Latinx college students’ anxiety, academic stress, and future aspirations: the role of sibling relationship quality

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Abstract
Latinx students experience stress at higher rates than European-American college-students in the U.S. and report the highest levels of anxiety among all other college-students, which can be a potential barrier to success. However, family members are identified as important sources of support by Latinx young-adults, and feeling support from family indicates a higher likelihood to remain enrolled in college. Few studies have explored the role of siblings in this relationship. This study examined whether positive and negative relationship qualities (RQ) between Latinx siblings may interact with level of anxiety, predicting academic stress (AS) and future aspirations (FA). Findings indicated that younger siblings with high anxiety and high negative RQ experienced higher levels of AS, while older siblings with low or mean-level anxiety and high negative RQ experienced high AS. Younger siblings with low anxiety, and high negative RQ with older siblings experienced low FA. The findings provide evidence that sibling relationship quality in Latinx students moderates the associations with anxiety, academic stress, and future aspirations, and that the presence of negative relationship qualities carried particular implications for future aspirations and academic stress. Understanding the influence of Latinx sibling RQ on mental health and AS can offer insight into the role of sibling relationships in the context of health, academic retention, and success in Latinx young people.

Keywords  Siblings · Latinx families · College students · Academic stress · Future aspirations

Highlights
• Examined if relationship qualities between Latinx siblings interact with anxiety, academic stress, and future aspirations.
• The presence of negative relationship qualities carries particular implications for future aspirations and academic stress
• Younger siblings with high anxiety and high negative relationship qualities experienced higher levels of academic stress.
• The higher the positive sibling relationship quality, the higher the future aspirations.
• Understanding influences of Latinx sibling relationships on mental health and academics can guide university efforts.

Stress and anxiety symptoms are two of the most prevalent mental health problems among college students (Kitzrow, 2003). For Latinx (i.e., the gender inclusive term for Latino/a; Santos, 2017; Scharrón-del Río & Aja, 2020) minority students in particular, experiences of stress occur at higher rates than European American college students in the United States (Eisenberg et al., 2013). Similarly, Latinx students also report the highest levels of anxiety compared to other minority and European American college students (Eisenberg et al., 2013; Holliday et al., 2016). Along these same lines and within the recent literature, achievement gaps between Latinx and European American college students have been identified and well-documented (Fry, 2011; Castillo et al., 2006; Fry & Lopez, 2012; Llagas & Snyder, 2003). These achievement gaps, including, but not limited to, grade point average (GPA), drop-out rates, and standardized testing (Jeynes, 2008; L. R. Green et al., 2000; Olneck, 2005), sets Latinx students up for the consequences associated with poor academic performance and future outcomes.
However, despite these setbacks, family members are often identified as important sources of support by Latinx emerging adults and feeling support from family indicates a higher likelihood to remain enrolled in college (Arana et al., 2011; Cooper et al., 2008). Both positive and negative relationship qualities impact these associations, where positive relationship qualities may buffer or protect against negative outcomes and stressors, and negative relationship qualities may exacerbate the effects of stress and maladjustment (Adams and Laursen 2007). Because of this, it is important to explore how positive sibling relationships are protective for Latinx college students who are experiencing anxiety, potentially leading to less academic stress and greater future aspirations.

In the present study, we use the risk and resilience (Masten, 2001) and the integrative model (Garcia-Coll et al., 1996) as a framework within which to examine the protective qualities of families. Both frameworks emphasize the advantages of familial support, where Masten identifies how positive outcomes may be achieved in the context of adversity, and Garcia-Coll highlights how families serve as a strength for racial and ethnic minority individuals’ experiences throughout development.

Few studies have explored the role of siblings in this association between familial support, stress, and academics. Similarly, the associations between academic stress and poorer academic outcomes, such as lower GPA and dropout rates, has been explored in a considerable amount of work, but little research has been done exploring the potential role that sibling relationships and levels of anxiety may have within the association which may affect these outcomes. The current study contributes to the literature by investigating whether Latinx sibling relationship qualities moderate the associations between anxiety, academic stress, and future aspirations.

### Anxiety & Achievement among College Students

According to Beiter and colleagues (2015), 38% of college students in the United States suffer from mild to extremely severe stress and 40% experience mild to extremely severe anxiety. Compared to other minority and European American college students, Latinx college students experience the highest levels of anxiety (Eisenberg et al., 2013; Holliday et al., 2016). Specifically, studies that examine samples from the Latinx community indicate that systemic barriers (e.g., low income, discrimination, and lack of health insurance) that are present uniquely in the Latinx community are linked with negative mental health (Potochnick and Pereira 2010). Despite these reports, few quantitative studies have explored the role of anxiety as a predictor for academic stress and future aspirations among Latinx college student populations. This is a significant cause for concern because Latinx college students’ risk of academic underachievement is increased from mental health problems (Deroma et al. 2009). Thus, it is important to identify the role of anxiety in this association and how it may contribute further to the present barriers and negative outcomes.

Although the Latinx population within the United States has been identified as the largest ethnic minority group, only 15.3% of Latinx individuals over the age of 25 have obtained a bachelor’s degree or higher, with only 17.4% of this population enrolled in both undergraduate and graduate degree programs (U.S. Census Bureau, 2017). Thus, it is important to examine the factors that contribute to Latinx college student’s academic success.

### Future Aspirations and Academic Stress

Future aspirations, or educational and vocational “dreams” for a future life in areas of career, family, and education, have been tied to significant effects for later life experiences (Nurmi, 1989, 1991). Similarly, these aspirations are highly predictive of subsequent educational and occupational attainment (Bandura et al., 2001). Mexican-American students, who are the largest subpopulation of Latinx college students and the lowest Hispanic subpopulation to obtain post-secondary degrees (National Center for Education Statistics, 2003; Phinney & Flores, 2002), are more likely to perceive future barriers to their educational and career goals and feel less confident in their ability to overcome these barriers than European-American students (Sirin et al., 2004). According to Manzano-Sanches and colleagues (2019), Latinx students experience less support and facilitation of future aspirations than they experience barriers that hinder their aspirations.

Similarly, academic stress, or stress related to course requirements, such as completing assignments and taking exams, or stress emerging from feeling academically over extended or incapable of completing a task beyond one’s perceived capabilities (Torres & Solberg, 2001), can be particularly prominent in college students. High levels of academic stress have been associated with lower academic performance in studies with predominantly European Americans samples (Andrews & Wilding, 2004; Struthers et al., 2000), and lower grades among Latinx students (Torres & Solberg, 2001). Because of these barriers and the implications for issues experienced later in life, it is important to understand the variables that impact and interact with Latinx students’ future aspirations and academic stress, and how they may buffer or exacerbate potential negative outcomes.
The Role of Sibling Relationship Quality

Family relationships may play particularly important roles in Latinx populations as demonstrated by the work of Sabogal et al. (1987) whose research uncovered that Latinx individuals endorsed higher values of family support, obligations to family members, and using family members as referents compared to individuals of European American descent. The presence of a sense of connectedness may be particularly important for Latinx siblings because, compared to the amount of time spent with parents and peers, siblings serve as important resources in contexts removed from family, like college (Updegraff et al., 2011).

According to Furman and Buhrmester, siblings, like all individuals in one’s social network, provide unique social provisions (1992). Though relationship quality can be assessed through several distinct subscales (e.g., admiration, antagonism, instrumental aid), Adams and Laursen found that the Network of Relationship Inventory (NRI) is best utilized as just positive and negative qualities collapsed together (2007). Similarly, differences between birth order present important considerations when understanding sibling perceptions of relationship quality. Older siblings usually possess greater physical strength, greater cognitive and social maturity, and greater responsibilities and authority (Tucker et al., 2010), and younger siblings report that the older siblings hold more power in this relationship (Lindell & Campione-Barr, 2017). Thus, perceptions of relationship quality and support may differ according to birth order. However, it is less clear how much birth order continues to impact youth perceptions throughout emerging adulthood when differences in relational power diminish (Lindell & Campione-Barr, 2017). Thus, it is important to investigate the influence of birth order on these associations.

For these reasons, given that Latinx families emphasize family support and connectedness through cultural values such as familism (Cauce & Domenech-Rodriguez, 2002; Marín & Marín, 1991), siblings hold unique and important roles in individuals’ lives, along with the significant disparities in Latinx college students’ educational outcomes (e.g., degree attainment, the increasingly high risk of maladjustment), it is important for scholars to investigate how academic stress and future aspirations, may be predicted by the interaction of anxiety and the quality of sibling relationships in young adulthood.

The Current Study

The current study extends the literature on academic stress and future aspirations of Latinx college student populations by examining the predictive potential of sibling relationship quality and level of anxiety. In general, we hypothesized that positive sibling relationships would be protective for Latinx college students in navigating anxiety, academic stress, and future aspirations, while negative sibling relationships would exacerbate these associations. To examine the main goal of the study, we examined the interaction between sibling relationship quality (separately for positive and negative) and anxiety on the outcomes of academic stress and future aspirations. We also examined the potentially moderating role of birth order in these associations.

While previous research has found that older siblings are more powerful in the relationship, as youth age, the relationships become more egalitarian and may be similarly beneficial or detrimental.

Methods

Participants

Using data from a larger study from 2016 to 2018 (Authors Citation) examining health and adjustment outcomes in young adult college students (N = 1104), the current study examined individuals between 18–25 (M = 21.03 years, SD = 1.93) from four, large public universities who self-identified as “Hispanic/Latino” and had at least one sibling (age 14 or older) who lived within various ranges from their sibling, resulting in a final sample size of n = 206. Among the sample of Latinx college students (64.1% female), 18.4% (n = 38) were born outside of the US, and 53.4% (n = 110) of participants’ mothers completed some college or more. In terms of participants’ birth order, 52.4% of the sample were older siblings reporting on a younger sibling and 47.6% of the sample were younger siblings reporting on an older sibling.

Procedures

Data were collected via online surveys at several universities in the Midwest, Southwest, and Eastern regions of the United States (University of Missouri, University of Connecticut, and Arizona State University) and through Amazon’s Mechanical Turk (MTurk). MTurk is an online labor market that screens participants to determine their eligibility, compensates them for their time, and has been found to be reliable (Buhrmester et al., 2011) and useful for the quick collection of cost-effective data (Kim & Hodgins, 2017). Before participating, all students completed consent forms electronically. All measures were completed in English and in an online survey format, lasting approximately 45 min. Participants through MTurk were compensated with $5 while participants on campuses were compensated through either receiving extra course credit or being entered into a raffle for $10 gift cards. If participants...
completed less than 80% of the survey or if participants took less than 30 min to complete the survey, cases were deleted. The study was approved by the Institutional Review Boards at the participating universities.

Independent t-tests were run comparing data from each university and MTurk with each other for the main variables of interest (i.e., positive sibling relationship quality, negative sibling relationship quality, anxiety, future aspirations, and academic stress). Of the 30 independent t-tests conducted, only 5 t-tests were significant. Students from the University of Connecticut were significantly different from MTurk participants on positive sibling relationship quality \( t(173) = 2.75, p < 0.01 \); anxiety \( t(172) = 2.37, p < 0.01 \); and academic stress \( t(171) = 4.71, p < 0.001 \). Students from Arizona State University were significantly different from MTurk participants on academic stress \( t(120) = 2.30, p < 0.05 \). Students from Arizona State University were significantly different from University of Connecticut students on academic stress \( t(63.41) = -3.74, p < 0.001 \). Given the few significant differences in the independent t-tests, source of the data was not included as a covariate in order to save degrees of freedom and the samples from each university and MTurk were aggregated and analyzed as one sample.

**Measures**

**Relationship Quality**

Both positive (7 items) and negative (6 items) relationship qualities were assessed using a short form of the Network of Relationships Inventory Social Provisions Scale (NRI; Furman & Buhrmester, 1985). Scale items were separated into two subscales: Support (e.g., positive relationship quality) and Negative Interaction (e.g., negative relationship quality). Using a 5-point Likert scale (1 = little or none; 5 = the most), participants were asked 13 items to describe their relationship with their closest-in-age sibling. An example item for negative relationship quality is, “How much do you and this person disagree and quarrel?” Scale items were averaged, with higher scores indicating higher levels of each subscale; the Cronbach’s alphas for positive and relationship qualities were 0.90 and 0.94 respectively.

**Anxiety**

Anxiety was measured through an adapted form of the Depression Anxiety Stress Scale (DASS; Lovibond & Lovibond, 1995). The scale included 7 items using a 4-point Likert scale ranging from (0 = Did not apply to me at all) to (3 = Applied to me most of the time). This measure includes four subscales: Autonomic Arousal with 3 items (e.g., “I experienced breathing difficulty (i.e., excessively rapid breathing, breathlessness in the absence of physical exertion).”), Skeletal Muscular Effects with 1 item (e.g., “I experienced trembling (i.e., in the hands).”), Situational Anxiety with 1 item (e.g., “I was worried about situations in which I might panic and make a fool of myself.”), and Subjective Experience of Anxious Affect with 2 items (e.g., “I felt scared without any good reason.”). Scores from each subscale were summed to create a global anxiety score. Cronbach’s alpha was 0.88.

**Future Aspirations**

Future aspirations were measured using an adapted version of the Children’s Future Expectation Scale and contained questions over the future the participant saw for their self or what they would like their life to be like as an adult (Wyman, 1993). The measure includes 11 items (e.g., “How sure are you that you will graduate from college?”) using a 5-point Likert scale (1 = not at all sure) to (5 = very much sure). Greater future aspirations were indicated through higher scores. Cronbach’s alpha was 0.93.

**Academic Stress**

Academic stress was assessed using the academic stress subscale within the College-Stress Inventory. This subscale addresses the frequency of stressful events related to academics and contains eight items (e.g., “Difficulty handling our academic workload”). Items were rated on a 6-point scale from (0 = Never) to (5 = Very often). Scores were averaged with higher scores indicating greater academic stress. Cronbach’s alpha was 0.92.

**Demographic Characteristics**

**Age** Participants’ age was collected via self-report.

**Gender** Participants self-reported their gender as either man or woman. 0 = man; 1 = woman.

**Nativity** Participants responded to the question “Where were you born?” 0 = Born outside continental USA; 1 = Born inside continental USA. Participants that indicated they were born in Puerto Rico were coded as born outside continental USA.

**Mother’s education** Mother’s educational attainment is typically considered the best single-variable proxy for SES (Chen et al., 1998) and is particularly relevant to the current study given that it shows family investment in education, which may be correlated with participants’ educational
Birth order  Birth order of the participant was assessed by comparing the age of the participant with the age of the sibling they are reporting on. 0 = participant is younger sibling; 1 = participant is older sibling.

Results

Analytical Plan

To test primary study hypotheses, we conducted four hierarchical linear regression models (separately for positive and negative relationship qualities) with both future aspirations and academic stress as the dependent variables. In each model, the first step included demographic controls: gender (man = 0), age, nativity (born outside continental U.S. = 0), and maternal education (some high school = 1; graduate or professional degree = 5). The second step included the main effects of birth order (younger sibling = 0), sibling relationship quality (positive or negative depending on the model) and anxiety. The inclusion of both gender and birth order as potential moderators were exploratory in the present study, however, gender was never revealed to be a significant moderator, so it was dropped as such and included only as a control variable.

The third step included all possible two-way interactions between birth order, sibling relationship quality, and anxiety. The fourth step included a three-way interaction between birth order, sibling relationship quality, and anxiety. In any individual model, if any step was not significant, that step was dropped in order to save degrees of freedom. Significant interactions were probed using simple slope analyses (Aiken & West, 1991).

Descriptive Statistics

The means, standard deviations, and correlations among the study variables are depicted in Table 1. Of the sample of college-aged, Latinx students, higher age was negatively correlated with sibling positive relationship quality ($r = -0.15$, $p < 0.05$). Identifying as a woman was positively correlated with higher academic stress ($r = 0.15$, $p < 0.05$). Furthermore, students who reported higher positive relationship quality with their sibling was positively correlated with greater future aspirations ($r = 0.28$, $p < 0.001$). Negative relationship quality with siblings was positively correlated with anxiety ($r = 0.21$, $p < 0.01$) and academic stress ($r = 0.25$, $p < 0.001$). Academic stress was also negatively correlated with future aspirations ($r = -0.24$, $p < 0.001$).

Associations with Academic Stress

In the model examining positive sibling relationship quality, results indicated that the 4th step of the hierarchical linear regression, including the 3-way sibling positive relationship quality X anxiety X birth order interaction was significant, $F(11,176) = 7.07$, $p < 0.001$, $R^2 = 0.31$. There was a significant main effect of participant age, $\beta = -0.15$, $t(176) = -2.19$, $p < 0.05$, such that the older the participant, the less academic stress they reported. There was also a significant main effect of anxiety, $\beta = 0.35$, $t(176) = 3.56$, $p < 0.001$, which was subsumed within a 3-way interaction of positive relationship quality X anxiety X birth order, $\beta = 0.17$, $t(176) = 2.00$, $p < 0.05$. Simple slope analyses

Table 1 Means and intercorrelations among study variables

| Variable          | Mean  | SD    | 1     | 2     | 3       | 4     | 5       | 6       | 7     | 8     | 9   | 10 |
|-------------------|-------|-------|-------|-------|---------|-------|---------|---------|-------|-------|----|----|
| Age               | 21.03 | 1.93  | –     | –     | –       | –     | –       | –       | –     | –     | –  |    |
| Gender            | –     | –     | –0.06 | –     | –       | –     | –       | –       | –     | –     | –  |    |
| Nativity          | –     | –     | –0.14 | –0.09 | –       | –     | –       | –       | –     | –     | –  |    |
| Mother’s Ed.      | –     | –     | –0.09 | 0.01  | –0.09   | –     | –       | –       | –     | –     | –  |    |
| Birth Order       | –     | –     | 0.20**| –0.06 | –0.18** | –     | –       | –       | –     | –     | –  |    |
| Pos. RQ           | 3.37  | 0.99  | –0.15*| 0.10  | –0.05   | 0.05  | –0.09   | –       | –     | –     | –  |    |
| Neg. RQ           | 2.16  | 0.96  | 0.05  | 0.06  | 0.003   | 0.02  | 0.04    | 0.02    | –     | –     | –  |    |
| Anxiety           | 0.41  | 0.58  | 0.02  | 0.08  | –0.05   | 0.13  | –0.06   | –0.03   | 0.21**| –     | –  |    |
| Aca. Stress       | 1.79  | 1.18  | –0.08 | 0.15* | –0.08   | 0.07  | –0.04   | –0.10   | 0.25***| 0.48***| –  |    |
| Future Asp.       | 4.00  | 0.87  | –0.01 | 0.04  | –0.05   | 0.13  | 0.29    | 0.28*** | –0.12 | –0.20**| –24***| –   |

*Education, Pos Positive, Neg Negative, RQ Relationship Quality, Aca Academic, Asp Aspirations. Gender: 0 = Men; 1 = Women. Nativity: 0 = Born outside continental US; 1 = Born inside continental US. Mother’s Education: 1 = Some high school; 2 = High school; 3 = Some college; 4 = College; 5 = Graduate or professional school. Birth Order: 0 = Younger sibling; 1 = Older sibling

\(p < 0.05, \ ^*p < 0.01, \ ^{**}p < 0.001 \)
Aiken & West, 1991; Sibley, 2008) were conducted to probe the interaction (see Fig. 1). Findings indicated that for younger siblings who reported low levels of positive sibling relationship quality, $t(176) = 3.30, p < 0.01$, and for older siblings who reported high levels of positive sibling relationship quality, $t(176) = 5.37, p < 0.001$, the higher their anxiety, the greater their academic stress (Table 2).

In the model examining negative sibling relationship quality, the 3rd and 4th steps in this hierarchical linear regression were not significant and were dropped from further analyses. Results indicated that the 2nd step of the hierarchical linear regression was significant, $F(7, 180) = 10.04, p < 0.001, R^2 = 0.28$. There was a significant main effect of negative sibling relationship quality,
\[ \beta = 0.15, t(180) = 2.33, p < 0.05, \] such that higher negative sibling relationship quality was related to higher academic stress. There was also a significant main effect of anxiety, \[ \beta = 0.46, t(180) = 6.98, p < 0.001, \] such that higher anxiety was associated with higher academic stress.

**Associations with Future Aspirations**

The 4th step of the hierarchical linear regression examining positive sibling relationship quality was significant, \( F(11, 176) = 3.78, p < 0.001, R^2 = 0.19. \) In this model, a main effect emerged for mother education, \( \beta = 0.20, t(176) = 2.73, p < 0.01, \) such that the more education the participant’s mother had, the higher future aspirations reported by participants. Main effects also emerged for positive sibling relationship quality, \( \beta = 0.32, t(176) = 3.43, p < 0.01, \) and anxiety, \( \beta = -0.33, t(176) = -3.11, p < 0.01. \) These main effects were subsumed by a two-way interaction of positive sibling relationship quality x anxiety, \( \beta = -0.23, t(176) = -2.59, p < 0.05. \) This two-way interaction was further subsumed by a three-way interaction of positive sibling relationship quality x anxiety x birth order, \( \beta = 0.24, t(176) = 2.61, p < 0.05. \) Follow-up simple slopes analyses (Aiken & West, 1991; Sibley, 2008; See Fig. 2) indicated that for younger siblings with high levels of positive sibling relationship quality, \( t(176) = -3.69, p < 0.001, \) and for older siblings with low levels of positive sibling relationship quality, \( t(176) = -1.96, p = 0.05, \) lower anxiety was associated with higher levels of future aspirations.

In the model examining negative relationship quality, the 3rd and 4th steps in this hierarchical linear regression were not significant and were dropped from further analyses. Significant associations emerged in the 2nd step, \( F(7180) = 2.05, p = 0.05, R^2 = 0.07. \) A significant main effect emerged for mother education, \( \beta = 0.15, t(180) = 2.04, p < 0.05, \) such that the more education the participant’s mother had, the higher future aspirations reported by participants. A significant main effect also emerged for anxiety, \( \beta = -0.21, t(180) = -2.83, p < 0.01, \) such that higher anxiety was associated with lower future aspirations.

**Discussion**

Latinx student populations are growing within higher education settings (Fry, 2011) and the national population. Furthermore, Latinx students experience the highest rates of anxiety among all college students (Eisenberg et al., 2013; Holliday et al., 2016), fewer future aspirations compared to European-American students (Sirin et al., 2004), and stronger associations between academic stress and lower educational outcomes (Andrews & Wilding, 2004; Struthers et al., 2000; Torres & Solberg, 2001). Because of these considerations, it is important to explore factors that promote well-being within this population. The present study examined how sibling relationship quality for Latinx emerging adults moderates the association between anxiety and academic stress and future aspirations. These associations, however, were found especially with positive relationship quality and were dependent upon birth order.

As would be expected, high levels of anxiety, regardless of relationship quality with siblings or other individual characteristics, was associated with both greater academic stress and lower future aspirations. However, it was also the case that high negativity in sibling relationships was associated with higher academic stress regardless of birth order.
or gender of the student. Previous research indicates that negative sibling relationships can lead to negative implications for youth adjustment (Dirks et al., 2015), but our present study suggests that this can extend to the academic realm and remain important well into emerging adulthood.

According to Manzano-Sanches and colleagues (2019), siblings and parents acted as the most valuable support in their goals for higher education, both as a form of inspiration and source of advice. This suggests a strong potential role that siblings specifically might serve for Latinx college students. Our findings regarding the impacts of positive sibling relationship quality, however, suggest that these experiences can differ for older and younger siblings. While for all students, greater anxiety was associated with greater academic stress, for younger siblings this association was only significant when their relationships with siblings were lower in positivity, whereas high levels of positivity dampened this association and sibling positivity was protective. Conversely, for older siblings the association was stronger under conditions of high positivity with siblings. Therefore, positive sibling relationships were particularly beneficial to younger siblings, perhaps because they felt particularly supported by their older siblings. For older siblings, however, it appears that positive and supportive relationships with their younger siblings was almost an added burden when they were experiencing high levels of anxiety. Associations with future aspirations were more similar across birth orders, however. When younger siblings reported high levels of support and positivity with their older siblings, and had low levels of anxiety, they reported the highest levels of future aspirations, whereas low levels of sibling positivity had a significantly negative impact on their future aspirations. Additionally, older siblings with high levels of sibling positivity were relatively high in their future aspirations regardless of their level of anxiety, but high anxiety and low relationship quality was particularly detrimental to their future aspirations.

Consistent with Masten’s (2001) risk and resiliency framework and García-Coll et al. (1996) model of developmental competencies which suggest that the role of family and familial interactions serve as a protective factor even in the face of adversity, positive sibling relationships appear to aid Latinx college students’ future aspirations more generally and can help younger siblings in particular manage their academic stress. But the added burden of being an older sibling who is concerned with the wellbeing of their younger sibling may make it difficult for older siblings to navigate family obligations, anxiety, and academic stress. This may particularly be the case in this cultural context due to role that familism values play within Latinx families (Cauce & Domenech-Rodriguez, 2002; Marín & Marín, 1991).

Limitations and Future Directions

Several limitations existed in the present study despite its contributions to the current literature. Data from the present study were cross-sectional and examining these processes over-time would both give insight to these associations and investigate which developmental periods siblings may be most influential in protecting against negative outcomes. The present study would also benefit from exploring the differences between ethnic and racial backgrounds within the Latinx community along with including other gender identities, which may shed light on concerns specific to a wider variety of identities and experiences. By doing so, future studies could benefit from exploring how these associations are couched within the barriers of institutional and systemic racism along with other aspects of the current sociopolitical context (e.g., xenophobia, discrimination) that exist in university systems and campuses and contribute to Latinx student’s experiences of and vulnerability to anxiety, stress, and low feelings of support (Franklin et al., 2014; Gloria et al., 2012; Gore & Aseltine, 2003). It should also be noted that data for this study were collected prior to the COVID-19 pandemic, and intersections between anxiety, stress, and the pandemic could not be examined, but would likely be impacted. In addition, future studies may benefit from exploring the frequency in which siblings communicate and the directionality and quantity of which sibling is disclosing to whom.

Despite these limitations, our findings provide evidence that Latinx sibling relationships during emerging adulthood moderate the associations between anxiety, academic stress, and future aspirations, and that negative relationship qualities carry particular implications for future aspirations and academic stress. In accordance with our findings, it may be advantageous for universities to reinforce the role of family relationships, particularly relationships between college students and their siblings. Additionally, universities should endorse a more collective and communal university experience that will consider family functioning as an essential part of students’ learning. These steps may particularly benefit “non-traditional” students and provide supports during unpredictable life events. Similarly, this research can be used to advocate for academic resources for Latinx students nationally to provide access to quality education and equitable occupational opportunities.

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Compliance with Ethical Standards

Conflict of Interest The authors declare no competing interests.

Ethical Approval All procedures included in the study were in accordance with the ethical standards of the responsible committee on human experimentation (institutional and national) and with the Helsinki Declaration of 1964 and its later amendments.

Informed Consent Informed consent was obtained from all participants included in the study. Animal subjects were not used by any of the authors in this study.

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