Cultural, Contextual, and Individual Determinants of Mental Health Service Utilization Among Latinx Emerging Adults

Kenia Carrera Diaz
Utah State University

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CULTURAL, CONTEXTUAL, AND INDIVIDUAL DETERMINANTS OF MENTAL HEALTH SERVICE UTILIZATION AMONG LATINX EMERGING ADULTS

by

Kenia Carrera Diaz

A dissertation submitted in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in

Psychology

Approved:

Rick A. Cruz, Ph.D.
Major Professor

Michael Levin, Ph.D.
Committee Member

Rebecca Blais, Ph.D.
Committee Member

Guadalupe Marquez-Velarde, Ph.D.
Committee Member

Melanie Domenech Rodriguez, Ph.D.
Committee Member

D. Richard Cutler, Ph.D.
Vice Provost of Graduate Studies

UTAH STATE UNIVERSITY

Logan, Utah

2022
ABSTRACT

Cultural, Contextual, and Individual Determinants of Mental Health Service Utilization among Latinx Emerging Adults

by

Kenia Carrera Diaz

Utah State University, 2022

Major Professor: Rick A. Cruz, Ph.D.
Department: Psychology

The sociopolitical context of Latinx emerging adults in the U.S. has been evolving in the past decade with possible consequences to their mental health and access to services. Even though efforts to improve Latinxs’ access to quality mental health services (MHS) have been previously made, the service utilization rates of Latinx emerging adults continue to appear low and disproportionate to their need. The present project aimed to (a) identify predictors of MHS utilization among Latinx emerging adults through a systematic review of the literature published in last 10 years, and (b) test the direct effects of cultural identity dimensions on emotion expression and emotion regulation, and its indirect effects on self-stigma, perceived public stigma, and attitudes towards seeking professional psychological help (ATSPPH), using path analysis. In the systematic review, a total of 9 studies were identified and coded for predictors of MHS use. Findings from this study revealed approximately 20 correlates of service utilization categorized as predisposing, enabling, or need factors, as well as several gaps in the literature. Among
the most strongly endorsed predictors of MHS utilization was mental health stigma, which was further explored in the second study.

In the second study, I examined the influence of cultural identity dimensions (i.e., English language use, mainstream comfort, Spanish language use, and ethnic identity) on self-stigma, perceived public stigma, and ATSPPH through emotional competence (i.e., emotion expression and emotion regulation) among a sample of Latinx college students \((N = 472)\). The results from this study showed that lower emotion expression and difficulties in emotion regulation predicted greater self-stigma, perceived public stigma, and negative ATSPPH. Findings also indicated that more English language use and adherence to ethnic identity were associated with lower levels of self-stigma and negative ATSPPH. Two statistically significant indirect pathways between the acculturation predictors, English language use and ethnic identity, on self-stigma and ATSPPH through emotion expression were also found. Results highlight the need for interventions that target Latinx emerging adults’ stigma and negative ATSPPH, as well as improve their emotion regulation and expression skills, to ultimately improve their treatment seeking behaviors. Further clinical implications, limitations, and future research directions are discussed.

(199 pages)
Cultural, Contextual, and Individual Determinants of Mental Health Service Utilization among Latinx Emerging Adults

Kenia Carrera Diaz

Despite being at an increased risk of experiencing mental health problems, Latinx emerging adults underutilize professional psychological services compared to other ethnic/racial groups. It is important for researchers to understand this mental health disparity to improve Latinx emerging adults’ use of quality mental health services (MHS). The current project investigated factors that might influence Latinx emerging adult’s use of MHS through two separate studies. In the first study, I systematically reviewed research published in the past decade that examined predictors of MHS use among Latinx emerging adults. A total of 9 studies were found and included in this review. This systematic review highlighted several factors that increased or decreased the likelihood or extent of Latinx emerging adults’ use of MHS. These factors included mental health stigma, perceived helpfulness of treatment, insurance coverage, perceived need, and knowledge of available resources. Among these, mental health stigma was often rated as a barrier to seeking psychological treatment among Latinx emerging adults. In the second study, I explored how cultural factors, like language use and how much people identified with being Latinx, and emotional factors, including emotion regulation and expression, might influence Latinx college students’ stigma and negative attitudes towards seeking professional psychological help. Results from this study showed that limited emotion expression and difficulties with emotion regulation predicted greater stigma and negative attitudes towards seeking professional psychological help. On the other hand, higher English language use and adherence to ethnic identity were associated with less stigma and negative attitudes towards seeking professional psychological help among Latinx college students. Based on the results from both studies, suggestions for clinical practice and future research are offered.
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CHAPTER I
INTRODUCTION

There is a widely recognized disparity between Latinxs’\textsuperscript{1} prevalence of psychological problems and mental health service (MHS) use (United States Department of Health and Human Services [USDHHS], 2001), and substantial efforts have been made to understand predictors of this population’s underutilization of services (Alegria et al., 2007; Bledsoe et al., 2008; Cabassa et al., 2006; Chang & Biegel, 2018; Cho et al., 2014; Menendez et al., 2019). Despite these efforts, the disproportionately low rates of MHS use among Latinxs compared to their Non-Hispanic (NH) White American peers persist (Cook et al., 2017; Substance Abuse and Mental Health Administration [SAMHSA], 2018). Among this population, Latinx emerging adults (i.e., ages 18 to 29; Arnett, 2000) demonstrate the lowest levels of MHS utilization relative to their need (SAMHSA, 2018), and, in recent years, they have experienced a significant increase in prevalence of serious mental illness (SAMHSA, 2018). Given this persistent trend, I aimed to identify and analyze determinants of Latinx emerging adults’ MHS utilization in this multiple-study dissertation. The overarching purpose of this project is to inform mental health care policy reforms, research, and interventions aimed at improving Latinx emerging adults’ access to and utilization of quality psychological services.

The present project broadly focused on the Latinx emerging adult population given their unique cultural context (Fuligni, 2007; Syed & Mitchell, 2013), multiple encountered stressors (French & Chavez, 2010; Hubbard et al., 2018), and low rates of

\textsuperscript{1} Latinx is a gender inclusive term used to describe people from Caribbean, Central American, and South American descent (Scharrón-del Río & Aja, 2020).
treatment use (SAHMSA, 2018; Goodwill & Zhou, 2020). In particular, the life stage recognized as emerging adulthood (i.e., ages 18 to 29) is regarded as a period of increased instability, transitions, and responsibilities (Arnett, 2000; Arnett et al., 2014). Given that individuals in this developmental stage are tasked with attaining specific markers of adulthood (e.g., financial independence, stable relationships, and employment; Setterson, 2007), many emerging adults describe this transitory period as stressful (e.g., financial, academic, and interpersonal stressors; Hubbard et al., 2018), with negative impacts to their mental health (Liu et al., 2018) and well-being (Baggio et al., 2016). The research literature indicates that emerging adulthood can present differently for ethnic and racial minority groups due to variable contextual and cultural factors (Syed & Mitchell, 2013). Among Latinx emerging adults, ethnic identity development (Phinney, 2006), specific cultural values (Fuligni, 2007), and minority group status (French & Chavez, 2010) may influence mental health outcomes during this developmental stage. For instance, Latinx emerging adults endorse higher levels of family obligations (i.e., a cultural value of supporting, assisting, and respecting their family) compared to their NH White peers (Fuligni, 2007). Latinx emerging adults with a greater orientation to family obligations on average report higher levels of stress, resulting from having to negotiate their individual needs with the needs of the family (Fuligni, 2007; Fuligni et al., 2010; Katsiaficas et al., 2015). This population also experiences stressors related to their ethnic minority status, such as discrimination, which are associated with increased risks for mental health problems (Arbona & Jimenez, 2014; French & Chavez, 2010). Despite added risk factors, Latinx emerging adults demonstrate a wider gap between their need for MHS and professional psychological help-seeking behaviors relative to their NH
White counterparts (Goodwill & Zhou, 2020; Miller et al., 2016). Although we have a number of reviews that have aggregated the literature on predictors of service utilization among Latinx adults, to my knowledge, no papers have reviewed the literature focused specifically on Latinx emerging adults.

Previous studies have identified a number of predictors for Latinx emerging adults’ use of MHS, ranging from individual (e.g., stigma and negative attitudes towards MHS utilization; Keyes et al., 2012; Mendoza et al., 2015; Menendez et al., 2019) to cultural (e.g., values endorsing self-reliance; Bermúdez et al., 2010; Chang, 2015; Comas-Diaz, 2006) factors. At the individual level, mental health stigmas and negative attitudes towards seeking professional psychological help (ATSPPH) are recognized as prominent barriers to MHS use (Clement et al., 2015; Jennings et al., 2015; Li et al., 2014; Ward-Ciesielski et al., 2019; USDHHS, 2001). Prior work has related certain Latinx cultural factors (e.g., familism; Bermúdez et al., 2010) to the prevalence of mental health stigma and attitudes in this community (Ballesteros & Hilliard, 2016; Burnett & Zeigler et al., 2017; Menendez et al., 2019). In particular, Latinxs high on the familism cultural value (i.e., valuing family assistance, respect, and support; Fuligni et al., 1999) endorse a preference for obtaining emotional support from family members rather than seeking professional psychology help (Bermúdez et al., 2010). Latinx emerging adults explain the preference for family support, or even self-reliance, by reporting that they want to avoid bringing shame to their family for using MHS, demonstrating a public stigma against psychological problems and services (Chang, 2015; Comas-Diaz, 2006). In contrast, highly acculturated (i.e., assimilated to the mainstream culture; Schwartz et al., 2010) Latinx emerging adults are more likely to endorse greater positive attitudes
towards mental health help-seeking (Ballesteros & Hilliard, 2016) and seek professional psychological services (Burnett & Zeigler et al., 2017; Milville & Constantine, 2006). A possible explanation for this pattern might be that more acculturated Latinx emerging adults might feel as if their values and beliefs more closely align with the context (i.e., the mainstream culture as opposed to their Latinx ethnic culture) in which services are provided (Ballesteros & Hilliard, 2016; Milville & Constantine, 2006). These findings illustrate the important influence of cultural factors (e.g., acculturation; Burnett & Zeigler et al., 2017; Miville & Constantine, 2006) on predictors of MHS use for Latinx emerging adults.

Another determinant of MHS utilization connected to cultural factors is emotional competence. Emotional competence is defined as the effective recognition, regulation, and expression of emotions (Ciarrochi et al., 2003; Rickwood et al., 2005). Among the general population, data shows that individuals higher in emotional competence are more likely to recognize a need for services and, in turn, seek treatment (Ciarrochi et al., 2003; Kim & Lee, 2014; Kim et al., 2016; Nyugen & Anderson, 2005; Rickwood et al., 2005). Problem recognition and expression are culturally bonded phenomena (Hwang et al., 2008; Ramzan & Amjad, 2017; Tsai & Lu, 2018), and, although Latinx cultural scripts (i.e., simpatía) favor high displays of positive emotions, they also discourage the expression of negative emotions (Senft et al., 2020). The cultural message suggesting negative emotions should be suppressed or avoided possibly contributes to Latinx emerging adults’ underutilization of MHS. Previous studies that examined the association between emotional competence, cultural factors, and MHS utilization have been largely conducted with NH White (Ciarrochi et al., 2003; Gulliver et al., 2010) and Asian
American samples (Kim & Lee, 2014; Kim et al., 2016; Nyugen & Anderson, 2005). Given the important influence of cultural factors on Latinx emerging adults’ mental health and service utilization, additional research exploring the mechanisms through which individual, affective, and cultural factors interact to inform Latinx emerging adults’ decision to seek services is needed.

**Study 1**

The occurrence of numerous sociopolitical events in the U.S. in the past decade (e.g., immigration policies; Morse et al., 2012; U.S. ICE, 2019; Ybarra et al., 2016) have demonstrated an impact on Latinx emerging adults’ mental health (Becerra et al., 2020; Roche et al., 2020; Vargas et al., 2019) and access to services (e.g., Affordable Care Act; Baumgartner et al., 2020). Even though efforts to improve Latinxs’ utilization and access to quality MHS have been previously made (Cook et al., 2017), the service use rates of Latinx emerging adults continue to appear low and disproportionate to their need (SAMHSA, 2018). Systematic reviews of the literature can help inform policy reforms, future research directions, and necessary adaptations to interventions (Andersen, 1995). Earlier systematic reviews have been conducted with either the general Latinx population (Bledsoe et al., 2008), Latinx adults (Cabassa et al., 2006), or Latinx youth and their families (Kapke & Gerdes, 2016). However, to my knowledge, there are no available reviews that synthesize studies examining the determinants of Latinx emerging adults’ MHS use. For this reason, the first study in this dissertation project is a systematic review of the literature from the past ten years on predictors specific to Latinx emerging adults’ use of MHS. It is important to address the heterogeneity of the Latinx population (NLPA, 2020), thus I also aimed to highlight possible subgroup differences based on several
sociodemographic variables (e.g., education level, immigration status, nativity, and generation status) that appeared in the literature reviewed. In this systematic review, I addressed the following questions: (a) what factors influence Latinx emerging adults’ use of MHS? and (b) how does MHS utilization vary based on Latinx emerging adults’ characteristics?

**Study 2**

The second study in this dissertation consists of an empirical analysis of specific contributors to Latinx college students’ mental health help-seeking stigma and attitudes. Specifically, public stigma (i.e., negative evaluations of people that utilize MHS at the societal level; Corrigan et al., 2014), self-stigma (i.e., negative internalized beliefs about seeking MHS; Corrigan et al., 2014), and negative ATSPPH have been found to be strong predictors of Latinx college students’ actual use of MHS (Ajzen, 1991; Clement et al., 2015; Jennings et al., 2015; Li et al., 2014; Ward-Ciesielski et al., 2019; Kam et al., 2019; Li et al., 2014; Masuda et al., 2009; Mendoza et al., 2015; USDHHS, 1999). To begin understanding how Latinx college students’ decide to use professional MHS, I examined potential predictors and explanatory pathways of these three important indicators of MHS utilization—perceived public stigma, self-stigma, and ATSPPH. Based on the previously reviewed literature on the association between cultural (i.e., acculturation; Burnett & Zeigler et al., 2017; Miville & Constantine, 2006), affective (i.e., emotional competence; Ciarrochi et al., 2003; Hwang et al., 2008; Kim & Lee, 2014; Kim et al., 2016; Rickwood et al., 2005), and individual (i.e., MHHS; Kam et al., 2019; Li et al., 2014; Masuda et al., 2009; Mendoza et al., 2015) factors, I tested the indirect influences of acculturation on perceived public stigma, self-stigma, and negative ATSPPH through emotional
competence, using path analysis. In this study, I explored the following questions: (a) whether and how emotion expression and emotion regulation were associated with perceived public stigma, self-stigma, and negative ATSPPH; (b) whether levels of acculturation, as measured by Spanish language use, ethnic identity, English language use, and mainstream comfort, shaped emotion expression and emotion regulation, and (c) whether emotion expression and emotion regulation partially explained the association between acculturation and self-stigma, perceived public stigma, or ATSPPH among Latinx college students.
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CHAPTER II

STUDY I
Predictors of Latinx Emerging Adults’ Mental Health Service Utilization: A Systematic Review

Kenia Carrera Diaz, M.S.

Utah State University
Predictors of Latinx Emerging Adults’ Mental Health Service Utilization: A Systematic Review

In industrialized societies, markers of adulthood are attained later in life than in developing countries, and researchers have paid increased attention to the distinct developmental period of emerging adulthood between 18 to 29 years old (Arnett, 2000). Emerging adulthood is characterized by increases in identity exploration, transitions, self-focus, instability, and possibilities (Arnett, 2004). Despite 80% of emerging adults expressing optimism about their lives and future (Arnett & Schwab, 2012), this group is also faced with several life stressors and mental health difficulties (Arnett et al., 2014). Approximately half of 19- to 25-year-olds in the United States (U.S.) meet criteria for a psychological disorder (Blanco et al., 2008), and 75% of lifetime mental health disorders appear by this age (Kessler et al., 2005; Kessler et al., 2007). Rates of major depressive episodes, suicide related outcomes, and psychological distress have increased among this age cohort by 63% to 71% in the past decade (Twenge et al., 2019). There are many factors that contribute to this trend, for example, the majority of emerging adults report higher than average levels of stress related to finances, interpersonal relationships, and academics compared to other age groups (American College Health Association, 2017; Hubbard et al., 2018; Hunt & Eisenberg, 2010). Emerging adults that describe experiencing stressful life events (e.g., financial, family, and career-related hardships) exhibit a two-to-sixteen times higher likelihood of suicidality and mental health diagnoses compared to their peers with no stress exposure (Liu et al., 2018). However, only a quarter of emerging adults that experience psychological problems have historically sought treatment (Copeland, 2013), and these rates of service utilization have
remained relatively the same despite increases in psychological problems among this population (Mojtabai et al., 2016). Untreated mental illness in emerging adulthood has been associated with poorer mental health prognosis (Kessler et al., 2007), lower life satisfaction (Howard et al., 2010), and greater criminal justice system involvement (Sakala et al., 2020) later in life. Therefore, the disparity between emerging adults’ levels of psychological distress and use of mental health services (MHS) is a public health concern that needs to be addressed.

Although Latinxs demonstrate similar or, at times, lower prevalence rates of mental health diagnoses compared to their Non-Hispanic (NH) White American peers (Cook et al., 2018; Lipson et al., 2018; Liu et al., 2018), Latinxs with psychological disorders are more likely to experience persistent and severe impairment as a result of these diagnoses (Breslau et al., 2006; Cook et al., 2018). Moreover, national data reveal a significant and steady increase in serious mental illnesses among Latinx emerging adults in the past decade (Substance Abuse and Mental Health Administration [SAMHSA], 2018). Despite this upward trend in psychological problems, the rate of Latinx emerging adults’ mental health service utilization (MHSU) remains low (Cook et al., 2018; Miller et al., 2016). Findings from a national data study, comparing the prevalence rates of mental health service use among emerging adults (ages 18 to 26 years), showed that 14.1% of Latinx participants sought outpatient services in the past year compared to 24.1% of NH Whites, even though all participants reported at least one diagnosis of past-year mental illness (Miller et al., 2016). These data illustrate that it is imperative to understand and identify contributors to MHSU specific to Latinx emerging adults to
guide reforms of the current health care system (U.S. Department of Health and Human Services [USDHHS], 2001).

As members of an ethnic minority group, Latinx emerging adults encounter added stressors associated with an increased risk for mental health problems (French & Chavez, 2010). Previous studies indicate that sociocultural factors unique to ethnic/racial minorities, such as acculturative stress and ethnic/racial discrimination, are associated with higher rates of anxiety, depression, and psychological stress symptoms in this population (Arbona & Jimenez, 2014; Corona et al., 2017; French & Chavez, 2010; Mayorga et al., 2018; Sanchez et al., 2018). For Latinxs, the identity exploration facet of emerging adulthood may also involve the process of acculturation and ethnic identity development (Phinney, 2006; Schwartz et al., 2013; Umaña-Taylor et al., 2014). Acculturation occurs when a member from a minority or immigrant group comes in contact with the dominant/host culture and undergoes culture-related changes to adapt to their new context (Schwartz et al., 2010). The process of acculturation may be stressful for individuals that feel pressure to either adhere to their heritage/ethnic culture (e.g., Latinx; Lui, 2015) or acquire the mainstream culture (e.g., NH White; Mayorga et al., 2018), and may experience rejection from either group throughout this process (Mena et al., 1987; Mayorga et al., 2018). Differences in adherence to ethnic cultural norms between Latinx emerging adults and their parents can lead to familial conflict, and, subsequently, to greater risk of psychological problems (Lui, 2015). Discrimination (i.e., differential and unfair treatment based on group membership) is a form of rejection performed by the dominant society for belonging to a minority group, and it is also detrimental to Latinx emerging adults’ mental health (Hwang & Goto, 2008; Sanchez et
al., 2018; Villegas-Gold & Yoo, 2014). This literature illustrates the unique stressors faced by Latinx emerging adults and the need to address their access to quality MHS.

It is also important to acknowledge that Latinxs are a largely heterogenous group. In fact, this ethnic label is used to encompass people of Central American, Caribbean, and South American descent, who share some cultural practices, norms, values, and experiences but may also differ across several contextual, social, and demographic aspects (National Latinx Psychological Association [NLPA], 2020). The term *Latinx* is intended to be more inclusive of diverse gender identities by replacing the gendered labels Latino and Latina with the gender-neutral “x” at the end (Scharrón-del Río & Aja, 2020). Although the majority of Latinx emerging adults are second- (i.e., one or both of their parents are foreign-born) or later (i.e., at least one grandparent or great-grandparent is foreign-born) generation individuals (Noe-Bustamante & Flores, 2019), the context of Latinxs in the U.S. is often viewed as pluralistic because this population tends to be in contact with at least two cultures, the mainstream culture and their ethnic culture (Szapocznik & Kurtines, 1993). The culturally unique context of Latinx emerging adults in the U.S. merits the consideration of relevant cultural and contextual factors when investigating this population’s MHSU. Regardless of the great heterogeneity within the Latinx community (USDHHS, 2001), little research has identified specific predictors of MHSU across and within Latinx subgroups. Available research has noted differences in MHSU across Latinx subpopulations based on nativity (Corrigan et al., 2016), immigration status (Cha et al., 2019; Derr, 2016), education level (Cho et al., 2014), and age (Chang & Biegel, 2018; Cho et al., 2014). For instance, foreign-born Latinxs use half as many MHS compared to U.S.-born Latinxs (Corrigan et al., 2016; USDHHS, 2001).
This is particularly concerning given the surge in anti-immigration policies in the last few years (Morse et al., 2012; U.S. Immigration Custom Enforcement [ICE], 2019; Ybarra et al., 2016), with documented deleterious effects to the mental health and well-being of Latinxs, including immigrants and emerging adults (Daftary, 2020; Ornelas et al., 2020). Another example of differential use of MHS across Latinx subgroups is based on level of education (Cho et al, 2014). In specific, Latinxs with a bachelor’s degree or higher are more likely to seek treatment for mental health problems compared to Latinxs with a high school equivalent or lower (Cho et al., 2014). Based on the heterogeneity of this population and of their MHSU, research should explore specific predictors of MHSU within and across subgroups of Latinx emerging adults.

Much of the work on emerging adults’ mental health and service utilization, in general (Arnett, 2008; Rosenbaum, 2001; Syed & Mitchell, 2013; Swanson, 2016), and with Latinx emerging adults, in particular (Ballesteros & Hilliard, 2016; Mendoza et al., 2015; Menendez et al., 2019; Miville & Constantine, 2006; Turner & Llamas, 2017), has been conducted with college student samples. A possible explanation for this might be that the majority, almost 70% (McFarland et al., 2019), of emerging adults enroll in 2- or 4-year college institutions after high school graduation. Among Latinx emerging adults, college enrollment rates have increased by 14% from 2000 to 2019, with 36% identifying as college students (McFarland et al., 2019). The literature’s focus on Latinx college students neglects a vast segment of this population (Cooper et al., 2005; Syed & Mitchell, 2013), and it groups a largely heterogenous community into a homogeneous group. In particular, rates and predictors of MHSU might differ for Latinx college students and non-college attending Latinx emerging adults (Cho et al., 2014). Therefore, the current
study proposes to review and synthesize the findings on contributing factors to Latinx emerging adults’ MHSU with an emphasis on subgroup differences (e.g., college-attending compared to non-college attending, foreign-born compared to native born, and documented compared to undocumented immigrants).

Previous literature reviews (e.g., systematic reviews, meta-analyses, and literature reviews) that explored correlates of MHSU of Latinxs have focused on either the general Latinx population (Bledsoe et al., 2008), Latinx adults (i.e., 18-year-olds and older; Cabassa et al., 2006), or Latinx youth and their families (Kapke & Gerdes, 2016), as well as on comparative analyses of subpopulations of emerging adults (Li et al., 2016), racial and ethnic minorities (Maura & Weisman de Mamani, 2017; Sun et al., 2016), and immigrants (Derr et al., 2016). Although there is an expanding base of empirical studies on Latinx emerging adults’ MHSU, to the best of my knowledge, this literature has yet to be synthesized. In the present project, I address this research gap through a systematic review of studies that report predictors specific to Latinx emerging adults’ MHSU. Since the ultimate goal of this paper is to inform research and policies aimed at increasing Latinx emerging adults’ access to quality MHS, the outcome variable in this systematic review is actual use of MHS. In addition, given the heterogeneity within the Latinx emerging adult population, this systematic review noted within-group variability (e.g., based on education level, ethnic background, immigration status, nativity, acculturation levels) across and within the samples whenever possible.

**Theoretical Framework**

I use Andersen’s (1995) Behavioral Model of Health Services Use (BMHSU) as the organizational framework for presenting predictors of Latinx emerging adults’ MHSU
found in the literature. Andersen (1995) initially conceptualized the BHMSU to aid in the identification and analysis of determinants of medical health care utilization. The model has since been used to explore contributing factors of mental health service use with Latinx (Cabassa et al., 2006; Cho et al., 2014; Keyes et al., 2012; Lee et al., 2014) and college student populations (Eisenberg et al., 2012; Pilar et al., 2019; Nam et al., 2018). The BMHSU postulates that predictive and explanatory factors of service utilization can be categorized as (a) predisposing, (b) enabling, and (c) need factors. Predisposing factors are sociodemographic characteristics that make an individual susceptible to service utilization, including demographics (e.g., age and gender), social structure (e.g., education level, ethnicity, culture, and social network), and health beliefs (e.g., attitudes, values, and knowledge). Enabling factors are resources that facilitate or impede the utilization and access to MHS, such as insurance status, knowledge of resources, time, and availability of services. The third factor, need, consists of an individual’s perceived and actual need for seeking professional psychological help. Perceived need is composed of the person’s subjective understanding of their functioning, recognition of experiencing a problem, and decision that their status merits seeking help (Andersen, 1995). The literature demonstrates that perceived and actual need are one of the most consistently endorsed determinants of service utilization (Andersen, 1995; Cabassa et al., 2006; Chang & Biegel, 2018; Cho et al., 2014).

Although Andersen (1995) conceptualized the role of culture under predisposing factors, particularly health beliefs and social structure, the BMHSU has been critiqued for underemphasizing the impact of cultural and contextual factors (Gelberg et al., 2000; Yang & Hwang, 2016). In response, some researchers have adapted and expanded the
BHMSU to fit the circumstances of diverse populations through the development of new theoretical models (Copeland & Butler, 2007; Gelberg et al., 2000; Yang & Hwang, 2016). Other researchers have incorporated cultural factors into their application of the BMHSU without explicitly modifying it or developing new conceptual frameworks (Bustamante et al., 2012; Cabassa et al., 2006; Choi, 2009; Portes et al., 1992). Relevant to the Latinx American population, Yang and Hwang (2016) modified the BMHSU to explain immigrants’ health service use (HSU) by including macrostructural and contextual factors that are unique to immigrants’ experiences and specifying how culture and context are represented under each component of the BMHSU (i.e., predisposing, enabling, and need factors; Figure 1). At the macrostructural and contextual level, Yang and Hwang (2016) included government policies, context of reception (i.e., government policies, societal attitudes towards immigrants, and presence of an immigrant community in that area), and country of origin attitudes. Under personal-level characteristics, they describe how this population’s ethnic culture, acculturation/assimilation, and immigration status influence their attitudes, beliefs, knowledge, and access to services (Yang & Hwang, 2016). For this reason, I rely on Yang and Hwang’s (2016), modification of Andersen’s (1995) BMHSU to more accurately account for the influence of cultural and contextual factors on service utilization.

**Current Context**

During the past decade, the U.S. has undergone several sociopolitical changes, ranging from health care reforms (Baumgartner et al., 2020), governmental policies (Morse et al., 2012; U.S. ICE, 2019; Ybarra et al., 2016), to a global pandemic (Czeisler et al., 2020). All of these factors have likely influenced Latinx emerging adults’ access
and utilization of MHS. For instance, the nationwide implementation of the Affordable
Care Act (ACA) in 2014 expanded the number of insured Latinxs by 15% since its
inception, reducing a prominent barrier to accessing mental health care for many
(Baumgartner et al., 2020; Chang & Biegel, 2018; Cho et al., 2014; Menendez et al.,
2019). Nonetheless, the insurance coverage offered by the ACA excludes undocumented
immigrants and Deferred Action Childhood Arrivals (DACA) recipients (i.e., an
immunity program offered to people that immigrated to the U.S. before the age of 16;
U.S. Citizen and Immigration Services, 2017), leaving a sizable portion of the Latinx
population without health insurance (Baumgartner et al., 2020; Rosenbaum, 2020). In
addition, President Trump’s 2017 public charge rule (Department of Homeland Security,
2019) discourages legal immigrants to use any government assistance programs,
including health insurance, by considering them public charges if they do so
(Rosenbaum, 2020). Legal immigrants that are regarded as public charges risk being
denied citizenship, which might be undesirable since citizen status increases access to
resources (Rosenbaum, 2020). Although the enactment of the ACA has benefitted
members of the Latinx community, recent governmental policies have restricted these
benefits to only a segment of the Latinx population (Baumgartner et al., 2020;
Rosenbaum, 2020).

The government’s public charge rule is one example of a number of policies that
have affected the U.S.’s Latinx population. Since the 2016 presidential election, the
government has passed several anti-immigration policies and spread negative rhetoric
against Latinx immigrants, with documented adverse effects on the general Latinx
community (Albright & Hurd, 2019; Becerra et al., 2020; Roche et al., 2020; Vargas et
al., 2019). Recent research findings show an increase in depression, anxiety, and stress among Latinx immigrants (Becerra et al., 2020), as well as incidents of discrimination and psychological distress among the general Latinx American population (Albright & Hurd, 2019; Daftary et al., 2020; Vargas et al., 2019). These statistics are concerning given the recent limitations on Latinxs’ access to care during a time when their need for services appears high.

More recently, the novel coronavirus 2019 (COVID-19) infection has also disproportionately impacted the Latinx community as demonstrated by greater rates of job loss (Montenovo et al., 2020) and mortality (Center for Disease Control and Prevention [CDC], 2020) compared to NH Whites. In fact, Latinxs and emerging adults are the two groups that have experienced the highest rates of unemployment (Montenovo et al., 2020) and the greatest increase in mental health problems (Czeisler et al., 2020) compared to other ethnic/racial and age groups as a result of the current pandemic. These findings illustrate how multiple social, political and contextual factors are currently impacting the Latinx community, and, since negative mental health outcomes are already being found, point to the importance of reporting the effects of these factors on Latinxs’ MHSU.

**Purpose of the Review**

Despite expanding research attention being given to Latinx MHSU, the research on predictors of MHSU unique to Latinx emerging adults have yet to be synthesized. Importantly, the recent sociopolitical (Albright & Hurd, 2019; Becerra et al., 2020; Vargas et al., 2019) and environmental (Czeisler et al., 2020) developments in the U.S. and their impacts on Latinx outcomes suggest a need to identify and synthesize the
surging literature on Latinx emerging adults’ MHSU. Moreover, available studies tend to examine Latinxs as a homogenous group and neglect the great variability across Latinx subgroups that might influence their rates of service use (USDHHS, 2001). To address these research gaps, I attempted to answer the following questions through the present systematic review of the literature: (a) what factors influence Latinx emerging adults’ use of MHS? and (b) how does MHSU vary based on Latinx emerging adults’ characteristics? As explained by the BHMSU, in order to effect change in health care policies, variables that explain and influence service utilization must first be identified and understood (Andersen, 1995). Therefore, this systematic review focused on Latinx emerging adults’ actual use of MHS as the outcome variable. Guided by Andersen’s (1995) BMHSU with a heightened focus on cultural and contextual factors (Yang & Hwang, 2016), I categorized the predictors of MHSU identified in this systematic review as predisposing, enabling, or need factors to more clearly highlight the variables researchers, interventionists, and policy makers should target to improve Latinx emerging adults’ access to MHS.

Method

To strive for quality reporting and replicability, I used the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009; Page et al., 2020). The use of reporting guidelines is considered best practice since they increase the transparency of methods and reproducibility of findings (Moher et al., 2009). The PRISMA guidelines are recommended when conducting systematic reviews of studies with a range of methods, and it is one of the most popularly applied guidelines in the literature (Siddaway et al., 2019).
Eligibility Criteria

Studies included in this systematic review had to address the question, “what factors influence the use of MHS among Latinx emerging adults?” To answer this question, study samples had to report 100% or varying degrees of MHSU, thus articles that solely examined barriers to treatment utilization and had samples with no service use were excluded. I defined MHSU as previously used (e.g., past-year or lifetime) or currently receiving professional psychological services from a trained mental health provider, such as a psychologist, counselor, psychotherapist, or social worker, in any setting, including a community mental health center, hospital, or outpatient clinic. This outcome variable could be measured as dichotomous, “yes or no”, responses or as treatment dosages (e.g., frequency of therapy sessions attended). Articles that focused on secondary variables of service utilization, instead of measuring actual help-seeking behaviors, such as willingness to seek counseling, intentions to use services, or attitudes towards seeking professional psychological help, were excluded. The studies that assessed the provision of emotional or psychological support by informal sources, such as family, friends, or religious clergy, rather than professional psychological providers were also excluded.

Study participants had to identify as Latinx or Hispanic, live in the U.S. at time of data collection, and the majority, at least 90%, of the sample had to be between the ages of 18 to 29. Arnett (2016) explained that either ages 18 to 25 or 18 to 29 can be considered part of the emerging adulthood developmental period. He explained that markers of adulthood, denoting the end of emerging adulthood, are variable and difficult to measure, thus the specific age range should be selected depending on the question
being asked (Arnett, 2016). Given that numerous studies on emerging adulthood (Swanson, 2016), including with college student samples (Goodwill & Zhou, 2020), conceptualize emerging adults as 18- to 29-year-olds, the wider age range, 18 to 29, was initially set to capture a more comprehensive population of Latinx emerging adults. During the screening process, however, it became evident that the age range reported by participants of research aimed at investigating emerging adults could be slightly wider than 18-29. Therefore, we decided to include studies that explicitly examined emerging adult populations, with at least 90% of their Latinx sample being between the ages of 18 to 29.

Moreover, articles that examined predictors of MHSU across different racial and ethnic groups and carried out subgroup analyses with their Latinx emerging adult participants were also included in the review. In particular, the researchers had to conduct study analysis and provide results of their Latinx emerging adult subpopulation that were specific enough for me to extract relevant study data (i.e., predictors to Latinx emerging adults’ MHSU). Consequently, studies that included Latinx emerging adults in their sample, but adjusted for age and/or ethnicity were excluded. Eligible studies included published peer-reviewed journal articles and gray literature (i.e., one doctoral dissertation). The articles were limited to those conducted in the U.S. since I argue that Latinxs in the U.S. experience several unique contextual and cultural factors. A brief preliminary search of articles in Spanish was conducted to ensure all relevant studies were gathered, but no records published solely in Spanish were found. Therefore, the included studies were limited to those in English. Records were not excluded based on
the methods, statistical analyses, or measures employed since my research question has been historically explored through several quantitative and qualitative approaches.

**Information sources**

Four major psychology databases were searched—APA PsychInfo, APA PsycArticles, MEDLINE, and Psychology and Behavioral Sciences Collection. The search was limited to the past 10 years, from 2010 to 2020. As briefly summarized in the introduction and literature review sections of this paper, sociopolitical changes in the past decade, such as the implementation of new immigration (Morse et al., 2012; U.S. ICE, 2019; Ybarra et al., 2016) and health care policies (Baumgartner et al., 2020), have the potential to dramatically affect the mental health and well-being of Latinx in the U.S. Therefore, studies on predictors of Latinx emerging adults’ MHSU in the last 10 years should be more representative of the current mental health needs of this population.

**Search strategy**

The search terms entered into the databases focused on the study question’s main concepts, including Latinxs, emerging adults, MHS, and help-seeking. Boolean terms (e.g., ‘AND’ and ‘OR’) were used to increase the likelihood of capturing all of the records that included this systematic review’s population, context, and outcome of interest (Fowler, 2017). Appendix A provides a list of the search terms entered into the databases. This method yielded a total of 739 initial results. The titles and abstracts of these articles were stored in a freely available web-tool, Rayyan, for multiple team members to efficiently screen records and avoid duplicates. If there was ambiguous eligibility based on the title or abstract, then the article was retrieved for a more thorough read of the full text. To ensure reliability of the findings, an undergraduate research assistant and I
independently reviewed the articles. The research assistant was trained on how to retrieve, review, and classify records. We resolved disagreements through discussions of the articles and review of inclusion and exclusion criteria. We initially considered that 17 studies stored in Rayyan had the necessary characteristics to be included in this project. We subsequently scanned the references cited in these 17 articles to potentially retrieve additional studies. One more study was added through this citation searching method. After a thorough review of the articles found through the database and citation searches, a total of nine studies were identified and included in this systematic review (Figure 2; Appendix B).

**Data Extraction**

I developed a codebook prior to the review of the literature to extract target study data and to facilitate the analysis of patterns within and between articles. The study’s codebook included available participant information (e.g., age, ethnicity/race, sex/gender, sexual orientation, nationality, nativity, generation status, language preference, acculturation, immigration status, religious affiliation, education level, health insurance, and socioeconomic status), study characteristics (e.g., recruitment method, theoretical framework, time period of data collection, study design, data analysis methods, and measures), and relevant findings (e.g., percentage and type of mental health needs, service use rates, associations between variables, and general results). This codebook is available upon request and can be accessed through the link provided in Appendix C. Table 1 presents a brief version of the codebook with relevant study characteristics, service use rates, and summaries of the papers’ findings.
Validity

In accordance with the PRISMA guidelines, I assessed the included studies for methodological quality, using the Mixed Methods Appraisal Tool (MMAT; Hong et al., 2018). I selected the MMAT given that the identified articles presented either quantitative
or qualitative study designs. Prior to examining specific quality criteria, I answered two screening questions for each article: “Are there clear research questions?” and “Do the collected data allow to address the research questions?” All included papers passed these screening questions. Research quality criteria was composed of five items, which assessed for selection biases, generalizability, appropriateness of measures, attrition rates, and suitability of statistical analysis (Hong et al., 2018). For the qualitative studies, the five items asked about the appropriateness of qualitative approach, adequate data collection methods, interpretations supported by data, and coherence across study’s methods. Based on responses to these five items, I assigned all studies a rating between 0 to 5, with 0 being low quality and 5 meaning high quality. The majority of the papers (77.8%) received a rating of 4 or 5. The articles that were rated at a 3 or below demonstrated weaknesses in recruitment, generalizability, and/or appropriateness of measures. All identified records were included regardless of not meeting the entire specified quality criteria.

Data Analysis and Synthesis

In addition to summarizing data from the included records in Table 1, I present the reported correlates of MHSU in a second table and categorize them using the three factors of the BMHSU (Table 2; Andersen, 1995). I also describe the findings of this systematic review as a narrated synthesis of the identified literature (Popay et al., 2006). A narrative synthesis approach is recommended when the selected records include a range of methods (e.g., qualitative and quantitative) and the data cannot be easily aggregated using other approaches (e.g., meta-analysis; Popay et al., 2006). The narrative synthesis process followed an inductive thematic analysis approach (Butler et al., 2016;
Moher et al., 2009; Popay et al., 2006), where the findings were analyzed, compared, and grouped based on similarities and differences (for another example of a narrative synthesis within a systematic review, see Guise et al., 2014). The suggested guidelines for narrative synthesis within systematic reviews were followed to reduce the introduction of bias at the data analysis stage (Butler et al., 2016; Moher et al., 2009; Popay et al., 2006). In particular, I carried out the following three steps: (a) the extracted articles were individually analyzed for potential codes, (b) themes and patterns across all studies were identified, and (c) study findings were grouped based on those themes (Butler et al., 2016; Popay et al., 2006). The themes generated through this process were broadly organized under the three components of the BMHSU (Andersen, 1995).

Results

Sample

The nine studies that met inclusion criteria shared several study characteristics (Table 1). Specifically, seven were cross-sectional and two longitudinal (Broman, 2012; Green et al., 2020; only the most recent wave of data was included for the longitudinal studies since those examined emerging adult outcomes). Approximately half the studies were conducted with college students (Cha et al., 2019; Granillo, 2011; Menendez et al., 2019; Turner & Llamas, 2017), and the other half was conducted with general young adult populations (Broman, 2012; Green et al., 2020; Moore et al., 2020; NeMoyer et al., 2020; Raymond-Flesch et al., 2014). Five studies measured mental health service use in the past year (Broman, 2012; Granillo, 2011; Green et al., 2020; Moore et al., 2020; NeMoyer et al., 2020) as compared to lifetime use (Menendez et al., 2019; Turner & Llamas, 2017), and three studies collected nationally representative data (Broman, 2012;
Granillo, 2011; NeMoyer et al., 2020). From the nine studies gathered, five explicitly accounted for mental health need (Broman, 2012; Granillo, 2011; Green et al., 2020; Moore et al., 2020; NeMoyer et al., 2020), and one of these studies was composed of a clinical sample (i.e., 100% of participants endorsed mood or anxiety disorder symptoms; Moore et al., 2020). In five studies, 100% of participants identified as Latinx/Hispanic (Granillo, 2011; Green et al., 2020; Menendez et al., 2019; Turner & Llamas, 2017; Raymond-Flesch et al., 2014;), with one study investigating the MHSU of Puerto Rican emerging adults (Green et al., 2020) and another of Latinx DACA recipients (Raymond-Flesch et al., 2014). Three qualitative studies were included in this review (Cha et al., 2019; Moore et al., 2020; Raymond-Flesch et al., 2014), while the remaining six used quantitative statistical methods. The majority of the quantitative studies carried out correlation (Granillo, 2011; Green et al., 2020; Turner & Llamas, 2017) and/or regression analyses (Broman, 2012; Granillo, 2011; Green et al., 2020; Menendez et al., 2019; NeMoyer et al., 2020; Turner & Llamas, 2017), and presented their results as correlation coefficients, odds ratios, and/or prevalence rates.

**Predisposing Factors**

**Gender**

Among the studies that examined the influence of demographic characteristics on MHSU, gender was associated with Latinx emerging adults’ previous service use. The literature reviewed here showed that being female was correlated with increased odds of professional psychological help-seeking as compared to being male (Broman, 2012; Green et al., 2020). Among the studies that examined gender differences, one found that symptoms of depression and diagnosis of depression mediated the effects of gender on
MHSU (Broman, 2012). Results from this study’s initial logistic regression model showed that Latinx emerging adult men were significantly less likely to seek psychological treatment compared to their female counterparts, but this effect was not significant when the variables for depression were entered into the statistical models (Broman, 2012). In particular, the findings suggested that gender influenced levels of depression, which subsequently informed professional psychological help-seeking. In a study on the therapy usage of Puerto Rican young adults’ from the Bronx and Puerto Rico, investigators noted a consistent gender effect, where being female was significantly associated with more outpatient service use, even after controlling for need, as measured by diagnoses of mood, anxiety, substance use disorders, and psychological distress (Green et al., 2020). These results are counter to Broman’s (2012) claim that depression explains the effects of gender on Latinx emerging adults’ MHSU. Even though these articles shared several study characteristics, including being longitudinal, conducting logistic regressions, and measuring MHSU in the past year, a potential explanation for their differing findings might be attributed to participant factors. Specifically, Broman (2012) analyzed data from a nationally representative sample of Latinx emerging adults, whereas Green and colleagues’ (2020) research focused on Puerto Rican young adults. These results demonstrate a need for future research to investigate whether the pathway through which (e.g., through clinical diagnoses and psychological symptoms) gender influences service utilization differs based on Latinx emerging adults’ region of origin or descent (e.g., Mexico, Cuba, Puerto Rico, Guatemala, etc.).

*Gender and Ethnic Identities*
In the three qualitative publications (Cha et al., 2019; Moore et al., 2020; Raymond-Flesch et al., 2014) and a correlational study (Turner & Llamas, 2017), participants reported factors associated with their ethnic, gender, and sexual identities as impacting their decision to use MHS. For instance, Latinx participants described undergoing four processes of identity negotiation to be able to seek treatment (Moore et al., 2020). The researchers in this study labelled these processes as separating from social norms (i.e., rejecting stigmas related to mental health and sexual minorities), integrating alternative examples (i.e., attending to situations when in-group members encouraged or supported the use of MHS), concealing stigmatized selves (i.e., choosing when and with who to reveal their minority identities), and greater self-acceptance (i.e., accepting their mental health conditions and sexual minority status to overcome stigmas and engage in treatment). Participants that utilized MHS rejected stigmas and social norms against help-seeking held within their ethnic, gender, and sexual minority communities and focused on examples of positive attitudes towards MHSU to access treatment. Another study on the relation between Latinx college students’ ethnic identity and previous service use lent support to these findings (Turner & Llamas, 2017). Even though this study found no differences in levels of ethnic identity adherence between participants with previous service use as compared to those with no history of therapy receipt, Latinx college students that had past experiences with MHS reported that their ethnic community did not influence their decision to seek treatment (Turner & Llamas, 2017). Taken together, the results presented in these studies might indicate that Latinx emerging adults that overcome mental health stigmas presented by their minority identity groups (e.g., ethnic, gender, or sexual minority communities) are more likely to seek professional
psychological help, but further research is needed to confirm these claims. The findings from this research also highlight the importance of further analyzing Latinx emerging adults’ multiple identities and how they navigate them to access services.

**Religiosity**

Another predisposing variable that was related to help-seeking behaviors was religiosity (Granillo, 2011; Turner & Llamas, 2017). The articles included in this systematic review examined different concepts related to religion, including spirituality (i.e., belief in a higher power), religious affiliation, and religiosity (i.e., participants’ sense of how religious they are). In one study, higher religiosity was connected to higher odds of service utilization among Latina university students (Granillo, 2011). A more recent study on the effects of religious affiliation and spirituality on MHSU among Latinx college students found participants that perceived religious affiliation as not influencing their use of MHS were more likely to seek psychological treatment (Turner & Llamas, 2017). In this study, Latinx college students with previous service use also reported significantly lower levels of spirituality (M = 48.24, SD = 4.58) compared to participants with no prior experience using MHS (M = 52.06, SD = 5.71, p <.05; Turner & Llamas, 2017). Since both studies were conducted with primarily Latina college students, using similar statistical methods, the varying effects of religion-related factors on Latinx emerging adults’ professional psychological help-seeking across these two studies might be attributed to how religiosity was assessed. Given that one study found religiosity to be associated with greater MHSU (Granillo, 2011) and the other found an opposite effect (Turner & Llamas, 2017), further research on the influence of religion and related variables on service utilization among Latinx emerging adults is warranted.
Stigma

Across four studies with a range of methods, Latinx emerging adults endorsed stigma as a barrier to service utilization (Cha et al., 2019; Granillo, 2011; Menendez et al., 2019; Moore et al., 2020). The present literature measured mental health help-seeking stigma as either perceived, personal, or cultural. Greater perceived stigma indicated that participants thought society viewed individuals with histories of mental health service use negatively, while higher personal stigma was related to Latinx emerging adults’ own negative beliefs about psychological help-seeking (Granillo, 2011). In a study of Latina university students’ MHSU, participants that reported greater personal stigma exhibited lower odds of seeking professional psychological help (Granillo, 2011). Notably, this was the only investigation in this systematic review that included number of therapy visits as an outcome variable, and it showed Latina university students with higher personal stigma were more likely to engage in 4-6 therapy sessions as opposed to 1-3 (Granillo, 2011). Even though personal stigma had an overall negative effect on past year service use, it increased this samples’ likelihood of attending a greater number of therapy sessions. Unlike personal stigma, perceived stigma demonstrated no influence on treatment use in this study (Granillo, 2011). Given that the influence of personal stigma and perceived stigma were examined by only one study in this review, more research is needed to understand the impact of different types of psychological help-seeking stigma (e.g., personal and perceived) on therapy use among Latinx emerging adults.

Moreover, cultural beliefs about mental health, namely stigmatizing views, were also reported as obstacles for seeking professional psychological help among Latinx college students, DACA recipients, and undocumented immigrants (Cha et al., 2019;
Menendez et al., 2019; Moore et al., 2020). In two separate qualitative studies (Cha et al., 2019; Moore et al., 2020), Latinx emerging adults, with undocumented immigrant status or sexual minority identities, indicated that the stigma held against mental health help-seeking in their Latinx communities impeded their treatment utilization. Given their added minority identities, Latinx emerging adults in these studies also expressed feeling as if holding multiple minority identities compounded their mental health stigma. A quantitative study that asked Latinx undergraduate students to rank barriers to MHSU from a predetermined list, also showed that cultural stigma was endorsed as the most prominent deterrent to seeking counseling services (Menendez et al., 2019). Results from this study, however, demonstrated that cultural stigma was not associated with actual use of services among Latinx college students (Menendez et al., 2019). These findings suggest that even though Latinx emerging adults consider cultural stigma to be a significant barrier to their MHSU, its influence on actual help-seeking is not yet well understood. In addition, the Latinx participants in the two qualitative studies were all first-generation immigrants (i.e., foreign born; Cha et al., 2019; Moore et al., 2020), while the sample in the quantitative study that revealed a nonsignificant association between cultural stigma and MHSU was composed of primarily second and third generation Latinx immigrants (i.e., at least one foreign born parent or grandparent; Menendez et al., 2019). Given these differences in participants’ characteristics, future research is needed to examine the impact of cultural stigma on first generation Latinx emerging adults’ actual help-seeking behaviors.

**Attitudes**
The present systematic review revealed some attitudes as predictive of Latinx emerging adults’ treatment use, including perceived helpfulness of treatment (Cha et al., 2019; Granillo, 2011), concern of providers’ limited cultural sensitivity (Raymond-Flesch et al., 2014), and perceived family support (Granillo, 2011). In a qualitative study, Latinx emerging adults, with undocumented immigration status, identified the belief that providers would be unable to solve their immigration-related stressors as a main theme that discouraged them from seeking professional psychological services (Cha et al., 2019). Relatedly, a group of DACA-eligible Latinx emerging adults also reported not accessing MHS due to a concern about providers’ cultural sensitivity and ability to understand their situation as DACA recipients (Raymond-Flesch et al., 2014). These qualitative findings were supported by multivariate logistic regression analysis conducted with Latina college students on predictors of past year MHSU (Granillo, 2011). In this study, perceiving that treatment might be helpful was related to greater odds of actually using services (Granillo, 2011). Furthermore, Granillo’s (2011) analysis also showed that perceived family support negatively impacted the number of therapy sessions Latina college students attended, where the frequency of treatment use decreased after 10 sessions for participants with greater family support. Taken together, this literature highlights the importance of cognitive perceptions on Latinx emerging adults’ decisions to seek MHS, as well as the weight providers’ ability to address this population’s unique circumstances and stressors holds on Latinxs’ attitudes towards therapy.

**Enabling Factors**

**Insurance Coverage**
Structural obstacles, such as lack of translation services, insurance coverage, and knowledge of services, were noted to significantly contribute to the utilization of MHS by Latinx emerging adults. The ability to access services depends on several practical factors, including having health insurance (Green et al., 2020; Granillo, 2011). In a sample of Latina college students (Granillo, 2011) and one of Puerto Rican young adults (Green et al., 2020), the researchers found that insurance coverage impacted Latinx emerging adults’ access to mental health care (Granillo, 2011; Green et al., 2020). The influence of insurance coverage on Latinx emerging adults’ MHSU was tested in several multivariate models that adjusted for demographic characteristics (Green et al., 2020), mental health need (Granillo, 2011; Green et al., 2020), and previous service use (Green et al., 2020), with significant effects in each model. Relatedly, these two studies also found nonsignificant associations between their samples’ socioeconomic status and service utilization (Granillo, 2011; Green et al., 2020). Therefore, the affordability of MHS through having health insurance, regardless of income status, appears to be a contributing factor to Latinx emerging adults’ decision and ability to engage in mental health treatment.

Knowledge

The literature surveyed here also identified knowledge of where and how to access MHS as a significant facilitator to Latinx emerging adults’ psychological help-seeking behaviors (Granillo, 2011; Raymond-Flesch et al., 2014). In fact, Granillo’s (2011) statistical model testing access factors, including knowledge of services, insurance coverage, childhood financial status, and nativity, demonstrated that the variance in MHSU produced by these variables was largely explained by knowledge of counseling
resources on campus. Results from this study indicate that familiarity with where to 
obtain mental health treatment drives Latinx emerging adults’ decision to utilize services 
regardless of their insurance, income, and nativity status. Reports by DACA-eligible 
young adults in a qualitative study corroborated these finding by identifying a lack of 
knowledge regarding their insurance coverage and mental health care options as a 
common barrier to treatment-seeking (Raymond-Flesch et al., 2014). Despite having 
access to care through college campuses or insurance plans (Cha et al., 2019; Granillo, 
2011), limited knowledge of how to navigate the healthcare system and available 
resources is a great impediment to seeking psychological help among Latinx emerging 
adult populations (Granillo, 2011; Raymond-Flesch et al., 2014).

**Community-level Resources**

An additional enabling factor specific to Latinx emerging adults’ receipt of 
professional psychological treatment is availability of translation/linguistic services 
(NeMoyer et al., 2020). NeMoyer and colleagues (2020) compared the impact of 
community-level factors (e.g., hospitals with linguistic and/or translation services, 
emergency departments, and outpatient substance use services) on past-year outpatient 
service use across a nationally representative sample of ethnically and racially diverse 
emerging adults. They found that access to linguistic and/or translation services in their 
counties’ hospitals increased the odds of Latinx emerging adults using specialty MHS, 
and this effect was significantly higher for Latinxs as compared to NH White emerging 
adults (NeMoyer et al., 2020). These results suggest that increasing the number of 
available linguistic and translation services in hospitals might improve Latinx emerging 
adults’ access to specialty mental health treatment.
Need Factors

**Perceived Need**

Perceived need of MHS, which was self-reported by participants, was consistently found to be a determining factor of treatment use among the articles included in this systematic review (Broman, 2012; Cha et al., 2019; Granillo, 2011; Green et al., 2020; Menendez et al., 2019). For example, one study showed a significant association between perceived need and Latina college students’ MHSU, where greater recognition of need resulted in higher likelihood of treatment receipt (Granillo, 2011). In fact, results from this study’s multivariate analysis of need factors showed that perceived need for counseling services accounted for 20% of the variance in participants’ actual therapy usage (Granillo, 2011). Similarly, qualitative interviews of emerging adults with undocumented immigration statuses revealed that low perceived need was a barrier to mental health help-seeking among the study’s Latinx population (Cha et al., 2019). Latinx emerging adults in this study normalized their psychological problems by comparing them to troubles related to financial and immigration stressors, which they perceived as more real than mental health issues. These findings broadly suggest that when individuals recognize that they might be experiencing a psychological problem and that this distress could be alleviated through professional help, they are more likely to seek MHS (Andersen, 1995).

**Actual Need**

Moreover, actual need, which was assessed through screeners and diagnostic tools, was another variable with high predictive power of MHSU among Latinx emerging adults. For instance, a sample of Latinx undergraduate students identified potential
deterrents to treatment seeking from a list of common barriers, and, despite significantly endorsing several items from the list, previous traumatic experience was the only factor that predicted actual MHSU (Menendez et al., 2019). In particular, the odds of seeking therapy among Latinx college students with trauma experiences were 9.7 times greater than their counterparts that reported no prior traumatic events. Another investigation demonstrated that psychological need, as measured by depression, was the only study variable that influenced service utilization among Latinx emerging adults (Broman, 2012). In the same study, the author found that Latinx emerging adults with a diagnosis of depression were approximately 10 times more likely to seek mental health treatment than nondepressed Latinxs (Broman, 2012). In addition, general psychological distress was also identified as a predictor of MHSU in a separate investigation with Puerto Rican emerging adults (Green et al., 2020). Interestingly, not all types of psychological disorders increased likelihood of professional psychological help-seeking (Granillo, 2011; Green et al., 2020). In two separate studies, anxiety symptomatology and substance use were positively correlated with an increased likelihood of MHSU (Granillo, 2011; Green et al., 2020). However, endorsement of these psychological disorders did not significantly predict actual treatment utilization in subsequent multivariate models that accounted for all the need factors in each study (Granillo, 2011; Green et al., 2020). A possible explanation for these subsequent non-effects could be that the variance in service use was better explained by the other need factors, such as depression, psychological distress, and/or perceived need. For this reason, future research should further investigate which psychological disorders are more likely to result in treatment seeking and why these exhibit greater predictive power than other mental health need variables. Based on
the significant influence of perceived need and certain psychological disorders, future studies would also benefit from consistently accounting for these need factors to identify and better understand other facilitators and barriers to Latinx emerging adults’ professional psychological help-seeking.

Discussion

The present systematic review of the literature elucidated several predisposing, enabling, and need factors that influence Latinx emerging adults’ use of MHS, as well as significant gaps in the research. Among the most highly endorsed predictors of professional psychological help-seeking by this population were mental health-related stigma (Cha et al., 2019; Granillo, 2011; Menendez et al., 2019; Moore et al., 2020), actual need of services (Broman, 2012; Granillo, 2011, Green et al., 2020; Menendez et al., 2019), perceived need of services (Cha et al., 2019; Granillo, 2011), perceived helpfulness of treatment (Cha et al., 2019; Granillo, 2011), insurance coverage (Granillo, 2011; Green et al., 2020), and knowledge of services (Granillo, 2011; Raymond-Flesch et al., 2014). In accordance with previous research with general adult populations (Abdullah & Brown, 2011; USDHHS, 1999), the literature surveyed here consistently demonstrated that mental health stigma was a significant barrier to service utilization among Latinx emerging adults (Cha et al., 2019; Granillo, 2011; Menendez et al., 2019; Moore et al., 2020). Specifically, personal stigma (Granillo, 2011) and cultural mental health beliefs (Cha et al., 2019; Menendez et al., 2019; Moore et al., 2020) were often cited as deterring this population’s decisions to seek treatment. Latinx emerging adults also expressed hesitation regarding treatment utility given their unique circumstances (e.g., immigration- or income-related stressors), noting their concern that providers might not be culturally
sensitive or able to help (Cha et al., 2019; Granillo, 2011; Raymond-Flesch et al., 2014). Despite these highly endorsed negative perceptions of MHS, some Latinx emerging adults exhibited the ability to negotiate, tolerate, and reject stigmas promoted by their ethnic and social communities to engage in help-seeking behaviors (Moore et al., 2020; Turner & Llamas, 2017). Taken together, this research reveals that mental health stigma and perceived unhelpfulness of treatment are formidable obstacles to MHSU for this group, but it also offers possible intervention options. Importantly, the literature suggests a need for culturally sensitive providers that are attuned to the unique needs of this community (e.g., such as an awareness of this population’s possible concerns about privacy and multiple intersecting identities) and for interventions that target mental health stigmas. An example of such programs are education- and contact-based interventions (i.e., learning the facts about mental illness and interacting with an individual with a mental illness and prior service use), which have been shown to reduce personal and perceived stigmas among college students and Latinxs (Kosyluk et al., 2016), especially when these interventions are culturally adapted (e.g., contact occurs with someone from their own ethnic group; DeFreitas et al., 2018).

Additional indicators of professional psychological service use among Latinx emerging adults were insurance coverage (Granillo, 2011; Green et al., 2020) and knowledge of services (Granillo, 2011; Raymond-Flesch et al., 2014). The studies that demonstrated the enabling effects of insurance coverage on use of outpatient services were conducted with both general community samples of emerging adults and college students (Granillo, 2011; Green et al., 2020). The investigation carried out with college students, however, demonstrated that knowledge of services accounted for a larger
portion of the variability in treatment utilization regardless of insurance coverage (Granillo, 2011). These patterns are significant for multiple reasons. First, among general populations of Latinxs, approximately 25% are uninsured (Alegría et al., 2007; Baumgartner et al., 2020). While the rates of uninsured Latinx adults have declined, by approximately 15%, since the ACA was implemented in 2014, the disparity in insurance coverage between Latinxs (24.9% uninsured) and their NH White (8.6% uninsured) and Black American (14.4% uninsured) counterparts remains (Baumgartner et al., 2020). These statistics are concerning given that insurance coverage has been identified as a significant barrier to Latinx emerging adults’ MHSU (Baumgartner et al., 2020; Green et al., 2020). Moreover, Latinxs enrolled in 4-year universities seem to have greater access to MHS (Granillo, 2011; Samlan et al., 2020) and higher insurance rates (Cha et al., 2019; Lipson et al., 2018). The driving obstacle to treatment-seeking among this group, however, appears to be lack of knowledge of services rather than insurance coverage. This is particularly problematic since prior work shows that the majority of Latinx college students are unaware of the on-campus counseling services available to them (Yorgason et al., 2008). Therefore, the articles examined here might indicate that distinct predictors of MHSU based on Latinx emerging adults’ college-attending compared to non-attending status exist, highlighting unique interventions for each group. In particular, ACA should be expanded to include Latinx populations that are not being captured by the current policies, such as increasing Medicaid expansions across all states and allowing undocumented immigrants to obtain insurance coverage through the ACA. For Latinx college students, outreach programs that increases their awareness of available MHS on
campus and how to properly access them should be implemented across institutions, such as providing this information as part of first-year college students’ orientation.

In line with Andersen’s (1995) claims that need factors are the most predictive of actual service utilization, the literature surveyed in this review showed that perceived and actual need accounted for the greatest variance and likelihood of MHSU among Latinx emerging adults (Broman, 2012; Granillo, 2011; Green et al., 2020; Menendez et al., 2019). In fact, recognizing a need for MHS was associated with an approximately 10 times increased likelihood of treatment use by this group (Granillo, 2011). Similar trends were found for actual need (Broman, 2012; Menendez et al., 2019), but the significance of those results varied based on the type of mental illness endorsed (Granillo, 2011; Green et al., 2020). Despite these variables’ high predictive power, some studies did not account or control for participants’ current mental health need, signaling an important gap in the literature. Future research should make sure to assess and control for mental health need in an agreed upon manner to facilitate the identification of additional predictors of Latinx emerging adults’ use of services.

**Limitations**

As postulated by Yang and Hwang’s (2016) HSU framework, macrostructural and contextual factors play a significant role on individual help-seeking behaviors. Even though a few articles mentioned and recognized the importance of macrostructural variables, these were often presented as discussion topics as opposed to being included in the papers’ primary analyses of Latinxs’ service use. For instance, in one study, the possible influence of the ACA on insurance coverage and therapy usage among young adults was mentioned, but differences in access to healthcare as a result of the ACA were
not tested (NeMoyer et al., 2020). The impact of governmental policies was more clearly stated in two separate analyses of interviews with undocumented students and DACA-eligible young adults, but these were not measured in direct relation to actual MSHU among Latinx emerging adults (Cha et al., 2019; Raymond-Flesch et al., 2014). Even when participants described the healthcare benefits offered by their DACA status (e.g., access to job-based insurance and a driver’s license), they expressed hesitation to seeking treatment due to fear and mistrust of providers (Raymond-Flesch et al., 2014). A common theme among this population was fear of disclosing documentation status due to a perceived risk of discrimination and deportation of their family members. In another qualitative study, undocumented Latinx college students, who had health insurance and access to MHS, echoed DACA-eligible emerging adults’ privacy concerns regarding mental health providers (Cha et al., 2019). The phenomena described in these studies has been previously conceptualized as cautious citizenship, and it has been associated with Latinx immigrants’, as well as Latinx U.S. citizens’, access to health care (Pedraza et al., 2019). There is evidence that cautious citizenship is a result of the connection between immigration and healthcare policies that have compounded nativity and citizenship with access to benefits (Pedraza et al., 2019). Despite cautious citizenship being salient for undocumented Latinx immigrants, spillover effects have also been observed with Latinx U.S. citizens (Pedraza et al., 2019) and DACA-eligible emerging adults (Raymond-Flesch et al., 2014) since they fear endangering undocumented individuals in their social networks. Given the direct impact of several sociopolitical (e.g., anti-immigration policies; Albright & Hurd, 2019; Daftary et al., 2020; Vargas et al., 2019) and environmental (e.g., COVID-19; Czeisler et al., 2020) occurrences in the last decade on
Latinxs’ well-being (Baumgartner et al., 2020), it is especially imperative that researchers attend to the effects of macrostructural factors on Latinx emerging adults’ access and use of MHS.

Similar to the limited research base on macrostructural factors associated with Latinx emerging adults’ MHSU, results from this systematic review showed a need for further investigations on the influence of cultural factors on this population’s psychological help-seeking behaviors. A few of the included studies in this review noted effects of cultural factors, such as ethnic identity (Turner & Llamas, 2017), translation/linguistic services (NeMoyer et al., 2020), and religious affiliations (Granillo, 2010), on Latinx emerging adults’ decisions to seek psychological treatment, but to a lesser extent than the studies conducted with other Latinx age groups (Alegría et al., 2007; Keyes et al., 2012; Miville & Constantine, 2006). Prior work with Latinx adults demonstrates that cultural variables, such as ethnic identity, acculturation, cultural values, and English language proficiency, impact Latinxs’ decision to seek mental health treatment (Alegría et al., 2007; Keyes et al., 2012; Miville & Constantine, 2006).

Nonetheless, these studies have been conducted with primarily general adult populations or over 10 years ago (Alegría et al., 2007; Chang & Biegel, 2018; Cho et al., 2014; Keyes et al., 2012; Miville & Constantine, 2006), failing to meet the inclusion criteria for this systematic review. Given the unique circumstances of emerging adulthood and Latinxs’ contact with multiple cultures, it is particularly important for future research to examine whether and how these factors influence Latinx emerging adults’ patterns of service utilization.
Additional shortcomings in the literature were revealed. One of the most salient limits to the research, was an oversight of Latinx emerging adults’ possible subgroup differences. Even though I was able to note some differences based on Latinx emerging adults’ sociodemographic characteristics (e.g., education level, territory/country of origin, and generation status), the majority of the articles identified and included in this review provided limited information on their Latinx samples. Since these comparisons were often made between only two studies, subgroup differences highlighted in this review must also be interpreted cautiously, which suggests a need for future research to replicate and confirm those findings. In addition, the majority of the articles I initially identified were either conducted with college students, which might not be a representative sample of emerging adults, or carried out comparative analyses between racial and ethnic groups, which made it difficult to extract results specific to Latinxs. Even though collecting data from nationally representative samples of Latinx emerging adults, as opposed to using convenience samples, can be more costly for researchers, investigations with this specific population are imperative and would improve the field’s understanding of contributing factors to Latinx emerging adults’ MHSU.

Clinical Implications

Relevant clinical implications can be gathered from the articles reviewed in the present study. At the individual level, culturally appropriate mental health literacy programs should be developed and widely implemented to help Latinx emerging adults learn to recognize when they are experiencing psychological distress and would benefit from receiving services. Psychoeducation efforts aimed at increasing Latinx emerging adults’ knowledge of available resources, in general, and the utility of mental health
treatment, in specific, are also warranted. The identified articles also highlighted the detrimental effects of stigma, thus interventions that target mental health help-seeking stigmas held by Latinx emerging adults and their social communities might also improve their treatment-seeking behaviors. At the community level, availability of translation/linguistic services and culturally sensitive providers should be increased to facilitate Latinx emerging adults’ access to quality care. As previously stated, a prominent deterrent for this group is the perception that providers might be culturally insensitive or ineffective in addressing their specific struggles. Therefore, clinicians’ knowledge regarding Latinx’s culture and context, while recognizing that this is a heterogenous population that can encounter a range of varying circumstances, should be especially targeted. At the structural level, approximately 7% of psychologists identify as Latinx/Hispanic, thus increasing the number of practicing Latinx mental health providers could improve this ethnic groups engagement in services (American Psychological Association, 2020). Insurance coverage for all Latinxs, including non-college attending emerging adults and undocumented immigrants, should also be further expanded, and health care policies should refrain from including immigration status and nativity as a requirement for access. Although patterns in the research that inform necessary reforms were observed, the literature on predictors of Latinx emerging adults’ MHSU is scant and additional high-quality studies are needed to more accurately understand how to enhance this population’s help-seeking behaviors and access to care.
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*Raymond-Flesch, M., Siemons, R., Pourat, N., Jacobs, K., & Brindis, C. D. (2014). "There is no help out there and if there is, it's really hard to find": A qualitative study of the health concerns and health care access of Latino "DREAMers". *The Journal of Adolescent Health: Official Publication of The Society for Adolescent Medicine, 55*(3), 323–328. https://doi.org/10.1016/j.jadohealth.2014.05.012


http://dx.doi.org/10.1037/lat0000140


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https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=3&lvlid=64


https://www.ice.gov/287g


Figure 1

*Immigrants’ health service utilization theoretical framework*

Table 1. Summarized Information of Identified Studies

<table>
<thead>
<tr>
<th>Author (Year)</th>
<th>Theoretical Framework</th>
<th>Sample Size (Latinx)</th>
<th>Ethnicity/race</th>
<th>Age</th>
<th>Gender/Sex</th>
<th>Education</th>
<th>Mental health need</th>
<th>Study Design (Methodology)</th>
<th>Utilization rates</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Granillo (2011) *</td>
<td>Andersen Model of Health Care Utilization (Andersen 1995)</td>
<td>1876</td>
<td>100% Latinx</td>
<td>M = 21; 90% 18-30</td>
<td>100% Female</td>
<td>82% undergraduate students &amp; 18% graduate students</td>
<td>48% perceived need for professional services</td>
<td>Cross-sectional (Quantitative)</td>
<td>23%</td>
<td>Among a sample of Latina college students, having insurance, knowledge of services, depression, anxiety, suicidal ideation, drug use, perceived need, religiosity, and belief that treatment is helpful was associated with higher odds of using mental health services. Greater personal stigma and perceived family support were related to lower odds of using services. The needs measures accounted for most of the variance in mental health service utilization in the models explored.</td>
</tr>
<tr>
<td>Broman (2012)</td>
<td>NS</td>
<td>4881 (522)</td>
<td>White; 1161 Black; 522 Latinx</td>
<td>18-26 (M= 21.85) (specific to Latinxs)</td>
<td>48% male (specific to Latinxs)</td>
<td>29% college students (specific to Latinxs)</td>
<td>9% diagnosed with depression (specific to Latinxs)</td>
<td>Longitudinal (Quantitative)</td>
<td>7% current 13% prior</td>
<td>Among the Latinx young adult sample in this study, only diagnosis of depression and symptoms of depression significantly predicted mental health service use.</td>
</tr>
<tr>
<td>Study</td>
<td>Sample Size</td>
<td>Latinx Percentage</td>
<td>Age Range</td>
<td>Gender</td>
<td>Education</td>
<td>Depressed in Past Month</td>
<td>Study Design</td>
<td>Sample Description</td>
<td>Findings</td>
<td></td>
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<tr>
<td>Raymond-Flesch et al. (2014)</td>
<td>NS 61</td>
<td>100%</td>
<td>22-4, SD=3</td>
<td>59%</td>
<td>M = 22.4, SD = 3</td>
<td>95% High school graduate; 51% Full time college student; 20% Part time college student; 28% Not a student</td>
<td>Cross-sectional (Qualitative)</td>
<td>NS (varying degrees in total sample)</td>
<td>Among a sample of Latinx DACA recipients, financial costs, limited health care literacy, fear and mistrust, and uncertainty of DACA benefits were reported as barriers to using mental health services.</td>
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<tr>
<td>Turner &amp; Llamas (2017)</td>
<td>NS 83</td>
<td>100%</td>
<td>18-34; M=21.23 (SD=3.71)</td>
<td>78%</td>
<td>Female</td>
<td>78% Female</td>
<td>23%</td>
<td>NS</td>
<td>Female</td>
<td>Among a sample of Latinx college students, stronger spirituality predicted higher likelihood of using mental health services. The other two study variables, therapy fears and ethnic identity, were not associated with service use.</td>
</tr>
<tr>
<td>Menendez et al. (2019)</td>
<td>NS 145</td>
<td>100%</td>
<td>18-24, 17.9%; 25-34, 4.1%; 35-44, 1.4%; decline to answer</td>
<td>55.9%</td>
<td>Female</td>
<td>100% Female</td>
<td>41.4%</td>
<td>Cross-sectional (Quantitative)</td>
<td>Among a sample of Latinx college students, those that had a history of trauma were 9.7 times more likely to use mental health services compared to participants that had not experienced a traumatic event. In addition, the highest endorsed barrier to using services was cultural beliefs, with 42.1% of participants reporting this barrier, but it did not reflect actual use.</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Year</td>
<td>Sample Size</td>
<td>Gender</td>
<td>Ethnicity</td>
<td>Age</td>
<td>Diagnosis</td>
<td>Study Design</td>
<td>Community</td>
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<tr>
<td>Cha et al. (2019)</td>
<td>30 (16)</td>
<td>53.3% Latinx; 46.7% Asian American Pacific Islander</td>
<td>M = 21.6 (total sample)</td>
<td>53% Female (total sample)</td>
<td>7% Freshman in college; 17% Sophomore; 43% Junior; 27% Senior; 3% Graduate student; 3% Recently graduated not in school (total sample)</td>
<td>100% endorsed high levels of stress and mental strain</td>
<td>Cross-sectional (Qualitative)</td>
<td>Among a sample of undocumented immigrant students with mental health need, Latinxs reported low perceived need, futility of mental health services to address immigration issues, mental health stigma, and immigration status stigma as barriers to seeking services.</td>
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<tr>
<td>Green et al. (2020)</td>
<td>2004</td>
<td>100% Latinx</td>
<td>M = 22.2 (SD=0.1)</td>
<td>50.8% Female</td>
<td>37.6% college students</td>
<td>21.4% any 12-month disorder (South Bronx = 26.0% &amp; Puerto Rico = 17.6%, p&lt;.001)</td>
<td>Longitudinal (Quantitative)</td>
<td>Among a population of Puerto Rican young adults from the South Bronx and Puerto Rico, being female, having insurance, having a 12-month disorder, and childhood disorders were related to higher odds of using mental health services. Outpatient mental health service use in young adulthood was not associated with site (South Bronx vs. Puerto Rico), age, household economic status, childhood externalizing disorders, and childhood mental health service use.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Authors</td>
<td>Sample Size</td>
<td>Percentage of Latinx, Black, NH White, Asian</td>
<td>Age Range</td>
<td>Utilization Rates</td>
<td>Type</td>
<td>Cross-sectional</td>
<td>Service Use</td>
<td>Note</td>
<td></td>
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<tr>
<td>NeMoyer et al. (2020)</td>
<td>Andersen Model of Health Care Utilization (Andersen 1995)</td>
<td>3294 (749)</td>
<td>22.7% Latinx; 35.2% Black; 27.0% NH White; 15.1% Asian</td>
<td>18 – 29 (age range of total sample)</td>
<td>0-11 years: 39.1%; 12 years: 31.5%; 13-15 years: 22.5%; 16+ years: 6.9% (specific to Latinxs)</td>
<td>Cross-sectional (Quantitative)</td>
<td>17.5% past 12-month MH disorder (specific to Latinxs)</td>
<td>Among a national, community sample of emerging adults, Latinx emerging adults’ use of mental health services increased with a higher density of hospitals with linguistic and translation services in their county.</td>
<td></td>
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</tr>
<tr>
<td>Moore et al. (2020)</td>
<td></td>
<td>31 (14)</td>
<td>45.2% Latinx; 54.8% NH Black</td>
<td>Mean= 22.16, SD = 1.8; 18-25 (age range of total sample)</td>
<td>Cisgender male, 3%; Transgender male = 1, 23%; Cisgender female, 19%; Transgender female, 16%; Non-binary (total sample)</td>
<td>Cross-sectional (Qualitative)</td>
<td>100% endorsed symptoms of mood or anxiety disorder within past two years</td>
<td>Among a sample of Latinx and Black sexual minority young adults with previous service use, processes of identity negotiation were reported as facilitators to seeking treatment, and social norms and mental health stigma as barriers.</td>
<td></td>
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</tbody>
</table>

*Note. Utilization rates are based on percentage of Latinx participants that used outpatient mental health services in the past year unless otherwise specified. NS means not specified. M stands for mean and SD is standard deviation. *Dissertation.*
Table 2. Correlates of MHSU categorized by the factors in Andersen’s (1995) BMHSU

<table>
<thead>
<tr>
<th>BHMSU factor</th>
<th>Association with MHSU</th>
<th>Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Predisposing factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (female)</td>
<td>+</td>
<td>Green et al. (2020), Broman (2012)</td>
</tr>
<tr>
<td>Comorbid disorders in childhood</td>
<td>+</td>
<td>Green et al. (2020)</td>
</tr>
<tr>
<td>Perceived helpfulness of treatment</td>
<td>+</td>
<td>Granillo (2011)</td>
</tr>
<tr>
<td>Personal stigma</td>
<td>-</td>
<td>Granillo (2011)</td>
</tr>
<tr>
<td>Religiosity</td>
<td>+</td>
<td>Granillo (2011)</td>
</tr>
<tr>
<td>Spirituality</td>
<td>-</td>
<td>Turner &amp; Llamas (2017)</td>
</tr>
<tr>
<td>Perceived family support</td>
<td>-</td>
<td>Granillo (2011)</td>
</tr>
<tr>
<td>View that ethnic community did not influence decision to seek services</td>
<td>+</td>
<td>Turner &amp; Llamas (2017)</td>
</tr>
<tr>
<td>View that religious affiliation did not influence their decisions</td>
<td>+</td>
<td>Turner &amp; Llamas (2017)</td>
</tr>
<tr>
<td><strong>Enabling factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insurance coverage</td>
<td>+</td>
<td>Green et al. (2020), Granillo (2011)</td>
</tr>
<tr>
<td>Knowledge of services</td>
<td>+</td>
<td>Granillo (2011)</td>
</tr>
<tr>
<td>Hospitals linguistic/translation services</td>
<td>+</td>
<td>NeMoyer et al. (2020)</td>
</tr>
<tr>
<td><strong>Need factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived need</td>
<td>+</td>
<td>Granillo (2011)</td>
</tr>
<tr>
<td>Symptoms of depression</td>
<td>+</td>
<td>Broman (2012)</td>
</tr>
<tr>
<td>Traumatic experience(s)</td>
<td>+</td>
<td>Menendez et al. (2019)</td>
</tr>
<tr>
<td>Psychological distress</td>
<td>+</td>
<td>Green et al. (2020)</td>
</tr>
<tr>
<td>Suicidal ideation*</td>
<td>+</td>
<td>Granillo (2011)</td>
</tr>
<tr>
<td>Substance use*</td>
<td>+</td>
<td>Granillo (2011)</td>
</tr>
<tr>
<td>Anxiety*</td>
<td>+</td>
<td>Granillo (2011)</td>
</tr>
</tbody>
</table>

*These significant bivariate associations disappeared when entered into multivariate models.
STUDY 1 APPENDICES
STUDY 1. Appendix A

Search Terms
(Latinx OR Latino OR Latina OR Hispanic) AND (emerging adult OR young adult OR college student OR undergraduate OR undergraduate student) AND (mental health service utilization OR help-seeking OR help seeking OR psychological help-seeking OR counseling service utilization) AND (mental health services OR community mental health services OR treatment OR university counseling OR professional psychological help) AND (predictors OR barriers OR facilitators OR determinants OR correlates)
STUDY 1. Appendix B

PRISMA Flow Diagram
Note. This figure illustrates the in-depth flow diagram of the study selection process. From “The PRISMA 2020 statement: An updated guideline for reporting systematic reviews”, by M.J. Page, J.E. McKenzie, P.M. Bossuyt, I., Boutron, T.C. Hoffmann, C.D., Mulrow et al., 2021, BMJ, p. 36.
STUDY 1. Appendix C

Coding Table Link
https://docs.google.com/spreadsheets/d/1QgMX-EUceODATxxyODoWH4TLNGz8e9mJ/edit?usp=sharing&ouid=117293795679013895255&rtpof=true&sd=true
CHAPTER III

STUDY 2
The Effects of Acculturation and Emotional Competence on Latinx College Students’
Mental Health Help-Seeking Stigma and Attitudes

Kenia Carrera Diaz, M.S.

Utah State University
The Effects of Acculturation and Emotional Competence on Latinx College Students’ Mental Health Help-Seeking Stigma and Attitudes

Emerging adulthood (i.e., ages 18-25) is a developmental period characterized by increases in autonomy, exploration, and transitions (Arnett, 2000). In 2017, the U.S. Bureau of Labor Statistics reported that 66.7% of high school graduates ages 16-24 enrolled in a 2- or 4-year college, suggesting that the majority of emerging adults are college students (U.S. Bureau of Labor Statistics, 2017). Given added autonomy and newfound responsibilities, emerging adults are exposed to several life stressors that put them at an increased risk for mental health problems. However, fewer than 25% of college students with a diagnosable mental health issue seek treatment (Blanco et al., 2008; Mental Health America [MHA], 2017). Among this population, Latinx college students are less likely to seek psychological services (Marrast et al., 2016; Miller et al., 2016 et al., 2015), even though they exhibit similar (Kouyoumdjian et al., 2003) or higher (Roberts et al., 2006; Saluja et al., 2004) rates of psychopathology compared to other ethnic groups. Therefore, Latinx college students are a particularly vulnerable population for mental health disparities, and it is important that research examines their help-seeking behaviors during this developmental stage.

Previous research studies have identified several contributing factors to Latinxs’ underutilization of mental health services (MHS), among which cultural beliefs, help-seeking stigma, and attitudes are well-established predictors (Keyes et al., 2012; Mendoza et al., 2015; Menendez et al., 2019; Rastogi et al., 2012; Sun et al., 2016; U.S. Department of Health and Human Services [USDHHS], 2001). Many Latinxs endorse a preference for self-reliance or familial assistance as opposed to seeking professional
psychological help due to the stigma associated with formal services (Abdullah & Brown, 2011; Chang, 2015). Furthermore, the processes of acculturation (i.e., adopting the mainstream culture; Schwartz et al., 2010) and enculturation (i.e., maintaining the heritage culture; Schwartz et al., 2010) inform cultural belief maintenance and formation, which in turn have been observed to impact racial and ethnic minorities’ attitudes towards seeking professional psychological help (ATSPPH; Sun et al., 2016). In recent years, studies have attempted to understand the impact of emotion regulation on Latinxs, particularly Latinx youth and young adults, and found that levels of acculturation and enculturation also influence emotion regulation strategies (Archuleta, 2015; Archuleta & Lakhwani, 2016; Mayorga et al., 2018). However, the combined contributions of acculturation, emotion regulation, and emotion expression on Latinx college students’ stigma and ATSPPH have not been previously explored. In this study, I investigate how acculturation, emotion regulation, and emotion expression interact to influence mental health stigma and attitudes among Latinx college students.

Theoretical Framework

Hwang et al.’s (2008) Cultural Influences on Mental Health (CIMH; Figure 1) theoretical model provides a comprehensive framework for understanding the interrelated and complex influences of culture on mental health and help-seeking, particularly among ethnic and racial minority groups. Hwang and colleagues (2008) define culture as a shared “set of attitudes, values, beliefs, and behaviors...[and] culture-related experiences such as those related to acculturation and being an ethnic minority” (p. 212). The CIMH model recognizes that cultural factors permeate mental health issues at all levels, including prevalence, etiology, expression, diagnosis, help-seeking, and treatment
(Hwang et al., 2008). The present study focused on the effects of culture on mental health expression and help-seeking through Pathways C, D, and E (Figure 1). As displayed through Pathways A to E (i.e., cultural background, cultural meanings and norms, expression, and help seeking), CIMH contends that culture affects how individuals express distress, including how individuals recognize, present, and disclose symptoms (i.e., emotion expression and emotion regulation). These cultural differences may subsequently influence individuals’ help-seeking behaviors. For example, the research literature suggests that Latinxs that endorse higher ethnic cultural values relative to NH White values (i.e., more enculturated), hold more negative attitudes towards mental health help-seeking and use less professional psychological services (i.e., Pathway A to E; Bledsoe, 2008; Burnett-Zeigler et al., 2017; Miville & Constantine, 2006). Two Latinx cultural values have been offered as possible explanations for this association: familism and simpatía. In particular, familism promotes a reliance on the family for support, and simpatía discourages the display of negativity (Pathway D; Senft et al., 2020). Thus, Latinxs higher on these cultural values are less likely to seek services outside of the family (Pathway D to E; Chang et al., 2013) and to disclose their emotional or psychological distress (i.e., emotion expression and emotion regulation; Komiya et al., 2000; Mendoza et al., 2015; Senft et al., 2020). Guided by the CIMH model, I tested the indirect effects of cultural factors on help-seeking through the expression pathway, including emotion expression and emotion regulation, among a population of Latinx college students.

Attitudes and Stigma
Perceived public stigma (Jennings et al., 2015; Ward-Ciesielski et al., 2019), self-stigma (Choi et al., 2019; Clement et al., 2015; Jennings et al., 2015), and attitudes towards seeking help (Bathje & Pryor, 2011; Li et al., 2014; Mojtabai et al., 2016; Ward-Ciesielski et al., 2019) are strong indicators of MHS utilization, with stigma recognized as “the most formidable obstacle” to using MHS (USDHHS, 1999, p. 56). Stigma of seeking psychological help is defined as stereotyping, prejudice, discrimination, and social rejection directed at people that use MHS (Corrigan, 2004). Two types of stigma are often examined in relation to MHS utilization—perceived public stigma and self-stigma (Corrigan et al., 2014). Public stigma consists of society’s negative beliefs and attitudes towards people that use psychological services (i.e., rating this group as “undesirable or socially unacceptable”; Vogel et al., 2006, p. 325). When individuals perceive that society labels people that seek treatment as undesirable or unacceptable, they internalize this belief and it results in self-stigma (Vogel et al., 2007). Individuals that endorse self-stigma oftentimes decide to not seek MHS to preserve a positive sense of self-worth and self-image (Vogel et al., 2007). Consequently, self-stigma has been shown to directly influence negative ATSPPH (Vogel et al., 2007). Ajzen’s (1991) Theory of Planned Behavior (TPB) explains the significant influence of ATSPPH on MHS utilization. The TPB claims that people’s cognitive evaluations regarding seeking professional help—including their help-seeking attitudes (i.e., good or bad judgements about seeking professional psychological help), subjective norms (i.e., social pressures and expectations regarding using or not MHS), and perceived behavioral control (i.e., ability and control over seeking help)—influence their intentions, which, in turn predict their actual help-seeking behaviors (Ajzen, 1991; Vogel et al., 2007).
Even though public stigma, self-stigma, and ATSPPH have demonstrated a mediational pathway to service use, where perceived public stigma predicts self-stigma which, in turn, influences ATSPPH (Bathje & Pryor, 2011; Choi et al., 2014; Vogel et al., 2007), prior work has also tested the effects of these variables separately. In fact, ATSPPH has been repeatedly found to be more closely and strongly related to college students’ intentions to seek and actually use MHS than self-stigma and perceived stigma when analyzed in the mediation model (Bathje & Pryor, 2011; Vogel et al., 2007) and on its own (Li et al., 2014; Ward-Ciesielski et al., 2019). For example, a meta-analysis of 18 studies, examining correlates of college students’ mental health help-seeking intentions, found positive ATSPPH had the strongest association with help-seeking ($r = .46$) across nine identified psychosocial factors, including when compared to public stigma ($r = -.11$; Li et al., 2014). In a separate systematic review of the literature, Clement and colleagues (2015) consistently found a significant negative association between self-stigma and service use, with a median effect size of -.23. While the direct influences of self-stigma and ATSPPH on mental health help-seeking behaviors are well-established in the literature (Clement et al., 2015; Guarneri et al., 2019; Li et al., 2014; Mojtabai et al., 2016), findings on the effects of perceived public stigma on treatment utilization are more inconsistent (Cheng et al., 2013; Clement et al., 2015; Eisenberg et al., 2009; Golberstein et al., 2009). In the previously cited systematic review, perceived stigma showed significant associations with help-seeking in only two out of 19 studies that examined this relation (Clement et al., 2015). Given the significant, but varying, effects of these different types of stigmas and attitudes on MHS utilization, an important first step to
understanding Latinx college students’ professional psychological help-seeking behaviors is to separately explore influences on self-stigma, perceived public stigma, and ATSPPH.

As suggested by the CIMH theoretical framework (Hwang et al., 2008), it is important for researchers to consider the role of culture when exploring predictors of mental health help-seeking stigma and attitudes, namely because cultural factors dictate a group’s acceptable and desirable behaviors (Abdullah & Brown, 2011). For example, despite holding values that emphasize strong interpersonal bonds through dignity and respect (i.e., personalism) and highlight family interdependence, obligations, and assistance (i.e., familism), many Latinxs endorse a preference for self-reliance over help-seeking (Bermúdez et al., 2010). Through qualitative and quantitative research, Latinx college students report that they often refrain from seeking help from family members to avoid burdening them (Chang, 2015). Latinxs’ preference for self-reliance also appears to stem from a concern with what others might think (“*el que dirán*”; Flores-Ferrán, 2010; Chang, 2015), worrying that seeking help for emotional and psychological problems might bring family shame and group disharmony (Comas-Diaz, 2006). The belief that seeking services for emotional and psychological distress might result in family shame, burden, or group disharmony might be indicative of self-stigma, and the notion of “*el que dirán*” reflects public stigma. Lending support to this claim, prior work has found that Latinxs college students report higher levels of perceived public stigma and self-stigma compared to their NH White counterparts (Eisenberg et al., 2009). Relatedly, Latinx undergraduates that are more highly acculturated to the mainstream, NH White, culture display more positive ATSPPH and a greater likelihood of using MHS, potentially due to a deviation from the previously described cultural beliefs (Ballesteros & Hilliard, 2016).
Despite these findings, previous studies have not investigated the specific mechanisms through which culture impacts Latinx college students’ mental health help-seeking stigma and attitudes. In the present study, I add to this literature by examining how cultural and affective factors interact to influence perceived public stigma, self-stigma, and ATSPPH among Latinx college students. By testing these associations separately, the current study sought to understand the unique effects of culture and emotion on each of the outcome variables since they demonstrate a distinct influence on actual help-seeking behaviors (Bathje & Pryor, 2011; Clement et al., 2015; Ward-Ciesielski et al., 2019).

**Acculturation**

Previous research studies suggest that the influence of cultural values on attitudes and stigma towards using MHS is conditional upon Latinxs’ levels of acculturation and enculturation (Bauldry & Szafarski, 2017; Burnett-Zeigler et al., 2018; Keyes et al., 2012; Miville & Constantine, 2006). The process of changing behaviors, values, knowledge, and identity to match the host/mainstream culture is termed acculturation, and the process of maintaining the traditional culture is called enculturation (Schwartz et al., 2010). Levels of acculturation and enculturation are a particularly salient topic when studying Latinx college students given this population’s developmental and cultural context. College students are at a developmental stage often termed emerging adulthood, which is characterized by increased responsibilities, changes, and exploration (Arnett, 2005). Emerging adults report that they often reexamine the beliefs and values they learned from their families (Arnett, 2005). Given the culturally pluralistic context with which Latinx Americans interact (Szapocznik & Kurtines, 1993), Latinx college students might find themselves in the processes of reevaluating and redefining their cultural
identification between their Latinx culture and the mainstream (i.e., NH White) culture. Therefore, it is important for researchers to evaluate where Latinx college students are in this process to be able to ultimately assess their self-stigma, perceived public stigma, and ATSPPH.

Furthermore, a subset of the literature shows Latinxs that endorse higher levels of enculturation (e.g., ethnic identity adherence and Spanish language preference) are less likely to seek MHS (Burnett-Zeigler et al., 2018; Keyes et al., 2012), and to hold greater stigma and negative ATSPPH compared to more acculturated Latinxs (Ballesteros & Hilliard, 2016; Bauldry & Szaflarski, 2017; Miville & Constantine, 2006). Given the range of processes involved in acculturation, researchers have examined the influence of different components of acculturation and enculturation on mental health help-seeking separately (Burnett-Zeigler et al., 2017; Keyes et al., 2012; Malcarne et al., 2006). Ethnic identity is a cognitive measure of enculturation, which evaluates an individual’s sense of belonging and attachment to the values, attitudes, preferences, and beliefs of their ethnic group (Burnett-Zeigler et al., 2018; Malcarne et al., 2006). A stronger ethnic identity has been found to be related to less use of professional psychological services (Burnett-Zeigler et al., 2017; Keyes et al., 2012). A possible explanation for this finding is that Latinxs that feel more closely attached to their ethnic group might also sense a disconnect to the larger U.S. mainstream culture in which MHS are provided, subsequently becoming reluctant to seeking professional help (Burnett-Zeigler et al., 2017). In contrast, highly acculturated Latinx individuals, including college students and young adults, might feel as if their values and beliefs align with the context in which services are provided (i.e., greater mainstream comfort), being more willing to seek treatment
(Burnett & Zeigler et al., 2017; Miville & Constantine, 2006) and endorse more favorable ATSPPH (Ballesteros & Hilliard, 2016). Based on these findings, I focused on mainstream comfort and ethnic identity as measures of acculturation and enculturation, and evaluated their association with self-stigma, perceived public stigma, and ATSPPH.

In addition, the relation between acculturation and mental health help-seeking has also been attributed to the behavioral domain of acculturation, measured by levels of participation and contact with the language, celebrations, clothing, and eating traditions of the heritage/mainstream culture (Malcarne et al., 2006). An often-cited behavioral indicator of acculturation is language use (i.e., English and Spanish; Cuellar et al., 1995; Keyes et al., 2012). Findings in this area indicate that higher Spanish language use (Keyes et al., 2012; Menendez et al., 2019) and limited English language proficiency predict lower MHS utilization (Alegría et al., 2007; Bauer et al., 2010; Rastogi et al., 2012). Previous research has found that a language mismatch between Latinxs and mental health service providers can result in inadequate assessment, diagnosis, and treatment of psychological problems, which might lead to service dissatisfaction and treatment termination (Kouyoumdjian et al., 2003; Santiago-Rivera, 2003). Limited English language proficiency has also been shown to contribute to lack of knowledge regarding availability of local mental health resources (Kouyoumdjian et al., 2003) and recognition of emotional problems (Alegría et al., 2007). Given the impactful role language plays in Latinxs’ MHS utilization and its relation to acculturation, I also focus on language use (i.e., English and Spanish) as measures of acculturation and enculturation in this project.

**Emotion Expression and Regulation**
As illustrated by the CIMH model (Hwang et al., 2008), emotion regulation and emotion expression are informed by cultural factors (Archuleta et al., 2015; Campos & Kim, 2017; Mayorga et al, 2018; Senft et al., 2020) and predict mental health help-seeking (Ciarrochi & Deane, 2001; Ciarrochi et al., 2003; Gulliver et al., 2010; Komiya et al., 2000; Mendoza et al., 2015; Rickwood et al., 2007). The effective expression and regulation of emotions is termed emotional competence, and it is considered to be part of the help-seeking process (Ciarrochi et al., 2003; Hwang et al., 2008; Rickwood et al., 2005). Specifically, emotion regulation strategies consist of the ability to identify, accept, understand, and manage internal emotional responses (Kaufman et al., 2016), and emotion expression is the ability to externally communicate those emotional responses to other people (Penza-Clyve & Zeman, 2002). Rickwood et al.’s (2005) conceptual framework describes the help-seeking process as beginning with an individual’s awareness and identification of an emotional problem (i.e., emotion regulation), which then, if willing, the individual expresses it to others. Previous studies found that adolescents and young adults that exhibit lower emotional competence report more negative ATSPPH (Komiya et al., 2000; Mendoza et al., 2015) and lower intentions to seek MHS (Ciarrochi et al., 2003; Rickwood et al., 2005).

The manner in which Latinx college students manage and express their emotions is likely influenced by their adherence to specific cultural factors (Ramzan & Amjad, 2017; Tsai & Lu, 2018). Broadly, many Latinxs ascribe to the cultural orientation of *convivial collectivism*. Convivial collectivism is characterized by interdependent relationships built through open and positive emotion expression and regular social interactions (Campos & Kim, 2017; Senft et al., 2020). A central value of convivial
collectivism is simpatía. Simpatía is a cultural script that dictates how individuals should behave interpersonally to maintain the group’s social harmony. This script encourages the direct and outward display of positive emotions and the avoidance of conflict or negative emotions, shaping how Latinxs manage and express their emotions (Senft et al., 2020; Triandis et al., 1984). In other words, the cultural script around simpatía restricts emotional expression by communicating that experiencing and disclosing negative emotions should be avoided. Prior work suggests that avoidance or suppression of negative emotions accounts, in part, for people’s negative ATSPPH (Kim & Lee, 2014; Kim et al., 2016; Nyugen & Anderson, 2005). This research, however, has largely focused on Asian American populations (Kim & Lee, 2014; Kim et al., 2016; Nyugen & Anderson, 2005), which value general emotional self-control (Kim et al., 2005). Unlike the Asian American value of emotional self-control, Latinx cultural scripts also favor the display of highly positive emotions (Campos & Kim, 2017; Senft et al., 2020). For this reason, it is important to investigate the potential relation between cultural factors, emotion expression and emotion regulation, and perceived stigma, self-stigma, and ATSPPH among a Latinx population of college students.

**Current Study**

Prior research and theory assert that cultural and affective factors, such as emotion suppression and difficulties in emotion regulation, contribute to the development of mental health help-seeking stigma and negative attitudes (Ciarrochi & Deane, 2001; Ciarrochi et al., 2003; Gulliver et al., 2010; Hwang et al., 2008; Keyes et al., 2012; Komiya et al., 2000; Mendoza et al., 2015; Rickwood et al., 2007). The research in this area, however, has been primarily conducted with Asian and Asian American populations
Kim & Lee, 2014; Kim et al., 2016; Nyugen & Anderson, 2005). Similar to the Asian cultural value of emotional restraint, Latinx cultural scripts (e.g., simpatía) discourage the expression of negative emotions, but they also promote the display of highly positive ones (Campos & Kim, 2017; Senft et al., 2020; Triandis et al., 1984). Therefore, research that examines the effects of cultural and affective factors on Latinxs’ professional psychological help-seeking stigma and attitudes is needed. Given the culturally pluralistic environment of Latinx college students (i.e., exposure and contact to the mainstream NH White culture and their traditional Latinx culture), different levels of acculturation may influence their adherence to the cultural scripts that guide this population’s emotion expression and management. For this reason, I examined whether and how levels of acculturation interacted with emotion expression and emotion regulation to influence Latinx college students’ self-stigma, perceived public stigma, and ATSPPH. To do this, I tested: (a) whether and how emotion expression and emotion regulation were associated with self-stigma, perceived public stigma, and negative ATSPPH; (b) whether levels of acculturation, as measured by Spanish language use, English language use, ethnic identity, and mainstream comfort, shaped emotion expression and emotion regulation, and (c) whether emotion expression and emotion regulation partially explained the association between acculturation and self-stigma, perceived public stigma, or ATSPPH among Latinx college students.

Method

Study Design

To carry out this project, I analyzed data from the Latino College Student Survey cross-sectional study. The research team collected self-reported questionnaire data from
487 Latinx college students using Qualtrics Panels in Spring 2019. Eligible participants were (a) Latinx/Hispanic, (b) between the ages of 18 and 25, (c) students at a college/university, and (d) comfortable answering questions in English. Given that the survey consisted of approximately 300 questions, we employed a multi-form planned missing design to reduce the number of questions each participant received. The items from each measure were randomly divided among three survey forms, and all forms included a set of required items (e.g., Form 1: XAB, Form 2: XAC, and Form 3: XBC). This research design calls for the use of missing data strategies to estimate responses for the items that were not included in a specific individual’s survey form. In total, the surveys took participants approximately 20 to 30 min to complete, and they were compensated via Qualtrics for their time. Approval for this study was obtained from Utah State University’s Institutional Review Board (#9022).

**Data Cleaning**

All data was prepared using the statistical computer software R (R Core Team, 2019). Given that the data was collected prior to the proposal of the current study, the data cleaning and preparing processes had already been completed. Despite the advantages of administering online surveys (e.g., reduced time burden and costs; Wright, 2005), this survey format poses several risks for biased (Wright, 2005) and inattentive responses (Huang et al., 2012). Therefore, the research team conducted several validity checks to maintain the quality of the collected data. Before the data was received from Qualtrics, the Qualtrics team excluded participants based on response time (i.e., if the participant responded too quickly or too slowly compared to the rest of the sample, then those participants were removed). The research team also included a validity check item
within the questionnaire to ensure that participants read the survey questions carefully. The item asked participants, “For this question, answer 5. What is 2 + 2?”. After an assessment of the data, it became clear that attentive participants either followed the instruction to respond with “5” or provided the correct answer to the question, being “4”. For this reason, participants that provided responses other than “5” or “4” were removed from the sample.

In addition to these steps, it was important to examine other indicators of careless responding (Huang et al., 2012; Yentes & Wilhelm, 2018). Therefore, the research team examined the dataset for careless, longstring (i.e., consecutive string of identical responses), and excessive missing responses, using the careless package in R (Yentes & Wilhelm, 2018). Box plots were created to check for outliers in missing and longstring responses (Appendix A). The research team excluded cases with outlier longstring responses (over 19 consecutive items endorsed with same response) or missingness (more than 10 missing items). A total of 15 cases were removed due to careless responding, resulting in the final sample of 472 participants.

**Participants**

The majority of the 472 participants in this study identified as women (82.6%), and the average age of the entire sample was 21.4 ($SD = 2.1$). Approximately half of the sample indicated living off campus with family (50.4%), and the rest were evenly split between living on campus (23.5%) or off campus not with family (23.3%). With regards to income, participants were asked to report how much difficulty they experienced with paying bills, and most of the sample said *a little difficulty* (30.5%) or *some difficulty* (30.5%), followed by *no difficulty at all* (18.6%) and *a great deal of difficulty* (18.0%).
The majority also indicated *having just enough money to make ends meet* (39.0%), followed by *having enough money left over after bills* (24.8%), *what I needed to make ends meet* (19.5%), *more than enough money left over after bills* (7.4%), and *not enough to make ends meet* (7.0%). To assess for specific ethnicity/national origin, participants responded to a closed-ended question and/or provided their ethnicity using an open-ended text option. Given the range of responses collected using this method, the research team clustered responses into higher order ethnicity groups, with the exception of the Mexican group since it composed the majority of the sample. The ethnicity breakdown in this sample was the following: Mexican (50.6%), Caribbean (22.0%), South American (8.5%), mixed (6.8%), and Central American (6.1%). The majority of the sample reported being U.S.-born (82.6%), with 16.3% of participants indicating that they were born in another country. Further participant demographic information can be found in Table 1.

**Measures**

*Emotion Expression*

The Emotion Expression Scale for Children (EESC; Penza-Clyve & Zeman, 2002) is a 16-item assessment of deficits in emotion expression, and it consists of two subscales—lack of emotional awareness and reluctance of emotion expression. The scale was initially developed using a sample of 9- to 12-year-olds (Penza-Clyve & Zeman, 2002), and has since been effectively applied and tested for internal consistency, construct validity, and test-retest reliability with older populations, including young adults (Desrosiers et al., 2015). The items were answered on a 5-point scale, ranging from 1 = *Not at all true* to 5 = *Extremely true*. Sample questions included, “I have feelings that I can’t figure out,” and “When I am sad, I try not to show it.” Higher scores on the EESC
indicated poorer emotion awareness and greater reluctance to express emotion. The EESC showed excellent internal consistency in the current sample, mean Cronbach’s $\alpha = .92$ (range = .91 - .92), across the 50 imputed datasets.

**Emotion Regulation**

The Difficulties in Emotion Regulation Scale-Short Form (DERS-SF; Kaufman et al., 2016) is a self-report measure of emotion regulation problems. The DERS-SF is composed of 18-items and six subscales, including strategies, non-acceptance, impulse, goals, awareness, and clarity. Responses were based on a 5-point scale, ranging from 1 = *Almost never* to 5 = *Almost always*. An example of the questions presented in this scale is, “When you’re upset, you become out of control.” Several studies have successfully tested the internal consistency and validity of the DERS with adolescent and young adult samples (Neumann et al., 2010; Weinberg & Klonsky, 2009). The DERS showed high internal consistency in this study, with a mean Cronbach’s $\alpha$ of .90 (range = .89 - .90) across the imputed datasets.

**Language Use**

English and Spanish language use were measured using the language use subscale from the Acculturation Rating Scale for Mexican Americans – II (ARSMA-II; Cuellar et al., 1995). The language use subscale of the ARSMA-II consists of 10 items, with five items dedicated to each language. The items asked participants to rate how often they engage in an activity in either English or Spanish, and responses were answered on a 5-point scale (1 = *Not at all*, 2 = *Not very often*, 3 = *Moderately*, 4 = *Very often*, and 5 = *Almost always*). Sample items included, “You enjoy watching TV in English.” and “You write in Spanish”. Higher mean scores on the five English language use items indicated
higher levels of acculturation, and higher mean scores on the five Spanish language use items suggested greater enculturation. The ARSMA-II has been widely used to measure levels of acculturation and enculturation (Schumann et al., 2020), and it was developed with Latinx samples, demonstrating strong construct validity with this population (Cuellar et al., 1995). Cronbach’s alphas for the measures of language use fell within the good internal consistency range (Spanish language use $\alpha = .86 - .87$; English language use $\alpha = .81 - .82$).

**Ethnic Identity**

The Scale of Ethnic Experiences (SEE) was administered to assess for participants’ ethnic identity and mainstream comfort (Malcarne et al., 2006). The SEE is typically composed of 32-items and four subscales, perceived discrimination, ethnic identity, mainstream comfort, and social affiliation, that measure ethnicity-related cognitive constructs. Only the ethnic identity and mainstream comfort subscales were included in this study’s survey. The ethnic identity subscale (12-items) asked participants to rate their attitudes towards being part of their ethnic group, including their sense of belonging and participation in cultural activities. The mainstream comfort subscale (6-items) assessed the participants’ comfort and sense of belonging to the mainstream NH White culture. Sample questions included, “Being a member of my ethnic group is an important part of who I am.” for the ethnic identity subscale, and “I feel like I belong to the mainstream American culture.” for the mainstream comfort subscale. Responses were based on a 5-point scale ranging from 1 = *Strongly disagree* to 5 = *Strong agree*. The SEE has been shown to be a reliable and valid measure to apply with Latinx American groups (Malcarne et al., 2006). Across the 50 imputed datasets from this study, the ethnic
identity subscale exhibited good internal consistency, range Cronbach’s $\alpha = .78 - .81$, and the mainstream comfort subscale showed acceptable reliability, range = $0.62 - 0.68$. Since Cronbach’s $\alpha$ is affected by having few items on a scale (Hayes & Coutts, 2020), we consider this an acceptable value for the current study.

**Self-Stigma**

The Self-Stigma of Seeking Help Scale (SSOSH) is a 10-item assessment of individual’s internalized stigma regarding seeking professional psychological help (Vogel et al., 2006). The items were answered based on a 5-point scale, ranging from 1 = *Strongly disagree* to 5 = *Strongly agree*. Sample items of the SSOSH included, “It would make me feel inferior to ask a therapist for help” and “My self-esteem would increase if I talked to a therapist” (reverse-scored). Half of the items are reverse-coded, and higher scores on the SSOSH indicated greater self-stigma. The SSOSH demonstrates strong internal consistency, test-retest reliability, and construct validity with college student populations (Vogel et al., 2006). With this sample of Latinx college students, the SSOSH showed good reliability, with a mean Cronbach’s $\alpha$ of $0.72$ (range = $0.69 - 0.73$) across the imputed datasets.

**Perceived Stigma**

The Stigma Scale for Receiving Psychological Help (SSRPH) measures people’s perceptions of how stigmatizing it is to receive professional psychological treatment (Komiya et al., 2000). The scale is made up of five items based on a 5-point scale (1 = *Strongly disagree* to 5 = *Strongly agree*). The research team removed item number two from the SSRPH given that this item measures self- rather than perceived stigma (Vogel et al., 2017). The final scale had four items. Sample questions from the SSRPH included,
“Seeing a psychologist for emotional or interpersonal problems carries social stigma” and “People will see a person in a less favorable way if they come to know that he/she has seen a psychologist.” Higher scores on this measure indicated greater levels of perceived public stigma. The SSRPH shows adequate construct and criterion validity when tested with college students (Komiya et al., 2000), and among our sample it demonstrated good internal consistency, $\alpha = .77 - .78$.

**Attitudes Towards Psychological Services**

The Attitudes Toward Seeking Professional Psychological Help-Short Form (ATSPPH-SF) assessed participants’ attitudes regarding MHS utilization (Fischer & Farina, 1995). The ATSPPH-SF is a 10-item scale with 4-point Likert-type responses, ranging from 1 = *Disagree* to 4 = *Agree*. Half of the items on the ATSPPH-SF are typically reverse-coded, and higher scores indicate more positive ATSPPH. For this study, items were coded to result in less favorable ATSPPH. An example item included, “The idea of talking about problems with a psychologist strikes me as a poor way to get rid of emotional conflicts”. The ATSPPH-SF has been previously applied with Latinx college students (Miville & Constantine, 2006), and it shows adequate internal consistency among college student samples (Elhai et al., 2009). In this sample, the ATSPPH-SF also showed adequate internal consistency, with a mean Cronbach’s $\alpha$ of .65 (range = .61 -.67) across the 50 imputed datasets.

**Covariates**

I included the following demographic variables as covariates: age, gender, nativity, and living status. The gender, nativity, and living status factors were converted into dummy codes with the reference category being based on the distribution of
responses. For instance, the gender variable was coded as woman=0 and other=1 since there was a greater number of participants that endorsed ‘woman’ (Table 1). For the nativity code, the reference group was those born in the U.S. as compared to any other country (Table 1). For living situation, dummy codes for living off campus with family and one for living off campus not with family were created.

Several research studies demonstrate that mental health need, as measured by psychological distress or symptoms, is a strong predictor of MHS utilization among Latinxs (Anastasia & Bridges, 2015; Menendez et al., 2019). Therefore, I controlled for symptoms of depression as measured by the Center for Epidemiologic Studies Depression Scale (CESD; Radloff, 1977). The CESD included 20-items that asked about the frequency and presence of depressive symptoms. The responses were based on a 4-point Likert-scale, ranging from 1 = Rarely or none of the time to 4 = Most or all of the time. CESD items were summed to obtain a total score, with higher scores indicating greater frequency of depressive symptoms and mental health need. Among the present sample of Latinx college students, the CESD exhibited excellent reliability, $\alpha = .90 - .91$, across the imputed datasets.

**Analytic Plan**

**Multiple Imputation**

The survey was administered using a three-form planned missing design, meaning that each participant completed one of three forms that included a subset of items from each measure (Rhemtulla & Hancock, 2019). When appropriate methods of accounting for missing data are applied, planned missing design demonstrates similar results as datasets with no missingness (Rhemtulla & Hancock, 2019). Given that missing values
are introduced by the researchers at random, and, therefore, unrelated to the variables, missing data here are considered to be missing completely at random (MCAR; Little & Rubin, 2002). When values are MCAR, approaches to missing data utilize the observed data from related items and variables to estimate the missing values. Multiple imputation (MI) and full information maximum likelihood (FIML) are the two missing data methods that follow this procedure and are recommended when planned missing design is executed (Little et al., 2014; Rhemtulla & Hancock, 2019). The difference between FIML and MI is that FIML accounts for missing data via modeling latent factors of the study variables (Little et al., 2014). Downsides to employing this strategy is that models become more complex since measurement models must be estimated for each variable, and there is an increased likelihood of model misfit. In contrast, MI creates multiple datasets with imputed estimates at the item-level, maintaining observed variables (Little et al., 2014). Since I planned on creating scaled and sub-scaled means and sums from the collected data, MI was conducted to account for missing data. The MI process consisted of the three stages shown in Figure 2 (Pedersen et al., 2017), which we carried out using the mice package in R (van Buuren & Groothuis-Oudshoorn, 2011). The missing data was replaced with the imputed values derived from the observed data, generating 50 imputed datasets with slightly different values. Through the MI process, estimates that are as representative as possible to what the missing values would have been were produced (Hardt et al., 2012; Pedersen et al., 2017; Rhemtulla & Hancock, 2019).

**Path analysis**

I ran a series of multiple regressions to examine the unique effects of the four independent variables, Spanish language use, English language use, ethnic identity, and
mainstream comfort, and the two mediators, difficulties with emotion regulation and poor emotion expression, in relation to the three outcome variables, self-stigma, perceived public stigma, and ATSPPH. For these analyses I used the lavaan statistical package in R (Rossel, 2012). The mitml package was then applied to run the regression analysis across all 50 imputed datasets and to pool the results (Grund et al., 2019). I completed the same process to investigate the potential associations between the two mediators and the predictor variables of acculturation and enculturation.

To address the study’s explanatory hypotheses, I created a series of mediation models, using the lavaan statistical package in R (Rosseel, 2012). The three mediation models tested whether emotion expression partially explained the influence of acculturation and enculturation, as measured by Spanish language use, English language use, ethnic identity, and mainstream comfort, on either self-stigma (Figure 3), perceived public stigma (Figure 4), or ATSPPH (Figure 5). The path analyses were conducted across the 50 imputed datasets, and the estimates were pooled using the R package mitml (Grund et al., 2019). I also examined regression coefficients for the $a$, $b$, and $c'$ pathways (Figures 3 - 5). In the third step, I conducted indirect effect analyses. Specifically, I tested the indirect effects where both the $a$ and $b$ pathways were significant. To do this, I entered the path coefficients and standard errors for the $a$ paths and the regression coefficient and standard errors for the $b$ paths into the Rmediation program (Tofghi & MacKinnon, 2011). I specified the significance level at $\alpha = .05$ and used the distribution of the product method, which is shown to result in higher power compared to other hypothesis testing methods (Tofghi & MacKinnon, 2011). The distribution of the product method determined whether the indirect pathway from the predictor (e.g., ethnic
identity) to the outcome variable (e.g., self-stigma) via the mediator (i.e., emotion expression) was significant, which is the case if the 95% confidence intervals do not include zero (Tofghi & MacKinnon, 2011). Since difficulties in emotion regulation were not significantly associated with the predictors, I did not run the mediation models with this variable.

**Results**

**Preliminary Analyses**

Descriptive statistics and correlations were calculated for the study variables across the 50 imputed datasets, and the results (i.e., means, standard deviations, and correlation statistics) were pooled using Rubin’s rules (Pedersen et al., 2017; van Buuren & Groothuis-Oudshoorn, 2011). As shown in Table 2, self-stigma was significantly associated with the rest of the study variables; perceived stigma was positively correlated with difficulties in emotion regulation, poor emotion expression, and the two other outcome variables; and, ATSPPH was significantly associated with all the variables, except mainstream comfort and emotion expression. The preliminary regression results, adjusting for covariates, supported these initial correlational findings and noted difficulties in emotion regulation was not significantly associated with any of the acculturation and enculturation factors (Table 3). Poorer emotion expression, however, was positively and significantly related to stronger ethnic identity ($b = 0.18, SE = 0.06, p < .01$) and greater English language use ($b = 0.12, SE = 0.06, p = .04$). Importantly, the putative mediators, difficulties in emotion regulation and poor emotion expression, were significantly correlated with some of the outcome variables (Table 4). In particular, difficulties in emotion regulation demonstrated significant, positive associations with
self-stigma, perceived public stigma, and ATSPPH. Emotion expression was also positively correlated with perceived public stigma ($b = 0.18, SE = 0.06, p < .01$), but its associations with self-stigma ($b = 0.08, SE = 0.04, p = .08$) and ATSPPH ($b = 0.06, SE = 0.03, p = .07$) were outside of the significance threshold based on a $p$-value of .05.

**Path Analyses**

Since the difficulties in emotion regulation mediator was not related to the predictor variables of acculturation and enculturation (Table 3), I only ran the three models with emotion expression as the mediator (Table 5). First, I tested whether the effects of Spanish language use, English language use, ethnic identity, and mainstream comfort on self-stigma were mediated by emotion expression (Figure 3). Results indicated that higher English language use and ethnic identity significantly predicted emotion expression, and poorer emotion expression predicted greater self-stigma ($b = 0.12, SE = 0.04, p < .01$). Specifically, greater use of the English language predicted lower emotion expression ($b = 0.12, SE = 0.06, p < .05$), and more endorsement of ethnic identity was associated with poorer emotion expression ($b = 0.18, SE = 0.06, p < .01$). To test for the indirect effects of English language use and ethnic identity on self-stigma through emotion expression, I conducted distribution of the product tests, using the *Rmediation* program in R (Tofghi & MacKinnon, 2011). Based on a $p$-value of .05 and 95% confidence intervals, the results from these tests demonstrated non-significant indirect effects for English language use on self-stigma through emotion expression ($b = 0.01, SE = 0.01, 95\% CI = [-0.0001, 0.04]$), but revealed significant effects for ethnic identity on self-stigma through emotion expression ($b = 0.02, SE = 0.01, 95\% CI = [0.004, 0.05]$).
In the second mediation model, I tested the indirect effects of emotion expression on the association between the four predictors and perceived public stigma (Figure 4). Similar to the previous model, only English language use \( (b = 0.12, SE = 0.06, p < .05) \) and ethnic identity \( (b = 0.18, SE = 0.06, p < .01) \) significantly influenced emotion expression, and poorer emotion expression predicted higher perceived public stigma \( (b = 0.19, SE = 0.06, p < .001) \). After entering the path coefficients and standard errors for the significant \( a \) and \( b \) paths into the distribution of the product formula, significant indirect effects for English language use \( (b = 0.02, SE = 0.01, 95\% CI = [0.0002, 0.05]) \) and ethnic identity \( (b = 0.03, SE = 0.02, 95\% CI = [0.008, 0.07]) \) through emotion expression were observed.

In the final model, I examined the potential mediating effects of emotion expression on the associations between the four predictors and ATSPPH (Figure 5). Here, English language use \( (b = 0.12, SE = 0.06, p < .05) \) and ethnic identity \( (b = 0.18, SE = 0.06, p < .01) \) were associated with emotion expression, and poorer emotion expression was associated with greater negative ATSPPH \( (b = 0.08, SE = 0.03, p < .01) \). I also found significant indirect effects for English language use \( (b = 0.01, SE = 0.01, 95\% CI = [0.00003, 0.02]) \) and ethnic identity \( (b = 0.01, SE = 0.01, 95\% CI = [0.002, 0.03]) \) on ATSPPH through emotion expression (Table 5).

**Discussion**

The majority of Latinx college students are in a developmental stage in their lives marked by several life stressors and at an increased risk of experiencing psychological distress (French & Chavez, 2010; Goodwill & Zhou, 2020). Nonetheless, they underutilize MHS, and the research literature shows that perceived public stigma, self-
stigma, and negative ATSPPH contribute to this population’s decision to not seek
treatment (Bathje & Pryor, 2011; Cheng et al., 2013; Clement et al., 2015; Kam et al.,
2019; Ward-Ciesielski et al., 2019). Therefore, the present study examined potential
predictors of self-stigma, perceived public stigma, and ATSPPH, as well as possible
explanatory pathways. Guided by Hwang and colleagues’ (2008) CIHM and the
literature, I hypothesized that specific facets of acculturation (i.e., English language use
and mainstream comfort) and enculturation (i.e., Spanish language use and ethnic
identity) would influence perceived public stigma, self-stigma, and ATSPPH through
emotional competence among this sample of Latinx college students. This study’s
hypotheses were partially supported.

Results from the correlation, regression, and mediation analyses indicated that
ethnic identity, Spanish language use, and English language use significantly predicted
one of the outcome variables. Specifically, participants that reported greater Spanish
language use were more likely to endorse higher self-stigma, perceived public stigma,
and negative ATSPPH. Conversely, participants that reported more English language use
and endorsed greater ethnic identity expressed less self-stigma and negative ATSPPH.
The language use findings are consistent with the literature, which indicates that more
Spanish language use is associated with less favorable ATSPPH (Ballesteros & Hilliard,
2016; Kouyoumdjian et al., 2003), as well as with underutilization of MHS (Keyes et al.,
2012; Menendez et al., 2019). Scholars have previously speculated that greater English
language use might indicate a deviation from traditional Latinx cultural values, which
might stigmatize or discourage professional psychological help-seeking, resulting in more
favorable ATSPPH (Bauldry & Szafarski, 2017; Ballesteros & Hilliard, 2016; Burnett-
Zeigler et al., 2018). Given that measures of cultural values were not included in this study, I cannot support or refute that speculation. In addition, these results should not be taken to mean that endorsing higher levels of Spanish language use is detrimental to Latinx college students. Instead, it might signify that individuals with greater reported Spanish language use are at an increased risk to exhibiting negative ATSPPH and stigma, thus researchers should aim to understand possible reasons for this relation among this specific population. For instance, Latinx college students that prefer Spanish might encounter more structural barriers to accessing services, such as a lack of knowledge of availability of services, provider language mismatch, and difficulty navigating the mental health system (Keyes et al., 2012; Kouyoumdjian et al., 2003; Menendez et al., 2019), which researchers should further explore.

Moreover, the protective effects of ethnic identity on self-stigma and negative ATSPPH are generally inconsistent with prior studies (Ballesteros & Hilliard, 2016; Burnett-Zeigler et al., 2017; Cheng et al., 2013; Keyes et al., 2012). For instance, the research literature on the influence of acculturation, and specifically ethnic identity, on ATSPPH shows that stronger ethnic identity is associated with less favorable ATSPPH (Ballesteros & Hilliard, 2016; Miville & Constantine, 2006), as well as with lower MHS utilization (Burnett-Zeigler et al., 2017; Keyes et al., 2012). An exception to this trend in the literature is a study conducted by Ramos-Sanchez and Atkinson (2009) on Mexican Americans’ acculturation, help-seeking intentions, and attitudes, which found that ethnic identity was related to more positive ATSPPH. In addition, although the literature in this area is limited, a trend between higher ethnic identity and less self-stigma among Latinx college students was noted in a study conducted by Cheng and colleagues (2013),
supporting the current project’s findings. A possible explanation for these protective effects might be that a strong sense of belonging to one’s ethnic group might also provide a positive sense of self and, subsequently, less self-stigma about seeking help (Cheng et al., 2013). Nonetheless, these inconsistencies in the literature indicate that future research is needed to better understand the mechanisms through which ethnic identity influences self-stigma and ATSPPH.

As predicted, the measures of emotional competence, namely difficulties in emotion regulation and poor emotion expression, were positively associated with self-stigma, perceived public stigma, and negative ATSPPH. I also tested the association between emotion expression and the three outcome variables in the study’s mediation models, with emotion expression entered as the mediator for the relation between the acculturation predictors and self-stigma, perceived stigma, or ATSPPH. The findings from these mediation models demonstrated significant paths for the relation between emotion expression and all three outcome variables. These results suggest that poorer emotion expression is associated with higher self-stigma, perceived public stigma, and negative ATSPPH, identifying poor emotion expression as a potential risk factor for Latinx college students’ reduced use of MHS. These mediation models further showed significant indirect effects of English language use and ethnic identity through emotion expression on self-stigma, public perceived stigma, ATSPPH. Specifically, higher ethnic identity resulted in poorer emotion expression, which was positively associated with negative ATSPPH, self-stigma, and perceived public stigma. Similarly, greater English language use was associated with less emotion expression, and subsequently more perceived public stigma and negative ATSPPH. These results suggest that greater English
language use and ethnic identity can be risk factors for stigma and negative ATSPPH via emotion expression.

The contrasting effects of ethnic identity on emotion expression as compared to self-stigma and negative ATSPPH are partially supported by the research literature. In particular, the positive association between higher ethnic identity and poorer emotion expression can be explained by the Latinx cultural value of simpatía (Senft et al., 2020). Simpatía is a Latinx cultural script that discourages the experience and expression of negative emotions, while promoting positive emotionality (Senft et al., 2020). Higher scores on the emotion expression scale used in this study indicated greater reluctance to express negative emotions (Penza-Clyve & Zeman, 2002). Therefore, greater scores on this scale would be in line with the concept of simpatía, particularly for participants that endorsed stronger adherence to their Latinx heritage culture, which was observed here. In addition, reluctance to express emotions was positively related to self-stigma, perceived public stigma, and negative ATSPPH as predicted. Previous research, with primarily Asian American and NH White samples, demonstrated that poor emotional competence (i.e., the ability to identify, understand, manage, and describe emotions; Ciarrochi et al., 2003) predicts less favorable help-seeking attitudes (Kim et al., 2016; Kim & Lee, 2014). Results from the present study confirmed this association among Latinx college students, and added that both measures of emotional competence, poor emotion expression and difficulties in emotion regulation, also predicted self-stigma and perceived public stigma. These results lend support to models of mental health help-seeking that contend emotional competence is an important contributing factor to whether individuals seek psychological treatment. In conclusion, the relation between certain cultural factors (i.e.,
ethnic identity), a facet of emotional competence (i.e., emotion expression), and attitudes and stigma was supported among this sample of Latinx college students, with an implied need for programs that improve this population’s emotion expression and regulation strategies.

The difficulties in emotion regulation variable was also identified as a risk factor for greater self-stigma, perceived public stigma, and negative ATSPPH. However, I did not test the mediating effects of difficulties in emotion regulation since it was not initially related to any of the cultural predictors (i.e., Spanish language use, English language use, ethnic identity, and mainstream comfort). These findings suggest that the effects of difficulties in emotion regulation on self-stigma, perceived stigma, and negative ATSPPH might not be unique to a certain cultural orientation held by Latinx college students. A subset of research on the universality and cultural specificity of emotion processes has demonstrated that some emotion regulation strategies, such as emotional reappraisal (Gross & John, 2003; Kuang et al., 2019), are shared cross-culturally, while others, such as emotion expression, are moderated by cultural factors (Butler et al., 2007; Soto et al., 2005). In the present study, the difficulties in emotion regulation mediator might be exhibiting a universal effect since it appeared to not be impacted by the measures of acculturation included in this study. A possible reason for this might be that the emotion regulation strategies assessed in this study, including awareness, clarity, nonacceptance, goals, and impulse, are considered internal processes, whereas emotion expression is an external behavior, which is probably more likely to be influenced by social and cultural contexts (Kaufman et al., 2016; Penza-Clyve & Zeman, 2002). However, these hypotheses should be tested with additional samples of Latinxs, ethnic/racial groups, and
cultural factors to determine whether (a) the influence of difficulties in emotion regulation on self-stigma, perceived public stigma, and ATSPPH appears cross-culturally, and (b) different culture-related concepts influence the development of emotion regulation strategies. Despite the nonsignificant effects of levels of acculturation and enculturation on difficulties in emotion regulation strategies, this affective factor demonstrated a strong influence on mental health help-seeking stigma and attitudes among Latinx college students that merits further exploration and attention from researchers (Table 4).

Limitations

It is important to note the present study’s limitations to inform future research. First, I attempted to investigate the two broad concepts of acculturation and emotional competence, which have been previously measured using different instruments across studies. For instance, emotional competence is conceptualized as the ability to effectively understand, identify, describe, and manage emotions (Ciarrochi et al., 2003). Therefore, researchers have examined specific components of this variable, such as emotional self-control, emotional openness, and emotion regulation, which fall under the umbrella concept of emotional competence (Archuleta, 2015; Ciarrochi et al., 2003; Kim & Lee, 2014; Komiya et al., 2000; Mendoza et al., 2015). To comprehensively examine the influence of emotional competence on mental health help-seeking in this study, we included two different measures—one of emotion expression and another of emotion regulation. However, future research should investigate the effects of other emotional competence factors, such as emotional self-control, orientation, or openness (Ciarrochi et al., 2003; Kim & Lee, 2014; Komiya et al., 2000), that might have been overlooked in
this project. Acculturation is another variable that has been assessed in the literature using a range of instruments and proxy measures (Malcarne et al., 2006). Even though we included several, relevant measures of acculturation here, future studies might benefit from exploring the effects of different processes of acculturation (e.g., specific Latinx cultural values or beliefs) on mental health help-seeking stigma and attitudes. In addition, we investigated predictors of self-stigma, perceived public stigma, and ATSPPH because these variables have been observed to influence MHS utilization among Latinx college students. However, it might be helpful for future research to include actual measures of service use to fully understand whether and how cultural, affective, and attitudinal factors directly impact MHS utilization in this population.

Additional limitations of this research project were observed in the sample’s characteristics and study design. Specifically, the majority of participants reported being U.S. born (82.6%), women (82.6%), and/or of Mexican origin (50.6%), limiting the generalizability of this study’s results to other Latinx individuals. Given that nativity has been previously used as a proxy measure of acculturation, it was important to control for nativity in this study to account for the over-representation of U.S. born participants. Nonetheless, future studies should also aim to recruit more heterogenous Latinx samples that reflect the great diversity within this ethnic group. The current study also exhibited shortcomings in design, namely its cross-sectional nature and online data collection method. The cross-sectional design of the study impedes our ability to conclude casual associations between the project’s variables due to a lack of temporal order. In addition, the literature shows that research participants are more likely to respond carelessly to items on online surveys as compared to in-person questionnaires (Huang et al., 2012).
Lastly, despite the statistically significant results, this study’s findings tended to show relatively small effect sizes. Therefore, researchers should attempt to replicate these results by adjusting for the present study’s shortcomings, such as longitudinally collecting data from a more diverse sample of Latinx college students.

Conclusions

The present study’s findings elucidate potential risk and protective factors against self-stigma, perceived public stigma, and negative ATSPPH, which should be considered when developing interventions to increase Latinx college students’ utilization of MHS. Specifically, difficulties in emotion regulation, poor emotion expression, and more Spanish language use predicted greater self-stigma, perceived public stigma, and negative ATSPPH. Conversely, stronger ethnic identity and higher English language use were protective against self-stigma and negative ATSPPH. These results could be used to inform necessary adaptations to mental health policy, intervention, and prevention efforts in favor of Latinx college students’ psychological and emotional well-being. For instance, it is imperative for university and college campuses to enhance outreach and education programs that target Latinx college students’ mental health stigma and ATSPPH (Mendoza et al., 2015). It is advised that these programs be sensitive to how the information is presented, ensuring to incorporate Latinx cultural values and normalize MHS use among this community (Abdullah & Brown, 2011). To overcome language use barriers, efforts to expand Latinx college students’ awareness regarding available services (e.g., disseminating mental health information in Spanish and English), and to educate mental health practitioners on Latinx culture (e.g., knowledge regarding Latinx values, emotion expression and attitudes; Kouyoumdjian et al., 2003) could also be developed.
Lastly, to address emotion expression and regulation difficulties, interventions aimed at increasing Latinx college students’ emotion awareness and expressivity might also be beneficial, such as interventions that promote expressive writing in culturally congruent ways (Tsai & Lu, 2018). Given this study’s findings, the previously mentioned initiatives and programs should be more widely disseminated and adapted to serve Latinx college students.
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### Table 1

**Participant Demographics**

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<tr>
<th>Category</th>
<th>Mean/Count (SD/%)</th>
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<tbody>
<tr>
<td><strong>Age</strong></td>
<td>21.35 (2.1)</td>
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<tr>
<td><strong>Sex</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>76 (16.1%)</td>
</tr>
<tr>
<td>Female</td>
<td>390 (82.6%)</td>
</tr>
<tr>
<td>Other</td>
<td>6 (1.3%)</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>74 (15.7%)</td>
</tr>
<tr>
<td>Woman</td>
<td>386 (81.8%)</td>
</tr>
<tr>
<td>Other</td>
<td>12 (2.5%)</td>
</tr>
<tr>
<td><strong>Nativity</strong></td>
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</tr>
<tr>
<td>United States</td>
<td>390 (82.6%)</td>
</tr>
<tr>
<td>Other country</td>
<td>77 (16.3%)</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>Mexican</td>
<td>239 (50.6%)</td>
</tr>
<tr>
<td>Caribbean</td>
<td>104 (22%)</td>
</tr>
<tr>
<td>Central American</td>
<td>29 (6.1%)</td>
</tr>
<tr>
<td>South American</td>
<td>40 (8.5%)</td>
</tr>
<tr>
<td>Mixed</td>
<td>32 (6.8%)</td>
</tr>
<tr>
<td>Other</td>
<td>24 (5.1%)</td>
</tr>
<tr>
<td>Don't know</td>
<td>4 (0.8%)</td>
</tr>
<tr>
<td><strong>Living situation</strong></td>
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</tr>
<tr>
<td>On campus</td>
<td>111 (23.5%)</td>
</tr>
<tr>
<td>Off campus (with family)</td>
<td>238 (50.4%)</td>
</tr>
<tr>
<td>Off campus (not with family)</td>
<td>13 (2.8%)</td>
</tr>
<tr>
<td><strong>Difficulty paying bills</strong></td>
<td></td>
</tr>
<tr>
<td>No difficulty at all</td>
<td>88 (18.6%)</td>
</tr>
<tr>
<td>A little difficulty</td>
<td>144 (30.5%)</td>
</tr>
<tr>
<td>Some difficulty</td>
<td>144 (30.5%)</td>
</tr>
<tr>
<td>A great deal of difficulty</td>
<td>85 (18%)</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>11 (2.3%)</td>
</tr>
<tr>
<td><strong>Money left after bills</strong></td>
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<tr>
<td>More than enough money left over</td>
<td>35 (7.4%)</td>
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<tr>
<td>Enough money left over</td>
<td>117 (24.8%)</td>
</tr>
<tr>
<td>Description</td>
<td>Count</td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>Just enough to make ends meet</td>
<td>184</td>
</tr>
<tr>
<td>Slightly less than what I needed to make ends meet</td>
<td>92</td>
</tr>
<tr>
<td>Not enough to make ends meet</td>
<td>33</td>
</tr>
</tbody>
</table>
Table 2

Descriptive Statistics and Correlations for Study Variables

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<thead>
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<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Difficulties in Emotion Regulation</td>
<td>2.71</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
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<td></td>
<td>(0.85)</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2. Emotion Expression</td>
<td>.71***</td>
<td>3.05</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(0.97)</td>
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<td></td>
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</tr>
<tr>
<td>3. Spanish Language Use</td>
<td>.01</td>
<td>.04</td>
<td>3.11</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
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<td>(1.07)</td>
<td></td>
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</tr>
<tr>
<td>4. English Language Use</td>
<td>-.05</td>
<td>.05</td>
<td>-.12**</td>
<td>4.44</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5. Ethnic Identity</td>
<td>-.07</td>
<td>.13*</td>
<td>.35***</td>
<td>.15**</td>
<td>3.57</td>
<td></td>
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<td></td>
<td></td>
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<td>(0.70)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6. Mainstream Comfort</td>
<td>-.08</td>
<td>-.10*</td>
<td>-.37***</td>
<td>.22***</td>
<td>-.22**</td>
<td>3.24</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.74)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>7. Self-stigma</td>
<td>.23***</td>
<td>.14**</td>
<td>.09*</td>
<td>-.21***</td>
<td>-.16**</td>
<td>-.14**</td>
<td>2.65</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.71)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Perceived stigma</td>
<td>.25***</td>
<td>.28***</td>
<td>.08</td>
<td>.03</td>
<td>.002</td>
<td>-.02</td>
<td>.32***</td>
<td>3.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.98)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Attitudes</td>
<td>.10*</td>
<td>.09</td>
<td>.10*</td>
<td>-.16**</td>
<td>-.12*</td>
<td>-.08</td>
<td>.59***</td>
<td>.25***</td>
<td>2.27</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.49)</td>
</tr>
</tbody>
</table>

Note. Means and standard deviations are noted across the diagonal.

*p < .05, **p < .01, ***p < .001
Table 3

Model Estimates for Cultural Predictors on Emotion Regulation and Emotion Expression with Covariates

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Difficulties in Emotion Regulation</th>
<th>Poor Emotion Expression</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>SE</td>
</tr>
<tr>
<td>English Language Use</td>
<td>0.02</td>
<td>0.05</td>
</tr>
<tr>
<td>Spanish Language Use</td>
<td>0.02</td>
<td>0.03</td>
</tr>
<tr>
<td>Ethnic Identity</td>
<td>-0.08</td>
<td>0.05</td>
</tr>
<tr>
<td>Mainstream Comfort</td>
<td>-0.02</td>
<td>0.05</td>
</tr>
<tr>
<td>CESD</td>
<td><strong>0.55</strong></td>
<td><strong>0.03</strong></td>
</tr>
<tr>
<td>Gender</td>
<td>-0.10</td>
<td>0.08</td>
</tr>
<tr>
<td>Age</td>
<td>-0.06</td>
<td>0.03</td>
</tr>
<tr>
<td>Nativity</td>
<td>0.05</td>
<td>0.08</td>
</tr>
<tr>
<td>Off campus w/ family</td>
<td>-0.02</td>
<td>0.07</td>
</tr>
<tr>
<td>Off campus not w/ family</td>
<td>-0.01</td>
<td>0.09</td>
</tr>
</tbody>
</table>

*Note.* Bolded statistics indicate significant results at $p \leq .05$. 
### Table 4

*Model Estimates for Mediators on Outcome Variables with Covariates*

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Self-stigma</th>
<th>Perceived stigma</th>
<th>ATSSPH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>SE</td>
<td>p</td>
</tr>
<tr>
<td>Difficulties in Emotion Regulation</td>
<td>0.20</td>
<td>0.05</td>
<td>.00</td>
</tr>
<tr>
<td>CESD</td>
<td>-0.02</td>
<td>0.05</td>
<td>.67</td>
</tr>
<tr>
<td>Gender</td>
<td>0.10</td>
<td>0.09</td>
<td>.22</td>
</tr>
<tr>
<td>Age</td>
<td>-0.06</td>
<td>0.03</td>
<td>.06</td>
</tr>
<tr>
<td>Nativity</td>
<td>-0.08</td>
<td>0.09</td>
<td>.35</td>
</tr>
<tr>
<td>Off campus w/ family</td>
<td>-0.13</td>
<td>0.07</td>
<td>.06</td>
</tr>
<tr>
<td>Off campus not w/ family</td>
<td>-0.17</td>
<td>0.08</td>
<td>.03</td>
</tr>
<tr>
<td>Emotion Expression</td>
<td>0.08</td>
<td>0.04</td>
<td>.08</td>
</tr>
<tr>
<td>CESD</td>
<td>0.05</td>
<td>0.04</td>
<td>.23</td>
</tr>
<tr>
<td>Gender</td>
<td>0.10</td>
<td>0.09</td>
<td>.25</td>
</tr>
<tr>
<td>Age</td>
<td>-0.07</td>
<td>0.03</td>
<td>.04</td>
</tr>
<tr>
<td>Nativity</td>
<td>-0.07</td>
<td>0.09</td>
<td>.45</td>
</tr>
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<td>0.07</td>
<td>.05</td>
</tr>
<tr>
<td>Off campus not w/ family</td>
<td>-0.18</td>
<td>0.08</td>
<td>.03</td>
</tr>
</tbody>
</table>

*Note.* Bolded statistics indicate significant results at $p \leq .05$. 

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### Table 5

**Model Estimates for Mediation Models**

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Mediators</th>
<th>Outcomes</th>
<th>$a$</th>
<th>SE</th>
<th>$b$</th>
<th>SE</th>
<th>$a*b$</th>
<th>SE</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLU</td>
<td>EE</td>
<td>SS</td>
<td>-0.02</td>
<td>0.04</td>
<td>-0.002</td>
<td>0.004</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELU</td>
<td>EE</td>
<td>PS</td>
<td>0.12*</td>
<td>0.06</td>
<td>0.12**</td>
<td>0.04</td>
<td></td>
<td></td>
<td>[-0.0001, 0.04]</td>
</tr>
<tr>
<td>ELU</td>
<td>EE</td>
<td>PS</td>
<td>0.12*</td>
<td>0.06</td>
<td>0.19***</td>
<td>0.06</td>
<td>0.02</td>
<td>0.01</td>
<td>[0.0002, 0.05]</td>
</tr>
<tr>
<td>ELU</td>
<td>EE</td>
<td>ATSPPH</td>
<td>0.12*</td>
<td>0.06</td>
<td>0.08**</td>
<td>0.03</td>
<td>0.01</td>
<td>0.01</td>
<td>[0.000003, 0.02]</td>
</tr>
<tr>
<td>SLU</td>
<td>EE</td>
<td>PS</td>
<td>-0.02</td>
<td>0.04</td>
<td>-0.002</td>
<td>0.003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELU</td>
<td>EE</td>
<td>PS</td>
<td>0.12*</td>
<td>0.06</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>0.01</td>
<td>[0.0002, 0.03]</td>
</tr>
<tr>
<td>ELU</td>
<td>EE</td>
<td>PS</td>
<td>-0.04</td>
<td>0.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* All of the models were adjusted for covariates. Abbreviations: PS = Perceived stigma, SS = Self-stigma, ATSPPH = Attitudes toward seeking professional psychological help, SLU = Spanish language use, ELU = English language use, EI = Ethnic identity, MC = Mainstream comfort, EE = Emotion expression.

*p ≤ .05, **p ≤ .01, ***p ≤ .001
Figure 1

The Cultural Influences on Mental Health Model

Note. This figure illustrates the pathways proposed by the CIMH model. Reprinted from “A conceptual paradigm for understanding culture’s impact on mental health: The cultural influences on mental health (CIMH) model”, by W.-C. Hwang et al., 2008, Clinical Psychology Review, 28, p.212, Copyright (2021), with permission from Elsevier.
Figure 2

*Multiple Imputation Process*

Note. This figure depicts the three stages of multiple imputation. From “Missing data and multiple imputation in clinical epidemiological research”, by A. B. Pedersen et al., 2017, *Clinical Epidemiology*, 9, p.163.
Figure 3

*Results of Mediation Model with Emotion Expression as Mediator and Self-stigma as Outcome*

- $a_1 = -0.02$
- $b_1 = 0.12^{**}$
- $c_{1}^{'} = 0.08^{*}$
- $c_{2}^{'} = -0.14^{**}$
- $c_{3}^{'} = -0.23^{***}$
- $c_{4}^{'} = -0.08$
- $c_{5} = -0.21^{***}$
- $c_{6} = -0.09$

*p < .05, **p < .01, ***p < .001.*
Figure 4

Results of Mediation Model with Emotion Expression as Mediator and Perceived Stigma as Outcome

\[ b_1 = 0.19^{**} \]

\[ c_1 = 0.11^{*} \]
\[ c_2 = 0.09 \]
\[ c_3 = 0.03 \]
\[ c_4 = 0.03 \]

\[ a_1 = -0.02 \]
\[ a_2 = 0.12^{*} \]
\[ a_3 = 0.04^{*} \]
\[ a_4 = 0.04 \]

*p < .05, **p < .01, ***p < .001.
Figure 5

Results of Mediation Model with Emotion Expression as Mediator and ATSPPH as Outcome

*\(a_1 = 0.02\)

*\(a_2 = 0.12\)

*\(a_3 = 0.04\)

\(b_1 = 0.08^*\)

*\(c_1' = 0.06^*\)

*\(c_2' = 0.08^*\)

*\(c_3' = 0.13^{***}\)

*\(c_4 = 0.03\)

\(c_2 = -0.07\)

\(c_3 = -0.12^{**}\)

\(c_4 = -0.03\)

\(c_3 = -0.07\)

\(*p < .05, **p < .01, ***p < .001.\)
STUDY 2 APPENDICES
STUDY 2. Appendix A

Careless Responding Analysis
STUDY 2. Appendix B

Supplemental Tables
Supplemental Table B1

Model Estimates for Cultural Predictors on Emotion Regulation and Emotion Expression with Covariates

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Difficulties in Emotion Regulation</th>
<th>Poor Emotion Expression</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$b$</td>
<td>$SE$</td>
</tr>
<tr>
<td>English Language Use</td>
<td>-0.002</td>
<td>0.05</td>
</tr>
<tr>
<td>CESD</td>
<td><strong>0.56</strong></td>
<td><strong>0.03</strong></td>
</tr>
<tr>
<td>Gender</td>
<td>-0.08</td>
<td>0.08</td>
</tr>
<tr>
<td>Age</td>
<td>-0.05</td>
<td>0.03</td>
</tr>
<tr>
<td>Nativity</td>
<td>0.06</td>
<td>0.08</td>
</tr>
<tr>
<td>Off campus w/ family</td>
<td>-0.02</td>
<td>0.06</td>
</tr>
<tr>
<td>Off campus not w/ family</td>
<td>-0.02</td>
<td>0.07</td>
</tr>
<tr>
<td>Spanish Language Use</td>
<td>0.004</td>
<td>0.03</td>
</tr>
<tr>
<td>CESD</td>
<td><strong>0.56</strong></td>
<td><strong>0.03</strong></td>
</tr>
<tr>
<td>Gender</td>
<td>-0.08</td>
<td>0.08</td>
</tr>
<tr>
<td>Age</td>
<td>-0.05</td>
<td>0.03</td>
</tr>
<tr>
<td>Nativity</td>
<td>0.06</td>
<td>0.08</td>
</tr>
<tr>
<td>Off campus w/ family</td>
<td>-0.02</td>
<td>0.06</td>
</tr>
<tr>
<td>Off campus not w/ family</td>
<td>-0.02</td>
<td>0.07</td>
</tr>
<tr>
<td>Ethnic Identity</td>
<td>-0.07</td>
<td>0.05</td>
</tr>
<tr>
<td>CESD</td>
<td><strong>0.56</strong></td>
<td><strong>0.03</strong></td>
</tr>
<tr>
<td>Gender</td>
<td>-0.10</td>
<td>0.08</td>
</tr>
<tr>
<td>Age</td>
<td>-0.06</td>
<td>0.03</td>
</tr>
<tr>
<td>Nativity</td>
<td>0.04</td>
<td>0.08</td>
</tr>
<tr>
<td>Off campus w/ family</td>
<td>-0.02</td>
<td>0.06</td>
</tr>
<tr>
<td>Off campus not w/ family</td>
<td>-0.01</td>
<td>0.07</td>
</tr>
<tr>
<td>Mainstream Comfort</td>
<td>-0.01</td>
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<tr>
<td>CESD</td>
<td><strong>0.56</strong></td>
<td><strong>0.03</strong></td>
</tr>
<tr>
<td>Gender</td>
<td>-0.07</td>
<td>0.08</td>
</tr>
<tr>
<td>Age</td>
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<td>0.03</td>
</tr>
<tr>
<td>Nativity</td>
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<td>0.08</td>
</tr>
<tr>
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<td>0.06</td>
</tr>
<tr>
<td>Off campus not w/ family</td>
<td>-0.02</td>
<td>0.07</td>
</tr>
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</table>

Note. Bolded statistics indicate significant results at $p \leq .05$. 
## Supplemental Table B2

*Model Estimates for Cultural Predictors on Outcome Variables Expression with Covariates*

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Self-stigma</th>
<th></th>
<th>Perceived stigma</th>
<th></th>
<th>ATSPPH</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b</td>
<td>SE</td>
<td>p</td>
<td>b</td>
<td>SE</td>
<td>p</td>
</tr>
<tr>
<td>English Language Use</td>
<td>-0.12</td>
<td>0.05</td>
<td>.02</td>
<td>0.09</td>
<td>0.07</td>
<td>.21</td>
</tr>
<tr>
<td>Spanish Language Use</td>
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<td>0.03</td>
<td>.02</td>
<td>0.11</td>
<td>0.04</td>
<td>.02</td>
</tr>
<tr>
<td>Ethnic Identity</td>
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<td>.00</td>
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<td>.68</td>
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<td>Mainstream Comfort</td>
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<td>.09</td>
<td>0.03</td>
<td>0.07</td>
<td>.66</td>
</tr>
<tr>
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<td>.05</td>
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<td>0.04</td>
<td>.00</td>
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<td>.08</td>
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<td>0.08</td>
<td>.29</td>
<td>-0.05</td>
<td>0.11</td>
<td>.67</td>
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<td>Off campus not w/ family</td>
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<td>0.09</td>
<td>.47</td>
<td>-0.17</td>
<td>0.13</td>
<td>.18</td>
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</tbody>
</table>

*Note.* Bolded statistics indicate significant results at $p \leq .05$. 
CHAPTER IV

SUMMATIVE DISCUSSION

In the current dissertation project, I examined predictors of Latinx emerging adults’ mental health services (MHS) utilization through two separate studies. Latinx emerging adults are an important population subgroup to study, given that they are at a developmental stage marked by life transitions, responsibilities, and new roles (Arnett, 2005). Given the stressful nature of these life changes, emerging adults (i.e., 18- to 29-year-olds) are at an increased risk of experiencing depressive symptoms, suicide related outcomes, and psychological distress (Arnett et al., 2014; Hunt & Eisenberg, 2010; Liu et al., 2018; Twenge et al., 2019). Despite the Latinx population’s elevated risk for mental health problems, they are less likely to seek professional psychological help compared to other age groups, and rates of service utilization are even lower among Latinx compared to Non-Hispanic (NH) White emerging adults (Goodwill & Zhou, 2020; Miller et al., 2016). Contemporary research has also documented negative effects of environmental and sociopolitical events (e.g., immigration reforms, Affordable Care Act, coronavirus 19 pandemic) from the past decade on Latinx emerging adults’ mental health (Czeisler et al., 2020; Daftary et al., 2020; Vargas et al., 2019). Given this populations’ current need and underutilization of MHS, it is pertinent and necessary for researchers to identify and understand factors that influence Latinx emerging adults’ decisions to seek professional psychological help. Hence, the presented studies in this dissertation aimed to (a) identify predictors of MHS utilization among Latinx emerging adults, and (b) understand the effects of cultural and affective factors on three prominent indicators of MHS use among a sample of Latinx college students. The broad purpose of this dissertation is to add to the
existing literature, inform future directions in research, and provide suggestions for clinical practice to ultimately contribute to the improvement of Latinx emerging adults’ access to quality MHS.

The first study in this dissertation was a systematic review of research studies published in the last 10 years on predictors of MHS utilization among Latinx emerging adults. In this review, I defined MHS utilization as previous and/or current use of professional psychological services provided by formal sources (e.g., psychologist, counselor, social worker). The participants had to identify as Latinx or Hispanic, live in the U.S. at the time of data collection, and be between the ages of 18 to 29. Following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines (Moher et al., 2009; Page et al., 2020), a total of 9 studies were identified as meeting criteria for inclusion in this systematic review. I analyzed the included studies using a thematic analysis approach, where findings were grouped and synthesized based on similarities and differences (Butler et al., 2016; Moher et al., 2009; Popay et al., 2006).

Approximately 20 correlates of MHS utilization among Latinx emerging adults were found across the 9 studies, and categorized as predisposing, enabling, or need factors (Andersen, 1995). Among these, mental health-related stigma, actual need of services, perceived need of services, perceived helpfulness of treatment, insurance coverage, and knowledge of services were the most highly endorsed and predictive of Latinx emerging adults’ actual treatment use. The results from this systematic review elucidated recommendations for future research and clinical implications, which I discuss further below.
The current systematic review also revealed several gaps in the literature that researchers should aim to address. Specifically, the majority of studies that were initially identified as meeting some eligibility criteria were excluded because their samples were composed of general college student populations, without specifying age as 18- to 29-year-olds, and/or their methods were comparative analyses based on ethnicity/race, without providing sufficient information on their Latinx subpopulations. Another reason for why studies were excluded was due to the outcome variable being a factor related to service use, such as intentions or willingness to seek treatment, instead of actual utilization of MHS. Even though research on factors related to MHS use provides valuable information, the dearth of studies on actual treatment usage signals a considerable gap in the literature. Furthermore, this research area would also benefit from investigations on how predictors of MHS utilization might vary based on Latinx emerging adults’ different sociodemographic characteristics. For example, prior work with Latinx adults that looked at treatment use across ethnic subgroups demonstrated that Mexican Americans utilize MHS at significantly lower rates than Puerto Ricans (Alegría et al., 2007; Cho et al., 2014) and at comparable rates to Cuban Americans (Cho et al., 2014). Despite the unique circumstances encountered in emerging adulthood and the heterogeneity within Latinx populations, these findings have not been tested with Latinx emerging adults. Taken together, the systematic review of the literature demonstrated that further research focused on this specific population and that considers their unique contextual and cultural circumstances is needed.

In the second study, I attempted to address some of those gaps in the literature by exploring the influence of cultural and affective factors on three strong predictors of
MHS utilization among a sample of Latinx college students (ages 18 to 25). Specifically, I examined whether and how measures of acculturation (i.e., Spanish language use, ethnic identity, English language use, and mainstream comfort) and emotional competence (i.e., emotion regulation and emotion expression) influenced Latinx college students’ self-stigma, perceived public stigma, and attitudes towards seeking professional psychological help (ATSPPH). Results from correlation, regression, and mediation analyses, demonstrated that difficulties in emotion regulation and limited emotion expression were associated with greater self-stigma, perceived public stigma, and negative ATSPPH among Latinx college students. Based on the influence of the three outcome variables on rates of MHS utilization (Clement et al., 2015; Jennings et al., 2015; Mojtabai et al., 2016; Vogel et al., 2007; Ward-Ciesielski et al., 2019), difficulties in emotion regulation and limited emotion expression should be regarded as risk factors for Latinx college students, and interventions aimed at improving them should be developed. Given that stigma, attitudes, and emotion expression are culturally bonded factors, these efforts should consider the influence of culture on Latinx college students’ mental health outcomes. For example, interventions could account for the Latinx cultural value of simpatía, which encourages individuals to display highly positive emotions and hide negative ones (Senft et al., 2020), by attempting to normalize Latinx college students’ expression of negative emotions, while acknowledging and exploring this valued cultural script.

Moreover, stronger ethnic identity demonstrated a protective effect for Latinx college students by predicting less self-stigma and negative ATSPPH among this group. A possible explanation for this finding might be that a greater sense of belonging to an
ethnic group might strengthen Latinx emerging adults’ sense of self, subsequently resulting in less self-stigma. In addition, a study included in the systematic review showed that Latinx emerging adults reported seeking examples of people within their ethnic communities that have received therapy to normalize their own professional psychological help-seeking (Moore et al., 2020). The significance of ethnic group belonging on Latinx emerging adults’ decision to use MHS is highlighted in these studies. Previous research, however, suggests that higher ethnic identity is related to more negative ATSPPH (Ballesteros & Hilliard, 2016) and less MHS utilization (Burnett-Zeigler et al., 2017; Keyes et al., 2012). Even though a protective effect of ethnic identity on Latinx college students’ stigma and attitudes was found, and some evidence that support this finding can be extrapolated from the systematic review presented here, the inconsistencies in the literature call for further research in this area. Specifically, researchers should attempt to understand under which circumstances greater endorsement of ethnic identity affects Latinx emerging adults’ mental health stigma, attitudes, and service utilization. If the protective influence of ethnic identity is replicated and better understood, then interventions that strengthen this factor among communities of Latinx emerging adults should be developed.

Across the studies in this dissertation, language was another important predictor of Latinx emerging adults’ MHS use, stigma, and attitudes. In the second study, greater Spanish language use was associated with more self-stigma, perceived public stigma, and negative ATSPPH. These results suggest that Latinx college students that report more Spanish language use might be at increased risk of holding negative attitudes and stigmas against professional psychological help-seeking. Future research directions should focus
on identifying reasons for why Latinxs that endorse higher levels of Spanish language use might be at greater risk here. In the systematic review, the limited provision of translation/linguistic services by hospitals was identified as a practical barrier to accessing MHS for Latinx emerging adults (NeMoyer et al., 2020). This might suggest that structural barriers, such as availability of translation services and provider language mismatch, might help explain the effects of Spanish language use on perceived public stigma, self-stigma, and negative ATSPPH found in the second study of this dissertation.

Taken together, the results of the two studies completed for this dissertation project offer additional suggestions for clinical practice with Latinx emerging adults. First, the systematic review of the literature showed that mental health stigma was among the most highly endorsed predictors of service utilization among Latinx emerging adults (Cha et al., 2019; Granillo, 2011; Menendez et al., 2019; Moore et al., 2020). Another significant contributor to MHS utilization was perceived helpfulness of treatment (Cha et al., 2019; Granillo, 2011). Specifically, Latinx emerging adults reported concerns about mental health provider’s cultural sensitivity, including their ability to understand and help with the unique circumstances this population encounters (Cha et al., 2019; Granillo, 2011). To address these barriers, culturally sensitive and attuned stigma reduction programs, aimed at normalizing Latinx emerging adults’ use of MHS, should be developed and widely disseminated. Given that the findings on stigma and perceived helpfulness of treatment were drawn from research conducted with college-attending and non-attending samples, stigma reducing interventions should be implemented in university campuses and community settings to reach as many Latinx emerging adults as possible. Another obstacle to treatment seeking observed among Latinx emerging adults
was lack of knowledge of available MHS (Granillo, 2011; Raymond-Flesch et al., 2014). Therefore, it is particularly important for community awareness campaigns to include information on how available resources and how to properly access them. Lastly, Latinx emerging adults that reported perceiving that they needed services were more likely to seek them. The idea of perceived need can also be related to individuals’ abilities to understand and recognize their emotional states and needs. Therefore, these findings further demonstrate that interventions focused on improving emotion expression and regulation strategies adapted for Latinx emerging adults might be crucial to facilitating this population’s professional psychological help-seeking.

The studies carried out in this dissertation project contained several limitations that should be addressed. As mentioned in the systematic review, it is important that research on predictors of Latinx emerging adults’ MHS utilization examines how the impact of these factors might vary based on sociodemographic characteristics. Even though we adjusted for participants’ gender, nativity, and living status in the second study, I did not analyze and present the effects of these variables on the study’s models and outcomes. In future studies, sociodemographic factors, such as nativity and education level, should be included as part of the primary study’s analysis. In addition, the systematic review showed a gender effect, where female identifying emerging adults, were more likely to utilize MHS (Broman, 2012; Green et al., 2020). The sample in the second study in this dissertation was composed of largely female identifying Latinx college students, thus it is important that future research replicate our findings with more male identifying participants. Based on the research literature, another necessary step would be to examine how the models tested in the second study of this dissertation would
influence actual use of MHS. Even though studies in this area are expanding, the available research on this topic is limited and it demonstrates several gaps, emphasizing a need for further exploration of predictors to Latinx emerging adults’ MHS utilization to ultimately contribute to the improvement of this population’s access to quality treatment.
References


APPENDICES
Appendix A

Curriculum Vitae
Kenia Carrera Diaz  
Updated: November 2021

**EDUCATION**

<table>
<thead>
<tr>
<th>Date</th>
<th>Institution</th>
<th>Program</th>
<th>Details</th>
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<tr>
<td>August 2021-August 2022</td>
<td>Providence Saint John’s CFDC, Santa Monica, CA</td>
<td>Doctoral Clinical Psychology Internship (APA Accredited)</td>
<td>Supervisor: Olga Belik, Ph.D.</td>
</tr>
</tbody>
</table>
| 2022 (Anticipated)  | Utah State University, Logan, Utah            | Ph.D., Clinical and Counseling Psychology (APA Accredited) | Dissertation: *Cultural, contextual, and individual determinants of mental health service utilization among Latinx emerging adults*  
Advisor: Rick A. Cruz, Ph.D. |
| August 2019        | Utah State University, Logan, Utah            | M.S., Clinical and Counseling Psychology (APA Accredited) | Thesis: *Examining the effects of familism on the association between parent-adolescent conflict, emotion regulation, and internalizing problems among Latinx adolescents*  
Advisor: Rick A. Cruz, Ph.D. |
| May 2016           | University of Arizona, Tucson, Arizona        | B.S., Psychology; Biology, FSHD, & Spanish Minors |                                                                         |

**CLINICAL TRAINING EXPERIENCE**

<table>
<thead>
<tr>
<th>Location</th>
<th>Role</th>
<th>Dates</th>
<th>Details</th>
</tr>
</thead>
</table>
| Neuropsychology Center of Utah                | Student Therapist| August 2019 – August 2021 | *Collaboratively developed detailed treatment plans with clients based on their presenting problems and therapeutic goals*  
*Used evidence-based interventions to treat children, adolescents, and young adults with behavioral, social, cognitive, and emotional problems*  
*Consulted with clients’ caregivers, family members, and school staff to help with case conceptualizations and treatment*  
*Maintained records of clients’ progress and therapy sessions*  
* Participated in monthly grand round staff meetings*  
*Attended weekly supervision meetings with licensed psychologist*  
*Total hours: 1064 (direct hours), 870 (support hours)*  
*Supervisor: Adam Schwebach, Ph.D.* |
| PMTO Group, Utah State University Psychology Community Clinic | Practicum Student | August 2020 – October 2020 | *Co-led a 10-week behavioral parent training group based on the Parent Management Training Oregon-model (PMTO) intervention*  
*Conducted PMTO sessions via teletherapy*  
*Wrote weekly progress notes*  
*Conducted weekly mid-week calls with group participants to ensure their success with the  
Supervisor: Adam Schwebach, Ph.D.* |
home practice assignments
- Reviewed taped of weekly group sessions to note areas of strength and growth as a provider and co-leader
- Rated mine and my co-leader’s fidelity to the PMTO treatment program across the dimensions of knowledge, structure, teaching, process, and overall development
- Attended weekly group supervision meetings with a licensed psychologist and expert in the PMTO program

Supervisor: Melanie Domenech-Rodríguez, Ph.D.
Total hours: 19.85 (direct hours), 39.75 (support hours)

Box Elder School District  Garland, UT
Practicum Student, August 2019 – March 2020
- Administered behavioral, social/emotional, cognitive, and academic assessments to middle and high school students
- Presented evaluation results to students, parents, and educational team
- Participated in educational team meetings to determine students’ eligibility for accommodations and services, and to create Individualized Education Programs
- Consulted with teachers regarding specific student problems, including academic progress and emotional/behavioral problems
- Conceptualized cases and decided which assessments to administer to students
- Scored assessments and wrote integrated reports
- Attended weekly supervision meetings with licensed school psychologist

Supervisor: Marietta Veeder, Ph.D.
Total hours: 63.25 (direct hours), 105 (support hours)

Up-to-3  Logan, UT
Practicum Student, June 2018 – May 2019
- Conducted behavior evaluations of toddlers 0-3 years old
- Provided in-home behavioral parent training in English and Spanish to help parents reduce children’s behavioral problems and increase appropriate behaviors
- Attended weekly staff meetings to coordinate care and develop goals for families with interdisciplinary teams
- Provided information and training to community partners as requested
- Attended weekly supervision meetings with licensed psychologist

Supervisor: Gretchen Peacock, Ph.D.
Total hours: 184.25 (direct hours), 194.5 (support hours)

Utah State University Psychology Community Clinic  Logan, UT
Student therapist (integrated practicum), September 2016 – August 2018
- Conducted evidenced-based interventions with children, adolescents, and adults
- Administered intellectual and cognitive assessments to children to evaluate for ADHD/specific learning disabilities
- Wrote integrated reports, intakes, dispositions, and weekly notes
- Attended weekly individual and group supervision meetings with licensed psychologists

Supervisors: Scott DeBerard, Ph.D., Sara Boghosian, Ph.D., and Marietta Veeder, Ph.D.
Total hours: 175.25 (direct hours), 186.50 (support hours)

RESEARCH EXPERIENCE
Utah State University, Logan Utah
August 2016-Present

Graduate Research Assistant in the Youth Development, Context, and Prevention Lab
Report to Rick A. Cruz, Ph.D.
Responsibilities:

- Train, manage, and mentor undergraduate research assistants, coordinate lab activities, develop research studies, write research publications, and organize and analyze data.
- Latino College Student Survey (on-going)
  - The purpose of this study is to understand how cultural, social, and individual factors interact to influence mental health outcomes, stigma, and service utilization among Latinx young adults.
  - Assisted in developing the study proposal and IRB application
  - Conduct statistical analyses of collected data
  - Write publishable articles with resulting data
- Family Check Up Implementation Study (completed)
  - The study aimed to test the feasibility of implementing the Family Check Up, a brief evidence-based prevention program, in a non-profit community organization, The Family Place, for Latinx families in Logan, UT.
  - Assisted in the preparation of the IRB application reviewed by USU’s IRB
  - Screened and scheduled families for participation in English & Spanish
  - Recruited Latinx families in the community
  - Acted as the interventionist delivering the Family Check Up to Latinx families
  - Reviewed and coded family tasks
  - Analyzed qualitative and quantitative data
  - Presented data findings at a conference
- Routine Outcome Monitoring (ROM) Project (completed)
  - The project aimed to implement a measurement feedback system for student therapist, OwlOutcomes, at USU’s Psychology Community Clinic
  - Sent out surveys to student therapists and aided in leading a focus group
- Salud de los Adolescents Latinos (completed)
  - The study examined how culture, family processes, stress, and decision-making influence risky behaviors among Latino youth across Utah’s Wasatch Front (Ogden to Spanish Fork).
  - Trained remote research assistant to conduct participant sessions
  - Supervised and coordinated with research assistants
  - Recruited families through community events
  - Screened and scheduled families in English and Spanish
  - Used and analyzed data for the completion of my Master’s thesis project

University of Arizona, Tucson Arizona
January 2015-May 2016

Undergraduate Research Assistant in Clinical Psychology Lab
Report to John JB Allen, Ph.D., and Ezra Smith, M.S.
Responsibilities:

- Aided in the investigation of the effects of multiple concussions on the university’s high-impact sports athletes.
- Ran EEG experiments on participants
- Cleaned and analyzed data using MATLAB
UROC-PREP Program, University of Arizona  
**Undergraduate Researcher**  
**Research Mentors: John JB Allen, Ph.D. and Ezra Smith, M.S.**  
Responsibilities:  
- Conducted my own research project  
- Wrote a research paper and published an abstract  
- Gave an oral and poster presentation  

Study title: *Associations Between Mild Traumatic Brain Injuries, Event-Related Potentials, and Major Depression Disorder*  

University of Arizona, Tucson Arizona  
**Undergraduate Research Assistant in Social Psychology Lab**  
**Report to Jeff Stone, Ph.D.**  
Responsibilities:  
- Studied social psychology phenomena such as, cognitive dissonance and in-group behaviors  
- Ran studies and implemented surveys  
- Inputted and coded data  

**PUBLICATIONS**  

**BOOK CHAPTERS**  

**CONFERENCE PRESENTATIONS**  


Longitudinal trajectories of depression and anxiety: Characterizing change, symptom covariation and association with cultural factors. Symposium presented at the Society for Research on Adolescence Biennial Conference, Minneapolis, MN.


Wynn, E., Carrera, K., Levin, M., Deberard, S., Cruz, R. (April, 2017). Implementing a measurement feedback system in a psychology graduate training clinic. Poster presented at Rocky Mountain Psychological Association (RMPA) 87th Annual Convention, Salt Lake City, UT.


**TEACHING EXPERIENCE**

**Teaching Assistant**

Psychology of Gender (undergraduate class), Fall 2018 and Spring 2019

- Grade discussion posts and papers; engage with students’ discussion posts; and conduct
guest lecture

Teaching Assistant
Psychological Statistics (undergraduate class), Spring 2019
- Hold weekly office hours, grade exams, and answer students’ questions

Guest Lecturer
Psychology of Gender, Fall 2018
- 50-minute lecture on research and special topics on gendered violence and victim blaming.

Teaching Assistant
Behavior Analysis (undergraduate class), Fall 2018
- Scored exams and assignments, and answered students’ questions

Teaching Assistant
Intellectual Assessment (graduate class), Spring 2018
- Held weekly office hours, helped students practice administration of WAIS and WISC, and scored student’s intellectual assessment pass offs.

Teaching Assistant
Abnormal Psychology (undergraduate class), Fall 2017
- Administered and scored exams and answered students’ questions

PROFESSIONAL TRAINING
- Parent Management Training Oregon-model (PMTO), Course taught by Melanie Domenech-Rodríguez, Fall 2019 to Spring 2020, Logan UT

SERVICE
Spring 2018-Present Safe Passages 4 U, Trained Leader
Fall 2016-Present Teaching Tolerance, Trained Leader
Fall 2018-Summer 2020 Northern Utah Violence Prevention Education Coalition, Member
Spring 2018-Spring 2019 Diversity Advancement and Accreditation Committee, Student Representative
Fall 2016-Fall 2018 Northern Utah Hispanic Health Coalition, Member

COMMUNITY PRESENTATIONS
Como mantener unido el amor en pareja
November 8, 2019
Carrera, K., Garcia, B., and Estrada, J.
The Family Place, Logan UT

Comunicación en familia
November 15, 2018
Rosario, J., Carrera, K., and Alvarez, C.
Centro de la Familia, Providence UT
- Co-facilitated 2-hour workshop in Spanish on how to effectively communicate and listen to
your partner/children.

Solución de problemas  
February 23, 2018
Carrera, K. and Lara, J.  
The Family Place, Logan UT  
- Co-facilitated 2-hour workshop in Spanish on how to problem solve with partners/children.

Comunicación de parejas  
February 9, 2018
Carrera, K. and Navarro, C.,  
The Family Place, Logan, UT  
- Co-facilitated 2-hour workshop in Spanish on skills for communicating effectively with spouses/partners.

VOLUNTEER EXPERIENCE

Sept. 2015 - May 2016  
DIVORCE RECOVERY, Inc.,  
Non-profit Arizona Corporation  
Children of Divorce and Changing Families Group  
Leader/Intern  
- Led group discussion about divorce transitions and losses, organized activities for children, and was trained to run group meetings with children of divorce.

Aug. 2015 - May 2016  
PSYCHOLOGY PEER MENTOR PROGRAM,  
The University of Arizona, Psychology Department  
Lead Mentor  
- Was available to other peer mentors, helped with trainings, kept peer mentor office organized, maintained a scrapbook, and helped Psychology advisors with Peer Mentor Program.

PSYCHOLOGY PEER MENTOR PROGRAM,  
The University of Arizona, Psychology Department  
Psychology Peer Mentor  
- Met with psychology freshman 5 times throughout the semester, co-facilitated Psy197A class, maintained records of mentees, prepared weekly classes, and attended weekly program meetings.

WORDCATS and MATHCATS,  
The University of Arizona, College of Education  
Tutor  
- Tutored middle school children in math and English either in a classroom setting or one-on-one.

Summer 2013  
AgDISCOVERY CAMP,  
The University of Arizona and Arizona Western College  
Student Counselor  
- Was in charge of 10 high school students, lived with them in dorms over the summer, planned activities, settled disputes, helped with final project.
**PROFESSIONAL ORGANIZATIONS**

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<td>2019 – Present</td>
<td>National Latinx Psychological Association</td>
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<td>2019 – Present</td>
<td>American Psychological Association’s Division 53</td>
<td>Society of Clinical Child and Adolescent Psychology</td>
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<td>2014 – Present</td>
<td>Psi Chi, The International Honor Society in Psychology</td>
<td>Member</td>
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<td>2011 – 2012</td>
<td>National Honors Society</td>
<td>San Luis High School</td>
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<td>Academic Decathlon</td>
<td>San Luis High School Team</td>
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<td>2010 – 2012</td>
<td>Socratic Society</td>
<td>San Luis High School Club Sergeant at Arms</td>
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<td>2009 – 2012</td>
<td>Interact Club</td>
<td>San Luis, Arizona Branch Vice President</td>
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<tr>
<td>2009 – 2012</td>
<td>Class of 2012 Club</td>
<td>San Luis High School Club Member</td>
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**AWARDS/DISTINCTIONS**

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<td>April 2019</td>
<td>Carolyn Barcus Diversity Scholarship</td>
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<td>Aug. 2012 - May 2016</td>
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<td>Spring 2013 &amp; Fall 2013</td>
<td>Dean's List</td>
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<tr>
<td>Spring 2014 &amp; Spring 2015</td>
<td>Honorable Mention</td>
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Appendix B

Letter of Information
Letter of Information

Latino/Hispanic College Student Survey

Introduction
You are invited to participate in a research study conducted by Dr. Rick Cruz, an Assistant Professor in the Department of Psychology at Utah State University. The purpose of this research is to understand factors that influence health and well-being among Latino/Hispanic college students in the United States. This form includes important information about the research to help you decide whether to participate. Please read it carefully and ask any questions before you agree to participate. Your participation is entirely voluntary.

Procedures
Your participation in this study will involve answering survey questions. The survey is completely anonymous. You will first be asked to provide background information about yourself, such as your Latino/Hispanic heritage, and your age. This will determine whether you are eligible for the study. You will then be asked to complete a series of questions regarding your cultural background, relationships with those close to you, experiences with discrimination, attitudes towards mental health, drug and alcohol use behaviors, and suicidal thoughts and actions. It will take about 20-30 minutes to complete the survey. We anticipate that 500 people will participate in this research study across universities and colleges in the United States.

Alternative Procedures
Rather than participate in this research, you might prefer alternatives such as learning more about mental health symptoms, screening tools, and providers at https://www.apa.org/helpcenter/ or mentalhealthamerica.net.

Risks
This is a minimal risk research study. That means that the risks of participating are no more likely or serious than those you encounter in everyday activities. The foreseeable risks include possible discomfort regarding sensitive questions on the survey about drug and alcohol use, or suicidal thoughts and behaviors.

We do ask questions about drug and alcohol use behavior, which in some cases may be illegal. Your responses are anonymous and we appreciate your honest responses to these questions. There can be serious risks and consequences associated with drug and alcohol use. If you or others are worried about your alcohol or drug use, please call the national substance use hotline at 1-800-662-HELP.

In addition, the survey also asks questions about depression, and suicidal thoughts and actions. Since this is an anonymous survey, we are unable to identify specific individuals that express suicidal thoughts or actions. If you are feeling suicidal, we encourage you to contact the National Suicide Prevention Hotline at 1-800-273-8255.

Please also note that you cannot get in trouble for any answer you provide, and we will not have the ability to share your answers with anyone.
If you have a bad research-related experience or are distressed in any way during your participation, please contact the principal investigator of this study right away at 435.277.0878 or cruz.research.usu@gmail.com

Benefits
There is no direct benefit to you for participating in this research study. However, this study will help the researchers learn more about health and well-being among college students. Ultimately, this information can help behavioral health and substance use providers to be more equipped to help address the needs of Latino/Hispanic students.

Confidentiality
This is a completely anonymous survey. We will make every effort to ensure that the information you provide as part of this study remains confidential. Online activities always carry a risk of a data breach, but we will use systems and processes that minimize breach opportunities. Specifically, we will collect your survey information through the Qualtrics survey program, and the data will be securely stored in a password-protected folder on Box.com, an encrypted, cloud-based storage system. Only individuals of the research team will have access to your data. It is unlikely, but possible, that others (Utah State University, or state or federal officials) may require us to share the information you give us from the study to ensure that the research was conducted safely and appropriately. We will only share that information if law or policy requires us to do so. It is unlikely, although unlikely, that unauthorized individuals could gain access to your responses because you are responding online. However, your participation in this online survey involves risks similar to a person's everyday use of the Internet. We encourage you to fill out this survey in a private place to avoid others seeing the information that you share on the survey. Your identity will not be revealed in any publications, presentations, or reports resulting from this research study.

Voluntary Participation & Withdrawal
Your participation in this research is completely voluntary. If you agree to participate now and change your mind later, you may withdraw at any time by exiting out of your browser. If you choose to withdraw, we will not be able to remove information you shared since the data are anonymous. There are no penalties to withdrawing from the study.

Compensation
Compensation will be provided by Qualtrics Panels. No other compensation is included for your participation in this study.

IRB Review
The Institutional Review Board (IRB) for the protection of human research participants at Utah State University has reviewed and approved this study. If you have questions about the research study itself, please contact the Principal Investigator at (435) 277-0878 or rick.cruz@usu.edu. If you have questions about your rights or would simply like to speak with someone other than the research team about questions or concerns, please contact the IRB Director at (435) 797-0567 or irb@usu.edu.
Informed Consent
By clicking “I Agree to Participate” below, you agree to participate in this study. You indicate that you understand the risks and benefits of participation, and that you know what you will be asked to do. You also agree that you have asked any questions you might have, and are clear on how to stop your participation in the study if you choose to do so. Please be sure to retain a copy of this form for your records by printing this page. You may also follow [Public Box Link for Letter of Information Doc to be added] to the document. If you do not want to participate, please simply close this webpage in your browser.

[ ] I agree to participate