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Cultural Adaptation Profiles Among Mexican-Descent Latinxs: Acculturation, Acculturative Stress, and Depression

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Abstract

Objectives: Person-centered analysis was used to examine profiles of acculturation and acculturative stress among Mexican-descent adults in relation to depression. It was hypothesized that identified profiles would support multiple acculturation styles, that acculturation profiles would differentially relate to acculturative stress dimensions, and that those profiles with greater Latinx acculturation and lower acculturative stress would report less severe depression. *Method:* Mexican-descent Latinx adults ($n = 230$) completed self-report measures of Latinx and Anglo acculturation, acculturative stress, and depression symptom severity. Latent profile analysis was used to derive acculturation–acculturative

stress profiles. *Results:* Three distinct profiles emerged. One profile was notable for bicultural acculturation with traditional Latinx acculturative stress. The two remaining profiles reported similarly high traditional Latinx acculturation, but differed in acculturative stress, such that one profile was elevated in one dimension of acculturative stress, whereas the other reported elevated acculturative stress across multiple domains. Participants in this last profile also reported significantly greater depression. *Conclusions:* The findings provide further evidence of the beneficial role of heritage-culture acculturation and suggest that focused versus generalized forms of acculturative stress may be a distinguishing component related to depression.

Keywords:

Mexicans, acculturation, acculturative stress, depression, latent profile analysis

The United States' demographic makeup has changed substantially during the last half century, with Latinxs constituting a significant and rising segment of its shifting demography. Recent estimates indicate approximately 60.6 million Latinxs live in the United States (U.S. Census Bureau, 2020), comprising 18.5% of the total United States population (U.S. Census Bureau, 2019), the majority of which identify as Mexican descent (Pew Research Center, 2020). Notably, the proportion of the total U.S. Latinx population who are immigrants has declined from 40% to 33% (Pew Research Center, 2020); therefore, projected Latinx growth will be mainly attributable to those born in the United States.

Latinxs disproportionately encounter risk factors for adverse mental health outcomes including unique psychosocial stressors, such as racial and ethnic discrimination (Almeida et al., 2016; Torres et al., 2012; Torres & Ong, 2010), loss related to migration and family separation (Garcini et al., 2019), public policies that contribute to hostile and stigmatizing social contexts (Almeida et al., 2016; Hatzenbuehler et al., 2017; Pew Research Center, 2018), and the process of navigating between and within multiple cultural contexts (Benet-Martínez et al., 2002; Driscoll & Torres, 2013, 2020; Schwartz et al., 2016). Depression and depressive disorders have been found to be one adverse mental health outcome that is particularly influenced by cultural context among Latinxs (Alegría et al., 2008; Franzini et al., 2001; Vilsaint et al., 2019). These findings call for research that investigates cultural context and cultural adaptation, including acculturation and acculturative stress, as related to depression among Mexican-descent Latinxs. The present study examined acculturation and acculturative stress in relation to depression symptom severity among Mexican-descent Latinxs using person-centered analysis.

Acculturation and Acculturative Stress

Acculturation refers to changes in cultural attitudes, beliefs, values, behaviors, practices, and identification resultant from sustained contact between two or more dissimilar cultural systems or groups (Berry, 2003; Sam & Berry, 2010; Schwartz et al., 2010). Acculturation occurs at individual and group levels, and dimensions of acculturation correspond to the extent to which individuals endorse behaviors, practices, identifications, and values of their heritage culture and those of the receiving culture. Current acculturation conceptualizations posit changes transpire along dimensions of cultural continuity (i.e., traditional Latinx culture) and cultural contact (i.e., the receiving culture). Acculturation

scholars have proposed four acculturation styles: *integration* or *biculturalism* (high acculturation for heritage and receiving cultures), *separation* (high acculturation for heritage culture/low acculturation for receiving culture), *assimilation* (low acculturation for heritage culture/high acculturation for receiving culture), and *marginalization* (low acculturation for heritage and receiving cultures; Berry, 2003; Sam & Berry, 2010).

Many studies have documented the relationship between acculturation and depression among U.S. Latinxs, although it should be noted that numerous inconsistencies exist in the empirical literature (Rogler et al., 1991; Yoon et al., 2011, 2013). Several studies implicate greater adherence with traditional Latinx culture as protective and greater receiving-culture acculturation as a risk factor for depression among emerging adults (Rivera, 2007) and average aged community Latinxs (Caetano et al., 2008; Driscoll & Torres, 2020; Rodriguez et al., 2007; Torres, 2010). Some empirical work, however, has found evidence of some beneficial influence for receiving-culture acculturation in certain contexts with community adults (Thoman & Surís, 2004; Torres et al., 2012). For example, receiving-culture acculturation, but not heritage-culture acculturation, attenuates the indirect relationship of perceived discrimination to psychological distress through acculturative stress among a sample of Latinxs averaging 39 years of age (Torres et al., 2012). Thus, findings suggest that heritage- and receiving-culture acculturation may significantly influence Latinx mental health and support the notion that the acculturation–mental health relationship is complex.

Acculturative stress refers to psychological stress reactions that occur in response to and alongside acculturation (Berry, 2006; Umaña-Taylor & Alfaró, 2009). Grounded in stress-and-coping paradigms, acculturative stress reflects the notion that intercultural contact challenges Latinx individuals' culturally based behavioral repertoires, attitudes, and identities. As such, acculturation and acculturative stress are inextricably interrelated. Some work has noted that language fluency, a commonly used proxy for acculturation, was associated with acculturative stress, such that English use was linked to fewer stressors, while the opposite was reported for Spanish use among Latinxs (Lueck & Wilson, 2011). Like acculturation, acculturative stress may emanate from heritage and receiving cultures. Notably, Rodriguez et al. (2002) identified acculturative stressors originating from the U.S. culture, namely, English competency and pressure to acculturate, and from the traditional culture, including Spanish competency and pressure against acculturation. Multiple studies have found that acculturative stress is significantly associated with Latinx depression (Crockett et al., 2007; D'Anna-Hernandez et al., 2015; Driscoll & Torres, 2013, 2020; Hovey, 2000; Rusch & Reyes, 2013; Torres, 2010).

In a seminal critique of acculturative stress research, Rudmin (2009) noted that acculturative stress measures tap into a variety of constructs and sources of acculturative stress (e.g., cultural competence, linguistic competence, perceived discrimination, private regard for ethnic identity, and pressure to resist acculturation). Yet, prior studies mainly rely on global assessment of acculturative stress (i.e., total scale scores) and neglect to investigate relationships among acculturative stress dimensions (i.e., subscales) and depression. Because acculturation and acculturative stress are interwoven in dynamics of power and oppression between the receiving culture context and its relationship with the unique cultural histories of Latinx subgroups (Lee & Park, 2017; Padilla & Perez, 2003; Schwartz et al., 2010), it is crucial for research on cultural adaptation to elucidate the nuanced ways in which acculturation and acculturative stress influence mental health among Latinx subgroups.

Person-Centered Analytic Approaches

Within the last decade, studies have increasingly implemented person-centered analytic techniques to investigate cultural adaptation and mental health among U.S. Latinxs. Person-centered analytic approaches [e.g., latent class analysis, latent transition analysis, and latent profile analysis (LPA)] are appropriate for the investigation of cultural adaptation, because: (a) they identify unobserved subgroups among a heterogeneous population who may at the same time share similar social identities (e.g., ethnic, gender, and socioeconomic position) and (b) are theoretically neutral, permitting acculturation groups, or *profiles*, to emerge empirically rather than constructed by researchers a priori (Schwartz & Zamboanga, 2008; Torres et al., 2018). Indeed, studies implementing person-centered analysis suggest a complex depiction of cultural adaptation among U.S. Latinxs. Schwartz and Zamboanga (2008) found evidence of six acculturation profiles—*Undifferentiated*, *Assimilated*, *Partial Bicultural*, *American-Oriented Bicultural*, *Separated*, and *Full-Bicultural*—partially supporting Berry (2003) model of acculturation and providing evidence of multiple biculturalism profiles. The smallest identified profile corresponded to undifferentiated acculturation, which Schwartz and Zamboanga (2008) argued was suggestive of discomfort and confusion regarding one's identity as a cultural being. Bulut and Gayman (2020) found evidence of four acculturation profiles—*Separated*, *Partial Separated*, *Bicultural*, and *Marginalized*—using a large, community-based sample of foreign-born Latinxs residing in Miami, mainly Cuban Americans. Among the identified profiles, partial separated and bicultural acculturation was associated with significantly lower depression symptomatology.

Other research has included additional cultural adaptation variables, beyond traditional assessments of acculturation, within their analyses. Salas-Wright et al. (2015) identified five acculturation profiles along dimensions of language use preference, social group preference, and Latinx identity—*Spanish-Dominant/Strongly Separated*, *Spanish-Dominant/Separated*, *Bilingual/Bicultural*, *English-Dominant/Bicultural*, and *English-Dominant/Assimilated*. Gonzalez-Backen et al. (2017) found evidence of four cultural profiles, among Mexican-origin adolescent girls, across ethnic identity dimensions (i.e., exploration, affirmation, and resolution), behavioral acculturation (i.e., Spanish and English language use), and family ethnic socialization: *Strong-Positive*, *Spanish-Dominant Low*, *English-Dominant Low*, and *Strong-Negative*. This study, however, measured acculturation unidimensionally and did not assess for possible variation in subgroup differences.

More recently, Capielo Rosario and Dillon (2020) incorporated acculturative stress into their analysis among a sample of mainland Puerto Rican participants. They reported three acculturation–acculturative stress profiles—*Partial Marginalization–High Stress*, *Partial Separation–Low Stress*, and *Full Biculturalism–Medium Stress*. Taken together, these studies suggest that while LPA is an important advancement in the examination of cultural adaptation among U.S. Latinxs, using combined samples of Latinxs may obscure important distinctions among ethnic subgroups that relate to cultural adaptation and mental health.

Present Study and Hypotheses

The present study used person-centered analysis to examine the roles of acculturation and acculturative stress dimensions among Mexican-descent adults in relation to depression symptoms. Person-centered analysis, specifically LPA, addresses gaps in empirical research that rely on

predetermined categories of acculturation and acculturative stress and, instead, clusters individuals based on group similarities and differences. Three research questions informed the present study. First, to what extent are Berry's (2003) theorized acculturation styles—bicultural, separation, assimilation, and marginalization—represented among Mexican-descent Latinxs? It was expected that LPA would identify profiles that support multiple acculturation styles. Because prior studies provided mixed evidence for Berry's (2003) proposed acculturation styles (Bulut & Gayman, 2020; Capielo Rosario & Dillon, 2020; Salas-Wright et al., 2015; Schwartz & Zamboanga, 2008), there were no a priori predictions regarding the number and type of acculturation profiles.

Second, how do acculturation styles relate to various dimensions of acculturative stress? That is, does LPA identify subgroups of profiles for acculturation and acculturative stress dimensions that are meaningfully different from each other among Mexican-descent Latinxs? No prior studies have examined whether acculturation profiles significantly correspond to variation in the configuration of acculturative stress dimensions. Given the exploratory nature of this research question and analyses, no specific predictions were made regarding how acculturation profiles might relate to dimensions of acculturative stress.

Third, how do different acculturation–acculturative stress profiles, if present, relate to depression symptom severity among Mexican-descent individuals? Based on prior studies suggesting a beneficial influence of greater Latinx acculturation (Driscoll & Torres, 2020; Torres, 2010), it was expected that endorsement of greater heritage-culture acculturation and lower dimensions of acculturative stress would be associated with lower depressive symptom severity. It is unclear from prior studies which specific dimensions of acculturative stress in conjunction with which specific acculturation styles are associated with depression symptoms. Therefore, no specific predictions were made regarding the influence of acculturation and acculturative stress dimensions on depression symptoms severity.

Method

Participants

The present study included 230 adult Latinxs who self-identified as Mexican descent (e.g., Mexican, Mexican American, and Chicano). The average age of the sample was approximately 36 years ($SD = 12.25$; range = 18–76). Most participants were women ($n = 164$, 73%), and most reported being married or living with a significant other ($n = 125$, 55%), while the remaining participants were either single, separated, divorced, or widowed. For generation level, 112 (54%) participants were the first member of their family to move to the U.S., 63 (30%) were second generation, and 32 (15%) were third generation or higher. The average amount of time lived in the U.S. for first generation participants was approximately 10 years ($SD = 8.5$) and ranged from less than 1 year to 50 years. Much of the sample reported a household annual income of \$20,000 or less ($n = 112$, 57%), 45 (23%) earned between \$20,000 and \$50,000, and 39 (20%) earned \$50,000 or higher. Regarding educational attainment, 123 (65%) participants had attended 11 years or less of school, 4 (2%) had a high school diploma, 16 (8%) had attended at least 1 year of college, and 47 (25%) had a bachelor's degree or higher.

Procedure

The present study comprises secondary data analyses of previously published data (Driscoll & Torres, 2020; Torres, 2010). Those studies recruited self-identified Latinx adults (18 years and older) from local

community events and organizations in a moderately size city in the Midwestern United States, and from national professional networking listservs with a predominantly Latinx base. Research suggests that LPA is robust against effects attributable to sample differences in time and format for data collection, because the relationships among observed variables—that is, profiles identified through LPA—correspond to the influence of a latent variable on the observed variable scores (Chuah et al., 2006; DiStefano & Kamphaus, 2006). After a brief description of the project, participants provided informed consent and completed a series of questionnaires either by paper-and-pencil ($n = 169$) or by online ($n = 61$). All materials were available in Spanish and English. Most participants ($n = 163$, 71%) completed the questionnaires in Spanish. Participants received gift cards as compensation. All study procedures were conducted in compliance with the host institution's internal review board.

Instruments

Acculturation

The *Acculturation Rating Scale for Mexican Americans-II* (ARSMA-II; Cuellar et al., 1995) is a self-report scale that consists of 30 items and uses a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*extremely often or almost always*). The ARSMA-II asks questions pertaining to language preference and identification with the traditional Latinx and receiving Anglo cultures, where *Latinx Orientation Scale* (LOS) and *Anglo Orientation Scale* (AOS) can be calculated via mean scores. Internal consistency coefficients have been reported at .88 for the LOS and .83 for the AOS (Cuellar et al., 1995). For the present study, Cronbach's alphas were .79 and .92 for the LOS and AOS, respectively.

Acculturative Stress

The *Multidimensional Acculturative Stress Inventory* (MASI; Rodriguez et al., 2002), a 36-item measure, assesses acculturative stress among Mexican-descent Latinxs living in the U.S. The MASI incorporates items corresponding to acculturation pressures from Latinx and mainstream American cultures, as well as stressors associated with competency in Spanish and English languages. Four subscales can be calculated from the MASI items: *English Competency Pressures* (e.g., "I don't speak English or don't speak it well"), *Spanish Competency Pressures* (e.g., "I feel pressure to learn Spanish"), *Pressure to Acculturate* (e.g., "It bothers me when people pressure me to assimilate to the American ways of doing things"), and *Pressure Against Acculturation* (e.g., "People look down upon me if I practice American customs"). Participants rate the level of distress caused by each item on a 6-point Likert scale, ranging from 0 (*does not apply*) to 5 (*extremely stressful*). Mean scores for each subscale are calculated in which higher scores reflect greater acculturative stress. Internal consistency coefficients for the MASI subscales, in the form of Cronbach's alphas, have been reported at .91, .93, .84, and .77 for English Competency, Spanish Competency, Pressure to Acculturate, and Pressure Against Acculturation, respectively (Rodriguez et al., 2002). For the present study, Cronbach's α for English Competency was .90, Spanish Competency was .90, Pressure to Acculturate was .86, and Pressure Against Acculturation was .71.

Depression

The *Center for Epidemiological Studies-Depression* scale (CES-D; Radloff, 1977) is a widely used 20-item self-report questionnaire that assesses depression symptom severity. Participants indicate the frequency with which they experienced depression symptoms during the past week rated on a 4-point Likert scale from 0 (*rarely or none of the time, less than 1 day*) to 3 (*most of the time—5–7*

days). Summed ratings provide a total score ranging from 0 to 60. A CES-D total score of 16 or greater is considered significant clinical elevation, or “caseness,” with higher scores reflecting more severe depression symptoms (Nezu et al., 2002; Radloff, 1977). The CES-D has been used extensively with Latinxs (e.g., Crockett et al., 2007; Torres, 2010; Torres & Rollock, 2007) and has demonstrated functional and scalar equivalence for Latinxs and non-Latinx Whites (Crockett et al., 2005). For the present study, Cronbach’s α for the CES-D was .86.

Data Analysis Plan

Data analysis proceeded through several steps. First, LPA was conducted using Mplus 7.31 (Muthén & Muthén, 2012) to identify conceptually and statistically distinct participant subgroupings along scores of acculturation and acculturative stress. As noted above, LPA is an appropriate analytic technique for the present study, because it identifies unique homogenous subgroupings along multiple dimensions driven by an unobserved latent variable; maximizes within group similarity while minimizing between group similarity; and does not make a priori assumptions about the number of groups within a latent variable. LPA assumes that an unobserved latent variable, of which the number of groups is unknown, directly influences the configuration of scores that present in study data (DiStefano & Kamphaus, 2006). Therefore, data analysis in LPA proceeds through an iterative process where models with increasing numbers of k groups, or *profiles*, are generated with each participant classified into the one group with their highest probability association based on the pattern of scores that are of interest.

For the present study, the ARSMA-II and MASI subscales were used to estimate model solutions. A maximum likelihood algorithm estimated model solutions with k and $k - 1$ profiles. Best model fit and the appropriate number of model profiles were determined through a combination of inspection of several fit indices and model interpretability (Nylund et al., 2007; Vermunt & Magidson, 2004). Overall reliability and stability of profile solutions was denoted by entropy (E), where values of .80 are considered acceptable (Muthén & Muthén, 2008; Tein et al., 2013). The Akaike Information Criterion, Bayesian Information Criterion (BIC), and sample-size adjusted BIC were inspected, with lower values indicating better model fit. The Lo-Mendell-Rubin likelihood ratio test (LMR) and Bootstrap Lo-Mendell-Rubin likelihood ratio test (BLRT) were examined. The LMR and BLRT evaluate a model solution with k profiles against a model solution with $k - 1$ profiles. A nonsignificant p value (i.e., $p > .05$) indicates that the more parsimonious model is a better fit to study data. Following procedures used by Schwartz and Zamboanga (2008), model solutions were required to contain at least 1% of participants in all profiles identified, and all profiles needed to be conceptually distinguishable from each other. Results from a Monte Carol simulation study regarding power estimates using LPA indicated that a minimum sample of size of 200 is required to detect k profiles and reject the null hypothesis of $k - 1$ profiles using 8 items (Nylund et al., 2007). The present study used six items at $n = 230$, and thus is adequately powered.

After LPA, two additional analyses tested for differences between profiles for the major study variables of interest. First, a multivariate analysis of variance (MANOVA) was conducted to determine significant differences between the identified profiles on acculturation subscales and acculturative stress subscales. Second, an analysis of covariance (ANCOVA) tested whether depression symptom severity significantly was significantly different from each of the identified acculturation–acculturative stress profiles. Because previous research has found significant differences among Latinxs by gender and

nativity status (foreign born versus U.S. born) for acculturation, acculturative stress, and depression (Alegría et al., 2008; Driscoll & Torres, 2020; Torres et al., 2012), both MANOVA and ANCOVA included gender and nativity status as covariates.

Results

Descriptive Statistics

The mean LOS and AOS acculturation scores for the total sample were 3.98 ($SD = 0.56$; range = 2.17–4.88) and 2.88 ($SD = 0.91$; range = 1.00–4.16), respectively. In the initial ARSMA-II development and validation study, Cuellar et al. (1995) reported average LOS and AOS scores of 3.28 and 3.82, respectively. Compared to the sample reported in Cuellar et al., participants in the present study reported, on average, somewhat greater Latinx orientation and somewhat lower Anglo orientation. Regarding average acculturative stress subscales, pressure to speak Spanish was 0.83 ($SD = 0.89$; range = 0.00–4.57), pressure to speak English was 1.59 ($SD = 1.27$; range = 0.00–5.00), pressure to acculturate was 1.50 ($SD = 1.04$; range = 0.00–5.00), and pressure against acculturation was 0.76 ($SD = 0.70$; range = 0.00–4.00). The mean severity of depression symptom score was 17.14 ($SD = 9.84$; range = 0.00–51.00). Using the recommended cutoff score of 16 or higher for caseness (Nezu et al., 2002; Radloff, 1977), 116 participants (46.52%) reported significant elevation of depression symptom severity. Examination of bivariate correlations indicated that participant age was positively associated with LOS ($r = .16, p = .03$) and negatively associated with AOS ($r = -.29, p < .001$). Age was also significantly, positively correlated with acculturative stress domains for pressure to speak English ($r = .34, p < .001$) and pressure to acculturate ($r = .16, p = .03$). Age was not significantly associated with depression symptom severity. Because of the significant associations between age, acculturation, and acculturative stress domains, age was included as a covariate in subsequent MANOVA tests.

Latent Profile Analysis

LPA of models for one through six profiles was estimated. Comparison of fit indices for each model solution is shown in Table 1. Of the six models estimated, the 3-profile model solution fit study data the best, as evidenced by a significant LMR likelihood ratio test ($p = .0011$) and significant BLRT ($p < .0001$). The entropy value for the 3-profile model indicated that the model solution was reliable ($E = 0.871$), and classification accuracy was greater than 0.90 for all three profiles. Model solutions with 1-, 2-, 4-, 5-, and 6-profiles all had nonsignificant LMR values, and 5- and 6-profile solutions contained a profile with fewer than 1% of participants classified to it. Consequently, the 3-profile model was retained as the best fitting solution. Profile 1, $n = 81$, was 35.21% of the total sample; Profile 2, $n = 101$, was 43.91% of the total sample; and Profile 3, $n = 48$, was 20.87% of the total sample. Table 2 presents means and standard deviations for participant scores of ARSMA LOS and AOS subscales, MASI subscales, and results for tests of significant differences between profiles. Regarding MANOVA results, the assumption for homogeneity of variance–covariance matrices was not met, Box's $M = 189.93, p < .001$. Following recommendations by Tabachnick and Fidell (2007), Pillai's trace was used to identify significant differences among the configuration of acculturation and acculturative stress scores by class. Examination of this score indicated that there was a significant multivariate effect by profile, Pillai's trace = 1.25, $F(12, 330) = 46.35, p < .001$, partial eta squared = 0.63. Figure 1 presents acculturation and acculturative stress subscales for each of the identified profiles relative to the total sample mean.

Table 1 Fit Indices for One- to Six-Profile Solutions

Model	AIC	BIC	aBIC	Entropy	LMR <i>p</i> value	BLRT <i>p</i> value
One-class solution	3539.33	3580.58	3542.55	—	—	—
Two-class solution	3331.7	3397.03	3336.81	0.866	0.0786	< .0001
Three-class solution	3162.48	3251.87	3169.46	0.871	0.0011	< .0001
Four-class solution	3067.37	3180.83	3076.24	0.878	0.471	< .0001
Five-class solution	3004.8	3142.33	3015.55	0.898	0.0633	< .0001
Six-class solution	2974.61	3136.2	2987.23	0.905	0.0746	< .0001

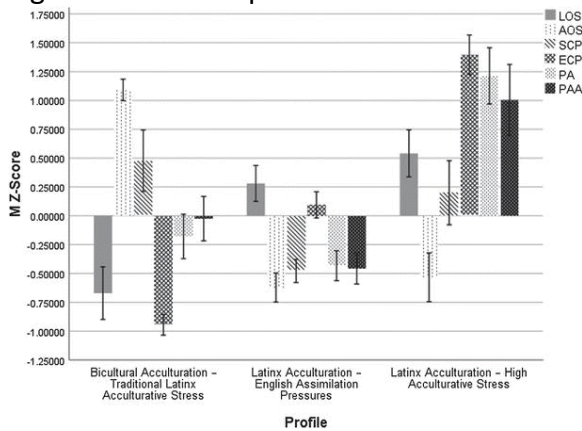
The bold profile indicates the best-fitting solution. AIC = Akaike information criterion; BIC = Bayesian information criterion; aBIC = sample-size adjusted Bayesian information criterion; LMR = Lo-Mendell-Rubin likelihood ratio test; BLRT = bootstrap Lo-Mendell-Rubin likelihood ratio test.

Table 2 Means, Standard Deviations, and Significant Differences Among Profiles Scores on Study Variables

Variable	Profile 1 (n = 81) M (SD)	Profile 2 (n = 101) M (SD)	Profile 3 (n = 48) M (SD)	F (2, 198)	η ²
Acculturation—Latinx orientation	3.60a (0.59)	4.19b (0.39)	4.34b (0.32)	27.43***	0.24
Acculturation—Anglo orientation	3.89a (0.36)	2.31b (0.58)	2.42b (0.67)	123.27***	0.59
Spanish competency pressures	1.23a (1.11)	0.35b (0.42)	1.00a (0.89)	15.61***	0.15
English competency pressures	0.40a (0.53)	1.72b (0.73)	3.41c (0.73)	175.71***	0.67
Pressure to acculturate	1.36a (0.92)	1.05b (0.71)	2.73b (0.88)	42.61***	0.33
Pressure against acculturation	0.78a (0.62)	0.37b (0.45)	1.44c (0.76)	39.26***	0.32

Within each row, means with different subscripts are significantly different from each other, *p* < .001. Profile 1 = Bicultural Acculturation—Traditional Latinx Acculturative Stress; Profile 2 = Latinx Acculturation—English Assimilation Pressures; Profile 3 = Latinx Acculturation—High Acculturative Stress. *** *p* < .001.

Figure 1. Visual Depiction of the Three Identified Profiles Relative to the Sample Mean



Note. LOS = acculturation—Latinx orientation; AOS = acculturation—Anglo orientation; SCP = acculturative stress—Spanish competency pressures; ECP = acculturative stress—English competency pressures; PA = acculturative stress—pressure to acculturate; PAA = acculturative stress—pressure against acculturation. Error bars correspond to 95% confidence intervals.

The first research question investigated to what extent Berry’s (2003) theorized acculturation styles are represented among Mexican-descent Latinxs. As shown in Table 2, participants in Profile 1 exhibited

moderate-to-moderately high acculturation for LOS ($M = 3.30$, $SD = 0.59$) and AOS ($M = 3.89$, $SD = 0.26$), respectively. When LOS and AOS were standardized around the total sample mean acculturation scores, Profile 1 had lower LOS and greater AOS compared to the other identified profiles (see Figure 1). MANOVA results indicated that, relative to the other profiles, Latinx acculturation was significantly lower and Anglo acculturation was significantly higher for Profile 1 (see Table 2). Cuellar et al. (1995) developed criteria to classify acculturation styles based on reported ARSMA-II scores, where scores greater than 2.86 for the LOS and 3.53 for the AOS correspond to bicultural acculturation. Using these cutoffs scores as a reference point, participants in Profile 1 were notable for significantly lower traditional Latinx-culture acculturation and significantly greater receiving-culture acculturation relative to other Mexican-descent Latinxs in this study, while at the same time endorsing acculturation subscales at levels suggestive of bicultural acculturation. By contrast, participants in Profile 2 reported high Latinx acculturation and low Anglo acculturation (see Table 2). Mean scores for LOS ($M = 4.19$, $SD = 0.39$) and AOS ($M = 2.31$, $SD = 0.58$) were higher and lower, respectively, compared to Profile 1 (see Figure 1), and these differences were statistically significant (see Table 2). According to Cuellar et al. (1995), scores greater than 3.70 for LOS and less than 3.24 for AOS are suggestive of traditional Latinx acculturation. Participants' LOS and AOS scores for Profile 3 were 4.34 ($SD = 0.32$) and 2.42 ($SD = 0.67$), respectively. These scores were similar to participants' reported acculturation scores for Profile 2 (see Table 2) and were also suggestive of traditional Latinx acculturation (Cuellar et al., 1995). That is, respondents in this group reported higher Latinx acculturation and lower Anglo acculturation.

The second research question examined how acculturation styles relate to various dimensions of acculturative stress. Profile 1 exhibited several noteworthy characteristics in this regard. Specifically, English competency pressures was significantly lower for Profile 1 compared to all other profiles (see Table 2); furthermore, Spanish competency pressure for Profile 1 was somewhat elevated (see Figure 1) and significantly higher compared to Profile 2 (see Table 2). Profile 1 was found to have somewhat low pressure to acculturate (see Figure 1), and it was significantly lower compared to Profile 2 (see Table 2). Finally, participants in this profile reported moderately elevated pressure against acculturation that was significantly greater than that in Profile 2, but significantly lower compared to Profile 3 (see Table 2). Given this configuration of scores, this profile was designated *Bicultural Acculturation–Traditional Latinx Acculturative Stress*.

For Profile 2, acculturative stress domain scores for this profile were notable for Spanish competency pressures as well as pressure against acculturation that was significantly lower than the other two identified profiles (see Table 2). In addition, participants in Profile 2 reported pressure to acculturate that was significantly lower than participants in Profile 3, but was not significantly different from the Bicultural Acculturation–Traditional Latinx Acculturative Stress profile. Indeed, the only acculturative stress domain that was somewhat elevated for Profile 2 was English competency pressures (see Figure 1), and this score was significantly greater compared to the Bicultural Acculturation–Traditional Latinx Acculturative Stress profile, but significantly lower compared to Profile 3 (see Table 2). The configuration of scores for Profile 2 suggested that individuals in this group had retained more components of traditional Latinx culture compared to the receiving, Anglo-American culture and, at the same time, were reporting acculturative stress that corresponded the acquisition of cultural behaviors, beliefs, and social identity related to Anglo American culture, most prominently in the

domain of English-language use. This profile was designated *Latinx Acculturation–English Assimilation Pressures*.

Profile 3, when compared to the other two identified profiles, exhibited marked differences in the constellation of acculturative stress domains. Participants in this profile reported elevated Spanish competency pressure, as well as English competency pressure, pressure to acculturate, and pressure against acculturation higher than those of all other identified profiles (see Figure 1). MANOVA results indicated that these differences for this profile were statistically significant (see Table 2). Indeed, the only acculturative stress score for this profile that was not significantly higher than all other profiles was for Spanish competency pressures. For this profile, Spanish competency pressures were significantly higher than for the *Latinx Acculturation–English Assimilation Pressures* profile, but were not significantly different from the *Bicultural Acculturation–Traditional Latinx Acculturative Stress* profile. Taken together, the configuration of acculturation and acculturative stress scores suggested that Mexican-descent Latinxs in Profile 3 exhibited traditional Latinx acculturation and prominent acculturative stress across multiple domains. Profile 3 was, therefore, designated *Latinx Acculturation–High Acculturative Stress*.

The third research question investigated how different acculturation–acculturative stress profiles relate to depression symptom severity. As noted above, ANCOVA controlling for gender and nativity status tested for differences between identified profiles regarding depression symptom severity. Alphas were adjusted for pairwise comparison using Bonferroni correction. Results indicated a significant main effect between identified acculturation–acculturative stress profiles for depression symptom severity, $F(2, 198) = 7.50, p = .001$, partial eta squared = .07. Specifically, the profile for *Latinx Acculturation–High Acculturative Stress* ($M = 22.41, SD = 11.09$) reported significantly greater depression symptom severity compared to *Bicultural Acculturation–Traditional Latinx Acculturative Stress* ($M = 15.62, SD = 10.91$), $p = .002$; and *Latinx Acculturation–English Assimilation Pressures* ($M = 16.01, SD = 8.00$), $p = .002$. Unexpectedly, *Bicultural Acculturation–Traditional Latinx Acculturative Stress* and *Latinx Acculturation–English Assimilation Pressures* did not significantly differ in depression symptom severity.

Discussion

Previous research has mainly examined acculturation and acculturative stress among Mexican-descent Latinxs using variable-centered approaches (e.g., multivariate regression), thereby obscuring potential acculturation–acculturative stress subgroupings that may have important relationships with mental health. A major aim of this study was to use person-centered analysis to delineate profiles along dimensions of acculturation and acculturative stress for Mexican-descent Latinxs, and to investigate the relationship of identified profiles to depression. Overall, this study found evidence for three profiles of acculturation–acculturative stress among Mexican-descent Latinxs. The first profile, *Bicultural Acculturation–Traditional Latinx Acculturative Stress*, comprised higher Latinx and Anglo acculturation, suggestive of possible bicultural acculturation, highest Spanish competency pressures, lowest English competency pressure, and pressures to acculturate and against acculturation that were in between the other two identified profiles. The second profile, *Latinx Acculturation–English Assimilation Pressures*, was characterized by higher Latinx acculturation and lower Anglo acculturation, lowest Spanish competency pressure, English competency pressure in between the other two

identified profiles, low pressure to acculturate, and lowest pressure against acculturation. The third profile, Latinx Acculturation–High Acculturative Stress, also had higher Latinx and lower Anglo acculturation and, except for Spanish competency pressures, the highest scores for all dimensions of acculturative stress.

There are several major findings in the present study. First, this study, which sampled Mexican-descent Latinxs only, found no evidence of marginalization acculturation. One possible interpretation of this finding is that marginalization may not be applicable for Mexican-descent Latinxs. Although acculturation scholars have questioned the validity of marginalization as a distinct construct (Del Pilar & Udasco, 2004), other studies sampling non-Mexican-descent Latinxs have found some evidence of marginalization (Capielo Rosario & Dillon, 2020; Schwartz & Zamboanga, 2008). Indeed, one prior study that found evidence of a marginalization profile among Puerto Ricans used the same measure of acculturation as the present study (Capielo Rosario & Dillon, 2020). Taken together, the present study results suggest that marginalization acculturation may be appropriate for some Latinx ethnic subgroups but perhaps less so for Mexican-descent Latinxs. Second, the finding that none of the emergent acculturation–acculturative stress profiles corresponded to an assimilation acculturation style is potentially important given that almost half of the present sample was born in the United States. This underscores the high importance that Mexican-descent Latinxs may place on maintaining cultural continuity, and that this is influenced by factors other than country of birth. Padilla and Perez (2003) suggested oppression and power dynamics shape attitudes about the relative value that Latinxs place on retention of heritage culture versus acquisition of receiving culture and that these in turn influence acculturation styles. This study is the first to use person-centered analysis to examine cultural adaptation profiles among Mexican-descent Latinxs and, therefore, calls for replication in future research. Given this qualification, however, these findings suggest that Mexican-descent Latinxs face multiple forms of social and cultural pressure to adopt, reject, or retain cultural behaviors, attitudes, beliefs, and identities, but that these do not correspond to an “all-or-none” adoption or rejection of the traditional Mexican and Anglo culture.

Along these lines, a third major finding is that dimensions of acculturative stress are more dominant for some Mexican-descent Latinxs than others, and that these forms of acculturative stress co-occur with more than one acculturation style. This is an important distinction between the present study and prior research that has either examined acculturative stress as an overall construct (Capielo Rosario & Dillon, 2020) or as a dependent variable (Schwartz & Zamboanga, 2008). In this study, two profiles exhibited acculturation scores that suggested traditional Latinx acculturation but differed markedly in acculturative stress, such that one profile had the highest acculturative stress on three subscales for pressures to speak English, pressures to adopt behavioral practices associated with the receiving cultural group, and for pressures to retain behavioral practices associated with one’s Latinx ethnic heritage, whereas the second profile, though exhibiting lower acculturative stress scores in comparison, reported somewhat heightened scores only for the subscale that measured pressures to speak English. This suggests an important difference among Mexican-descent Latinxs who exhibit traditional-culture acculturation in that one group experiences a more generalized form of acculturative stress, wherein multiple components of cultural adaptation prove stressful, and a second group experiences a more focused, specific type of acculturative stress that centers around language capabilities.

By contrast, the Bicultural Acculturation–Traditional Acculturative Stress profile reported a configuration acculturative stress scores largely specific to maintaining continuity with traditional Mexican culture, most strongly evidenced in pressures to speak Spanish. Although the Bicultural Acculturation–Traditional Acculturative Stress profile was like the Latinx Acculturation–High Acculturative Stress profile regarding pressure to speak Spanish, pressure against acculturation was significantly higher for those individuals in the latter profile. This suggests that for those Mexican-descent Latinxs who exhibit bicultural acculturation, sources of acculturative stress may be less related to the process of possessing multiple cultural identities and their corresponding cultural behaviors, and more related to functional abilities, such as language.

What differentiates the two traditional Latinx acculturation profiles that report discrepant acculturative stress domains? One possible explanation is related to *bicultural identity integration* (BII; Benet-Martínez et al., 2002; Benet-Martínez & Haritatos, 2005;), which refers to the ability to synthesize heritage- and receiving-culture identities and the degree an individual perceives these cultural identities as compatible. Individuals who experience multiple cultural identities as conflicting (i.e., low BII) exhibit a contrast effect in response to cultural cues (Benet-Martínez et al., 2002). Multiple scholars have noted that cultural identifications, values, behaviors, and beliefs that comprise acculturation are separate components from one's ability to synthesize multiple cultural streams into a cohesive cultural identity (Benet-Martínez & Haritatos, 2005; Schwartz et al., 2015, 2016; Torres, 2013). Mexican-descent Latinxs in the Traditional Latinx Acculturation–High Acculturative Stress profile strongly identify with their traditional culture and may also view this as incompatible with the mainstream, receiving culture. In response to Latinx cultural cues, this profile may, therefore, experience higher acculturative stress dimensions related to pressure to acculturate to the receiving culture, while greater acculturative stress related to pressures to resist acculturation may arise in response to Anglo receiving cultural cues. Conversely, the profile identified as Traditional Latinx Acculturation–English Assimilation Pressure may differ in that they may not view multiple cultural identities as in conflict, and as such may be less likely to experience the multiple pressures to adopt, retain, or resist cultural adaptation as sources of acculturative stress.

A second possible and related explanation for the difference between the Traditional Latinx Acculturation–English Assimilation Pressure and Traditional Latinx Acculturation–High Acculturative Stress profiles may be related to racial–ethnic discrimination. Indeed, for the Traditional Latinx Acculturation–English Assimilation Pressure profile, the main source of acculturative stress may stem from discrimination from the mainstream, receiving culture. Prior studies have found that greater acculturative stress partially mediates the relationship between racial–ethnic discrimination and psychological distress and that great receiving culture acculturation is protective against this relationship (Torres et al., 2012). At the same time, it is important to note that prior studies have also demonstrated that greater Latinx acculturation also appears to protect against greater depression, in part mediated by lower acculturative stress (Driscoll & Torres, 2020; Torres & Ong, 2010). Taken together, this suggests that—despite reporting similarities regarding cultural beliefs, identifications, and values—the two Traditional Latinx Acculturation profiles identified in the present study may, in part, be differentiated by the extent to which they experience their multiple cultural identities as conflict and the extent to which their primary source of acculturative stress is attributable to discrimination emanating from the receiving culture. As has been noted by previous scholars, dynamics

of oppression and power shape cultural adaptation (Padilla & Perez, 2003) and the extent to which the receiving culture welcomes and promotes cultural adaptation versus rejects Mexican-descent Latinxs may have important implications for sources of acculturative stress and the extent to which Mexican-descent Latinxs are able to integrate and express numerous cultural behaviors, identities, and values in a myriad of cultural contexts (Schwartz et al., 2010, 2015). Future replication studies should incorporate assessments of bicultural identity integration and discrimination to determine the extent to which these experiences influence Mexican-descent individuals' cultural adaptation profiles.

Finally, generalized versus focused acculturative stress appears to relate to differences in mental health given that the Latinx Acculturation–High Acculturative Stress profile reported significantly higher depression symptom severity than all other profiles identified in this study. Bicultural Acculturation–Traditional Latinx Acculturative Stress and Latinx Acculturation–English Assimilation Pressures profiles, however, did not significantly differ in terms of depression symptom severity. Yet, the depression score for participants in the Latinx Acculturation–English Assimilation Pressures profile exceeded the recommended cutoff for “caseness” suggested by prior researchers (Nezu et al., 2002; Radloff, 1977), suggesting that this group is, possibly, notable for moderately elevated severity of depression symptoms. That this finding emerged through person-centered analysis is of note as typical multivariate analyses may have obscured distinctions among profiles and overlooked important differences in depression symptom severity.

Study Limitations and Future Research Directions

A few study limitations warrant comment. First, this study used a cross-sectional design, consequently limiting the ability to make causal inferences among acculturation–acculturative stress and depression symptom severity. Second, because participants were assessed once, it remains unclear the degree to which acculturation profiles are stable over time and across contexts. That is, questions left unanswered by the present study are whether the identified acculturation–acculturative stress profiles change over time; whether and under what circumstances transitions from one profile to another occur; whether transitions from one profile to another (if they occur) are sequential and/or hierarchically arranged; and the extent to which changes in acculturation–acculturative stress profiles influence depression. Given that the present study findings point to the benefit of retaining behaviors, values, and practices related to Mexican-heritage culture, it is crucial for future research to examine the process and contexts by which Mexican-descent Latinxs either retain heritage culture or adopt characteristics of a receiving culture while leaving aspects of the original cultural system unaltered, such that components of acculturative stress remain focused rather generalized. As noted above, prior findings suggest that the individual-level factors such as bicultural identity integration (Benet-Martínez et al., 2002; Benet-Martínez & Haritatos, 2005) and Latinx intercultural competence (Driscoll & Torres, 2020) contribute to the flexible expression of context-appropriate, culture-bound behaviors, and that this may also contour Latinx acculturative stress. Future studies should use longitudinal designs that capitalize on the strengths of person-centered analytic approaches by implementing latent transition analysis. Finally, the use of a convenience sample did not permit for analysis of potential differences in cultural profiles by geographic location. Therefore, the extent to which this study's findings generalize across geographic region remains an important unanswered question and calls for population-based sampling that tests for potential geographic differences among acculturation–acculturative stress profiles.

Theory, Research, and Clinical Implications

Despite the above limitations, there are several notable implications for the present study. First, this study adds to the growing scholarship base that advocates for the use of person-centered analyses to investigate and understand cultural adaptation among Mexican-descent Latinxs, specifically, and perhaps for Latinx individuals overall (Torres et al., 2018). These approaches further elucidate the link between cultural adaptation related to social identity (i.e., acculturation) and social process (i.e., acculturative stress) and their concordant relationships with Latinx mental health. The present results suggest that acculturation and acculturative stress jointly shape Latinx depression, such that multiple configurations of these dimensions may correspond to protective or risk factors, rather than a linear or “one-size-fits-all” relationship. Second, focused versus generalized acculturative stressors appear to be a distinguishing component for depression symptom severity among Mexican-descent Latinxs who report high heritage-culture acculturation. Prior theory has assumed that high heritage-culture acculturation and low receiving-culture acculturation correspond to poor functioning (Berry, 2006; Rudmin, 2003; Sam & Berry, 2010). The current work implicates the role of acculturative stress, with more diffuse pressures associated with increased depression symptoms. Third, none of the identified profiles corresponded to an assimilation acculturation style as proposed by Berry’s (2003) model. Current acculturation conceptualizations emphasize the multifaceted nature of cultural adaptation, and it is possible that different acculturation domains occur at varying rates, with some changes in behavioral components of acculturation (e.g., language use) potentially occurring at a different rate than others (e.g., cultural practices, holidays celebrated, and ethnic background of primary social group), and at a faster rate than components of acculturation that correspond to cultural values (Schwartz et al., 2010). Taken together, the present study highlights the critical related-and-distinct nature of cultural identity and cultural adaptation.

A further implication of this study is that nuanced assessment of acculturative stress across multiple domains may help develop effective treatment targets in clinical settings. For example, the assessment of acculturative stress might incorporate distress relative to language competencies in both Spanish and English, clients’ cultural identity and practices (cf. Schwartz et al., 2010), and the extent to which these components contribute to Mexican-descent Latinxs’ experienced pressures by mainstream-and/or heritage-cultures to accept, adopt, or reject elements of their cultural identity. Furthermore, this study suggests that the assessment of acculturative stress should occur regardless of presenting acculturative style and of Latinx-client identified cultural identity.

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