (Luis, Spanish-speaking, Sample 2, Fresno County)

Similarly, Randy (Sample 1) expressed his distress in the way the pandemic was responded to by larger structures of power:

Yeah. A bunch of people were getting infected every day. And some of the stuff I didn't wanna hear about, but I knew people were dying. And at the same time, people were opening up shops even though they were dying and stuff. I just felt really bad for the workers and for the people going there. It's basically taking a look at these data where people were dying and prioritizing money over human lives. And I thought that was really sad. (Randy, English-speaking, Sample 1, Imperial County)

Safety Nets

Several participants mentioned benefitting from government and community safety nets, however, many often felt that one resource was not enough to support them alone. Mimi was one participant who felt significantly helped by government safety nets. For example, after her pregnancy complications, Mimi was able to use disability leave. However, because disability payments were far lower than her paycheck and her utility bills were increasing due to her family being home all day, her family sought other financial resources. Mimi reached out to a community-based organization which helped her file for utility and rent assistance. She also used Pandemic-EBT but felt that it was not enough to support her family, so they sought food donations. To support her schooling, her college provided financial support by providing reimbursement for school expenses, but the reimbursement took several months to process. Mimi stated how critical access to low-income housing had been for her family:

Where I live, it's low-income based, so they're apartments and I had to tell the manager. The reason I've been able to stay afloat is because they lowered the rent, but if I had not been living in low-income-based, I don't know how I would have paid rent. (Mimi, Spanglish-speaking, Sample 2, Fresno County)

Family Dynamics

In accordance with what was reported by the second-generation Latino participants, several immigrant Latinos mentioned relying on relatives for support. Many of them, including Karina, Juan, and Luis, reported receiving assistance from their older children with meeting expenses and/or helping their younger children with virtual schooling. Juan's shared appreciatively how his son has helped him a lot financially in spite of his hours being cut:

My eldest son was also working. He's the one who was helping me a lot. He has a job in Fresno. And sometimes he works little, his work also decreased a few times to be honest, but I'm always very supported by my son, and that's very good (Juan, Spanish-speaking, Sample 2, Fresno County)

Regarding online learning, Karina and Victoria mentioned relying on their daughters to help the rest of her children with their work and with troubleshooting technical issues. Lily would also enlist her son to her help daughter with her homework, however, this was difficult for him too. Some participants (e.g., Lily and Victoria) expressed felt badly about not being able to help their children with their learning due to language barriers or not understanding the material.

Coping

Similar to Randy in Sample 1, some participants from Sample 2 mentioned reducing their time listening to news regarding the pandemic in order to manage their anxiety about the virus. For example, Gladys shared how the first couple of months of the pandemic she was very worried about what she saw on television, but after deciding to decreased her time watching TV, she felt more relaxed:

... the first two months, worried because of what I was watching on TV. I would think "oh this virus is going to get me and I'm going to die" that's what it made me think – everything I watched and listened to on the TV, that the virus is going to get me and if it gets you, you die, right? So I chose not to watch TV anymore, I stopped watching TV and I feel like it's helped me. (Gladys, Spanish-speaking, Sample 2, Fresno County)

Lily similarly decided to disconnect herself from the TV, internet, and news because it made her feel felt it was harming her mental health by provoking excessive worry.

Participants from Sample 2 more often mentioned using work as a distraction from the pandemic. For example, Luis expressed that he felt confined being indoors all the time and views going to work as an outlet. After mentioning his return to work soon, he noted:

Actually, it's better, because being at home all day depresses you, it depresses me. You feel claustrophobic of being locked up, you feel a tension, one that- no, no, I don't stay in the house. I do like to be there for small periods of time, but I come and go, come and go, because the four walls, they just- seeing the same things and not having any activities like before, they attack you, really. (Luis, Spanish-speaking, Sample 2, Fresno County)

Similarly, Juanita expressed that she enjoyed working because she becomes preoccupied with worries about her health when she is not working. Additionally, slightly different than spending time outdoors as Sample 1 had mentioned, Mimi noted that she would go on drives with her husband to calm themselves.

Participants in Sample 2 mentioned practicing religion and/or spirituality and using it as a coping strategy more often than those in Sample 1. For example, Mimi found herself reading the bible more when she noticed herself and her husband becoming easily irritated. Additionally, when Gladys' daughter was anxious about the virus, she observed that her daughter began to pray on her own to calm herself before bed, when previously, she would be received with unenthusiastic responses about praying:

Every night, as a family, before they go to sleep, we pray. We say prayers, so you know that they say, "Aw, mommy again?" or something like that. And in those days, she alone, "Mommy, I'm going to pray". When I heard her say, "I'm going to pray," I was worried because I thought, she never wants to and now. She alone, with her own fear I think, I don't know, and she'd say that's how she rested, that's how she could sleep. (Gladys, Spanish-speaking, Sample 2, Fresno County)

Additionally, at the interviews closing, Juan mentioned he would be attending church later that day. He noted that he felt relatively safe at church as only a small number of attendees were permitted, it took place outside, and with families spaced apart. He reported that it was a positive experience for his and his kids which relaxes them and makes them happy.

We're also going to church right now. They hold the mass outdoors, here outside. And there are a lot of restrictions, with the facemasks, and we have our hand sanitizer, and its nice. I'm Catholic, we go to the Catholic church and then we come back to the house calm...Before, we would go every week, every Sunday, but now with the pandemic, it's been a while since we've gone...we go feeling more secure because not a lot of people go... but it makes us happy to go for a little bit to listen to the Word, it's something very nice for my kids and for me as well. (Juan, Spanish-speaking, Sample 2, Fresno County)

Lily family also attended church on Zoom and in person since it opened. She reported that people at the services wore masks and social distanced. She reported enjoying it because was

something to do, but found it frustrating that attendees could not stay and talk after the services, especially since it has been a long time since she saw many of them in person and this socializing is a part of the church experience. Lastly, although some participants, such as Luis, did not mention attending religious masses in person or online, they mentioned taking advantage of food donations from religious sites and churches.

Discussion

Quantitative analyses did not reveal significant differences in mean anxiety or depression scores between Sample 1 (US-born Latinos) and Sample 2 (immigrant Latinos) nor significant relationships between mental health diagnoses and sample. Thus, this study does not provide clear quantitative evidence for the Immigrant ‘Mental’ Health Paradox during the COVID-19 pandemic. Because a small sample size may have hindered obtainment of significant results, future studies should increase sample size.

Although the present study did not obtain significant quantitative results, previous studies (before the COVID-19 pandemic) are in favor of an Immigrant ‘Mental’ Health Paradox. For example, in the longitudinal, population-based Hispanic Community Health Study/Study of Latinos, Wassertheil-Smoller et al., (2014) found that first-and second-generation Latinos are significantly more likely to have symptoms of depression than those born outside the United States. Similarly, in an analysis of the National Latino and Asian American Study and the National Comorbidity Survey, Alegria et al., (2009) found that US-born Latinos had higher rates of psychiatric disorders than their immigrant counterparts. Also important to note is that the Immigrant ‘Mental’ Health Paradox did not apply similarly to all Latino subgroups. Although it held true for Mexicans regarding mood, anxiety, and substance use disorders, it was only evident

among Cubans and “Other Latinos”³ for substance use disorders. Consequently, future studies exploring the Immigrant ‘Mental’ Health Paradox during the pandemic should remember to not treat Latinos as a heterogenous group.

Nevertheless, researchers have proposed several explanations for the Immigrant ‘Mental’ Health Paradox. One explanation put forth by Campbell et al., (2012) incorporates social identity theory (Tajfel & Turner, 1986) and social comparison theory (Suls et al., 2002). Social identity theory proposes that a person gains a sense of self through group memberships (i.e., ethnicity) rather than only personal characteristics; social comparison theory posits that individuals determine their own well-being and worth based on how they compare to similar others. Researchers have also found that these interpretations of self-worth based on social comparisons can have concrete consequences, such as physiological stress (e.g., Cohen et al., 2008). Thus, Campbell et al., (2012) proposed that the Immigrant ‘Mental’ Health Paradox could be a result of Latino immigrants making “downward or lateral” group comparisons to groups who are lower or at the same level of the social hierarchy (e.g., their relatives in Mexico). Contrary to this, US-born Latinos may be more prone to make “upward comparisons”, or comparisons to individuals who are higher in the hierarchy (e.g., higher income, ethnic majority). Qualitative results from the present study, however, contradict this hypothesis. For example, although Pamela (Sample 1), who had acculturation levels comparable to Latino immigrants (i.e., lived in Mexico for 10 years and is Spanish-speaking), made a downward comparison to people experiencing homelessness and stray animals during her interview, she had been diagnosed with anxiety and depression.

³ In the study, the “Other Latino” group was comprised of Latinos mainly from the Dominican Republic, Colombia, El Salvador, Ecuador, Guatemala, Honduras, Peru, and Nicaragua

An alternative explanation for the paradox proposed by Perez et al., (2008) is that Mexican immigrants, because they tend to arrive at an older age, may experience less interactions with non-Latinos over their lifetime compared to US-born Latinos, thus reducing incidents of discrimination. Although it may be true that immigrant Latinos have had less interactions with majority group members during the pandemic due to stay-at-home orders and their overrepresentation as essential workers (University of Illinois Chicago School of Public Health, 2021, Feb. 2), the current study highlights that many immigrant Latinos are perceiving discrimination at their workplace. For example, Karina's interview was largely dominated by an explanation of workplace conditions which were hazardous for her as a pregnant woman. She also elaborated on how the decision to leave her workplace contributed to many financial hardships during the pandemic. Thus, although during the pandemic, immigrant Latinos may encounter less interactions with dominant group members than before, the unpleasant or discriminatory encounters they do have at their workplace during the pandemic may contribute to significant financial, health, and emotional hardships.

One last explanation proposed for the Immigrant Health Paradox is that immigrant Latinos' higher levels familism inoculate them against many psychological stressors through the emphasis of close familial support (see pg. 13, Diaz & Niño, 2019). In accordance with what was forecasted by the literature above (see Ch.1), although familism is traditionally viewed as a protective factor, data from the present study suggests it may also be a risk factor for immigrant Latinos during the pandemic. Similar to Moyce, et al., (2020), this study revealed that immigrant Latinos are concerned about their family members in Mexico. Due to stay-at-home orders and the disproportionate effects which the national economic fallout has had on Latinos during the pandemic (U.S. Bureau of Labor Statistics, 2021), many participants expressed worry about their

(in)ability to provide financial or in-person, emotional support to their relatives in Mexico. All in all, more research needs to be done to draw conclusions regarding whether an Immigrant ‘Mental’ Health Paradox has existed during the pandemic.

Regardless of concrete evidence for the paradox, qualitative analyses revealed that both US-born and immigrant Latinos were stressed, but their sources of stress differed. Stressors that young adult, US-born Latinos often faced included: job insecurity, financial challenges, food insecurity, decreased social interaction, fear of COVID-19, challenges with providing or receiving familial support, and challenges with online schooling. The older adult, immigrant participants faced many of the same stressors, however, the qualitative data suggest they may have also faced increased responsibilities in regards to childcare, more instances of workplace discrimination, and faced acculturative stress more directly. Because these dissimilarities may be linked to age and employment differences across samples, future studies may select participants similar in age and with similar employment statuses, or control for these variables in quantitative analyses in order to draw more robust comparisons.

Another difference between samples was the manner in which they spoke about mental health. The Latinos higher in acculturation spoke more often about their personal mental health symptoms and in terms of anxiety or depression than their less acculturated counterparts. For example, Mimi, who was foreign born and spoke both English and Spanish during the interview, mentioned she was experiencing post-partum depression. On the other hand, monolingual Spanish-speaking immigrants often spoke about their mental health in terms of stress and sometimes psychosomatic symptoms. These findings are in line with previous literature which identified differences in the experience and meaning of mental illness between ethno-cultural groups. For example, Carpenter-Song et al., (2010) found that Latino participants viewed

psychiatric clinical labels as potentially very socially damaging, although having *nervios*, a psychosomatic symptom tended to have little stigma. This would explain why many immigrant participants refrained from using the terms “depression” or “anxiety” but utilized terms that referred to psychosomatic symptoms.

U.S.-born Latinos and Latino immigrants also coped differently with the effects of the pandemic. Some of the coping skills that helped the young adult, second-generation Latino participants include: spending time outdoors, socializing with friends or family, positive self-affirmations, and engaging in pleasurable activities. Older adults tended to cope with the pandemic by distracting themselves through work, going on drives, and engaging in religious practices. However, highlighted by participants in both samples, older adult immigrant Latinos often encouraged their children to engage in positive coping strategies (e.g., spending time outdoors and engaging in physical activity) and limit potentially harmful activities (e.g., being sedentary for long periods of time and using electronics). This information is in accordance with a 2006 national survey conducted by the American Psychological Association (APA) which revealed that more than half of Latinos reported feeling stressed in their daily lives however, compared to the general population, Latinos were more likely to engage in positive coping behaviors (e.g., exercising and spending time with friends and family) to manage stress. Thus, although results from the current study often contradict evidence for an Immigrant Health Paradox, it supports existing evidence for a Latino ‘Mental’ Health Paradox (National Alliance on Mental Illness, 2013). To obtain more robust conclusions, future studies should compare mental health outcomes and coping strategies among Latino and non-Latino white samples.

CHAPTER 4: LIMITATIONS, & CONCLUSION

Limitations

Quantitative Limitations

For both the sample of young adults (N = 8) and older adult Latino immigrants (N = 9), the limited sample size did not allow for identification of statistically significant relationships from the data or generalizable results. Difficulties I encountered with recruiting participants for quantitative data collection included: lack of response from organizations I intended to recruit from, time constraints from participants, and recruitment regulations due to the pandemic. Fear from community members regarding disclosure of their personal information may have also limited participation. For example, at the end of his interview, Miguel expressed concerns over confidentiality and retaliation from his employer for sharing information regarding COVID-19 safety in his workplace. Similar sentiments may have prevented other eligible community members from participation. Future studies should increase the sample size in order to allow for statistically significant results that are also generalizable to a larger population. With increased management of the pandemic, it is possible that organizations and participants may have increased availability to recruit or participate in the study.

The instruments used to collect the survey data present additional limitations. Due to time constraints and failure during pilot testing, some measures were omitted (ARSMA-II, CESD-10, STAI) and others were shortened (GAD-7 and Familism Questionnaire). Despite original intentions to use the Brief Acculturation Rating for Mexican Americans-II (ARMSA-II), a 12-item, validated, bi-directional acculturation measure available in English and Spanish, this measure was omitted due to its length and the lack of clarity when presenting response options over the phone. Acculturation was instead measured using language interviewed in and length of

time lived in the United States as a proxy. This presents a limitation, since the language which the participant interviewed presents a unidirectional measure of acculturation which does not acknowledge that some participants may be equally comfortable using both languages (i.e., enculturation). Future studies may seek to create an abbreviated acculturation measure specifically intended for administration over the phone.

Time constraints required that both the GAD-7 and the Familism Questionnaire were shortened, and the CESD-10 and STAI were omitted. Using only two items from the seven item GAD-7 to measure anxiety limited the validity of the measure. Similarly, using only the support and obligation familism factors did not allow for a complete measure of familism as a construct. Future studies should aim to utilize measures in their complete form to enhance validity and allow for more robust conclusions to be drawn.

Another possible limitation is that socioeconomic status was measured through occupation, employment status, and education. Although this information does provide a sense of participants' income and relative social status in society, a numerical income value would have offered a more precise and quantitative measurement. Income may be an important factor to consider since it has been identified as key influencer of mental health during the pandemic. For example, results from a survey administered during the COVID-19 pandemic in Austria revealed that having a lower income was associated with decreased mental health (Pieh et al., 2020). Moreover, a quantitative value would have allowed for additional quantitative analyses to be conducted, such as those which investigate the relationship between income and mental health. Nevertheless, together, the quantitative and qualitative information collected in this study provide valuable insights into participants socioeconomic status that can be used to draw perceptive conclusions.

Interviewer error also contributed to the limitations. Some questions from the Familial Obligation and Familial Support scales were omitted unintentionally by the interviewer. While many of the questions were randomly skipped, the second question of the Familial Support scale, “When one has problems, one can count on the help of relatives,” was more frequently omitted due to its similarity with the preceding question, “When someone has problems, s/he can count on help from his/her relatives.” Two out of the eight people who did respond to both questions answered differently. To prevent this problem in the future, interviewers might consider becoming familiar with the measure before administering it and systematically keeping track of the questions they ask.

Qualitative Limitations

Limitations existed within the qualitative data collection as well. First, the sample size proved insufficient to achieve saturation. Some studies suggest that 12 is an optimal number of interviews to reach saturation (Guest et al., 2006). This limitation may be addressed through additional data collection. Second, due to time constraints, the interview data for Sample 2 was analyzed using interview memos rather than using complete transcriptions. This may have resulted in less detailed analyses for the older adult Latino immigrants. Transcripts will be soon be acquired by the CLIMA Study and allow for equally deep analyses of both datasets.

Both Qualitative and Quantitative Limitations

Some limitations existed for both the qualitative and quantitative data collection. First, the data was self-reported, thus this data cannot be independently verified and may contain various sources of bias such as social desirability bias. Social desirability bias occurs when respondents tend to answer in a manner that will be view favorably by others; it may take form as over-reporting desirable behaviors or under-reporting undesirable behaviors (Nederhof, 1985).

Because I recruited participants via social media from a community which I am part of and am acquainted with some participants I interviewed, I provided participants with an option to be interviewed by another research assistant in an attempt to curb this bias; however, they each declined the offer. Thus, these respondents may have been particularly affected by social desirability bias, selecting information that would portray them in a positive light. Nevertheless, it is probable that all participants may have underreported negative coping mechanisms, while over reporting the positive ones. It is also important to note that familiarity with certain participants may have produced richer responses compared to others.

Second, this study is limited in its temporal generalizability. This data was gathered over a one-month period during the COVID-19 pandemic and represents a specific moment in time. Because the pandemic is changing our social and built environment very rapidly, participants may have very different experiences at a different point during the pandemic. Third, all of the Latinos part of this study identified as Mexican, thus conclusions drawn about the Latino or Immigrant Health Paradoxes may not be generalizable to other Latinos. Fourth, my fluency level in Spanish is not as high as it is in English. When interviewing the young adult, second generation Latinos, I sometimes forgot how to say certain words in Spanish and resorted to saying the word in English. Although all participants I interviewed appeared to understand English, it is important to consider that my level of Spanish fluency may have influenced the participants perceptions of me and what they shared.

The last limitation is in regards to exploring the Immigrant ‘Mental’ Health Paradox. Ideally, two samples which only vary in immigration status would have been compared to investigate the paradox; however, in the present study, age co-varied with immigrant status. Although age may have presented a confounding variable, this was accounted for when

conducting quantitative analyses. Additionally, differences caused by age may be revealed in greater depth by the qualitative strand, which is emphasized in the current study. Nevertheless, future studies which investigate an Immigrant Health Paradox should select samples which are similar in age. In a similar vein, a more robust analyses of the Latino/Immigrant ‘Mental’ Health Paradox should also explore the experiences of non-Latino whites and other generations (e.g., third- and fourth-generation Latino Americans) during the COVID-19 pandemic. Collecting and comparing data from a wider range of generations together may reveal clearer patterns relating to acculturation.

This study allowed for collection of valuable information; however, because of these limitations, this project should be considered an exploratory study which lays the groundwork for a more comprehensive study on the mental health of young adult Latinos in rural California and a(n) Latino/Immigrant ‘Mental’ Health Paradox during the COVID-19 pandemic.

Conclusions

This study is the first to examine (1) the factors influencing the mental health of young adult, second-generation Latinos and Latino immigrants in rural California, (2) how these communities are coping with the effects of COVID-19, and (3) the role that acculturation plays in relation to Latinos’ mental health during the COVID-19 pandemic, particularly through exploration of an Immigrant ‘Mental’ Health Paradox. This study revealed that both young adult second-generation and older-adult immigrant Latinos were experiencing several stressors during the COVID-19 pandemic at home, in public spaces, at school, and in the workplace. Specific stressors this study exposed include: job, income, housing, and food insecurity, potentially hazardous workplace conditions, challenges with promoting children’s well-being, COVID-19 safety, and feelings of social isolation. Some ways participants coped with the pandemic

included: spending time outdoors, with family or friends, doing physical activity, stating positive self-affirmations, taking car rides, and engaging in religious or spiritual activities. In all, results revealed that the COVID-19 pandemic has touched every aspect of the lives of Latinos living in rural and agricultural California, and unfortunately in unfavorable ways. This study provides in-depth exploratory data which researchers, policy makers, advocates, and other stakeholders should utilize to promote the health and well-being of Latinos living in rural and agricultural California, communities which have been among the most impacted by the pandemic in the state.

Practical Implications

Although many institutions have traditionally taken deficit-based approaches to addressing many public health or social problems, incorporating strength- or asset-based, community-driven approaches to solving the mental health challenges of Latino communities living in rural California may be more effective at creating sustainable solutions. A deficit-based approach is one which seeks solutions to social problems “by focusing on community needs and problems”; it often promotes “deficiency-oriented policies and programs” (Kretzmann & McKnight, 1993, p.1-2). It is also argued that this approach signals “failure, helplessness, and low expectations for the families and communities” and “creates a dependency on outside resources and solutions” (Center for Child Well-Being, 2011, p.1). Although deficit-based approaches may be effective at assessing needs and delivering immediate solutions, the significant fault in this approach is that it often is used as an intervention after the problem is already present, rather than striving to prevent it (Kretzmann & McKnight, 1993).

In addition to deficit-based approaches which may be beneficial by providing relief for immediate needs, policy makers, advocates, researchers and other stakeholders should also employ strength-based approaches to enhance resiliency among Latino families living in rural

and agricultural California. Strength-based approaches aim to discover and develop a community's assets and capacities (Kretzmann & McKnight, 1993). One strength which communities hold is knowledge regarding their community and potential ways to solve key challenges affecting their community. Several participants reported lack of employment opportunities as a key challenge their community faces. For example, Randy noticed about his community: "there's a lot of unemployment here. I was unemployed for a long, long time. And eventually, when I did find a job, it was seasonal." Moreover, Randy has first-hand knowledge of challenges that will be invaluable when proposing effective solutions. For instance, when I asked if he gets assistance from others with job application materials, he stated:

No. Not really. They have too much stuff going on. And I would feel bad asking for their help. Basically, it's not much they can help anyways because these places if they contact me back, they're like 'Oh, we're not hiring at this time.' Even though they have their job hiring right there in the window with them. (Randy, English-speaking, Sample 1, Imperial County)

Based on Randy's knowledge and lived experience, institutions may work with Randy to conduct a needs assessment regarding how to best support communities with high unemployment.

Miguel also observed the same challenge and noted how the community taking it upon themselves to solve this issue, "they [community members] gotta go to work and a lot of them are doing jobs for people, simple jobs. But they're – instead of hiring a company they'll just hire a friend." Thus, an alternative way to take a strength-based approach would be to support community members' efforts by possibly supporting to start their own business. This approach would be especially beneficial *in addition* to government safety nets such as stimulus and unemployment checks. Employing the community's knowledge and skills would create a more

sustainable solution for high unemployment or job/income insecurity than implementing safety nets only after the problem exists.

Future Directions

Future studies seeking to conduct a more robust investigation of Latino and Immigrant ‘Mental’ Health Paradoxes should recruit a larger sample, include populations at several different levels of acculturation (e.g., whites, Latino immigrants, second-generation Latinos, and third-generation Latinos), and utilize a bi-directional measure of acculturation. This study has also begun to reveal differences in how female versus male-identifying participants are affected by the endorsement of Latino cultural values during the COVID-19 pandemic. Future studies may seek to recruit a more gender diverse sample to further investigate differential effects of cultural values (e.g., familism and marianismo) based on gender.

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