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Cultural modes of conflict resolution, roommate satisfaction, and school belonging: The role of socioeconomic status in university peer relations

Rocio Burgos-Calvillo[a], **Yolanda Vasquez-Salgado**[b], **Patricia M. Greenfield**[c,*]

[a]UCLA, United States

[b]California State University, Northridge, United States

[c]UCLA, Harvard University, United States

Abstract

It is often assumed that ethnic differences are the source of cross-cultural conflict and misunderstandings in the United States. However, research indicates that socioeconomic differences, i.e., family ecologies, play an important role in producing cross-cultural value conflict between student peers in a university setting. Our prior research revealed two resolution styles: (1) a collectivistic strategy – maintaining interpersonal harmony by avoidance or implicit communication, or (2) an individualistic strategy – advocating for and expressing one's personal feelings via explicit communication. In a small qualitative study of first-generation university students from Latin American immigrant families, improved roommate relations resulted from use of the more individualistic strategy. The purpose of the present study was to extend this work by examining whether the positive role of explicit conflict resolution with dormitory roommates generalizes to a large diverse sample of university students in the United States and to examine the role of socioeconomic status, a key aspect of the ecological surround. By means of a survey of 347 first-year UCLA students, we explored the interrelations of socioeconomic status, conflict resolution style, roommate relations, sense of belonging in the university environment, and psychological distress. Socioeconomic status consisted of parent education and income, which were closely related. Being a first-generation university student (i.e., neither parent had a postsecondary degree) was, as predicted, associated with harmony-maintaining modes of resolving roommate conflicts. In accord with our earlier qualitative findings, these modes of conflict resolution were less effective than an explicit mode in producing satisfying roommate relations. Less satisfying roommate relations led, in turn, to a lower sense of belonging in the university environment and more psychological distress. This causal chain from first-generation university status to less satisfying roommate relations, a lower sense of belonging, and more

*Corresponding author. greenfield@psych.ucla.edu (P.M. Greenfield).

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Ethics statement

We received approval for our research procedures, including informed consent, from UCLA's Institutional Review Board.

psychological distress may help explain the prevalence of “imposter” syndrome among first-generation university students.

Keywords

Conflict resolution; Culture; Cultural values; SES; First-generation college students; First-generation university students; Peer relations; Roommate relations; Transition to college/university; School belonging

Introduction

Peer relationships are integral to the developmental journey of adolescents and young adults, particularly during transitional periods such as the move to university (Telzer et al., 2015; Demir and Urberg, 2004; Fass and Tubman, 2002; Burgos-Cienfuegos et al., 2015). Secure peer attachments in emerging adulthood are linked to lower levels of depression, reduced loneliness, and enhanced social competence (Holt et al., 2018). The impact of peer relationships extends to academic realms, influencing adjustment and grades (Altermatt and Broady, 2009; Buhs et al., 2006; Gest et al., 2008; Hamm et al., 2011; Kindermann, 2007; Swenson et al., 2008; Wentzel et al., 2014). Thus, the significance of peer relations lies in their potent effects, both positive and negative, on university student development and adjustment (Lightfoot et al., 2018).

University roommate relationships have particular significance for students’ social functioning and overall university experience because roommates often are the first nonfamily and equal-status individuals with whom students cohabit (Erb, Renshaw, Short, & Pollard, 2014). Living together involves frequent interactions, negotiation of responsibilities, and compromises related to the living environment. Unlike friendships, students typically don’t choose their roommates, leading to potential peer-peer cultural value mismatches (Vasquez-Salgado et al., 2023). Research indicates a considerable percentage of students report conflict with roommates, with a nationwide survey revealing that 50.1 % of women and 44.1 % of men experienced frequent or occasional conflict (Liu et al., 2008). This conflict is not without consequences, as 5.6 % of undergraduates reported that roommate difficulties adversely affected their academic performance, surpassing the impact of alcohol use (American College Health Association, 2019). These findings underscore the unique challenges and potential consequences associated with college roommate relationships, emphasizing the need for further exploration and support in navigating these dynamics.

Maintaining healthy peer relationships, is, however, contingent upon effective conflict resolution. Peer-to-peer relationships, like any others, encounter challenges that demand communication and resolution. Disparities in cultural backgrounds may complicate conflict resolution, as cultural values shape interpretations of behavior (Chen et al., 2006). In this study, we delve into the hypothesis that harmony-based conflict resolution modes during the university transition are prevalent among first-generation university students from low-income backgrounds and are detrimental for key social and psychological factors in the university context. More specifically, we hypothesized that first-generation university students from low-income backgrounds would report lower school belonging and greater

distress, mediated by poor roommate relations, a function of harmony-based conflict resolution modes.

Roommates: cross-cultural value conflicts

Peers constitute a vital source of educational capital, particularly for disadvantaged students, acting as a conduit to middle-class institutions (Gandara, 1995; Granovetter, 1973). However, cultural mismatch can impede interactions for first-generation college students. Our qualitative study suggested that first-generation Latin American university students at the University of California, Los Angeles (UCLA) often have more collectivistic values and practices than their roommates, producing cultural value mismatch and misunderstanding (Burgos-Cienfuegos et al., 2015).

This conclusion was based on discourse data from a series of focus group discussions. At UCLA, almost all first-year students live in dormitories on campus where they are assigned to live with roommates. Often, the roommates are from different ethnic and socioeconomic backgrounds. We found that the collectivistic cultural values of first-generation university students from immigrant families originating in Mexico and Central America conflicted with the more individualistic values of their roommate peers. These students were also from low-income backgrounds. Many students from these low-income immigrant families were disturbed by individualistic behavior on the part of their roommates (Burgos-Cienfuegos et al., 2015).

One form of cultural conflict or mismatch experienced by the first-generation university students from Latin American families was a failure of a roommate to reciprocate. Reciprocating help is a collectivistic behavior. Lack of reciprocation meant that students gave or offered a material item or a service to their roommate, but did not receive anything in return. One student said “I volunteer to do things for you because I understand we all need that helping hand…but then when I don’t get it back its just like…we had math and we’re both taking [it]…she had one resource that I needed and she heard me…struggling for it and she didn’t do anything about it…” (Burgos-Cienfuegos et al., 2015). Hence, the absence of helping behavior on the part of a roommate was disturbing to students who held more collectivistic values. Vasquez--Salgado et al. (2023) followed up this qualitative study with two large-scale surveys. The first one revealed that a substantial percentage of participants experienced value conflicts with roommates holding different cultural approaches. Being a first-generation university student was the main factor that related to students’ likelihood of experiencing reciprocation mismatch. How students resolve these mismatches is the focus of the current study.

The role of social class

In the second study, the authors surveyed roommate pairs and found that social class differences in parental education between dormitory roommates played a role in students’ experiences with reciprocation mismatch, with students of lower parental education than their roommate reporting significantly more mismatch than students whose parents had higher education levels than their roommates’ parents (Vasquez-Salgado et al., 2023). Again,

we follow up this finding in the current study by exploring social class differences in modes of conflict resolution to deal with cultural mismatch between roommates.

The finding concerning social class differences suggests that when students come from less educated family backgrounds than their roommates, they are susceptible to cultural value mismatch in the area of reciprocating help, with negative consequences for psychological and academic well-being. In contrast, their roommates from more educated and individualistic family backgrounds are not disturbed by a failure to reciprocate help – that is, the violation of a collectivistic norm. Together these findings showed that only the lower-SES member of the roommate pair was affected by the mismatch; and this pattern was in line with the theoretical orientation that generated the present study.

Because of this asymmetry in the reaction to reciprocation mismatch on the part of the lower and higher SES roommate, it was necessary to develop difference scores for each roommate individually. This procedure allowed the research team to code not just the magnitude of educational difference between the two sets of parents but whether their parents had higher or lower education levels than their roommates. Therefore, analyses could not simply use difference scores for the pair as a whole, but had to use separate difference scores for each member of the pair, as the direction of the absolute educational difference (higher or lower) would differ for each roommate. Hence Vasquez-Salgado et al. (2023) provides the precedent, as well as the theoretical and empirical rationale for using individuals rather than pairs as the unit of analysis in the present study.

Theoretical framework

Our theoretical framework is Greenfield's theory of social change, culture, and human development (Greenfield, 2009). In this theory, social class differences, which create particular ecologies, are a determinant of cultural values rather than a variable to be disentangled from culture (Greenfield, 2009). The theory posits that collectivistic practices and values are adapted to ecologies in which formal education is limited and material resources are low – an ecology experienced by the parents of first-generation university students. In such an ecology, survival depends on maintaining harmony in order to work together. One expression of this value is that first-generation students often have collectivistic motivations for attending university, where they meet a very individualistic value system (Stephens et al., 2012; Vasquez-Salgado et al., 2021).

In contrast, individualistic practices and values are adapted to ecologies in which opportunity for formal education is great. One reason for this is that, in school, achievement is basically an individual matter. This is the ecology experienced by the parents of continuing generation university students, and the university environment itself.

Conflict resolution strategies

In the U.S., conflict resolution often involves confrontation, whereas collectivistic cultures prioritize interpersonal harmony, opting to avoid conflict (Markus and Lin, 1999). We hypothesized that first-generation university students might try to resolve such conflicts by engaging in conflict resolution styles aligned with their collectivistic values. One collectivistic value is the maintenance of interpersonal harmony, where the goal is to

preserve harmony and avoid confrontation. A more individualistic mode of conflict resolution is to be explicit about the problem, where the goal is to resolve the issue at hand through explicit discussion or, in other words, confrontation.

In our qualitative focus-group study, our team found that many students from a Latin American immigrant background did indeed avoid explicit confrontation of the issues. However, we also found that more positive consequences for roommate relations resulted when students utilized explicit styles of conflict resolution, a more individualistic strategy, than when they engaged in avoidant or implicit forms of communication to resolve the conflict (Burgos-Cienfuegos et al., 2015).

Based on our qualitative findings with first-generation Latin American students, the current study focused on modes of conflict resolution and their implications for roommate satisfaction and sense of school belonging. We hypothesized that the collectivistic value placed on maintaining interpersonal harmony would result in a non-confrontational, avoidant conflict-resolution style on the part of first-generation students in a large, ethnically diverse sample of UCLA undergraduates. Furthermore, we hypothesized that this mode of conflict resolution would, in turn, lead to less satisfying roommate relations, a lower sense of school belonging, and a higher level of distress. We now turn to school belonging and psychological distress.

Sense of school belonging and psychological distress

A robust body of research underscores the pivotal role of a sense of belonging in contributing to psychological well-being and reducing psychological distress (Arslan, (2018)). This association prompts continued exploration of factors influencing sense of school belonging, especially for historically marginalized students at risk of feeling disconnected (Covarrubias and Fryberg, 2015).

Current study

While extensive research examines family, peer, and school factors in student behavior, the role of socioeconomic status (SES) in peer relations and its impact on school belonging remains understudied. Summarizing our predicted model, we hypothesized that first-generation university students from low-income backgrounds would report lower levels of social belonging and higher levels of psychological distress and that this relationship would be mediated by less satisfying roommate relations, which are a function of harmony-maintaining modes of conflict resolution.

Our qualitative study suggested the superiority of an explicit mode of conflict resolution for improving roommate relations for first-generation students from Latin American immigrant families (Burgos-Cienfuegos et al., 2015). Our present study explores the extent to which this mode of conflict resolution is more typical of continuing-generation students than first-generation students. We also ask whether the positive effects of the explicit mode of conflict resolution suggested by the focus group study are confirmed by a large-scale quantitative study; whether they generalize beyond first-generation Latin American students to a diverse sample of university students; and whether more satisfactory roommate relations yield a greater sense of school belonging and lower psychological distress. Finally, we explore the

direct relationship of first-generation status with roommate satisfaction, school belonging, and psychological distress.

In sum, a major goal of the current study is to investigate three new questions:

1. Is there a difference in mode of conflict resolution, roommate satisfaction, roommate conflicts, school belonging, or psychological distress between first-generation and continuing generation students?
2. What is the relationship between modes of conflict resolution and roommate satisfaction?
3. How does roommate satisfaction relate to school belonging and psychological distress?

A second goal was to integrate evidence on these questions into a novel model that would indicate cause and effects of conflict resolution strategies.

Hypothesized model

Based on the introduction, candidate sociodemographic variables for predictor variables were first generation status and low family income. We expected that first-generation status and/or low family income would predict a harmony maintaining mode of conflict resolution. We expected that a more explicit mode (rather than harmony-maintaining modes) of conflict resolution would then predict greater satisfaction with roommate relations. Lastly, we hypothesized that, in turn, more positive relations with one's roommate would predict a greater sense of belonging in the university environment and less psychological distress.

Alternative variables and relationships that were explored

We compared two models to see whether less psychological distress predicted a greater sense of belonging in the university environment or whether a greater sense of belonging lowers distress. We also explored whether collectivistic motives to attend university would mediate between the sociodemographic characteristics of first-generation status/low family income and harmony-maintaining mode of conflict resolution. Lastly, we considered whether first-generation status, family income, or Latin American ethnicity should serve as our independent variable in the model.

Method

Participants

Our sample for all analyses consisted of 347 undergraduate students enrolled in their first year of study at UCLA. This sample resulted from combining datasets from the two studies reported by Vasquez-Salgado et al. (2023) and described earlier. Secondary data analysis was then carried out for the research reported here.

The overwhelming majority of participants were first-time freshmen; a small minority were transfer students. All participants lived on campus in the dormitories. At UCLA, most first-year students live in the dorms, although they are not required to do so. The mean age of participants was 18.7 years (SD=0.67); hence, virtually the whole sample was in the

normative period for entering the university for a bachelor's degree. Most participants were female (70.9 %) and 34.1 % of the participants were first-generation university students. The majority of students in our sample were from Asian (33.8 %), Latin American (currently termed Latinx in U.S. academia) (26.3 %), and European American backgrounds (24.0 %). Black/African American participants comprised 3.2 %; Persian or other Middle Eastern comprised 2.6 %; Mixed 9.2 %; and Other 0.9 %.

Students were recruited towards the end of their first year of university at the University of California, Los Angeles (UCLA) via flyers posted throughout campus, the Psychology Department subject pool, social media, and direct email. Ninety-five percent had lived with their roommates since the beginning of the school year.

In Study 1, the only criterion to join the study was that participants be in their first year of study at UCLA and age 18 or older. For Study 2, participants were told that they would be invited if they and their roommate completed an online prescreening survey and were both freshmen. Hence participants coming from Study 1 were recruited individually, whereas those coming from Study 2 were recruited in roommate pairs. Nonetheless, in some cases, only one roommate participated in Study 2. As in Vasquez-Salgado et al. (2023), each roommate in a pair was entered into the database as an individual participant. Techniques of dyadic analysis had already been considered, e.g., the Actor-Partner Interdependence Model (Vasquez- Salgado et al., 2023). However, the sample size at the pair level (n = 76 roommate pairs) was not sufficient for rules of thumb that call for at least 100 dyads (Kline, 2011). In addition, our hypotheses dealt with individual-level (within-individual) effects rather than the roommate-level (within-dyad) effects; and so we measured parent-education differences as they were experienced by each individual roommate. The introduction provides more details concerning the theoretical and empirical rationale for treating roommates as individuals in our data analysis. Treating roommates as individuals was also supported by the finding of Eisenberg et al. (2014) that most behaviors are uncorrelated in roommate pairs. Hence theoretical and empirical considerations all pointed to the validity of utilizing scores for each individual participant in a roommate pair. As a consequence, the two samples could be combined and a larger sample created.

Procedure

Participants were invited to participate by a direct email. The email included a link to the online survey. In the case of Study 2, roommate dyads were encouraged to take the survey independently of each other and not to share their responses with one another. All participants were told that their survey responses would be completely confidential. Participants from the Study 1 dataset received either class credit for participating in the study or movie tickets. Participants from the Study 2 dataset received $10 cash for participating in the study as well as a $10 cash bonus if both roommates completed the survey. Thus, in Study 2, the total possible compensation for each participant was $20 cash. All procedures were approved by the UCLA Institutional Review Board.

Measures

First-generation and continuing-generation university student status—Students were considered first-generation university students if they came from households where neither parent had received a postsecondary degree (coded 1). Students who were considered continuing-generation university students came from households where at least one parent had received a postsecondary degree (coded 0).

Parental income—Participants were asked their parents' combined yearly income. The following scale points were used for almost all analyses: Less than $10,000; $10,000-$19,999; $20,000-$29,999; $30,000-$39,999; $40,000-$49,999; $50.000-$59,999; $60,000-$69,000; $70,000-$79,000; $80,000-$89,999; $90,000-$99,000; $100,000-$149,000; more than $150,000.). For the structural equation model, these scale points were divided in half to make a binary variable. Up to $59,999 yearly income was considered low income. From $60,000 up was considered middle/high income.

Collectivistic motivation for attending university—A six-item measure captured students' collectivistic values in this domain (Stephens et al., 2012; Vasquez-Salgado et al., 2021). Students were asked to rate, on a five-point scale, the extent ("Strongly Disagree" to "Strongly Agree") to which they agreed with statements such as, "I decided to attend college so that I can help my family out after I'm done with college." (Note that "college" in the U.S. is equivalent to "university" in Europe, the term used elsewhere in this article.) The items yielded a Cronbach's alpha of 0.85.

Psychological distress—A six-item measure captured students' feelings of distressed mood since they started UCLA (Huynh & Fuligni, 2010; Vasquez-Salgado et al., 2023). Students were asked to rate the extent (1 = Not at all to 5 = Extremely) to which they felt "on edge", "nervous", "uneasy", "sad", "hopeless" and "discouraged" DURING YOUR FIRST YEAR AT UCLA (capital letters were part of the questions and emphasized the time scale). The Cronbach's alpha for the scale was 0.89.

Mode of conflict resolution—Participants were asked to answer how they resolved a group of specific cultural conflicts (For the complete list see Vasquez-Salgado et al., 2023 and/or the Appendix). Listed conflicts included items such as the following: "I showed support to my roommate when needed but he/she did not reciprocate support when I needed it"; "I often found myself helping my roommate with things that he/she needed more than he/she did for me". Alternative modes of conflict resolution were: "I didn't do anything about it," "Gave them a sign or hint that it bothered me but didn't actually tell him/her," "Explicitly communicated to him/her that it bothered me." In addition, participants could select "Not Applicable" or "Other". Mode of conflict resolution is a simple construct and therefore a single item measure was used. Past work demonstrates that, for a narrow behavioral construct (e.g., how respondents resolve conflict), a single item measure may be adequate (Fuchs & Diamantopoulos, 2009). A total of 256 participants reported a mode of conflict resolution. A total of 91 participants had missing responses, reported "Not Applicable," or reported "Other".

The three-point scale goes from most implicit ("I didn't do anything about it") to most explicit ("Explicitly communicated with them that it bothered me"), with a "sign or hint" at the midpoint of the scale. This one-item conflict-resolution measure is based on the different ways that students were found to resolve conflict in the qualitative study summarized above (Burgos-Cienfuegos et al., 2015). However, in that study, only the explicit mode contributed to positive roommate relations. In contrast, Modes 1 and 2 were both considered harmony-maintaining strategies. On the basis of the significant correlation of the binary measure, but not the three-point measure, with first-generation university status, we decided to use the two-point scale (harmony--maintaining [coded as 1] vs. explicit [coded as 2]) in our model.

Satisfaction with roommate—A four-item measure captured students' overall satisfaction with their roommate. Students were asked, on a nine-point scale, to rate the extent ("Not at all" to "Very") to which they agreed with statements such as 'I have a very strong relationship with my roommate. The other three items are found in the Appendix. " The four items were summed to form one overall score. The Cronbach's alpha for the measure was 0.95.

School belonging—A seven-item measure captured students' overall sense of belonging at their institution (Gillen-O'Neel & Fuligni, 2013; Tyler & Degoey, 1995). Students were asked, on a five-point scale, to rate the extent ("Strongly disagree" to "Strongly agree") to which they agreed with statements such as, "I feel like I am part of my school." The Cronbach's alpha for the measure was 0.85.

Sociodemographic and cultural features of the sample—Prior research with a subset of this sample had established significant intercorrelations among Latin American ethnicity, first-generation university student status, low parent income, and collectivistic motives for attending university (Vasquez-Salgado et al., 2021). T-tests with the full sample utilized in this study confirmed these associations: The families of first-generation university students had a significantly lower parental income than the families of continuing-generation university students ($t = 16.01$, $df = 337$, $p < .001$, $d = 1.83$). This effect size means that 96 % of the families of first-generation university students are below the mean income of the families of continuing-generation university students (Zach, 2020). Another way of thinking about the two ecological niches is in terms of contrasting mean income. The mean parental income of first-generation students was between $30,000 and $39,999; in sharp contrast, the mean parental income of continuing-generation students was between $80,000 and $89,000. Collectivistic motives for attending university were significantly higher among first-generation than continuing-generation students ($t = 7.87$, $df = 242.9$, $d = 4.85$, $p < .001$)

Data analytic plan—We begin with some descriptive statistics. We present *t*-tests to establish differences between first-generation and continuing-generation university students. We use a binomial test to explore educational differences in family background between different ethnic groups.

Following these sections, we present a correlation matrix that identified variables that were good candidates for the Structural Equation Model (SEM). Following Pearl (2009), we interpret our SEM as a causal model.

In our study, we employed the latest version of the R programming language to construct a robust structural equation model (SEM). R, known for its versatility and extensive statistical functionalities, allowed us to develop a comprehensive SEM that incorporated multiple variables and complex relationships within our dataset. Notably, one of the strengths of our modeling approach was the utilization of Full Information Maximum Likelihood (FIML) estimation in R. FIML is particularly advantageous in handling datasets with missing values, ensuring that the SEM is estimated using all available information without the need for data imputation. R's capacity to seamlessly manage missing data through FIML contributed to the reliability and integrity of our structural equation model, allowing for a more accurate representation of the underlying relationships among the variables under investigation.

Several studies have recommended 100 to 150 participants as the minimum sample size for structural equation models (Ding et al., 1995); our sample size of 347 greatly exceeds this minimum. Additionally, Bentler (2006) suggested that a saturated model with p variables has $p(p + 1)/2$ free parameters to be estimated. In the current study, we began with $p = 6$ observed variables in the model, resulting in 21 parameters to be estimated. Bentler and Chou (1987) suggested a sample size of 5–10 participants to number of free parameters ($21 \times 10 = 210$); our sample size of 347 greatly exceeds their recommendation.

Results

Ethnicity

Both first-generation and continuing-generation students are spread over multiple ethnic groups. Table 1 shows the distribution of self-identification selections. The sample selecting Hispanic/Latino ethnicity has the highest percentage of first-generation university students (79 %). A binomial test indicates that this proportion exceeds what would be expected by chance at the 0.00000007 level of significance. All other groups contain a majority of continuing-generation students, with the highest concentration in the European American group. A. binomial test indicates that the proportion of continuing-generation students in the European American sample (92 %) exceeds what would be expected by chance at the 0.00000004 level of significance. Lastly, the proportion of continuing-generation students among those selecting Asian/Asian American identity (75 %) also exceeds what would be expected by chance, at the 0.00000002 level of significance.

As a result of the findings in this table, Latinx ethnicity was created as a dummy variable and tried out in place of university generation status in the model shown in the figure. What happened will be explained when the model is presented at the end of the Results section.

The goal of these more descriptive sections is to lay the groundwork for generalizing about the effects of social-class differences in education and income across multiple ethnic groups.

Gender

No gender differences were predicted in roommate satisfaction, collectivistic motivation, conflict resolution strategies, general distress, or school belonging. Only one gender difference was found: analysis of variance revealed that females expressed significantly more general distress than males.

Modes of conflict resolution

We found a range of modes of conflict resolution in the sample. Among participants who provided a conflict-resolution style (N = 256), 29.3 % of participants (N = 75) reported "not doing anything about it;" 28.9 % of participants (N = 74) reported "giving a sign or hint that it bothered them but didn't actually tell them;" and 41.8 % (N = 107) reported choosing to "explicitly communicate to their roommate that it bothered them." For our statistical analyses, the first-two modes were combined into a variable called harmony-maintaining strategies for reasons explained earlier in the Method section; harmony-maintaining strategies were utilized by 58.2 % (N = 149) of the participants who provided a conflict-resolution style.

Differences between first-generation and continuing-generation university students

Question 1: Is there a difference in mode of conflict resolution, roommate satisfaction, school belonging, or psychological distress between first-generation and continuing generation students?—Table 2 answers our first question. Continuing-generation students, as expected, used more explicit modes of conflict resolution, compared with first-generation students, However, contrary to expectation, there was no significant difference between the two groups in overall roommate satisfaction. As expected, a sense of school belonging was significantly higher in continuing-generation students, whereas distress was significantly higher in first-generation students.

Correlations among potential model variables

Zero-order correlations for potential variables to be used in structural equation modeling are shown in Table 3. These correlations are used to support our choice of variables for the integrated model.

A crucial connection in our theoretical framework was between social class and mode of conflict resolution. We had two measures of social class, family income and parent education. Students from families where neither parent had received a postsecondary degree were first-generation university students. Those students from families where at least one parent had received a postsecondary degree were continuing-generation students. The table shows that these two social-class measures - coming from a low-income family and first-generation university student status - are very highly intercorrelated (0.61). Therefore, it made sense to select one for the social-class variable used in the structural equation model. First-generation university student status was significantly correlated with harmony-maintaining modes of conflict resolution; income was not. We therefore selected university generation rather than income for the structural equation model, to be presented at the end of the Results section. As a further check on this choice, income was substituted for first-generation university status in the model. The result of this substitution is presented in the below section on the integrated model.

Although collectivistic motives for attending university did not correlate with more harmony-maintaining modes of conflict resolution (r = .05, $p = .35$), we did in fact try the predicted model that included collectivistic motives to attend university as a mediator between first-generation student status and mode of conflict resolution. The model did not

converge; and both a LaGrange multiplier test and a Wald test indicated that collectivistic motives to attend university should be deleted from the model. For all these reasons, collectivistic motivation was deleted from the model. We think the reason why collectivistic motives for attending college had to be deleted from the model is because they are so strongly related to first-generation student status that this variable does not pick up enough additional variance in the model.

Question 2: what is the relationship between modes of conflict resolution and roommate satisfaction?—Table 3 shows a highly significant positive correlation between an explicit way to resolve conflict and more satisfactory roommate relations. Looked at the other way around, harmony maintaining strategies were associated with less satisfactory roommate relations.

Question 3: how does roommate satisfaction relate to a sense of school belonging and psychological distress—Table 3 shows that greater roommate satisfaction was significantly associated with both greater school belonging and lower psychological distress. In the model we explore whether roommate satisfaction predicts a sense of belonging that, in turn, leads to a lower level of distress; or alternatively, whether roommate satisfaction reduces distress, eventually leading to a greater sense of belonging.

Integrated model

Having used correlation patterns to select variables for the model and having explored alternative models, we present the best structural equation model in Fig. 1. Notably, we tested an alternative model with the binary measure of parental income in place of first-generation status and a second alternative model with a binary measure of ethnicity (dummy variable of Latin American ethnicity) in place of first-generation student status. The overall fit, as measured by the Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA) did not differ whether income or first-generation/continuing-generation status was used as an independent variable. However, only first-generation/continuing-generation status yielded a statistically significant and theoretically important link between roommate satisfaction and school belonging. We also tried out a model that reversed the relationship shown in Figure 1 between belonging and distress. The overall model fit just as well as the model shown in Fig, 1 (CFI = 1; RMSEA = 0). However, this alternative model lacked the important statistically significant connecting link between higher roommate satisfaction and lower distress. Hence, comparison with a number of alternative models confirmed that the model shown in Fig. 1 furnished the most coherent picture of the data.

Using Maximum Likelihood (ML) estimation, we utilized version 4.3.2 of RStudio for Windows. The path model (Figure 1) fit the data well, chi-square (1, N = 347) = .851, p = .356, CFI = 1.00, RMSEA = .00. For chi-square, a non-significant p-value (typically greater than 0.05) indicates that the model fits the data well (Byrne, 2006). In this case, the p-value is greater than 0.05, suggesting that the model fits the data reasonably well according to the chi-square test. A CFI close to 1 indicates a good fit. An RMSEA close to 0 indicates a good fit, with values below 0.05 typically considered very good (Byrne, 2006).

Overall, based on the chi-square test, CFI, and RMSEA values, it appears that the model fits the data well. Replacing first-generation/continuing-generation status with Latin American ethnicity as a dummy variable produced the same set of significant links as first-generation status, but the fit was not quite so good (CFI= .994, RMSEA = .045), most notable in the higher chi-square value of 1.702 (p = .192). In sum, this pattern of findings indicated that first-generation/continuing-generation status as independent variable provided the most coherent picture of causal relations.

Regression coefficients in Fig. 1 revealed expected associations among variables: a positive relationship between overall roommate satisfaction and explicit conflict resolution; a negative association between school belonging and first-generation university status; and a negative link between distress and school belonging. Additionally, a negative covariance was observed between explicit conflict resolution and first-generation university status. Overall, the model provides a comprehensive understanding of the relationships and fit indices.

We see in Fig. 1 that being a first-generation university student significantly predicted greater psychological distress. Most central to our study, a more explicit mode of conflict resolution predicted significantly greater roommate satisfaction. Roommate satisfaction and school belonging also served as mediators (Fig. 1). A mediated or indirect effect is when one variable predicts another variable through one or more intervening mediating variables (Kline, 2011). There was a significant indirect effect of resolution styles on sense of school belonging. This indirect effect is explained by a causal pathway through the intervening variable of roommate satisfaction (Bootstrapped unstandardized indirect effect = .40; 95 % confidence interval from .10 to .86 - confirming overall roommate satisfaction as a statistically significant mediator between explicit conflict resolution and school belonging). In other words, a more explicit style of conflict resolution predicted better roommate relations. Better roommate relations then predicted greater school belonging, which, in turn, led to lower distress (Bootstrapped unstandardized indirect effect of school belonging = −.04; 95 % confidence interval ranged from −.06 to −.012 – confirming school belonging as a statistically significant mediator between roommate satisfaction and distress). In addition, the model in Fig. 1 indicates that, independent of roommate relations, first-generation university students experience greater psychological distress and less school belonging, in comparison with continuing-generation students.

Discussion

Our findings illuminate a range of approaches to resolving conflict stemming from culture mismatch. While no single conflict resolution method is inherently superior, the effectiveness of these methods can vary in different environments. Explicit communication emerges as crucial when resolving conflicts between individuals from different social-class ecologies (Burgos-Cienfuegos et al., 2015). This approach helps mitigate negative assumptions that might adversely impact relationships, especially in the context of the university’s diverse student body. Indeed, we showed in a large-scale study that this principle held across a variety of ethnic groups.

The university environment necessitates explicit conflict resolution methods to foster positive roommate relations, which, in turn, can enhance a sense of school belonging and alleviate psychological distress, particularly vital for students from low socioeconomic backgrounds. Addressing conflicts between roommate peers requires a nuanced approach, acknowledging and accommodating cultural differences in attitudes toward conflict resolution.

It is essential to persist in investigating the impact of peer relations on student adjustment and development, considering the social-class characteristics that shape these relationships in a diverse university environment. Such research holds significant implications for narrowing the education achievement gap. The importance of positive roommate relationships cannot be overstated, as, for many students, this may be their primary exposure to real diversity on campus. Ensuring these experiences are positive is crucial to preventing the reinforcement of divisive stereotypes and cultural misunderstandings.

We plan to communicate our research findings to Residential Life staff at UCLA as a crucial step in initiating discussions and actions to address structural barriers. By engaging with Residential Life staff, who play a pivotal role in shaping the living environment, we aim to create awareness and promote strategies that enhance constructive conflict resolution, roommate relations, and a sense of school belonging. Moreover, we acknowledge the adaptive necessity of explicit communication in a culturally diverse environment. Beyond power relations, the diverse cultural backgrounds of students contribute to varied communication styles, and recognizing this diversity is fundamental for creating an inclusive atmosphere. Our commitment extends to further research and the implementation of interventions that promote positive peer relations, contributing to a more inclusive and supportive university environment for all students.

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Author note

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Data availability

Data will be made available on request.

Appendix

Online Survey Questions Used in this Article

Note: Q6 is the selected roommate.	
Background Questions	Where do you currently reside/live? ○ UCLA dorms ○ With my parents ○ Off campus with relatives (not parents) ○ Off campus with friends ○ Other (please specify) I lived with {{Q6}} since..... ○ Summer ○ Fall Winter ○ Spring ○ Other (please specify) What Is your age? What Is your gender? ○ Male ○ Female ○ Other My ethnicity is.... ○ Asian or Asian American, including Chinese, Japanese, Vietnamese, Filipino and others ○ Black or African American ○ Hispanic or Latino, including Mexican American, Central American and others ○ European American ○ Native American ○ Persian or other Middle Eastern What is the highest level of education your mother completed? What is the highest level of education your father completed? How much is your parents' combined yearly income?
Reported Conflicts (The reference for this measure is: Vasquez-Salgado, Y., Greenfield, P. M.,Guan, S. A., Gonzalez, L, & Tarlow, D. A. (2023). Peer-peer cultural value mismatch in the dormitory during the transition to college: Antecedents and correlates. *Journal of Intercultural Communication & Interactions Research, 2*(1), 37–54.https://doi.org/10.3726/jicir.2022.1.0004)	During the time your roomed with {{Q6}}, lease state how often you experienced the following with him/her... Never Rarely Sometimes Frequently • I purchased items (e.g., food, snacks) that I offered to my roommate but he/she never did the same for me • When going somewhere (e.g., store, coffee shot), I asked my roommate if he/she wanted/needed anything but he/she never did the same for me • I shared academic resources with my roommate (e.g., notes, books), but he/she never reciprocated the same for me • I showed support to my roommate when needed but he/she did not reciprocate support when I needed it • I often found myself helping my roommate with things that he/she needed more than he/she did for me • My roommate used my personal items (e.g., shampoo, food) without replacing them

	• My roommate used my personal items (e.g., dishes) and didn't clean them
	• I often found myself clearing common areas (e.g., restrooms, trash) that my roommate and I both used because he/she never helped clean up
	• My roommate made a lot of noise (e.g., watches television, talks on the phone) when I would try to study
	• My roommate did things that disrupted my sleep (e.g., turned on lights, made noise, brought people over)
Conflict Resolution Mode	During the time you roomed with {{Q6}}...when you experienced any of these situations with him/her, how did you typically handle it?
	○ I didn't do anything about it
	○ Gave them a sign or hint that it bothered me but didn't actually tell him/her
	○ Explicitly communicated to him/her that it bothered me
	○ Not Applicable
	○ Other
Overall Roommate Satisfaction	Please rate the extent to which you agree with the following things regarding your roommate {{Q6}}
	0 Not at all---8 Very
	• I am extremely happy with my roommate
	• I have a very strong relationship with my roommate
	• My relationship with my roommate is very rewarding
	• I am satisfied with the relationship I have with my roommate
Distress	Please rate the extent to which you felt each of the following ways DURING YOUR FIRST YEAR AT UCLA:
	Not at all A little Moderately Quite a lot Extremely
	• On edge
	• Nervous
	• Uneasy
	• Hopeless
	• Sad
	• Discouraged
Collectivistic Motivation for Attending University	Participants used the following 5-point scale to rate items in the next two measures:
	Strongly Disagree Disagree Somewhat agree Agree Strongly Agree
	I decided to attend college so that I can...
	• Help my family out after I'm done with college
	• Bring honor to my family
	• Be a role model for people in my community
	• Show that people from my background can do well
	• Give back to my community
	• Provide a better life for my own children
School Belonging	Please indicate how much you agree with the following statements (regarding UCLA)...
	• I feel close to people at my school

	• I feel like I am part of my school • I am happy to be at my school • My school is important to the way I think of myself as a person • I feel a sense that I personally belong at my school • I feel like a valued member of my school • I do not feel like an important part of my school (reverse coded)

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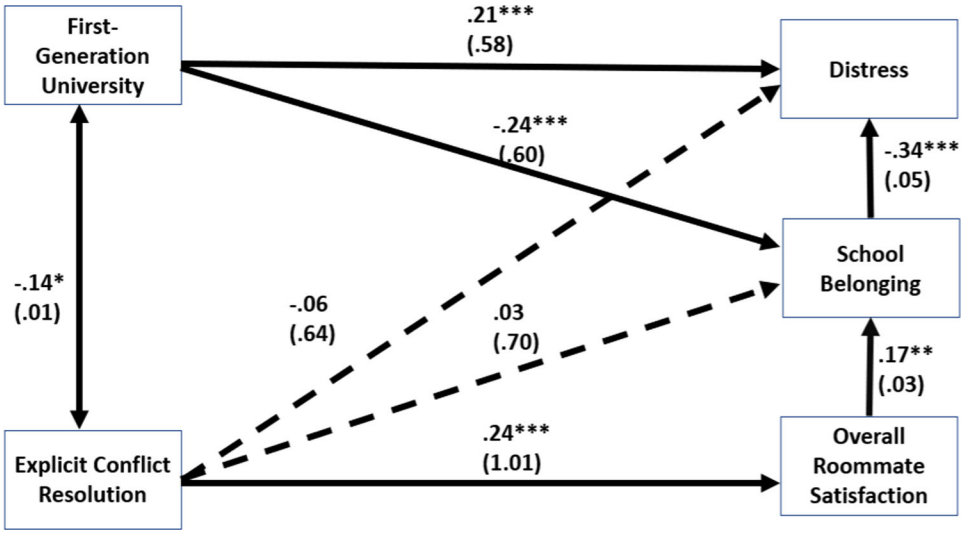

Fig. 1.

Model of relationship of social class background, mode of conflict resolution, roommate satisfaction, psychological distress, and school belonging. Included are standardized estimates (with standard errors); p<.001***, p<.01** p<.05*. Solid lines indicate statistically significant links. Dotted lines indicate nonsignificant links.

Table 1

Number of first-generation and continuing generation students self-identifying as members of different ethnic groups.

Ethnicity	First-Generation	Continuing-Generation
Asian/Asian American	29	88
Black/African American	4	7
Hispanic/Latino	71	20
European American	7	76
Persian or Other Middle Eastern	0	9
Mixed	6	26
Other	1	2

Note. One student did not provide ethnicity information, so the total N in the table is 346 rather than 347.

Table 2

Comparison of First-generation and Continuing-generation Students

	First generation		Continuing generation	SD	*t*	df	*P*
	M	*SD*	*M*	SD			
Explicit conflict resolution[a]	1.32	.5	1.46	.5	2.18	189.5	<.001
Overall roommate satisfaction [b]	28.00	9.0	29.44	8.3	1.43	220.5	0.15
School belonging [c]	22.53	5.4	25.45	5.3	4.80	237.1	<.001
Distress [d]	18.06	5.6	14.53	5.1	5.59	211.5	<.001

Note: Survey questions yielding each variable are presented in the Appendix

[a] 2-point scale

[b] 36-point scale

[c] 35-point scale

[d] 30-point scale

Table 3

Correlations for Key Variables.

Variable	1	2	3	4	5	6
Overall Roommate Satisfaction	-	.24^{c}	− 0.07	.19^{b}	− 0.17^{c}	.01
Explicit Conflict Resolution	.24^{c}	-	− 0.13^{a}	.09	− 0.11	−.01
First-Generation University	− 0.07	− 0.13^{a}	-	− 0.22^{c}	.29^{c}	− 0.61^{c}
School Belonging	.19^{b}	.09	− 0.22^{c}	-	− 0.38^{c}	.27^{b}
Distress	− 0.17^{b}	− 0.11	.29^{c}	− 0.38^{c}	-	− 0.24^{c}
Income	−.01	.01	− 0.61^{c}	.27^{c}	− 0.24^{c}	-

Note: University Generation Status: First-generation university student (coded as 1) vs. continuing-generation university student (coded as 0); Resolution modes: (coded 1 for harmony maintaining modes) vs. explicit conflict resolution mode (coded 2).

$^{a}p < .05$.

$^{b}p < .01$.

$^{c}p < .001$.