Cultural Self, Personal Self: Links With Life Satisfaction Among Mexican American College Students

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Structural equation modeling was used to test relations among heritage-culture retention (i.e., adherence to Latina/o values, ethnic identity, and collective self-esteem), personal self-esteem, life satisfaction, and academic grades for 446 Mexican American college students. Results indicated that the hypothesized model fit the data well. Personal self-esteem partially mediated the relation between heritage-culture retention and life satisfaction. Specifically, heritage-culture retention predicted personal self-esteem, and heritage-culture retention and personal self-esteem both predicted life satisfaction. The mediated effect of heritage-culture retention to life satisfaction via personal self-esteem also was significant. The relation of personal self-esteem to life satisfaction was significant for both genders, but stronger for women, resulting in a stronger mediated effect of heritage-culture retention on life satisfaction for women than men. Contrary to the hypotheses, academic grades were not predicted by life satisfaction and, thus, not indirectly related to heritage-culture retention or personal self-esteem. Overall, greater retention of aspects of one’s heritage culture predicted higher levels of both personal self-esteem and life satisfaction. In turn, higher personal self-esteem predicted greater life satisfaction. The hypothesized model explained 28% of the variance in life satisfaction. Implications for research and practice are discussed.

Keywords: Mexican American, heritage-culture retention, self-esteem, well-being

At 63%, Mexican Americans are the largest Latina/o ethnic group in the United States (Ennis, Rios-Vargas, & Albert, 2011). Despite their large and growing representation, Mexican Americans (9%) are less likely to graduate from college compared with Latinas/os as a whole (13%) and Whites (39%; National Center for Education Statistics, 2011). Numerous multi-level factors contribute to the gap in the educational pipeline for Latinas/os, such as discrimination (Benner & Graham, 2011), academic tracking (Werblow, Urick, & Duesbery, 2013), and psychological distress (Close & Solberg, 2008). Given that many Mexican Americans...
enroll in college but do not graduate, it is important to identify ways to increase degree completion rates. Promoting well-being is one avenue through which academic success may be fostered. For instance, research has demonstrated that life satisfaction, an indicator of subjective well-being, predicts GPA and college retention (Frisch et al., 2005). Among Mexican American college students, life satisfaction is positively related to academic constructs, including college self-efficacy, college outcome expectations, academic goal progress, and academic satisfaction (Ojeda, Flores, & Navarro, 2011). Therefore, if life satisfaction is related to important college outcomes, then it is important to better understand factors that relate to Mexican American college students’ life satisfaction.

Although some of the reasons for college noncompletion have been financial, studies have also indicated that cultural considerations, such as a lack of cultural congruity between the values of universities and those of many Latina/o students (Gloria, Castellanos, & Orozco, 2005), may contribute to attrition and other challenges. In particular, cultural issues may affect the life satisfaction of Latina/o students, which, in turn, has been identified as an important predictor of college performance (Rode et al., 2005). One area in which university values may conflict with those of Mexican American students involves endorsement of primarily individualistic values on the part of the university. The focus on competition and individual accomplishment discourages cooperation, communal learning, and collaboration (Thompson, in press), which is antithetical to many Latina/o cultural values (Knight et al., 2010). In fact, Schwartz et al. (2013) found individualistic traits positively predicted immigrant college students’ well-being—likely due to the need to compete within the higher education setting. Similarly, it also is important to identify the cultural values that predict positive well-being (e.g., life satisfaction) among Mexican American college students.

Accordingly, the present study sought to identify cultural factors that are associated with life satisfaction for Mexican American college students, which, in turn, may be related to their academic grades—an urgent matter, given their underrepresentation in higher education. Within the introduction, we first discuss the importance of examining life satisfaction as a dimension of subjective well-being, followed by an overview of the multidimensional culture retention framework (Latina/o values, ethnic identity, and collective self-esteem) that is used to guide the present study. Finally, we discuss the paths that will be tested in the hypothesized model of Mexican American college students’ life satisfaction and academic grades, including mediator (e.g., personal self-esteem) and moderator (e.g., gender, generation status) variables.

Well-being consists of three primary components—subjective, psychological, and eudaimonic (Waterman, 2008). Subjective well-being refers to a sense of satisfaction with one’s life, which is the focus of the present study (Diener, 1984, 2006). Scholars have noted the lack of attention to more global indicators of student functioning, such as subjective well-being (Suldo, Shaffer, & Riley, 2008). Life satisfaction is the cognitive self-evaluation of one’s quality of life and is the most stable component of subjective well-being, which also includes positive and negative affect (Diener, Lucas, & Oishi, 2002). Among college students, subjective well-being is linked with academic success (Rode et al., 2005). Although the path between academic and mental health variables may be bidirectional (Lent, 2004), a longitudinal study found that subjective well-being predicted adolescents’ academic performance 1 year later (Suldo, Thaljl, & Ferron, 2011).

In addition, the current well-being literature is limited in its examination of cultural influences on Mexican American college students’ life satisfaction (Ojeda et al., 2012). Latinas/os who feel socially connected to their ethnic community tend to evidence positive mental health outcomes (Gamst et al., 2002). Such importance of group membership to life satisfaction is supported by social identity theory, which posits that individuals seek to be a part of a larger social group that enhances their self-esteem (Tajfel & Turner, 1979), which, in turn, contributes to psychological functioning (Haslam, Jetten, Postmes, & Haslam, 2009). Thus, the current study examines how three domains of heritage-culture retention influences personal self-esteem and life satisfaction, which, in turn, influences academic grades among Mexican American college students.
Culture Retention Framework

Among individuals from immigrant backgrounds, cultural orientations consist of two primary dimensions—U.S. culture acquisition and heritage-culture retention (Berry, 1980). Because the impact of U.S. culture acquisition on well-being has been studied (Schwartz et al., 2013), and given that most U.S. universities are guided by a “mainstream American” mind-set, the current study expands the literature by focusing on retention of Latina/o cultural values and pride vis-à-vis subjective well-being. Scholars postulate that heritage-culture retention consists of cultural practices, beliefs or values, and ethnic identity (e.g., Kim & Abreu, 2001; Schwartz, Unger, Zamboanga, & Szapocznik, 2010). The specific beliefs examined can vary between studies, but generally center on a collectivistic, familialistic, and collaborative value system in which the welfare of the group takes precedence over that of the individual.

Research has established links between heritage-culture retention and personal self-esteem among Latinas/os. These studies have focused primarily on ethnic identity (Phinney, Cantu, & Kurtz, 1997; Umaña-Taylor, 2004), and some have focused on cultural values (Gonzales et al., 2008). However, few studies have integrated domains of heritage-culture retention. This is an important step because each of the domains of heritage-culture retention represents a distinct dimension (Castillo & Caver, 2009). Heritage-cultural practices represent the behavioral dimension, including, but not limited to, referencing language use and media preferences. Cultural values and beliefs represent the cognitive dimension, incorporating specific ideas and attitudes about how people should relate to one another. Ethnic identity represents a component of the affective dimension, in terms of an individual’s exploration and acceptance of their identity in their heritage-cultural group. An additional dimension of affective heritage-culture retention is collective self-esteem, a related but separate construct from ethnic identity. Whereas ethnic identity is concerned with the individual accepting their placement within a cultural group, collective self-esteem is the subject evaluation that an individual places on the group membership that they identify with (Crocker, Luhtanen, Blaine, & Broadnax, 1994; Phinney et al., 1997; Luhtanen & Crocker, 1992). In the current study, heritage-culture retention is measured by adherence to Latino values, ethnic identity, and, collective self-esteem.

Personal Self-Esteem as a Predictor of Life Satisfaction

Self-esteem is one of the most researched correlates of life satisfaction (Lucas, Diener, & Suh, 1996). Personal self-esteem refers to one’s feelings of self-worth (Rosenberg, 1965) as an individual and is positively related to subjective well-being (Lyubomirsky, Tkach, & DiMatteo, 2006; Rey, Extremera, & Pena, 2011). A study on youth of Mexican descent found that personal self-esteem predicted general happiness (a construct associated with well-being and life satisfaction; Kiang, Yip, Gonzales-Backen, Witkow, & Fuligni, 2006). Given that a meta-analysis on personal self-esteem found that Latinas/os scored lower than African Americans or Whites (Twenge & Crocker, 2002), and that personal self-esteem affects life satisfaction (Lucas et al., 1996; Wilson, 1967), research on the influence of personal self-esteem on Mexican American college students’ life satisfaction is warranted and is a focus of the present study.

Personal Self-Esteem as a Mediator Between Heritage-Culture Retention and Life Satisfaction

Personal self-esteem may also mediate the links between cultural variables and psychosocial outcomes (e.g., Schwartz, Zamboanga, & Jarvis, 2007). For example, a strong sense of ethnic identity or adherence to cultural values leads to personal self-esteem through the positive affect that accompanies membership in—and acceptance from—a cultural group (Phinney, 2003). In turn, a positive sense of self may promote overall well-being (Ryff & Singer, 2008; Waterman, 2008). Thus, a person who regards her/himself highly may be content with how one’s life has proceeded. As such, personal self-esteem may mediate the relation between heritage-culture retention and life satisfaction. Specifically, engaging in traditional heritage customs, such as speaking Spanish and eating...
Mexican foods; embracing traditional values such as collectivism; and adopting a sense of solidarity with people of Mexican descent, may engender a positive self-affect as a member of the Mexican collective group—which may then predict life satisfaction.

**Generation Status and Gender as Moderators**

Generation status differences have been documented in terms of how Latina/o immigrants and nonimmigrants experience life in the United States. For instance, one study found that immigrant Latinas/os were more likely than U.S.-born Latinas/os to believe success in the United States is possible through hard work (Wiley, Deaux, & Hagelskamp, 2012). Further, second-generation Latinas/os believed outsiders perceived their ethnic group more negatively than did immigrants, whereas immigrants had higher public regard, which is a component of ethnic identity. More generally, research suggests that generation status may moderate the relation between adherence to cultural values and mental health outcomes (e.g., Berkel et al., 2010; Gonzales et al., 2008; Knight et al., 2010; Markides & Eschbach, 2005). For instance, adherence to Latina/o cultural norms, cultural awareness, ethnic social orientation, and ethnic loyalty decrease over successive generations (Arbona, Flores, & Novy, 1995; Kim & Abreu, 2001), resulting in poor mental health outcomes (Berkel et al., 2010; Gonzales et al., 2008; Knight et al., 2010; Markides & Eschbach, 2005).

Gender may also contribute to within-group differences among Mexican American college students. For instance, Latinos are less represented in the educational pipeline compared with Latinas (Saenz & Ponjuan, 2008). In addition, Latino students have reported higher self-esteem (Supple & Plunkett, 2011) and life satisfaction than Latina students (Ojeda et al., 2011). Gender differences also exist in cultural values, with Latina students scoring higher on familismo, fatalismo, and respeto, and Latino students scoring higher on traditional gender roles (Lorenzo-Blanco, Unger, Baezconde-Garbanati, Ritt-Olson, & Soto, 2012). Traditional gender roles such as marianismo (i.e., the value of women as virtuous, chaste, subordinate, and spiritual pillars; Castillo, Perez, Castillo, & Ghosheh, 2010), machismo (i.e., the value of men as dominant and hypermasculine), and caballeroismo (i.e., the value of men as chivalrous and brave; Arciniega, Anderson, Tovar-Blank, & Tracey, 2008) may contribute to gender differences in the manifestation of cultural values. For example, familismo may be observed through Latinas’ role in maintaining family unity and caring for their spiritual and emotional needs (Castillo et al., 2010), whereas Latinos may demonstrate familismo by providing physical protection and financial security (Arciniega et al., 2008).

**The Present Study**

The present study tests a model delineating relations among heritage-culture retention (i.e., adherence to Latina/o cultural values, ethnic identity, and collective self-esteem), personal self-esteem, life satisfaction, and academic grades with a sample of Mexican American college students. Based on previous theory and research, we hypothesized that heritage-culture retention would significantly and positively predict both personal self-esteem (e.g., Berkel, 2010; Gonzales et al., 2008; Phinney et al., 1997; Umaña-Taylor, 2004) and subjective well-being (e.g., Berry, Phinney, Sam, & Vedder, 2006). Additionally, we hypothesized that personal self-esteem would predict subjective well-being (e.g., Lucas et al., 1996; Rey et al., 2011; Waterman, 2008). We then hypothesized that personal self-esteem would partially mediate the relation between heritage-culture retention and life satisfaction (e.g., Schwartz et al., 2007). Furthermore, we hypothesized that life satisfaction would predict academic success, as measured by academic grades (Suldo et al., 2011). Finally, based on gender and generation status differences in cultural expressions (e.g., Arbona et al., 1995; Lorenzo-Blanco et al., 2012) and well-being (e.g., Supple & Plunkett, 2011; Ojeda et al., 2011), we explored whether gender and generation status moderated the relations within the hypothesized model of Mexican American college students’ life satisfaction and academic grades (see Figure 1).

**Method**

**Participants**

Participants included 446 (262 female; 178 male; 6 unreported) Mexican American college students attending a Hispanic-Serving Institution (HSI). Students’ self-reported GPA ranged...
from 0.30 to 4.00 (M = 2.99, SD = 0.57) on a 4.0 scale. Age ranged from 18 to 25 years (M = 19.91, SD = 1.68). Generation status consisted of 22% first-generation (n = 96), 35.5% second-generation (n = 155), 16.9% third-generation (n = 74), 16.9% fourth-generation (n = 74), and 8.7% fifth-generation (n = 38) students. Nine participants did not report their generation status.

**Measures**

**Gender.** Participants reported their gender, which was coded 1 (female) or 2 (male). This dichotomous classification was used in the multiple group analysis testing gender as a moderator.

**Generation status.** Based on established conceptualizations of generation status among Latinos (Cuéllar, Arnold, & Maldonado, 1995), participants were asked to indicate their generation status from the following options: (a) “1st generation: you were born in Latin America”; (b) “2nd generation: you were born in the U.S., either parent born in Latin America”; (c) “3rd generation: you and your parents were born in Latin America”; (d) “4th generation: you and your parents were born in the U.S., at least one grandparent was born in Latin America with remaining grandparents born in the U.S”; and (e) “5th generation or greater: you, your parents, and all your grandparents were born in the U.S.” Based on their responses, participants were classified into one of three generation groups, which were coded: 1 (first generation), 2 (second generation), and 3 (third generation and beyond). This classification was used in the multiple group analysis testing generation status as a moderator.

**Heritage-culture retention.** To measure heritage-culture retention, we created a latent variable consisting of three observed variables: (a) adherence to Latina/o cultural values, (b) ethnic identity, and (c) collective self-esteem.

**Adherence to Latina/o cultural values.** The 35-item Latino/a Values Scale (Kim, Soliz, Orellana, & Alamilla, 2009) assesses adherence
to Latina/o cultural values using a total score along with four subscales: (a) Cultural Pride, (b) Simpatía, (c) Familismo, and (d) Espiritismo. The total score was used in the current study to capture an overall adherence to Latina/o cultural values, as suggested by Kim et al. (2009), due to low reliability coefficients for the four separate subscales. Participants responded to the items (e.g., “One should work to preserve the language of one’s ethnic group” and “One’s successes should be attributed to one’s family”) on a 4-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). Responses were averaged, with high scores indicating greater adherence to Latino cultural values. Concurrent validity has been supported by significant correlations in the expected directions with other measures that tap into acculturation (i.e., U.S. cultural acquisition and enculturation (i.e., heritage-culture retention), and discriminant validity was demonstrated by lack of significant correlation with a measure of social desirability (Kim et al., 2009). In addition, test–retest reliability was demonstrated with coefficient alphas of .89 at Time 1 and .78 at Time 2. The alpha coefficient for the current study was .87.

Ethnic identity. The 12-item Multigroup Ethnic Identity Measure (MEIM; Roberts et al., 1999) is a shortened version of the 14-item MEIM (Phinney, 1992) that measures ethnic identity across two subscales: (a) Exploration and (b) Affirmation/Commitment. Exploration of one’s ethnic identity included engagement in cultural practices (e.g., special food, music, and customs) and culturally related social organizations, whereas affirmation/commitment included positive feelings and pride toward one’s ethnic group. Participants responded to items (e.g., “I have a strong sense of belonging to my own ethnic group.”) on a Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). Responses were averaged, with higher scores indicating greater salience of ethnic identity. Convergent validity has been supported by significant positive and negative correlations with measures of psychological well-being and depression, respectively (Roberts et al.). The alpha coefficient for the current study was .89.

Collective self-esteem. The 16-item Race-Specific Collective Self-Esteem Scale (Crocker et al., 1994) is a modified version of the Collective Self-Esteem Scale (Luhtanen & Crocker, 1992) that specifically measures individuals’ feelings as members of their racial/ethnic group. It consists of four subscales: (a) Private Collective Self-Esteem, (b) Public Collective Self-Esteem, (c) Membership Collective Self-Esteem, and (d) Importance to Identity Collective Self-Esteem. For the current study, the total score was used to capture participants’ overall collective self-esteem. Participants responded to the items (e.g., “Overall, my ethnic group is considered good by others”) on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). Responses were averaged, with higher scores indicating higher collective self-esteem. Convergent validity was supported by significant moderate positive correlations with the original Collective Self-Esteem Scale (Crocker et al., 1994). The alpha coefficient for the current study was .83.

Personal self-esteem. The 10-item Rosenberg Self-Esteem Scale (Rosenberg, 1965) assesses an individual’s self-worth. Participants responded to each item (e.g., “I take a positive attitude toward myself”) on a 4-point scale ranging from 1 (strongly disagree) to 4 (strongly agree). Responses were averaged, with higher scores indicating higher self-esteem. Among Latina/o college students, convergent validity has been supported by significant positive and negative correlations with measures of life satisfaction and depression, respectively (Greenberger, Chen, Dmitrieva, & Farruggia, 2003). The alpha coefficient for the current study was .87.

Life satisfaction. The 5-item Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) assesses participants’ subjective well-being by determining their overall life satisfaction. Participants responded to items (e.g., “If I could live my life over, I would change almost nothing”) on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Responses were averaged, with higher scores indicating greater life satisfaction. Convergent validity was supported by significant positive correlations with other measures of subjective well-being (Diener et al., 1985). The alpha coefficient for the current study was .83.

Academic grades. Participants were asked to list their cumulative college GPAs on a 4.0 scale as a measure of academic grades.
Procedure

Professors from behavioral and social science departments were solicited through e-mail to provide permission to distribute surveys to their students in class. The second author attended the classes to introduce the study to students and provide informed consent. Students were told that the researcher was interested in learning about Latinas/os’ college experiences. Most students participated, including those students who did not identify as Mexican Americans. Data from non-Mexican Americans (n = 32) were not included in the analyses. Participants completed the survey within 30 min. Students were given snacks as a reward for participation.

Plan of Analysis

To determine if the data fit the hypothesized model of Mexican American college students’ life satisfaction and academic grades, and if any differences in the model relations emerged based on gender and/or generation status, structural equation modeling procedures were conducted using MPlus 6.11 and maximum likelihood estimation method with robust standard errors (MLR). Throughout this multistep process, we used a series of fit indices when choosing models and interpreting findings to bolster the reliability and validity of our decisions (Kline, 2005). Specifically, when evaluating measurement models, structural models, and multiple group analyses, we examined each chi-square test of significance, normed chi square, comparative fit index (CFI), and Steiger’s (1998) root mean square error of approximation (RMSEA). Whereas a nonsignificant chi square is indicative of good fit, this statistical test is very sensitive to sample size and lacks standardization, making it difficult to interpret (Kline, 2005; Little, Bovaird, & Card, 2007). Thus, we also examined a normed chi square, or the ratio of chi square to degrees of freedom (χ²/df), which reduces sensitivity to sample size. Values of χ²/df below 3.0 meet the criteria for a good model fit (Kline, 2005). CFI values ≥.95 and RMSEA values ≤.05 suggest a very close model-to-data fit, whereas CFI values ≥.90 and RMSEA values ≤.08 are indicative of an adequate fit to the data. Along with the aforementioned fit indices, chi-square tests of difference were conducted to determine model retention when comparing structural models for the full sample, and when conducting multiple group analyses by gender and generational status for both measurement and structural models (Kline, 2005). Based on the use of the MLR estimation method, the Satorra-Bentler chi-square tests of difference (SBSΔχ²; Satorra & Bentler, 2001) were calculated using an equation that included the chi-square values, scaling correction factors, and degrees of freedom for each nested (i.e., more restrictive) and comparison (i.e., less restrictive) model.

Prior to its placement in a structural model, we tested the invariance of the measurement model of heritage-culture retention with its indicators of Latina/o values, ethnic identity, and collective self-esteem by gender and generation status. This was accomplished by conducting a series of multiple group analyses. Each multiple group analyses compared only two groups and included multiple steps. Therefore, one set of multiple group analyses were run for gender (e.g., women vs. men), whereas three sets of multiple group analyses were run for generation status (i.e., first generation vs. second generation; first generation vs. third generation and beyond; second generation vs. third generation and beyond). For each set of multiple group analyses, we first fit the measurement model of heritage-culture retention across the two identified groups (across gender or generation status groups) at the same time without constraining any factor loadings (i.e., unconstrained measurement model). We then fit the retained model across the two groups, constraining all the factor loadings within the model to be equal across groups (i.e., fully constrained measurement model). The SBSΔχ² was then used to compare the unconstrained and fully constrained models. A nonsignificant SBSΔχ² would suggest the measurement of heritage-culture retention did not vary (that is, was invariant) across gender and/or generation status groups. It is important to note that it was not possible to test the adequacy of the measurement model of heritage-culture retention with the full sample, because with only three identifiers the measurement model was fully saturated, that is, it had no degrees of freedom.

Next, with the full sample, we tested and compared the hypothesized structural model and an alternative structural model, both of which depicted relations among heritage-
culture retention, personal self-esteem, life satisfaction, and academic grades. Specifically, the hypothesized model depicted paths suggesting that the relation of heritage-culture retention to life satisfaction was partially mediated by personal self-esteem, and then life satisfaction directly predicted Mexican American college students’ academic grades. The alternative model depicted paths suggesting that personal self-esteem fully mediated the relation of heritage-culture retention to life satisfaction, which then, in turn, directly predicted these participants’ academic grades (see Figure 1). The hypothesized and alternative models were compared using the SBS\(\Delta \chi^2\) to determine which should be retained for further analyses.

After determining which model to retain, we conducted a series of multiple group analyses to determine if relations within the retained model were moderated by gender and/or generation status. We first fit the retained structural model across the two identified groups (across gender or generation status groups) at the same time without constraining any structural parameters and constraining only the factor loadings within the latent variable of heritage-culture retention based on the adequacy of its fit (i.e., unconstrained structural model). We then fit the retained structural model across the two groups, constraining all the structural and measurement paths within the model to be equal across groups (i.e., fully constrained structural model). The SBS\(\Delta \chi^2\) was then used to compare the unconstrained and fully constrained structural models. A significant SBS\(\Delta \chi^2\) would suggest that gender and/or generation status moderates the relations within the retained model. If a significant SBS\(\Delta \chi^2\) was found, follow-up analyses were conducted to determine exactly what paths were moderated by gender and/or generation status.

Finally, we examined the indirect effects among the variables in the retained structural model. Using bootstrapping procedure with 5,000 random samples from the original data set and the MODEL CONSTRAINT command in MPlus 6.11, we determined whether the indirect relations were significant and moderated by gender and/or generation status (depending on whether it was determined that gender and/or generation status moderated relations within the retained structural model). The significance of the indirect effect and the moderation was determined based on Shrout and Bolger’s (2002) procedure in which the indirect standardized effects are significant if the 95% bootstrap confidence intervals do not include zero.

Results

Preliminary Analyses

Prior to testing the present study’s hypotheses, the data were screened for missing values, scrutinized for adherence to statistical assumptions, and examined for any gender and generation status differences across variables using IBM SPSS Statistics 19.0. SPSS’s multiple imputation module indicated that at least one missing value was found in (a) seven out of the eight variables of interest, and (b) 64 of the 446 cases. In total, however, only 67 of the 3,568 possible responses were missing. An examination of the missing value patterns found that 15 of the missing values were for demographic variables—generation status and gender. Specifically, nine of the 24 missing values were for generation status, whereas six were for participants’ gender. The remaining 52 missing values were found in 51 cases across six continuous variables of interest (Latina/o values, collective self-esteem, ethnic identity, personal self-esteem, life satisfaction, and academic grades). When examined, the skewness and kurtosis statistics suggested that the data appeared moderately and negatively skewed (e.g., values \(-5\) to \(-1\)) along with being platykurtic (e.g., values under 3). Additionally, the presence of multivariate non-normality was a possibility. Given the non-normality of the data, along with the aforementioned pattern of missingness, we used MLR to estimate the model fit within the MPlus 6.11 program. MLR uses full information maximum likelihood in the presence of missing values to calculate parameter estimates with standard errors that are robust to non-normal data. Given the pattern of missingness in the data related to demographic variables, the number of participants differed by analyses type. That is, the full sample analyses included 446 participants, whereas analyses to determine gender and generation status moderation included 440 (178 men, 262 women) and 437 (96 first generation, 155 second generation, and 186 third generation or beyond) participants, respectively. Demographic information for the full
example of 446 participants was reported in the Method section.

For descriptive purposes, a series of one-way multivariate ANOVAs was conducted to test for gender and generation status differences across the six continuous variables of interest in the present study. Results indicated that Mexican American women and their male peers did differ across the variables, $\lambda = .97$, $F(6, 382) = 2.15, p < .05, \eta^2 = .03$, where $\eta^2$ represents the multivariate effect size. Follow-up univariate analyses of variance indicated that Mexican American women exhibited greater ethnic identity saliency, $F(1, 387) = 5.99, p < .05, \eta^2 = .02$, and higher collective self-esteem, $F(1, 387) = 4.46, p < .05, \eta^2 = .01$, than their male peers. Additionally, significant differences did emerge when comparing participants across the three generation status groups, $\lambda = .92$, $F(12, 758) = 2.76, p < .001, \eta^2 = .04$. Follow-up univariate analyses of variance indicated significant generation status difference in only the three heritage-culture retention variables: (a) adherence to Latina/o cultural values, $F(2, 384) = 7.92, p < .000, \eta^2 = .04$, where $\eta^2$ represents the univariate effect size; (b) collective self-esteem, $F(2, 384) = 6.29, p < .01, \eta^2 = .03$; and (c) ethnic identity, $F(2, 384) = 9.50, p < .000, \eta^2 = .05$. Bonferroni post hoc analyses suggested that first-generation and second-generation Mexican American college students did not differ from each other on any of the heritage-culture retention variables. However, whereas those who identified as first generation also did not differ from those who identified as third generation in either their adherence to Latina/o cultural values or their endorsement of collective self-esteem, first-generation participants endorsed higher levels of ethnic identity than their third-generation peers. Furthermore, second-generation participants endorsed higher adherence to Latina/o cultural values, collective self-esteem, and ethnic identity compared with their third-generation peers.

Table 1 provides the means and standard deviations for the measured variables in the present study for the full sample as well as by gender and generation status. Table 2 provides the correlations among the variables of interest for the total sample. Pearson correlations by gender and generation status can be obtained from the first author.

### Primary Analyses

**Testing the Invariance of Heritage-Culture Retention Across Gender and Generation Status Groups.** A series of multiple group analyses were conducted to test gender and/or generation status invariance in the measurement model of heritage-culture retention. In these analyses, we compared an unconstrained measurement model in which the factor loadings for Latina/o values, ethnic identity, and collective self-esteem were allowed to covary to a constrained measurement model (i.e., all factor loadings were held constraint) across gender and then generation status pairs (see Table 3 for measurement model

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**Table 1**  
Means and Standard Deviations of Measured Variables for Total Sample and by Gender and Immigrant Generation  

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total sample</th>
<th>Men</th>
<th>Women</th>
<th>First generation</th>
<th>Second generation</th>
<th>Third generation</th>
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<td>$M$</td>
<td>$SD$</td>
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<td>$SD$</td>
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<td>4.83</td>
<td>.83</td>
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<td>.51</td>
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<td>.52</td>
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<td>.57</td>
<td>2.94</td>
<td>.59</td>
<td>3.03</td>
<td>.56</td>
</tr>
</tbody>
</table>

*Note.* Total sample, $N = 446$; men, $n = 178$; women, $n = 262$; 1st generation, $n = 96$; 2nd generation, $n = 155$; 3rd generation, $n = 186.$
fit indices). No significant gender (SBS\(\chi^2\)[2] = 3.62, \(p > .05\)) or generation status (first versus second generation, SBS\(\chi^2\)[2] = 5.50, \(p > .05\); first versus third generation, SBS\(\chi^2\)[2] = 5.69, \(p > .05\); second versus third generation, SBS\(\chi^2\)[2] = 5.93, \(p > .05\)) differences emerged. These results point to the measurement invariance of the heritage culture latent variable across gender and generation-status groups.

**Structural model of Mexican American college students’ life satisfaction and academic grades.** Using MLR, we fit the hypothesized model of life satisfaction and academic grades with the full sample of 446 Mexican American college students. Collectively, the chi-square test of significance and the other fit indices indicated that the hypothesized model was a good fit to the data (\(\chi^2[8] = 10.12, p = .2571; \chi^2/df = 1.27; CFI = 1.00; RMSEA = .02\)). We then tested the alternative model finding a good fit to the data (\(\chi^2[9] = 20.97, p = .0128; \chi^2/df = 2.33, CFI = .98; RMSEA = .06\)). Using the alternative chi-square test, we found a significant difference between the hypothesized and alternative model (\(\chi^2[1] = 10.33, p < .01\)). Along with this significant difference and a comparison of the fit indices, it appeared that the hypothesized model was a better fit to the data than the alternative model for this sample of Mexican American college students. Thus, the hypothesized model of Mexican American college students’ life satisfaction and academic grades was retained in the present study (see Table 4 for fit indices). Within the hypothesized model, all paths were significant, except for the path from life satisfaction

### Table 2

**Correlation Among Variables of Interest for the Total Sample**

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Latina/o values</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Ethnic identity</td>
<td>.56**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Collective self-esteem</td>
<td>.52**</td>
<td>.70**</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Personal self-esteem</td>
<td>.11*</td>
<td>.28**</td>
<td>.27**</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Life satisfaction</td>
<td>.20**</td>
<td>.25**</td>
<td>.25**</td>
<td>.50**</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>6. Academic grades</td>
<td>—</td>
<td>—</td>
<td>.93</td>
<td>—</td>
<td></td>
<td>.06</td>
</tr>
</tbody>
</table>

\(p < .05. \; **p < .001.\)

### Table 3

**Summary of Heritage-Culture Retention Measurement Model Fit Statistics by Gender and Generation Status**

<table>
<thead>
<tr>
<th>Measurement model</th>
<th>(\chi^2)</th>
<th>df</th>
<th>(p)</th>
<th>(\chi^2/df)</th>
<th>CFI</th>
<th>RMSEA</th>
<th>90% CI for RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paths unconstrained(^a)</td>
<td>2.90</td>
<td>2</td>
<td>.23</td>
<td>1.45</td>
<td>.99</td>
<td>.05</td>
<td>.000, .149</td>
</tr>
<tr>
<td>Paths fully constrained(^a)</td>
<td>6.54</td>
<td>4</td>
<td>.16</td>
<td>1.64</td>
<td>.99</td>
<td>.05</td>
<td>.035, .125</td>
</tr>
<tr>
<td>Generation status: First vs. Second</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paths unconstrained(^b)</td>
<td>2.99</td>
<td>2</td>
<td>.22</td>
<td>1.50</td>
<td>.99</td>
<td>.06</td>
<td>.000, .119</td>
</tr>
<tr>
<td>Paths fully constrained(^b)</td>
<td>8.17</td>
<td>4</td>
<td>.09</td>
<td>2.04</td>
<td>.98</td>
<td>.09</td>
<td>.000, .181</td>
</tr>
<tr>
<td>Generation status: First vs. Third</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paths unconstrained(^b)</td>
<td>5.55</td>
<td>2</td>
<td>.06</td>
<td>2.77</td>
<td>.96</td>
<td>.07</td>
<td>.000, .118</td>
</tr>
<tr>
<td>Paths fully constrained(^b)</td>
<td>11.25</td>
<td>4</td>
<td>.02</td>
<td>2.81</td>
<td>.99</td>
<td>.11</td>
<td>.037, .194</td>
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<tr>
<td>Generation status: Second vs. Third</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paths unconstrained(^b)</td>
<td>1.48</td>
<td>2</td>
<td>.48</td>
<td>.74</td>
<td>1.00</td>
<td>.00</td>
<td>.000, .139</td>
</tr>
<tr>
<td>Paths fully constrained(^b)</td>
<td>2.40</td>
<td>4</td>
<td>.66</td>
<td>.60</td>
<td>1.00</td>
<td>.00</td>
<td>.000, .091</td>
</tr>
</tbody>
</table>

\(^a\) Multiple groups analysis for gender (men = 178; women = 262). \(^b\) Multiple group analysis for generation status (1st generation = 96; 2nd generation = 155; 3rd generation and beyond = 186).

Note. \(\chi^2 = \chi^2\); df = degrees of freedom; \(\chi^2/df\) = normed \(\chi^2\); CFI = comparative fit index; RMSEA = root mean square error of approximation; CI = confidence interval.
to academic grades, suggesting that life satisfaction did not significantly predict GPA. Overall, only 0.3% of the variance in academic grades was explained by the relations in the model; however, 27.4% of the variability in Mexican American college students’ life satisfaction was explained by the relations within the hypothesized model (see Figure 1 for path coefficients for the full sample).

Testing gender and generation status as a moderator. We conducted multiple group analyses to determine if gender and/or generation status moderated the relations in the hypothesized model of Mexican American college students’ life satisfaction and academic grades. We first ran the analyses by comparing both genders on the fully constrained structural model, finding a close model-to-data fit within the hypothesized model. The next step was to find which specific paths within the model were moderated by gender. To do so, we ran a series of four models, in which we constrained one structural path at a time and then compared each model to the unconstrained structural model using the alternative chi-square test of difference. If significant differences between a model with one path constrained and the unconstrained model emerged, it was determined that gender moderated that path. Only one significant difference emerged, which was the path from personal self-esteem to life satisfaction. We then ran a partially constrained model in which all the paths were constrained, except for the path from personal self-esteem to life satisfaction, and found that it was a good fit to the data ($\chi^2 = 36.37, p = .0378$; $\chi^2/df = 1.58$; $CFI = .98$; $RMSEA = .05$).

Finally, using the alternative chi-square test of difference, the partially constrained structural model was found to be significantly different from the fully constrained structural model ($\chi^2 = 7.77, p < .01$), but not significantly different from the unconstrained model ($\chi^2 = 3.74, p > .05$). These findings confirmed that personal self-esteem significantly and positively predicted life satisfaction for both Mexican American college men and women; however, it was stronger relation for the women. Overall, the relations within the model

<table>
<thead>
<tr>
<th>Structural model</th>
<th>$\chi^2$</th>
<th>$df$</th>
<th>$p$</th>
<th>$\chi^2/df$</th>
<th>CFI</th>
<th>RMSEA</th>
<th>90% CI for RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full sample</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypothesized model</td>
<td>10.12</td>
<td>8</td>
<td>.26</td>
<td>1.27</td>
<td>1.00</td>
<td>.02</td>
<td>.000, .064</td>
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<tr>
<td>Alternative model</td>
<td>20.97</td>
<td>9</td>
<td>.01</td>
<td>2.33</td>
<td>.98</td>
<td>.06</td>
<td>.024, .085</td>
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<tr>
<td>Gender</td>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>Structural paths unconstraineda</td>
<td>32.82</td>
<td>20</td>
<td>.97</td>
<td>1.64</td>
<td>.98</td>
<td>.05</td>
<td>.014, .086</td>
</tr>
<tr>
<td>Structural paths fully constraineda</td>
<td>44.16</td>
<td>24</td>
<td>.04</td>
<td>1.84</td>
<td>.97</td>
<td>.06</td>
<td>.032, .090</td>
</tr>
<tr>
<td>Structural paths partially constrained</td>
<td>36.37</td>
<td>23</td>
<td>.04</td>
<td>1.58</td>
<td>.98</td>
<td>.05</td>
<td>.012, .082</td>
</tr>
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<td>Generation status: First vs. Second</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Structural paths unconstraineda</td>
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<td>20</td>
<td>.42</td>
<td>1.03</td>
<td>1.00</td>
<td>.02</td>
<td>.000, .079</td>
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<tr>
<td>Structural paths fully constraineda</td>
<td>28.13</td>
<td>24</td>
<td>.25</td>
<td>1.17</td>
<td>.99</td>
<td>.03</td>
<td>.000, .085</td>
</tr>
<tr>
<td>Paths fully constrainedb</td>
<td>24.18</td>
<td>20</td>
<td>.23</td>
<td>1.21</td>
<td>.99</td>
<td>.04</td>
<td>.000, .086</td>
</tr>
<tr>
<td>Generation status: Second vs. Third</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Structural paths unconstraineda</td>
<td>12.41</td>
<td>20</td>
<td>.90</td>
<td>.62</td>
<td>1.00</td>
<td>.00</td>
<td>.000, .029</td>
</tr>
<tr>
<td>Structural paths fully constrainedb</td>
<td>14.59</td>
<td>24</td>
<td>.93</td>
<td>.61</td>
<td>1.00</td>
<td>.00</td>
<td>.000, .018</td>
</tr>
</tbody>
</table>

Note. $\chi^2 = \chi^2; df = \text{degrees of freedom}; \chi^2/df = \text{normed } \chi^2; CFI = \text{comparative fit index}; RMSEA = \text{root mean square error of approximation}; CI = \text{confidence intervals}.

a Multiple groups analysis for gender (men = 178; women = 262). b Multiple group analysis for immigrant generation (1st generation = 96; 2nd generation = 155; 3rd generation and beyond = 186).
only explained .2% and .3% of the variance in Mexican American college men’s and women’s academic grades, respectively; however, 17.2% and 35.0% of the variability in Mexican American college men’s and women’s life satisfaction, respectively, was explained. Table 4 provides the fit indices, and Figure 1 illustrates the path coefficients by gender.

We then tested whether generation status moderates the relations within the hypothesized model using the same procedures. That is, we compared unconstrained and fully constrained models for pairs of generation statuses (i.e., first vs. second generation, first vs. third generation, and second vs. third generation). First, we tested whether the relations in the hypothesized differed for Mexican American college students who identified as first generation (n = 96) compared with those who identified as second generation (n = 155). Both the unconstrained (χ²[20] = 20.57, p = .4230; χ²/df = 1.03; CFI = 1.00; RMSEA = .02) and fully constrained (χ²[24] = 28.13, p = .2548; χ²/df = 1.17; CFI = .99; RMSEA = .03) structural models fit the data adequately. A chi-square test of difference showed the models did not significantly differ (χ²[4] = 7.06, p > .05), suggesting no detectable path differences between first-generation and second-generation Mexican American college students. Next, we compared the unconstrained (χ²[20] = 24.18, p = .2347; χ²/df = 1.21; CFI = .99; RMSEA = .04) and fully constrained (χ²[24] = 27.61, p = .2768; χ²/df = 1.15; CFI = .99; RMSEA = .03) models, finding no detectable path differences (χ²[4] = 3.56, p > .05) between first-generation (n = 96) and third-generation (n = 186) Mexican American college students. Finally, we found no detectable path differences (χ²[4] = 2.20, p > .05) when comparing the unconstrained (χ²[20] = 12.41, p = .9012; χ²/df = .62; CFI = 1.00; RMSEA = .00) and fully constrained (χ²[24] = 14.59, p = .9321; χ²/df = .61; CFI = 1.00; RMSEA = .00) models across Mexican American college students who identified as second generation (n = 155) and those who identified as third generation (n = 186). Overall, these multiple group analyses suggested that generation status did not moderate the relations within the hypothesized model of Mexican American college students’ life satisfaction and academic grades (see Table 4 for fit indices).

Testing indirect effect and gender moderation. The hypothesized model of Mexican American college students’ life satisfaction and academic grades includes three potential indirect effects among the variables—namely, the indirect effects from heritage-culture retention to life satisfaction and academic grades, along with the indirect effect from personal self-esteem to academic grades. Using bootstrapping procedures and the MODEL CONSTRAINT command in MPlus 6.11, we investigated whether these indirect relations were significant and moderated by gender. The significance of the indirect effects and the moderation was determined based on Shrout and Bolger’s (2002) procedure in which the indirect standardized effects are significant if the 95% bootstrap confidence intervals do not include zero. Results indicated that the indirect effects of heritage-culture retention and personal self-esteem to academic grades were not significant and did not differ by gender. This was not surprising, given the nonsignificant path from life satisfaction to academic grades and the lack of moderation by gender in this relation. However, results also indicated that the indirect effect of heritage-culture retention on life satisfaction was significant for both Mexican American college men (z = 3.33, p < .001; point estimate = .55, 95% CI [.281, .936]; standard error = .164) and their women peers (z = 4.42, p < .000; point estimate = .96, 95% CI [.577, 1.445]; standard error = .216). Furthermore, the indirect relation of heritage-culture retention to life satisfaction via personal self-esteem was significantly moderated by gender (z = −2.23, p < .05; point estimate = −.41, 95% CI [−.851, −.090]; standard error = .184). Overall, the model results indicated that heritage-culture retention had both significant and positive direct and indirect effects on life satisfaction for Mexican American college men and women. However, whereas the direct standardized effect did not differ by gender (.18 for men; .15 for women), the indirect standardized effect did (.10 for men; .14 for women). Yet the total standardized effect of heritage-culture retention on life satisfaction (.28 for men and .29 for women) is not sig-
significantly different by gender. In general, these findings suggested that personal self-esteem partially mediated the relation between heritage-culture retention and life satisfaction for this study’s sample.

Discussion

This study has the potential to inform interventions designed to bolster Mexican American college students’ life satisfaction and, in turn, to improve their academic outcomes via attention to heritage-culture retention. Specifically, heritage-culture retention may protect against risky behaviors that may impede their academic progress, such as alcohol and drug use, driving while intoxicated, and unhealthy sexual practices (Schwartz et al., 2011), via the promotion of personal self-esteem and life satisfaction. This is particularly important in light of their low college graduation rates when compared with those from other U.S. ethnic groups, including other Latinas/os (National Center for Education Statistics, 2011). Whereas studies have aggregated data across Latina/o groups when studying cultural values, cultural identity, and personal self-esteem (e.g., Kim et al., 2009), and have compared Latinas/os’ subjective well-being to that of Whites (e.g., Brown, Wallace, & Williams, 2001), the present study considers the significance of within-group relations among heritage-culture retention, personal self-esteem, life satisfaction, and academic grades by focusing solely on Mexican Americans. Additionally, the examination of gender and generation status within the present study represents another layer of within-group differences that needs to be explored and ultimately highlighted to better understand and promote the life satisfaction and academic grades of Mexican American college students.

Thus, the present study tested a model delineating relations among heritage-culture retention (i.e., adherence to Latina/o cultural values, ethnic identity, and collective self-esteem), personal self-esteem, life satisfaction, and academic grades (see Figure 1), and to determine if these relations were moderated by gender and generation status. The findings suggested that the model was a good fit to the data for the full sample, for both Mexican American college women and men, and across those who identified as first, second, or third generation. Analyses revealed that the relations within the model did not differ by generation status; however, one path in the model—personal self-esteem to life satisfaction—did differ by gender. However, contrary to our hypothesis, the paths from life satisfaction to academic grades, along with the indirect relations from heritage-culture retention and personal esteem to academic grades, were not significant. Thus, the relations within this model did not explain a significant amount of variance in academic grades (e.g., .3% for the full sample, .2% for men, and .3% for women). However, the model did explain 28% of the variance in life satisfaction for the full sample, 17% for men, and 35% for women. Thus, this model appears to be more useful in explaining variation in this sample of Mexican American college students’ life satisfaction than in their academic grades.

Although academic grades was not significantly explained by the relations with heritage-culture retention, personal self-esteem, and life satisfaction with this sample, it seems premature to conclude that no relations exist among these variables and academic grades for the larger community of Mexican American college students. In the present study, self-reported academic grades were the only academic outcome examined. Furthermore, measurement of this study’s variables happened concurrently and not over time. Instead, heritage-culture retention, personal self-esteem, and life satisfaction may actually predict future academic grades (e.g., Suldo et al., 2011). Thus, future studies should test an expanded construct of positive academic outcomes (e.g., GPA, academic honors, and degree completion), use institutional data to identify such academic outcomes rather than self-reported measures of such outcomes, and utilize longitudinal designs to determine the temporal relations among heritage-culture retention, personal self-esteem, life satisfaction, and academic outcomes.

Despite the lack of relation among life satisfaction and academic grades, the present study’s findings included noteworthy relations among the indicators of heritage-culture retention—namely, adherence to Latina/o cultural values, ethnic identity, and collective self-esteem. As hypothesized, correlation coefficients demonstrated strong associations among these aforementioned variables (Cohen, 1988). These findings coincide with previous research that
suggests Mexican Americans who adhered to cultural practices and values also demonstrated higher levels of ethnic pride (Berkel et al., 2010) and are more likely to exhibit higher levels of collective self-esteem (Verkuyten & Lay, 1998). Furthermore, for the full sample, the latent heritage-culture retention variable explained 76.5%, 40.7%, and 65.4% of the variance in collective self-esteem, adherence to Latina/o cultural values, and ethnic identity, respectively. This finding supports the work of cultural studies scholars who postulated that heritage-culture retention is comprised of culturally based practices, beliefs, and/or ethnic identity (e.g., Kim & Abreu, 2001; Schwartz et al., 2010), and shows that the framework of this cultural construct is similar across gender and generation statuses.

Although the structure of heritage-culture retention was not moderated by gender or generation level, preliminary analyses found gender differences in ethnic identity and collective self-esteem, along with generational differences among the three indicators of heritage-culture retention. Indeed, Mexican American college women exhibited greater ethnic identity saliency and higher collective self-esteem than their male peers. This finding may be related to Latinas’ powerful role within the family as cultural socializers and brokers (Santiago-Rivera, Arrendondo, & Gallardo-Cooper, 2002). Thus, to be successful in these important roles, Mexican American women may need to have greater ethnic pride and affiliation than Mexican American men. Whereas first- and second-generation Mexican American college students in our sample did not differ from one another across these heritage-culture retention constructs, both did differ from those who identified as third generation by endorsing greater saliency of ethnic identity. Additionally, second-generation Mexican American college students endorsed greater adherence to Latina/o cultural values and greater levels of collective self-esteem than their third-generation peers. Although first and second generation individuals are generally exposed to the heritage culture in their homes, third and later generation individuals are raised by U.S.-born parents who may be less connected to Mexican cultural influences. There is evidence that parents’ heritage-culture retention influences their children’s outcomes (e.g., Santisteban, Coatsworth, Briones, Kurtines, & Szapocznik, 2012).

Within the model of Mexican American college students’ life satisfaction and academic grades, the path from heritage-culture retention to personal esteem was significant, positive, and moderate in strength (see Figure 1). This path suggests that greater retention of heritage culture predicts higher levels of personal self-esteem. Although there is a paucity of research explaining the role of heritage-culture retention as an overarching construct (e.g., Kim & Abreu, 2001; Schwartz et al., 2010) in mental health outcomes (e.g., personal self-esteem and life satisfaction) with Mexican American college students, previous research has focused on positive predictive power of its components, namely, ethnic identity (e.g., Phinney et al., 1997; Umaña-Taylor, 2004), cultural values (e.g., Berkel et al., 2010; Gonzales et al., 2008; Kim et al., 2009), and collective self-esteem (e.g., Bettencourt & Dorr, 1997; Crocker et al., 1994; Zhang, 2005) in relation to personal esteem and life satisfaction, albeit with other ethnic groups (e.g., White, Black, Chinese, and Latinos as a whole) and other age groups of Mexican Americans (e.g., adolescents). The present study’s findings support and extend this previous research by demonstrating that heritage-culture retention as a whole represents a robust factor that may be positively related to Mexican American college students’ personal self-esteem and life satisfaction.

As hypothesized, personal self-esteem directly predicted life satisfaction for this sample of Mexican American college students and is consistent with previous research (Ryff & Singer, 2008; Waterman, 2008). This strong relation suggests that as levels of personal self-esteem increase, so do levels of life satisfaction as measured by these students’ satisfaction with their lives. Previous research has demonstrated a similar relation between personal self-esteem and life satisfaction among college students (Lucas et al., 1996), retired persons (Lyubomirsky et al., 2006), and Spanish adolescents (Rey et al., 2011). Furthermore, within the present study, the relation from personal esteem to life satisfaction was stronger for Mexican American women than men. It is possible that Mexican American women may need greater personal self-esteem to ward off societal and cultural pressures of traditional femininity, or marian-
ismo (Castillo et al., 2010), that may negatively impact their life satisfaction than their Mexican American male peers that are not faced with the same pressures based on gender privilege.

Given previous research demonstrating positive relations between indicators of heritage-culture retention and personal self-esteem (e.g., Berkel et al., 2010; Bettencourt & Dorr, 1997; Crocker et al., 1994; Gonzales et al., 2008; Kim et al., 2009; Umaña-Taylor, 2004), as well as positive relations between personal self-esteem and subjective well-being (e.g., Lucas et al., 1996; Lyubomirsky et al., 2006; Rey et al., 2011), we hypothesized and found that personal self-esteem significantly mediated the relation between heritage-culture retention and life satisfaction. That is, for this sample of Mexican American college students, embracing traditional Latina/o values (i.e., adherence to Latina/o cultural values), identifying strongly as Mexican American (i.e., ethnic identity), and having a positive sense of one’s self as a member of the Mexican American cultural group (i.e., collective self-esteem) predicted increased levels of personal self-esteem, which, in turn, predicted increased levels of life satisfaction. It is important to note that this mediated effect was stronger for Mexican American college women than men. At the same time, these same indicators of heritage-culture retention were directly and positively related to life satisfaction, suggesting that personal esteem only partially mediated this relation. Taken together, our findings suggest that heritage-culture retention and personal self-esteem each have strong and positive relations with life satisfaction.

Limitations and Future Directions

Although the present study makes significant contributions to understanding the positive influence of heritage-culture retention (i.e., adherence to Latina/o values, ethnic identity, and collective self-esteem) and personal self-esteem on Mexican American college students’ life satisfaction, some limitations should be considered in future research. Thus, caution should be used when generalizing the present study’s findings. Beyond the limitations related to the measurement of academic grades previously discussed, it is important to consider the cultural context in which the study occurred. All participants were enrolled at an HSI near the U.S.–México border, where they had the opportunity to interact with the Mexican culture on a daily basis. Although the majority of Mexican Americans live in the Southwest, they are represented across the United States (U.S. Census Bureau, 2008). Moreover, there is diversity within Latina/o subgroups, and what is true for this sample of Mexican American college students may not be true for other Latina/o students, particularly those attending predominately White universities. The use of nonrandom sampling methods also introduced self-selection bias into our findings (Heppner, Kivlighan, & Wampold, 2008). Given these threats to external validity, future research should use random samples of Mexican Americans and members from other Latina/o groups who attend a wide range of U.S. universities when testing the role of heritage-culture retention and personal self-esteem on well-being. Furthermore, it is important to extend this research to community samples of Mexican Americans and other Latinas/os (e.g., Puerto Ricans, Cubans, Central Americans).

Second, although we examined gender as a potential moderator in the hypothesized model of Mexican American college students’ life satisfaction and academic grades, the present study did not incorporate gender-specific cultural expectations. Thus, future research on culture and well-being of Mexican Americans should include culturally specific gender role attitudes and behaviors, namely, marianismo for women (Castillo et al., 2010), and machismo and caballerosismo for men (Arciniega et al., 2008). The inclusion of marianismo, machismo, and caballerosismo along with other cultural variables might more fully explain Mexican American college students’ personal self-esteem and life satisfaction.

Third, although our attention to multiple dimensions of Mexican American college students’ heritage-culture retention (i.e., adherence to Latina/o cultural values, ethnic identity, and collective self-esteem) was a clear strength of this study, the measurement of cultural practices was incomplete. That is, cultural practices and behaviors were measured vis-à-vis Mexican American college students’ exploration of their cultural identities (e.g., tendency to engage in cultural practices, such as special foods, music, and customs to understand their cultures of origin) and their expression of cultural pride and values (e.g., beliefs in the importance of main-
taining cultural customs and practices, along with retaining languages of origin such as Spanish or other native languages). However, we did not measure students’ actual cultural practices and behaviors. Thus, future research should measure a more robust factor of heritage-culture retention that includes not only cultural exploration, identification, pride, and values, but also Mexican American college students’ actual day-to-day cultural practices (e.g., language use, spiritual and religious observances, food choices, adherence to cultural scripts of appropriate gendered behavior).

Additionally, we only assessed one aspect of subjective well-being, namely, life satisfaction. Furthermore, we measured an individualistic dimension of life satisfaction. That is, Diener et al.’s (1985) Satisfaction with Life Scale asks questions focused on the individual, such as, “So far I have gotten the important things I want in life.” This item, however, does not capture a collectivistic perspective associated with Mexican American culture. To do so, this item could be reworded to read, “So far my family has gotten the important things we want in life.” The incorporation of collectivistic-based well-being measures along with individual-based measures may help researchers and practitioners understand Mexican American college students’ well-being more holistically. Thus, future research could focus on the development of measures that take into account multiple dimensions, that is, life satisfaction, domain-specific life satisfaction (work, academic), positive affect, and the lack of negative affect (Diener, 2000) of both individual and collective subjective well-being.

Finally, along with improved measurement of heritage-culture retention, subjective well-being, and academic outcomes, the investigation of additional factors that may influence subjective well-being and academic outcomes is warranted, particularly in light of the amount of variance explained by the relations in the model tested. Moreover, numerous factors may influence the educational trajectories of Mexican American college students, including discrimination, bicultural stress, and lack of access to educational opportunities. Thus, future studies should include sociocontextual factors to improve our understanding of Mexican Americans’ subjective well-being and academic outcomes.

**Implications for Practice**

As psychologists, we have a unique opportunity to intervene in the disparities that are apparent in the U.S. educational system, particularly for Mexican Americans who are often considered at-risk college students (Pidcock, Fischer, & Munsch, 2001). Previous research has documented a connection between positive academic outcomes and life satisfaction (Frisch et al., 2005; Ojeda et al., 2011; Suldo et al., 2011). With this in mind, psychologists have a responsibility toward identifying and using methods to promote the life satisfaction of Mexican American college students in hope of increasing their college graduation rates and, ultimately, their earning potential as contributors to the U.S. workforce. Based on the present study’s findings, it would behoove psychologists to support the development and retention of cultural values, ethnic identity, and collective self-esteem to bolster personal self-esteem and life satisfaction. Such support could come in the form of promoting active exploration of heritage-culture factors while providing therapeutic services. Psychologists also may promote community-based programs and events grounded in heritage culture to help Mexican American clients and communities retain their cultural roots. It also seems important to focus on increasing heritage-culture retention, personal self-esteem, and subjective well-being in the lives of Mexican American college students via individual and group interventions within academic settings (e.g., academic major programs, multicultural student centers, summer retention programs, residential life) on campus. Such interventions could include, but not be limited to, (a) invited speakers from Mexican American backgrounds who can address the importance of retaining heritage culture practices, values, and identification in the pursuit of educational and career goals; and (b) workshops, retreats, and campus celebrations focused on connecting with the Mexican American cultural roots via dance, film, music, and food. Such interventions would require that psychologists consult and collaborate with other higher education personnel, including, but not limited to, campus administrators, residence life directors, deans of students, academic advisors,


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