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Authors

Wasserman, Alexander M
Crockett, Lisa J
Temmen, Chelsie D
[et al.](#)

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Bicultural Stress and Internalizing Symptoms among U.S. Latinx Youth: The Moderating Role of Peer and Parent Support

Alexander M. Wasserman¹, Lisa J. Crockett², Chelsie. D. Temmen³, Gustavo Carlo⁴

¹University of Texas Health Science Center at San Antonio

²The University of Nebraska–Lincoln

³Eunice Kennedy Shriver National Institute of Child Health and Human Development

⁴University of California, Irvine

Abstract

Objective: U.S. Latinx youth are at increased risk for internalizing problems, perhaps due to high levels of bicultural stress. Taking a resilience perspective, this study examined peer and parent support as potential protective factors that might buffer the effects of bicultural stress on depression and anxiety symptoms among U.S. Latinx youth.

Methods: Participants were 306 Midwestern U.S. Latinx adolescents ($M_{age}=15.50$, 46.2% girls) and their primary caregivers who completed individual interviews. Measures included two types of cultural stress (acculturative and enculturative stress) and, for each type, distinguished the extent of exposure to stressors from the subjective intensity of stress reported.

Results: Results indicated that acculturative and enculturative stress were positively associated with internalizing symptoms, while social support from peers and parents was negatively associated with symptoms. Evidence regarding a stress-buffering effect of social support was mixed. Whereas higher levels of peer support mitigated the effects of subjective acculturative stress on depression and anxiety symptoms, parental support did not show a buffering effect. Moreover, in some cases, cultural stress appeared to attenuate the beneficial effect of social support.

Conclusions: Although there was some support for the stress-buffering hypothesis, the impact of bicultural stressors depended on the type of stress considered and whether the focus was on exposure to stressors or subjective stress, as well as the source of social support. The findings highlight the complex effects of bicultural stress on U.S. Latinx youth mental health.

Keywords

stress-buffering; bicultural stress; internalizing behavior; Latinx adolescents

Latinx youth currently comprise 25% of U.S. children under age 18 (Lopez et al., 2018). These youth also experience relatively high levels of internalizing problems. Based on data from the Youth Risk Behavior Survey, 34% of Latinx adolescents reported experiencing

depressive symptoms compared to 30% of Caucasian and 29% of African American adolescents (Kann et al., 2018); moreover, U.S. Latinx youth are at higher risk of anxiety disorders compared to their non-Latinx peers (Georgiades et al., 2018). Given the high prevalence and serious costs of internalizing symptoms (e.g., high school drop-out, adult unemployment, teenage pregnancy; Clayborne et al., 2019), understanding the factors contributing to depressive and anxiety symptoms among U.S. Latinx adolescents is critical.

Bicultural stress refers to the challenges and demands on persons navigating two cultural worlds (McCord et al., 2019). More specifically, bicultural stress includes negative experiences associated with confronting a new cultural setting as a result of immigration (acculturative stress; Berry, 2006), as well as enculturative stress, which stems from the pressure to retain one's heritage culture (Rodriguez et al., 2002). Bicultural stressors are thought to contribute to mental health problems (Romero & Roberts, 2003; Torres, 2010) and have been linked to the development of internalizing symptoms in U.S. Latinx youth (Cano et al., 2015; Cervantes et al., 2015; Suarez-Morales & Lopez, 2009; Stein, et al., 2012). Such stressors may be especially influential during adolescence, when ethnic-racial identity is developing (Umaña-Taylor & Fine, 2004) and peers are especially salient (Ellis & Zarbatany; 2017, Somerville, 2013). From a resilience perspective, it is important to move beyond documenting the effects of bicultural stress to identifying resources or processes that may counteract these detrimental effects. In addition to contributing to a sense of well-being directly, social support is theorized to protect individuals from the negative effects of stress (Cohen & Wills, 1985). Regarding mental health, the stress-buffering model posits that social support reduces the detrimental impact of stressful experiences on psychological well-being. Although some studies have provided evidence of a stress-buffering effect of social support on child and adolescent internalizing symptoms, other studies have not, and the findings vary by source of support and other factors (Rueger et al., 2016). In this study, we examined the role of social support in mitigating the effects of bicultural stress on depression and anxiety symptoms among Latinx adolescents living in the U.S. The primary goal was to test the potential buffering role of social support from peers and parents as well as the general effects of bicultural stress and social support on internalizing symptoms. A second goal was to distinguish the impact of exposure to high levels of stressful experiences (number of bicultural stressors) from the impact of subjective stress experienced in response to reported stressors.

Resiliency Theory and the Stress-Buffering Hypothesis

Although studies of stressful events and adverse conditions often focus on the negative outcomes associated with these experiences, stress and coping models (Lazarus & Folkman, 1984) and stress-buffering models (Cohen & Wills, 1995) propose that effective coping strategies and social support can diminish the negative sequelae of adverse experiences. Similarly, resilience models (e.g., Masten, 2014) acknowledge that some individuals exposed to adversity do surprisingly well due to protective factors that support adaptive functioning. However, studies of stress and resilience tend to examine general adverse experiences such as poverty or maltreatment and rarely adopt a cultural perspective in which adverse experiences are due to one's ethnic minority status (for exceptions, see Gaylord-Harden et al., 2018; Murry, 2019). More broadly, scholars have called for conceptual

models that incorporate culturally relevant variables to understand development among Latinx children and youth (e.g., Raffaelli et al., 2005). In this study, we adopted a cultural resilience approach by examining the potential role of social support in mitigating the effects of bicultural stress on internalizing symptoms among U.S. Latinx adolescents.

Bicultural Stress and Internalizing Symptoms

Exposure to bicultural stress is associated with psychological problems among U.S. Latinx youth, including internalizing symptoms (e.g., Hovey & King, 1996; Umana-Taylor, Updegraff, & Gonzales-Backen, 2011). Compared to studies of other adverse culture-related events such as discrimination and family cultural conflict, relatively few studies have examined the role of bicultural stress in Latinx youth's internalizing symptoms. In a systematic review, McCord and colleagues (2019) identified only six studies of bicultural stress; however, all six showed a positive association between bicultural stress and depressive symptoms. Furthermore, the association between bicultural stress and depression persists even when controlling for other kinds of stressors (Stein et al., 2012) and has been found longitudinally as well (Cano et al., 2015). Thus, although research with adolescent Latinx samples in the U.S. is relatively sparse, the association between bicultural stress and depressive symptoms appears to be robust.

In contrast, few, if any, studies have examined associations between bicultural stress and anxiety symptoms among U.S. Latinx adolescents. Bicultural stress may contribute to anxiety among U.S. Latinx adolescents owing to the salience of peers at this age, a heightened sensitivity to peer evaluation, and a desire to fit in (Somerville, 2013). U.S. Latinx youth, especially those in Latinx-minority schools and communities, need to interact competently with both Latinx and non-Latinx peers and may feel anxious about their acceptance by members of their own or other cultural groups as well as pressure to conform to multiple sets of cultural norms. Studies with older youth and adults indicate that higher levels of perceived bicultural stress are related to more anxiety symptoms in college students (Crockett et al., 2007; Jardin et al., 2018; Maldonado et al., 2018; Mayorga et al., 2018) and adult U.S. Mexican immigrants (Hovey & Magaña, 2002).

Types of Bicultural Stress

Bicultural stress incorporates two kinds of stressors: pressure to adopt the values and behaviors of the host society (i.e., "acculturative stress") and pressure to remain true to the norms of one's heritage culture (i.e., "enculturative stress"; Rodriguez et al., 2002; Schwartz et al., 2010). For example, immigrant U.S. Latinx youth may experience acculturative stress when they encounter pressure from White non-Hispanic peers and adults to speak English and learn "American" ways. At the same time, they may experience enculturative stress if their parents and other family members expect them to know Spanish and adhere to Latinx cultural values and practices. Both acculturative and enculturative pressures may be experienced as stressful and demanding, resulting in increased levels of physiological, psychological, and behavioral changes (Zeiders et al., 2014). Furthermore, given the known effects of neighborhood and school ethnic composition on adjustment among U.S. Latinx

youth (e.g., White et al., 2018), levels of bicultural stress might be especially high among Latinx adolescents residing in predominantly White, European American communities.

Dimensions of Bicultural Stress

Stress can be defined in terms of either the level of exposure to particular stressors or the subjective stress an individual experiences as a result of exposure (Holmes & Rahe, 1967; Lazarus & Folkman, 1984). Grant and colleagues (2003) recommended distinguishing between the events or situations themselves (“stressors”) and the individual’s subjective appraisal of those situations. However, measures of bicultural stress (e.g., Mena, Padilla, & Maldonado, 1987; Rodriguez et al., 2002) often merge exposure to stressors and subjective stress. Although both aspects of bicultural stress can be taxing, they are distinct (Romero et al., 2007), and it may be useful to distinguish their effects. Thus, one aim of the present study was to examine the respective effects of stress exposure and subjective appraisal.

The Moderating Role of Social Support

Social support is a key resource believed to reduce the impact of adverse stressors on psychological well-being. Support from others is thought to reduce the perception that stressors are overwhelming and may also help individuals cope with stressors that they feel they cannot manage alone (Cohen & Wills, 1995). In line with this expectation, substantial research underscores the positive association between social support and child and adolescent well-being (Rueger et al., 2016). However, findings regarding *stress-buffering* effects are less consistent and may depend on the source of support. A recent meta-analysis documented buffering effects of both peer and family support on various kinds of stress among children and adolescents (Rueger et al., 2016). Similarly, among Latinx and Mexican youth, there is growing evidence that family support is beneficial for young adult well-being (Guntzviller et al., 2020) and buffers the effect of general stress on adolescent and young adult depression (Raffaelli et al., 2013; Rivera, 2007). In contrast, findings regarding the buffering role of peers among U.S. Latinx youth have been mixed, with some studies of college-age youth showing buffering effects (Crockett et al., 2007; Gonzalez, et al., 2014; Solberg, & Viliarreal, 1997) and others failing to find them (Juang et al., 2016; Rodriguez et al., 2003).

The Present Study

Extending previous theory and research to incorporate a cultural perspective on stress and coping, this study examined the relations of bicultural stress to internalizing symptoms among U.S. Latinx adolescents as well as the potential moderating role of peer and parent support. Consistent with risk and resilience perspectives, we tested the stress-buffering hypothesis by examining whether social support mitigated the detrimental effects of bicultural stress. Furthermore, two types of bicultural stress (acculturative and enculturative) were examined, and the effect of stress exposure was distinguished from the effect of subjective stress. It was hypothesized that both aspects of bicultural stress would be positively associated with internalizing symptoms. Moreover, peer and parent support were expected to serve as buffers against the harmful effects of bicultural stress. The study contributes to the literature on stress and internalizing symptoms among U.S. Latinx

adolescents in at least three synergistic ways. First, it adds to the sparse literature on the association between bicultural stress and internalizing symptoms, especially anxiety symptoms among U.S. Latinx youth. Second, it brings a cultural resilience perspective to the study of stress and stress-buffering effects by examining bicultural stress among U.S. Latinx youth. Third, it examines the unique effects of stress exposure and subjective stress.

Method

Participants and Procedure

Participants were 306 Midwestern Latinx adolescents (M age=15.50, 46.2% female) and their primary caregivers (hereafter “parents”) residing in four communities across Nebraska. Most youth identified as Mexican heritage (79.9%). Over half of the youth (57.3%) lived with both parents (either biological or adoptive), and 67.1% were born in the U.S. Participating parents were mostly mothers (89.1%), and most (90.1%) were born outside the U.S. Most families lived in communities where the population was predominantly non-Hispanic White and of European heritage. The majority of families (59%) reported a median household income of \$30,000 or less annually.

Families were recruited through local public high schools and community settings using parent recruitment letters (in schools) and community flyers. Data were collected at participants’ homes or a convenient community location. Once parental consent and youth assent were obtained, parents and adolescents were interviewed separately by trained interviewers. Families received monetary compensation (\$50) for their participation. The Latino Youth Care Project was approved by the Institutional Review Board of the University of Nebraska, #20100611041FB.

Measures

Bicultural Stress—Participants responded to two subscales from the Multidimensional Acculturative Stress Inventory (MASI; Rodriguez et al., 2002). Acculturative stress was measured with the “Pressure to Acculturate” subscale, which consists of seven items (e.g., “it bothers me when people pressure me to assimilate to the American ways of doing things”). Enculturative stress was measured with the “Pressure against Acculturation” subscale, which consisted of four items (e.g., “I have had conflicts with others because I prefer American customs over Mexican/Latino ones”). Participants were asked to report if each event had occurred to them in the past 12 months and, if so, how stressful the event was. Responses of “does not apply” indicated that the event had not occurred and were coded as 0, as recommended by Rodriguez et al. (2002). The degree of stressfulness could range from *not at all stressful* (1) to *extremely stressful* (5). Typically, items are averaged to create subscale scores, with higher scores indicating more perceived pressure. However, in this study, a different approach was used to distinguish between stress exposure and the subjective appraisal, as described in the Analysis Plan.

Peer Support—Participants completed the 12-item peer attachment subscale of the Inventory of Parent and Peer Attachment (IPPA-R; Gullone & Robinson, 2005). Adolescents indicated how well each statement described their relationships with their friends (e.g., “my

friends accept me as I am”; $\alpha = .76$). Response options ranged from *never* (1) to *always* (5). Factor scores were extracted from confirmatory factor analyses (see supplemental materials for details). Higher scores reflected more perceived peer support.

Parent Support—Participants completed the parental support subscale of the Children’s Report of Parent Behavior Inventory (CRPBI; Barber et al., 2005). Adolescents responded to ten items to indicate how well each statement describes the parent to whom they felt closest (e.g., “is able to make you feel better when you are upset”; $\alpha = .89$). Response options ranged from *not like her/him* (1) to *a lot like her/him* (3). Higher factor scores reflected more perceived parental support.

Depression—Participants responded to the Center for Epidemiological Studies – Depression Scale (CES-D; Radloff, 1977). Adolescents indicated how often they experienced 20 symptoms within the past week (e.g., “I had crying spells”; $\alpha = .86$). Response options ranged from *rarely – less than 1 day* (1) to *most of the time – 5-7 days* (4). Higher factor scores reflected more depressive symptoms. This measure has been validated in Latinx samples (Crockett et al., 2005; Roberts, 1980). The item “*I felt that everything I did was an effort*” was removed because it had a low standardized factor loading (.13), which resulted in model misfit (see supplemental materials for details).

Anxiety—Participants responded to a shortened version of the Depression Anxiety Stress Scales (DASS; Crawford & Henry, 2003). Adolescents indicated how seven statements applied to them over the past week (e.g., “I felt I was close to panic”; $\alpha = .83$). Response options ranged from *did not apply to me at all* (0) to *applied to me most of the time* (3). Higher factor scores reflected more anxiety.

Analysis Plan

The analytic plan for the present study included the following steps: 1) first, descriptive analyses (means, standard deviations, bivariate correlations) were conducted to report the relationships among the study variables using observed scores; 2) measurement models were then conducted for the study constructs separately to empirically test for unidimensionality and to extract factor scores for use in the main analyses; and 3) factor scores were used in multivariate regression analyses to test the study hypotheses.

Analyses were conducted in Mplus 8.1 (Muthén & Muthén, 2017) with the full-information maximum likelihood (i.e., MLR) estimator to produce robust standard errors and less biased model results. Details regarding the measurement models are provided in the supplemental material. Notably, for both acculturative and enculturative stress, a two-part measurement model was estimated for semi-ordered data (Huggins-Manley et al., 2018). This was done to distinguish between exposure to bicultural stressors and the subjective appraisal of the stressor (Grant, 2003). Specifically, one factor reflects whether or not the adolescent experienced the stressor (no/yes), whereas the other factor reflects the subjective appraisal of the stressor rated on a scale from 1 = *not at all stressful* to 5 = *extremely stressful* and coded as missing if the adolescent reported not experiencing the stressor. Thus, there were two factors each for acculturative and enculturative stress corresponding to the number of

stressors and level of subjective stress. This factor structure for bicultural stress was found to be largely invariant between youth born in the U.S. compared to youth born outside the U.S. (see supplemental material for details).

Multivariate regression analyses tested the hypotheses regarding the effects of bicultural stress and social support on internalizing symptoms. Separate models were estimated for acculturative and enculturative stress¹. Gender was included as a covariate in each model because girls tend to report higher levels of internalizing behaviors during adolescence compared to boys (Telzer & Fuligni, 2013). Model fit was examined using the comparative fit index (CFI) and the root mean square error of approximation (RMSEA). A CFI of > .90 or .95 and a RMSEA of <.10 or .05 were considered to be indicators of acceptable and excellent model fit, respectively (Barrett, 2007; Hu & Bentler, 1999).

Moderation was tested by including an interaction term between each dimension of acculturative/enculturative stress (i.e., stress exposure and subjective stress, respectively) and each source of social support (i.e., peer and parent support, respectively) for a total of four interactions per model. Significant interactions were probed using the simple slopes procedure outlined by Aiken and West (1991). Specifically, the relationships between stress and internalizing symptoms were tested at three different values of peer/parent support: at the mean, 1SD above the mean, and 1SD below the mean (i.e., average, high, and low levels, respectively). If the effect of stress became non-significant at high levels of social support, the results supported the stress-buffering hypothesis.

Results

Descriptive Analyses

Descriptive statistics for all study variables are provided in Table 1. Bolded values indicate a significant bivariate correlation. As can be seen in the table, acculturative and enculturative stress were positively correlated with each other and with depression and anxiety symptoms. Peer and parent support were positively related to each other and negatively related to depression and anxiety symptoms. Depression and anxiety symptoms were positively intercorrelated. Regarding gender, girls reported higher levels acculturative and enculturative stress, peer support, and depression and anxiety symptoms than boys did.

Models Linking Bicultural Stress and Social Support to Internalizing Symptoms

Two multivariate regression models were estimated to examine the effects bicultural stress on depression and anxiety symptoms: one that included both components of acculturative stress (number of stressors, subjective stress) and another that included both components of enculturative stress (number of stressors, subjective stress). As illustrated in Figure 1, each model included peer and parent support as well as their respective interactions with the

¹Acculturative and enculturative stress were not included in the same model due to multicollinearity, likely the result of the strong correlation between the number of acculturative and enculturative stressors ($r = .84$) and between subjective acculturative and enculturative stress ($r = .70$). When including all four bicultural stress measures in the same model, the variance inflation factor (VIF) for the number of acculturative stressors, number of enculturative stressors, subjective acculturative stress, and subjective enculturative stress predictors was 25.5, 14.4, 12.8, and 5.3, respectively. When acculturative and enculturative stress were examined in separate models, all VIF were 1.5.

stress variables (four interaction terms total in each model) to determine if social support buffered against the negative effects of bicultural stress. Gender was included as a control.

Model Examining the Effect of Acculturative Stress—Results for the model that examined the effects of acculturative stress are summarized in the upper panel of Table 1. The model had acceptable overall fit $\chi^2 = 35.59$, $df = 20$, $p = .03$; CFI = .93; RMSEA = .05. Subjective stress (but not the number of stressors) was positively associated with depression and anxiety symptoms. Peer and parent support were both negatively associated with depression symptoms but not with anxiety symptoms. There were three significant interactions: between subjective stress and peer support on (1) depression and (2) anxiety, and (3) between the number of stressors and peer support on depression symptoms. For the interactions between subjective stress and peer support (illustrated in Figures 2a and 2b) simple slope analyses indicated that subjective stress from acculturation was positively related to depression and anxiety symptoms at average and low levels of peer support, but not at high levels of peer support. Thus, when peer support was high, subjective stress was no longer associated with either depression or anxiety symptoms, consistent with the stress-buffering hypothesis. For the interaction between the number of stressors and peer support in relation to depression symptoms (see Figure 2c), the number of stressors was positively related to depression symptoms at high levels of peer support and unrelated to depression symptoms at low and average levels of peer support, contrary to the stress-buffering hypothesis. The model explained 24% and 14% of the variance for depression and anxiety symptoms, respectively.

Model Examining the Effect of Enculturative Stress—Results for the model that examined the effects of enculturative stress are summarized in the lower panel of Table 1. The model had excellent overall fit $\chi^2 = 30.14$, $df = 20$, $p = .07$; CFI = .95; RMSEA = .04. In this model, both subjective stress and the number of stressors were positively associated with depression and anxiety symptoms. Peer and parent support were both inversely related to depression symptoms but only parent support was inversely related to anxiety symptoms. There was a significant interaction between the number of stressors and peer support. As shown in Figure 3a, the number of stressors was positively associated with depression symptoms at high levels of peer support but unrelated to the outcome at low and average levels of peer support. There was a similar interaction between subjective stress and parent support in relation to anxiety symptoms (depicted in Figure 3b). As can be seen in the figure, subjective stress was positively related to depression symptoms at all levels of family support, but the relationship was strongest at high levels of parent support and weakest at low levels of parent support. Neither interaction supported the stress-buffering hypothesis. The model explained 27% and 17% of the variance for depression and anxiety symptoms, respectively.

Discussion

The goal of this study was to test the stress-buffering hypothesis from a cultural perspective by focusing on the role of social support in mitigating the effects of bicultural stress on internalizing symptoms among U.S. Latinx youth. Extending prior research, the analysis examined the moderating role of peer and parent support on the relations of two types

of bicultural stress—acculturative and enculturative—to depression and anxiety symptoms. Furthermore, we distinguished exposure to bicultural stressors (number of stressors) from the degree of stress experienced from those events (level of subjective stress). Importantly, the study was conducted in communities with populations comprised primarily of non-Hispanic Whites of European heritage, a setting in which levels of bicultural stress might be high and have implications for adolescent adjustment.

In line with previous research (Cano et al., 2015; Crockett et al., 2007; Suarez-Morales & Lopez, 2009; Stein, et al., 2012), we found that bicultural stress was positively related to depression and anxiety symptoms, though our findings were more consistent for enculturative stress than acculturative stress. Similarly, we found that both peer and parent support were related to fewer depression symptoms, consistent with prior research on youth in the general population (Rueger et al., 2016), but only parent support was related to fewer anxiety symptoms. Regarding the stress-buffering hypothesis, our findings were mixed. Consistent with the hypothesis, we found that peer support served as a buffer against the negative effects of subjective acculturative stress on depression and anxiety symptoms. However, contrary to the hypothesis, social support did not mitigate the effect of acculturative stress exposure on internalizing symptoms or the effect of either aspect of enculturative stress on internalizing symptoms. Instead, the relation between acculturative stress exposure and depression symptoms was positive at high levels of peer support. Likewise, the relationship between subjective enculturative stress and anxiety symptoms was strongest at high levels of parent support. This pattern was unexpected and does not support the stress-buffering hypothesis; however, we offer an explanation based on previous research in the next section of the discussion.

It is interesting that peer support mitigated the effects of acculturative stress whereas parent support did not. Previous research has often found support for a buffering role of parent support among Latinx youth (Raffaelli et al, 2013) whereas findings regarding a buffering role of peer support is mixed, with some research demonstrating an effect (Crockett et al., 2007; Gonzalez, et al., 2014; Solberg, & Viliarreal, 1997) and others showing no effect (Juang et al., 2016; Rodriguez et al., 2003). Peer support may have served as a buffer against acculturative stress because Latinx youth are most likely to experience pressure to conform to the norms of the host culture when with peers (Hillekens et al., 2019). Friends are more likely to be aware of this acculturative pressure than parents are and hence more likely to offer effective support.

Regarding parent support, perhaps there was no buffering effect because the effectiveness of parental support is weakened when the family experiences adverse circumstances, especially when residing in predominantly White, non-diverse communities. Conceivably, the quality of parental support may be diminished if parents are trying to manage the difficulties of the family as a whole (e.g., economic strain, absent family members, or immigrant status in the U.S.) and their own emotional reactions (Rueger et al., 2016). It may also be that in U.S. Latinx families, parents are the primary source of enculturative pressure on youth which may decrease their capacity to counteract the effects of this kind of stress. Another possible explanation relates to the differences in acculturation status between parents and adolescents in the present sample: two-thirds of the adolescents were born

in the U.S. whereas most (90%) of the parents were foreign-born, potentially contributing to parent–child acculturation strain, which could have undermined any beneficial effects of parental support. Lastly, the finding might differ for other types of cultural stressors (e.g., discrimination) and we encourage other studies to incorporate multiple types of cultural stressors to provide a more complete assessment of the stress-buffering hypothesis. In general, our findings support a buffering effect of peers, but not parents, in reducing the impact of subjective acculturative stress, which is particularly relevant given that peers become a central developmental context during adolescence.

Reconsidering the Interactive Relations between Bicultural Stress and Social Support

In the present study, three interaction effects indicated that social support appeared to increase the association between bicultural stress and internalizing behaviors rather than reduce it. Such counterintuitive findings have been reported in previous studies of other types of stressors, and some scholars have interpreted such findings as indicating that social support and other protective factors that are beneficial when stress is low may be insufficient when stress levels are high (Rueger et al., 2016). This re-interpretation of the interaction between bicultural stress and social support stipulates that the effect of social support varies as a function of stress, contrary to the stress-buffering hypothesis in which the effect of stress varies as a function of social support (Rueger et al., 2016). To illustrate this alternative pattern, we conducted a follow-up set of simple slope tests, treating support as the main predictor and stress as the moderator.

The results of the follow-up analysis provide evidence that high levels of bicultural stress can undermine the beneficial effects of social support (see Figures S1a–S1c in the supplemental material). As shown in Figures S1a and S1b, peer support was negatively related to depression symptoms at low and average numbers of stressors (suggesting that support is beneficial) but unrelated to depression symptoms at a high number of stressors (suggesting that the beneficial effect of support is attenuated). Similarly, as can be seen in Figure S1c, parent support was negatively associated with anxiety symptoms at low and average levels of enculturative subjective stress but unrelated at high levels of subjective stress. While such results may seem counterintuitive, other researchers have reported similar findings for interactions between stressful events and coping strategies among ethnically diverse inner-city adolescents (Gonzales et al., 2001), between acculturative stress and ethnic identity among Mexican American college students (Iturbide et al., 2009), and between discrimination and familism values among Mexican-origin youth in the Southwest (Umana-Taylor et al., 2011). Taken together, the past and present findings indicate that the effectiveness of social support and other coping strategies has limits and may be insufficient when exposure to stressors or the impact of the stressor (including bicultural stressors) increases. Characteristics of the receiving community may be relevant here, as we might expect levels of bicultural stress to be higher among Latinx youth residing in predominantly White, European-heritage communities. If so, it is more likely that the level of stress might be sufficient to undermine the benefits of social support.

Disaggregating Dimensions of Bicultural Stress

Another aim of the present study was to disentangle the effects of exposure to bicultural stressors from the effects of subjective stress. We took a novel latent variable approach and found that stress exposure was distinguishable from youths' subjective experience of stress. These findings are consistent with Grant et al.'s (2003) view that environmental exposure to a stressor is distinct from the subsequent emotional appraisal of the stressor. These findings also demonstrate that stress exposure and subjective stress showed different relationships with the outcomes in two important ways. First, subjective stress was more consistently related to internalizing behaviors than stress exposure. These results imply that, perhaps owing to their personality traits or past history, some individuals react more strongly to bicultural stressors (e.g., appraise them as more stressful), which leads to higher levels of internalizing behaviors. Second, distinguishing between stress exposure and subjective stress may help explain the inconsistent findings in the literature regarding the stress-buffering role of peer support (Rueger et al., 2016). As discussed earlier, the effects of subjective acculturative stress were buffered by peer support whereas the effects of peer support were attenuated as exposure to bicultural stressors increased. Given this difference, perhaps the inconsistent findings in past research are due in part to the tendency to combine stress exposure and stress appraisal into a single measure. Notably, this also implies that the stress-buffering effects of peer support and the support-undermining effects of stress are not mutually exclusive and may co-occur.

Implications

The current study took a cultural resilience perspective on U.S. Latinx youth mental health, examining the potential protective role of social support in mitigating the effects of bicultural stress. The findings have implications for both risk and resilience models and the stress-buffering model. Regarding risk and resilience models, the results add to the growing evidence that bicultural stress, whether due to acculturative or enculturative pressures, has detrimental effects on U.S. Latinx youth. Regarding the stress-buffering model (and stress and coping models more broadly) they indicate that supportive relationships with peers and parents, although generally beneficial for adolescent well-being, may not be sufficient to maintain mental health under some circumstances; more broadly, also highlight the value of a nuanced conceptualization of stress that considers different kinds of cultural pressures and the distinction between exposure to stressors and subjective stress. These findings must also be considered in the context of U.S. Latinx youth residing in predominantly non-diverse communities, which might have modified the effects of peer and parent support. Given that most prior studies of U.S. Latinx youth are in relatively diverse communities, the present findings suggest the need for future research of Latinx youth residing in relatively non-diverse communities in the U.S.

The findings also have important implications for research and practice. In terms of measurement, our results suggest that stress is a multifaceted construct and that its components need to be disaggregated to provide an accurate understanding of its influence on maladjustment. Specifically, it appears that there is a qualitative difference between stress exposure and the subjective appraisal of the stressor (see Huggins-Manley et al., 2018), which measures such as the MASI and SAFE do not distinguish. Given our findings, we

would encourage researchers who utilize these measures to consider the need to separate the two components of stress.

Regarding implications for practice, the findings suggest that a combination of increasing social support and reducing bicultural stressors may be the most effective strategy for reducing internalizing symptoms among U.S. Latinx youth. Our results showed that peer support reduced the negative impact of subjective stress on internalizing symptoms. However, as exposure to stressors and its subjective appraisal increased, social support ceased to protect youth from internalizing problems. Therefore, prevention efforts may need to increase social support and limit exposure to bicultural stressors to most effectively reduce the higher rates of internalizing problems observed among U.S. Latinx youth.

Limitations and Future Directions

While the findings from the present study are notable, they are not without limitations. First, the data collected in the present study were cross-sectional; as such, we cannot ascertain the effects of bicultural stress and social support on internalizing behaviors over time or establish temporal precedence. We cannot amend this limitation; however, it is conceivable that social support needs to occur contemporaneously with the bicultural stressor to provide a buffering effect. Second, the study variables were all based on youth report, which may have inflated relations among the study variables. Future work using multiple methods (e.g., observations, multiple reporters) can reduce concerns about shared method variance. Third, although a strength of the present study is that it is one of the few studies focused on U.S. Latinx youth residing in predominantly non-Latinx, White communities, more research on this population of youth is needed to replicate the present findings and validate existing measures for Latinx youth. On the other hand, greater attention to Latinx youth growing up in such communities highlights the importance of receiving community characteristics, which could inform our understanding of U.S. Latinx adjustment

Conclusions

Our findings extend beyond the prior literature by providing a novel approach to the study of bicultural stress, social support, and internalizing symptoms among U.S. Latinx youth. Our study is unique in that we distinguished between the type of bicultural stressor (i.e., acculturation, enculturation), the dimension of the stressor (i.e., exposure, stress appraisal), and source of support (i.e., peers, parents), which had implications for the substantive results. Moreover, the study focused on an understudied population—U.S. Latinx youth residing in predominantly non-diverse communities in the Midwest. In support of the stress-buffering hypothesis, the impact of subjective acculturative stress on internalizing symptoms was reduced by high levels of peer support. However, we also found that the beneficial effect of parent support on internalizing symptoms was attenuated as the subjective appraisal of enculturative stressors increased. The present findings have implications for the development of interventions that consider the nuanced effects of stress exposure and subjective stress and the distinct roles of parent and peer support for U.S. Latinx residing in predominantly non-diverse communities.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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References

- Aiken LS, & West SG (1991). *Multiple Regression: Testing and Interpreting Interactions*. Thousand Oaks, CA: SAGE Publications, Inc.
- Barber BK, Stolz HE, Olsen JA, & Collins WA (2005). Parental support, psychological control, and behavioral control: assessing relevance across time, culture, and method. *Monographs of the Society for Research in Child Development*, 70(4), 1–137. 10.1111/j.1540-5834.2005.00365.x
- Barrett P (2007). Structural equation modelling: Adjudging model fit. *Personality and Individual Differences*, 42(5), 815–824. 10.1016/j.paid.2006.09.018
- Berry J (2006). Acculturative stress. In Wong P & Wong L (Eds.), *Handbook of multicultural perspectives on stress and coping* (pp. 287–298). Langley, British Columbia, Canada: Trinity Western University.
- Cano MÁ, Schwartz SJ, Castillo LG, Romero AJ, Huang S, Lorenzo-Blanco EI, ... Szapocznik J (2015). Depressive symptoms and externalizing behaviors among Hispanic immigrant adolescents: Examining longitudinal effects of cultural stress. *Journal of Adolescence*, 42, 31–39. doi:10.1016/j.adolescence.2015.03.017 [PubMed: 25899132]
- Cervantes RC, Cardoso JB, & Goldbach JT (2015). Examining differences in culturally based stress among clinical and nonclinical hispanic adolescents. *Cultural Diversity and Ethnic Minority Psychology*, 21(3), 458–467. 10.1037/a0037879 [PubMed: 25364836]
- Clayborne ZM, Varin M, & Colman I (2019) Systematic review and meta-analysis: adolescent depression and long-term psychosocial outcomes. *Journal of the American Academy of Child & Adolescent Psychiatry*, 58(1), 72–79. [PubMed: 30577941]
- Cohen S, & Wills TA (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310–357. 10.1037/0033-2909.98.2.310 [PubMed: 3901065]
- Crawford JR, & Henry JD (2003). The Depression Anxiety Stress Scales (DASS): Normative data and latent structure in a large non-clinical sample. *British Journal of Clinical Psychology*, 42(2), 111–131.
- Crockett LJ, Iturbide MI, Torres Stone RA, McGinley M, Raffaelli M, & Carlo G (2007). Acculturative stress, social support, and coping: relations to psychological adjustment among Mexican American college students. *Cultural Diversity and Ethnic Minority Psychology*, 13(4), 347–355. doi: 10.1037/1099-9809.13.4.347 [PubMed: 17967103]
- Crockett L,J, Randall BA, Shen Y-L, Russell ST, & Driscoll AK (2005). Measurement equivalence of the Center for Epidemiological Studies Depression Scale for Latino and Anglo adolescents: A national study. *Journal of Consulting and Clinical Psychology* 73(1), 47–58. [PubMed: 15709831]
- Ellis WE, & Zarbatany L (2017). Understanding processes of peer clique influence in late childhood and early adolescence. *Child Development Perspectives*, 11(4), 227–232. 10.1111/cdep.12248
- Gaylord-Harden NK, Barbarin O, Tolan PH, & Murry VMB (2018). Understanding development of African American boys and young men: Moving from risks to positive youth development. *American Psychologist*, 73(6), 753–767. 10.1037/amp0000300
- Georgiades K, Paksarian D, Rudolph KE, & Merikangas KR (2018). Prevalence of mental disorder and service use by immigrant generation and race/ethnicity among US adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 57(4), 280–287. [PubMed: 29588054]

- Gonzales NA, Tein J-Y, Sandler IN, & Friedman RJ (2001). On the limits of coping: Interaction between stress and coping for inner-city adolescents. *Journal of Adolescent Research*, 16(4), 372–395.
- Gonzalez LM, Stein GL, Kiang L, & Cupito AM (2014). The impact of discrimination and support on developmental competencies in Latino adolescents. *Journal of Latina/o Psychology*, 2(2), 79.
- Grant KE, Compas BE, Stuhlmacher AF, Thurm AE, McMahon SD, & Halpert JA (2003). Stressors and child and adolescent psychopathology: Moving from markers to mechanisms of risk. *Psychological Bulletin*, 29(3), 447–466.
- Gullone E, & Robinson K (2005). The inventory of parent and peer attachment-Revised (IPPA-R) for children: A psychometric investigation. *Clinical Psychology & Psychotherapy*, 12, 67–79.
- Guntzviller LM, Williamson LD, & Ratcliff CL (2020). Stress, social support, and mental health among young adult Hispanics. *Family & Community Health*, 43(1), 82–91. [PubMed: 31764309]
- Hillekens J, Baysu G, & Phalet K (2019). Compatible or conflicting? Peer norms and minority and majority adolescents' acculturation patterns. *Journal of Applied Developmental Psychology*, 65, 1–12. 10.1016/j.appdev.2019.101074
- Holmes TH, & Rahe RH (1967). The Social Readjustment Rating Scale. *Journal of Psychosomatic Research*, 11, 213–218. [PubMed: 6059863]
- Hovey JD, & King CA (1996). Acculturative stress, depression, and suicidal ideation among immigrant and second-generation Latino adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, 39(9), 1183–1192.
- Hovey JD, & Magaña CG (2002). Psychosocial predictors of anxiety among immigrant Mexican migrant farmworkers: Implications for prevention and treatment. *Cultural Diversity and Ethnic Minority Psychology*, 8(3), 274–289. [PubMed: 12143104]
- Hu L, & Bentler PM (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. 10.1080/10705519909540118
- Huggins-Manley AC, Algina J, & Zhou S (2018). Models for semiordered data to address not applicable responses in scale measurement. *Structural Equation Modeling*, 25(2), 230–243. 10.1080/10705511.2017.1376586
- Iturbide MI, Raffaelli M, Carlo G (2009). Ethnic identity on Mexican American college students' psychological well-being. *Hispanic Journal of Behavioral Sciences*, 31(4), 536–552.
- Jardin C, Mayorga NA, Bakhshaie J, Garey L, Viana AG, Sharp C, ... & Zvolensky MJ (2018). Clarifying the relation of acculturative stress and anxiety/depressive symptoms: The role of anxiety sensitivity among Hispanic college students. *Cultural Diversity and Ethnic Minority Psychology*, 24(2), 221. [PubMed: 29172570]
- Juang L, Ittel A, Hoferichter F, & Gallarin MM (2016). Perceived racial/ethnic discrimination and adjustment among ethnically diverse college students: Family and peer support as protective factors. *Journal of College Student Development*, 57(4), 380–394.
- Kann L, McManus T, Harris WA, Shanklin SL, Flint KH, Queen B, ... Ethier KA (2018). Youth risk behavior surveillance—United States, 2017 (Vol. 67). Atlanta, GA: Centers for Disease Control and Prevention.
- Lazarus RS, & Folkman S (1984). *Stress, appraisal, and coping*. New York, NY: Springer.
- Lopez MK, Krogstad M, & Flores A (2018). Key facts about young Latinos, one of the nation's fastest-growing populations. Fact Tank: News in Numbers, Pew Research Center. Retrieved from <https://www.pewresearch.org/fact-tank/2018/09/13/key-facts-about-young-latinos/#:~:text=3Latinos%20accounted%20for%2025,according%20to%20Census%20Bureau%20data>.
- Maldonado A, Preciado A, Buchanan M, Pulvers K, Romero D, & D'Anna-Hernandez K (2018). Acculturative stress, mental health symptoms, and the role of salivary inflammatory markers among a Latino sample. *Cultural Diversity and Ethnic Minority Psychology*, 24(2), 277–283. [PubMed: 29154561]
- Masten AS (2014). Global perspectives on resilience in children and youth. *Child Development*, 85(1), 6–20. 10.1111/cdev.12205 [PubMed: 24341286]

- Mayorga NA, Jardin C, Bakhshaie J, Garey L, Viana AG, Cardoso JB, & Zvolensky M (2018). Acculturative stress, emotion regulation, and affective symptomology among Latino/a college students. *Journal of Counseling Psychology*, 65(2), 247. [PubMed: 29543479]
- McCord AL, Draucker CB, & Bigatti S (2019). Cultural stressors and depressive symptoms in Latino/a adolescents: An integrative review. *Journal of the American Psychiatric Nurses Association*, 25(1), 49–65. [PubMed: 29862864]
- Mena FJ, Padilla AM, & Maldonado M (1987). Acculturative stress and specific coping strategies among immigrant and later generation college students. *Hispanic Journal of Behavioral Sciences*, 9(2), 207–225.
- Murry VMB (2019). Healthy African American families in the 21st century: Navigating opportunities and transcending adversities. *Family Relations*, 68(3), 342–357. 10.1111/fare.12363
- Muthén LK, & Muthén BO (2017). *Mplus User's Guide*. Eighth Edition. Los Angeles, CA: Muthén & Muthén.
- Radloff LS (1977). The CES-D scale: a self-report depression scale for research in the general population. *Applied Psychological Measurement* 1, 385–401.
- Raffaelli M, Andrade FC, Wiley AR, Sanchez-Armass O, Edwards LL, & Aradillas-Garcia C (2013). Stress, social support, and depression: A test of the stress-buffering hypothesis in a Mexican sample. *Journal of Research on Adolescence*, 23(2), 283–289.
- Raffaelli M, Carlo G, Carranza MA, Gonzalez-Kruger GE (2005). Understanding Latino children and adolescents in the mainstream: Placing culture at the center of developmental models. *New Directions for Child and Adolescent*, 2005, 109.
- Rivera FI (2007). Contextualizing the experience of young Latino adults: Acculturation, social support and depression. *Journal of Immigrant and Minority Health*, 9(3), 237–244. [PubMed: 17265173]
- Roberts RE (1980). Reliability of the CES-D scale in different ethnic contexts. *Psychiatry Research*, 2, 125–134. doi:10.1016/0165-1781(80)90069-4. [PubMed: 6932058]
- Rodriguez N, Mira CB, Myers HF, Morris JK, & Cardoza D (2003). Family or friends: Who plays a greater supportive role for Latino college students? *Cultural Diversity and Ethnic Minority Psychology*, 9(3), 236. [PubMed: 12971091]
- Rodriguez N, Myers HF, Mira CB, Flores T, & Garcia-Hernandez L (2002). Development of the Multidimensional Acculturative Stress Inventory for adults of Mexican origin. *Psychological Assessment*, 14(4), 451. [PubMed: 12501570]
- Romero AJ, Corvajal SC, Valle F, & Orduña M (2007). Adolescent bicultural stress and its impact on mental well-being among Latinos, Asian Americans, and European Americans. *Journal of Community Psychology*, 35(4), 519–534. 10.1002/jcop.20162
- Romero AJ, & Roberts RE (2003). Stress within a bicultural context for adolescents of Mexican descent. *Cultural Diversity and Ethnic Minority Psychology*, 9(2), 171. [PubMed: 12760328]
- Rueger SY, Malecki CK, Pyun Y, Aycock C, & Coyle S (2016). A meta-analytic review of the association between perceived social support and depression in childhood and adolescence. *Psychological Bulletin*, 142(10), 1017–1067. [PubMed: 27504934]
- Schwartz SJ, Unger JB, Zamboanga BL, & Szapocznik J (2010). Rethinking the concept of acculturation: Implications for theory and research. *American Psychologist*, 65(4), 237–251. 10.1037/a0019330
- Solberg VS, & Viliarreal P (1997). Examination of self-efficacy, social support, and stress as predictors of psychological and physical distress among Hispanic college students. *Hispanic Journal of Behavioral Sciences*, 19(2), 182–201.
- Somerville LH (2013). The teenage brain: Sensitivity to social evaluation. *Current Directions in Psychological Science*, 22(2), 121–127. doi: 10.1177/0963721413476512 [PubMed: 24761055]
- Stein GL, Gonzalez LM, & Huq N (2012). Cultural stressors and the hopelessness model of depressive symptoms in Latino adolescents. *Journal of Youth and Adolescence*, 41, 1339–1349. doi 10.1007/s10964-012-9765-8 [PubMed: 22528371]
- Suarez-Morales L, & Lopez B (2009). The impact of acculturative stress and daily hassles on pre-adolescent psychological adjustment: Examining anxiety symptoms. *The Journal of Primary Prevention*, 30(3–4), 335–349. [PubMed: 19408124]

- Telzer EH, & Fuligni AJ (2013). Positive daily family interactions eliminate gender differences in internalizing symptoms among adolescents. *Journal of Youth and Adolescence*, 42(10), 1498–1511. [PubMed: 23733435]
- Torres L (2010). Predicting levels of Latino depression: Acculturation, acculturative stress, and coping. *Cultural Diversity & Ethnic Minority Psychology*, 16, 256–263. 10.1037/a0017357 [PubMed: 20438164]
- Umaña-Taylor AJ, & Fine MA (2004). Examining ethnic identity among Mexican-Origin adolescents living in the United States. *Hispanic Journal of Behavioral Sciences*, 26(1), 36–59. 10.1177/0739986303262143
- White RMB, Zeiders KH, & Safa MD (2018). Neighborhood structural characteristics and Mexican-origin adolescents' development. *Development and Psychopathology*, 30, 1679–1698. [PubMed: 30289093]
- Zeiders KH, Umaña-Taylor AJ, Updegraff KA, & Jahromi LB (2014). Acculturative and enculturative stress, depressive symptoms, and maternal warmth: Examining within-person relations among Mexican-origin adolescent mothers. *Development and Psychopathology*, 27(1), 293–308. 10.1017/S09545794140006 [PubMed: 25004391]

Public Significance Statement

U.S. Latinx youth are at greater risk for developing depression and anxiety, partly because they are exposed to stressors related to conforming to “American” ways and retaining their Latinx values. While these stressors may adversely affect Latinx youth, our study demonstrated that resiliency is possible such that support from peers can lessen the negative influence of cultural stressors on mental well-being.

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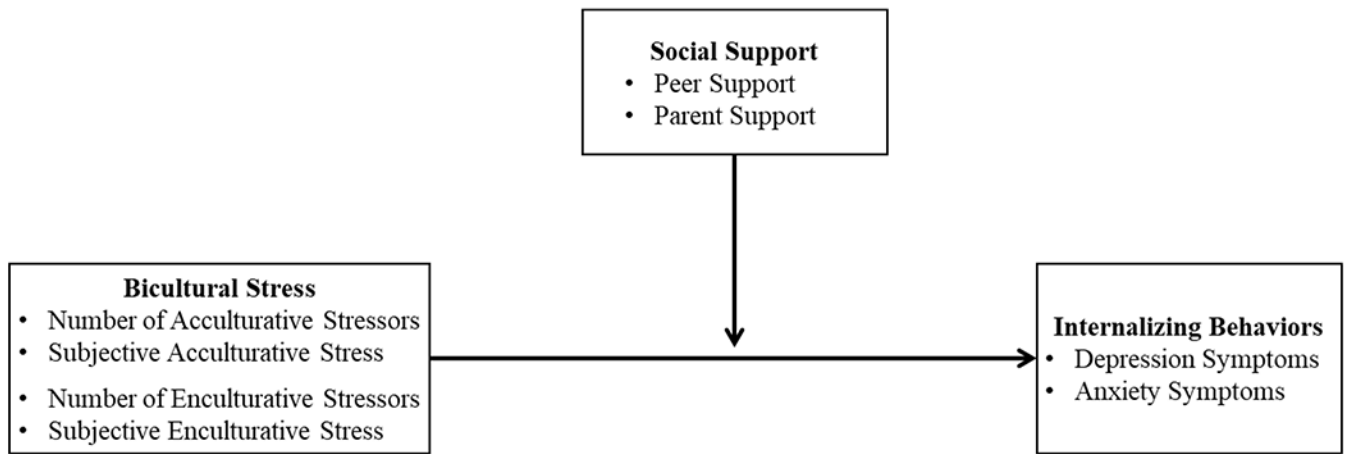


Figure 1. Schematic of Hypothetical Model

Note. Theoretical model showing that social support moderates the association between bicultural stress and internalizing behaviors. The effects of acculturative and enculturative stress were examined in separate models.

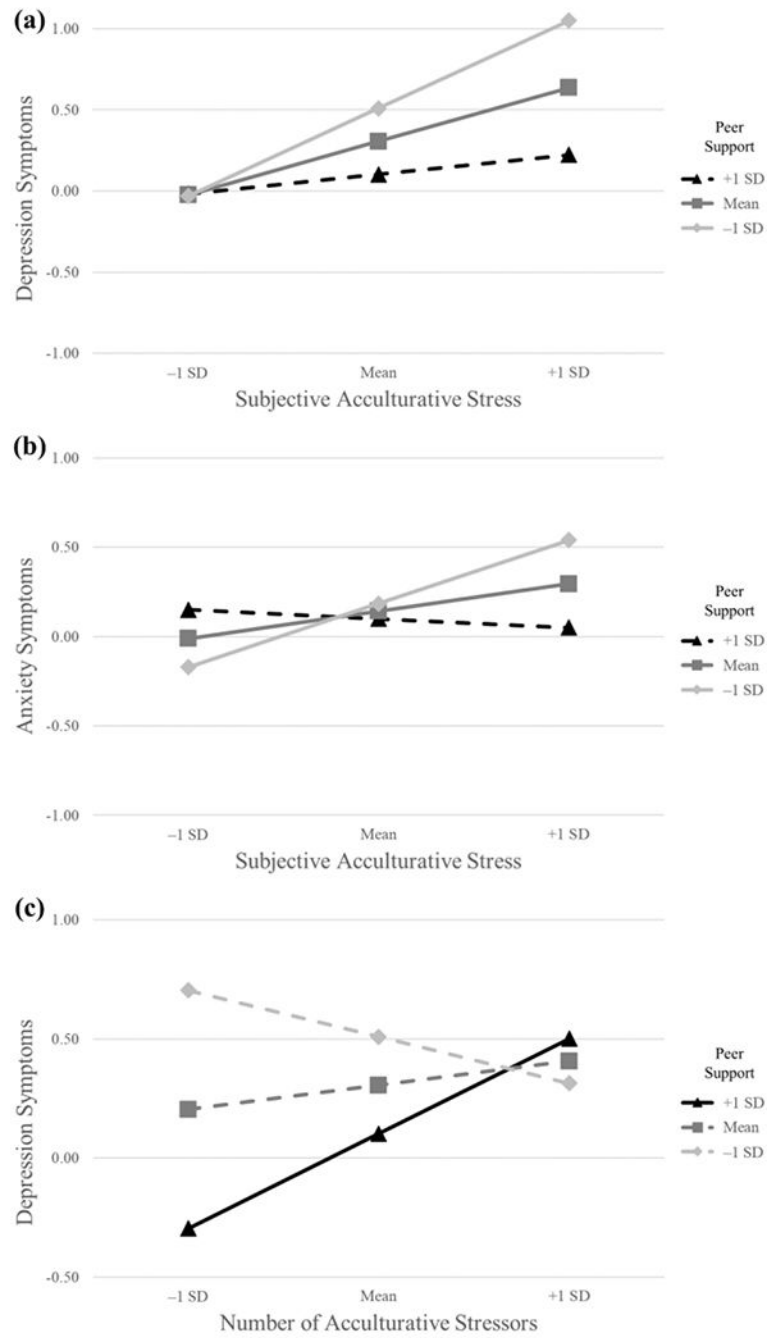


Figure 2.
 a. Plot of Depression Symptoms as a Function of Subjective Acculturative Stress and Peer Support
 b. Plot of Anxiety Symptoms as a Function of Subjective Acculturative Stress and Peer Support
 c. Plot of Depression Symptoms as a Function of the Number Acculturative Stressors and Peer Support

Note. Solid lines indicate a significant simple slope, dashed lines indicate a non- significant simple slope

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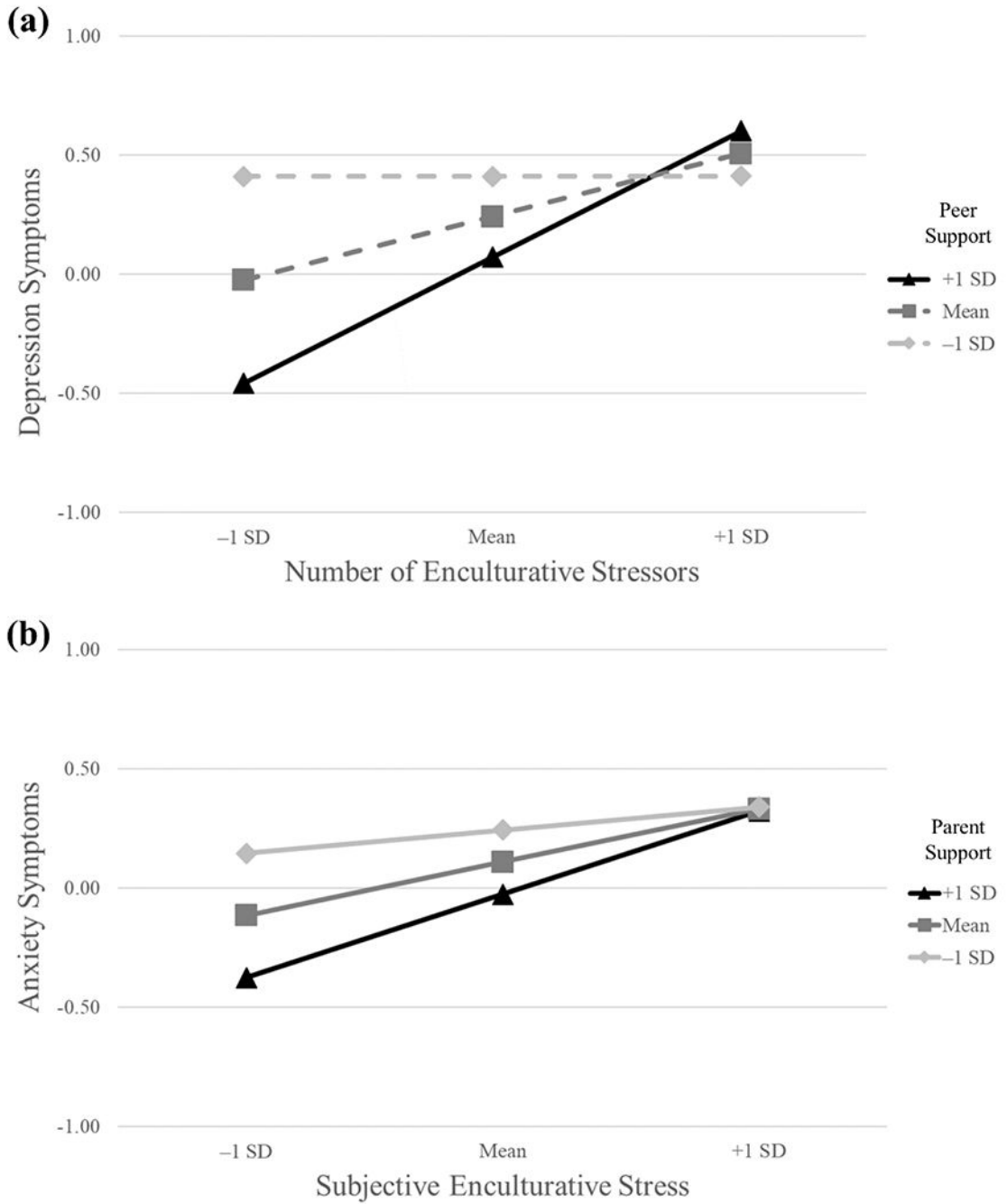


Figure 3.
a. Plot of Depression Symptoms as a Function of the Number of Enculturative Stressors and Peer Support
b. Plot of Anxiety Symptoms as a Function of Subjective Enculturative Stress and Parent Support
Note. Solid lines indicate a significant simple slope, dashed lines indicate a non- significant simple slope.

Table 1.

Descriptive statistics of study variables (observed scores)

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6
1. Acculturative Stress	1.44	1.00	–					
2. Enculturative Stress	0.77	0.75	.53	–				
3. Peer Support	3.89	0.53	–.10	–.03	–			
4. Parent Support	2.60	0.41	–.12	–.10	.17	–		
5. Depression	1.62	0.44	.34	.25	–.24	–.21	–	
6. Anxiety	1.50	0.56	.28	.29	–.07	–.15	.66	–
7. Gender (Girls = 0, Boys = 1)	0.54	0.50	–.12	–.08	–.17	.10	–.18	–.16

Note. Estimates in bold indicate a significant correlation at $p < .05$.

Table 2.

Results for Acculturative and Enculturative Stress Models

Acculturative Stress Model	Depression				Anxiety			
	EST	SE	STD	p<	EST	SE	STD	p<
Number of Stressors	0.11	0.09	0.08	.24	0.13	0.07	0.12	.08
Subjective Stress	0.41	0.11	0.25	.01	0.19	0.08	0.16	.03
Peer Support	-0.12	0.04	-0.15	.01	-0.03	0.04	-0.04	.53
Parent Support	-0.16	0.06	-0.17	.01	-0.08	0.04	-0.11	.07
Gender (Girl = 0, Boy = 1)	-0.40	0.14	-0.15	.01	-0.19	0.11	-0.10	.09
Number of Stressors x Peer Support	0.19	0.06	0.22	.01	0.11	0.06	0.17	.06
Subjective Stress x Peer Support	-0.15	0.06	-0.17	.02	-0.15	0.06	-0.22	.01
Number of Stressors x Parent Support	0.06	0.07	0.06	.45	-0.02	0.06	-0.02	.78
Subjective Stress x Parent Support	0.07	0.09	0.07	.42	0.12	0.07	0.15	.09
Outcome Covariance	0.57	0.07	0.55	.01	-	-	-	-

Enculturative Stress Model	Depression				Anxiety			
	EST	SE	STD	p<	EST	SE	STD	p<
Number of Stressors	0.30	0.08	0.20	.01	0.24	0.06	0.22	.01
Subjective Stress	0.48	0.10	0.26	.01	0.31	0.07	0.23	.01
Peer Support	-0.10	0.04	-0.13	.02	-0.01	0.04	-0.01	.87
Parent Support	-0.18	0.05	-0.19	.01	-0.09	0.04	-0.14	.02
Gender (Girl = 0, Boy = 1)	-0.40	0.14	-0.15	.01	-0.19	0.11	-0.10	.09
Number of Stressors x Peer Support	0.18	0.05	0.19	.01	0.09	0.05	0.13	.07
Subjective Stress x Peer Support	-0.04	0.06	-0.04	.45	-0.06	0.05	-0.08	.19
Number of Stressors x Parent Support	0.08	0.05	0.07	.17	0.03	0.05	0.04	.50
Subjective Stress x Parent Support	0.14	0.08	0.10	.08	0.12	0.06	0.12	.04
Outcome Covariance	0.53	0.06	0.53	.01	-	-	-	-

Note. EST = unstandardized estimate; SE = standard error; STD = standardized estimate. All variables were mean centered.