A BRIEF INTERVENTION DESIGNED TO IMPROVE SOCIAL AWARENESS AND SKILLS TO IMPROVE LATINO COLLEGE STUDENT RETENTION

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The purpose of this study was to examine the effectiveness of the Latino Educational Equity Project (LEEP), a brief intervention designed to enhance college retention by increasing social awareness and skills for Latino students at three, predominantly White universities in the Pacific Northwest. Participants were 40 students who completed the intervention and 41 students in a no-treatment control condition. Results of MANCOVA and ANCOVA analyses demonstrated partial success for the program with LEEP participants demonstrating significantly improved social adjustment to college and critical consciousness development. Implications are discussed.

It is widely known that Latinos are the fastest growing ethnic group in the United States and at 41.3 million, account for 14% of the total U.S. population (as of 2004, U.S. Census Bureau, 2004). What may be less known is that only 11% of Latinos hold a bachelor’s degree in comparison to 34% of Whites (ages 18-24; U.S. Census Bureau, 2004). This educational disparity is alarming in light of the growing Latino population in the U.S. and the consequent economic and health needs of this population.

Researchers have identified a number of academic and social challenges commonly experienced by Latino college students in educational attainment. These challenges include lower expectations from teachers and peers (Martinez & Klopott, 2003; Yosso, Smith, Ceja, & Solorzano, 2009), being the first in one’s family to attend college (Ginorio & Huston, 2001; Pew Hispanic Reports, 2002), and more ambiguous factors such as learning to navigate the cultural environment of college (Gloria & Robinson-Kurpius, 1996; Gloria, Castellanos, & Orozco, 2005; Villalpando, 2003). Many Latino/a students are initiating college with no prior knowledge of how to successfully persist and complete college and have limited experience with or family information about how to deal with academic and social stressors that contribute to attrition. Also, research has shown that Latino students are less likely to seek out professional services for emotional support when they experience challenges in college, especially at predominantly White institutions (PWIs; Kearny, Draper, & Barón, 2005; McMiller, & Weisz, 1996).

Given the numerous challenges experienced by Latino students, positive factors that lead toward academic success must be identified and interventions that enhance and build on these positive factors should be tested. Intervention research has found that within the college environment, for
example, mentoring (e.g., Bordes & Arredondo, 2005; Santos & Reigadas, 2002) and peer support (e.g., Battencourt, Charlton, Eubanks, Kernahan, & Fuller, 1999; Hernandez, 2000; Rodriguez, Bingham Mira, Morris & Cardoza, 2003) play important, positive roles in advancing Latino educational achievement. Mentoring has been found to help in college adjustment by helping students gain knowledge about resources on campus and improving their self-esteem (Santos & Reigadas, 2002). Peer support has been found to enhance adjustment, especially when peers support students’ social and academic needs and share social identities (Battencourt, et al. 1999). For example, through interviewing Latino college students, Hernandez (2000) found that Latino college peers provided emotional support, helped participants understand university academic practices and policies, and served as very positive models of how to successfully manage and complete academia.

Successful intervention programs, such as the following, include many of these elements. The LUCERO program (Cunningham, Cardenas, Martinez, & Mason, 2006) improved Latino student retention by focusing on enhancing use of technology, building Latino community leader connections, workforce development, academic success through tutoring and advising, and mentoring from program peers and the director. The Ethnic Mentor Undergraduate (EMU) program (Thile & Matt, 2005) improved Latino and other ethnocultural group and college transfer student retention in PWIs by focusing on ethnic group and personal pride, providing students with a positive group support system, and assigning an advanced student and faculty mentor by ethnic match. The Faculty Mentoring Program (FMP, Santos & Reigadas, 2002) improved Latino college student’s personal and social adjustment to college and satisfaction by enhancing their academic goal setting, academic self-efficacy, and by ethnically matching faculty mentors. Finally, a mentoring program for Latino freshmen at risk for academic non-persistence (Torres Campos, et al., 2008) demonstrated promising but non-significant improvements in academic motivation and self-efficacy and decreases in depression symptoms, obstacles, and stress by providing graduate student mentors who used face-to-face, email, text messages, and phone calls to help mentor young students. But while these and other interventions have been designed to improve the retention of students of color in higher education, very few attend to the broader cultural and political factors associated with being Latino on a university campus, nor the culturally insensitive systemic problems within higher education, especially at PWIs.

Given the state of current intervention research and based on the success and limitations of previous programs, we created, implemented, and tested the Latino Educational Equity Project (LEEP). Built on the principles of Critical Race Theory (Villalpando, 1994), we designed LEEP to provide intervention elements shown successful in past research, such as peer support and modeling, and added a component to help students increase consciousness of and respond to the unique cultural and political forces impacting Latinos in college. The goal of LEEP was to
improve social awareness and skills by facilitating social adjustment to college, cultural congruity between students’ home and university environments, and critical consciousness of what it means to be Latino in higher education.

Villalpando (1994) describes Critical Race Theory (CRT) as a framework that emphasizes the importance of analyzing racial exclusion and other forms of discrimination against college students, such as examining educational policies and policy-making within a historical and cultural context. CRT emphasizes five critical components for higher education: (a) the centrality of examining race and racism within university structures, practices, and discourse, (b) the challenge to dominant ideology, (c) a commitment to social justice and praxis, (d) a centrality of experiential knowledge from people of color, and (e) an historical context and interdisciplinary perspective (Solorzano, Villalpando, & Oseguera, 2005; Villalpando, 1994). As seen from these theoretical components, CRT has the potential to help students shift focus from an individual deficit model as the root of academic non-persistence to instead focus on the structural barriers within the university.

For the LEEP intervention, CRT was utilized to inform both the content of the intervention (e.g., through conversations regarding historical and political trends in academia and policies that hinder the pursuit of higher education for Latinos, etc.) and the strategies of the intervention (e.g., by sharing in groups the experiential knowledge of Latino student peers, having LEEP facilitators who could model Latino college success, etc.). Also, LEEP was designed to facilitate Latino student skills in three areas: Building Community was centered on building a network of individuals to provide mutual support for completing academic endeavors; Increasing Critical Consciousness was oriented toward increasing political awareness of race and higher education and the importance of college retention and completion not only for the students but for the Latino community as a whole; and Increasing Awareness of Cultural Congruency was designed to enhance Latino student awareness of university culture and the development of skills needed to balance home and university demands.

The effects of these integrated set of capacities built into a single intervention program has never been tested. Our specific hypotheses were: (1) LEEP participants will show significantly greater social adjustment, critical consciousness, and cultural congruity at three-week post-test in comparison to control group participants, and (2) LEEP participants will show significantly greater development in social adjustment, critical consciousness, and cultural congruity over time, from pre-test to three-week post-test and to eight-week post-test.

Method

Participant characteristics

Participants were self-identified Latino students (36% male, 64% female) enrolled in one of three public universities in the Pacific Northwest. The age range of participants for both conditions was 18 to 37 years old ($M = 20.54$, $SD = 3.16$). The
majority of students were in their sophomore year in college but given that each university had a Latino enrollment of less than seven percent, the authors recruited students across class to ensure sufficient participation. Participant mean GPA was 3.16 (SD = .54) with 79% meeting the designation of first generation college student. The majority of participants’ parents completed less than a high school education (53%) followed by completion of high school (26%). The majority of students (78%) reported citizenship in the United States and 62% of the sample was employed with an average of 15.37 (SD = 8.86) hours worked per week.

**Sample size and power**

Analyses examining pre- and post-test variables were conducted using Listwise deletion. Sample size varied slightly across analyses. Only those participants who completed surveys on all variables had their data included in the final analyses. Some participants did not complete the follow-up portion of the study. These data were not included in the final analyses.

The original sample at pre-test was 104 students, with 45 for the intervention group and 59 for the no-treatment control condition. The three-week post-test measurement response rate was 89% (40 of 45 participants) for the intervention group and 69% (41 of 59 participants) for the no-treatment control condition. Response rate for the eight-week post-test measurements was 45% (18 of 40 participants) for the intervention group and 18% (8 of 41 participants) for the no-treatment control condition. Due to this attrition, we completed the secondary analysis (RM-MANOVA) for the intervention group only. G*Power data software (version 3.0.10) was utilized to determine statistical power and effect size for the sample using a .05 alpha. Analyses revealed a .60 power statistic and medium effect size (0.35) for a sample of this size.

**Measures**

The demographic questionnaire and the *Multigroup Ethnic Identity Measure* (MEIM; Roberts, Phinney, Masse, Chen, Roberts, & Romero, 1999) were used only at pre-test. The MEIM is a 12 item, 5-point, Likert-type scale (responses ranging from “1–Strongly disagree” to “5–Strongly agree”) designed to measure ethnic identity exploration (a process-oriented developmental and cognitive component, α = .68) and ethnic identity commitment (an affective and attitudinal component, α = .89; Syed, Azmitia, & Phinney, 2007). This measure was only used at pre-test because it measures long-term behaviors associated with exploration and commitment to one’s ethnic identity and is not susceptible to change through brief interventions or brief assessment intervals. Internal consistency reliability of the full MEIM for this sample was α = .78. All other measures were administered at pre-test, post-test, and follow-up.

The Social Adjustment Subscale of the *Student Adaptation to College Questionnaire* (SACQ; Baker & Siryk, 1989) is a 19-item, 7-point, Likert-type scale (responses ranging from “1 – applies very closely to me” to “7 – doesn’t apply to me at all”) designed to measure social adjustment to college (α = .93 in a study of Latino college students; Toews & Yazedjian,
Internal consistency reliability for the Social Adjustment Subscale of the SACQ for this sample was $\alpha = .81$.

The Critical Consciousness of Race in Higher Education Scale was developed by the authors. It is a 12-item, 7-point, Likert-type scale (responses ranging from “1-Disagree” to “7-Agree”) designed to assess students’ awareness of race and racial identity within higher education. Sample items include: “I experience racism in college specifically because I am a Latino/a college student” and “Sometimes I feel that as a Latino/a, I do not belong in college”. Internal consistency reliability of the CCRHE for this sample was $\alpha = .78$.

The Cultural Congruency Scale (CCS; Gloria & Robinson-Kurpius, 1996) is a 13-item, 7-point, Likert-type scale (responses ranging from “1-Not at all” to “7-A great deal”) designed to explore students’ experiences of cultural fit between their home and university environments ($\alpha = .77$ in a study of Latino undergraduates; Bordes & Arredondo, 2005). Internal consistency reliability of the CCS for this sample was $\alpha = .84$.

**Procedures**

Participants in the LEEP intervention and no-treatment control conditions were recruited via email on departmental and group list-serves for Latino students and face-to-face when the authors visited ethnic student organizations. LEEP participants completed pre-test measures on-site before the start of the intervention (in hard copy) and completed three-week post-test and eight week follow-up measures on-line via surveymonkey.com. LEEP participants completed the program on their university campus. No-treatment control participants completed pre- and post-test measures via surveymonkey.com. All participants were compensated with a 2GB thumb-drive for their participation after completion of the post-test measures.

The intervention was conducted in a group format with 5-10 participants in each group. Six separate groups completed the intervention, two groups from each of three university campuses. LEEP was implemented over the course of one day for a total of eight hours. The authors intended for the intervention to occur over the course of four sessions held on separate days, but university staff, group facilitators, and students could not commit to the multiple sessions due to time and cost of travel. The authors chose to instead retain the intervention content (same contact time as originally intended) but hold the program in a one-day session.

**Group facilitators and treatment fidelity.** LEEP group facilitators were graduate students in psychology who identified as Latino descent. Facilitators of the same racial-ethnic heritage were utilized in order to facilitate a sense of community, provide positive Latino role models to participants, and provide the ethnic-racial match between participants and mentors that has been found to positively contribute to college adjustment, positive perceived mentor support, and positive evaluation of the intervention program itself in previous research (e.g., Santos & Reigadas, 2002). Group facilitators participated in a one-week long training to ensure fidelity to the LEEP curriculum. This training involved general group facilitation skills, an overview of Critical Race Theory, overview
of trends in educational research for Latino college students, and a review of policies that impact Latino college students. Pre-intervention practice discussions and activities were held among the facilitators only and monitored by the lead author to assure LEEP intervention fidelity.

The LEEP intervention

Built on CRT and on previous intervention research on Latino college student retention, LEEP was also developed and implemented in collaboration with student affairs staff, residential life, and student leaders at each of the PWIs in which it was implemented. The three primary components of LEEP focused on enhancing students’ social awareness and skills to negotiate the university environment (contact the lead author for the full LEEP intervention description).

Building community. This intervention component facilitated building a supportive peer community through conversations and activities. Facilitators led discussions to help participants share about their current college experiences and frustrations, and conducted activities, such as having participants write down and share their social support networks, to help students identify the supports they receive for academic success. Group activities also focused on cultivating interpersonal connections between participants at the beginning of the intervention. This served to build group cohesion in LEEP and to help participants in the future.

Increasing critical consciousness. The component helped participants understand critical consciousness by first writing and then sharing their personal definitions of critical consciousness and then moving into more formally defining critical consciousness as the ability to perceive oppression within social, political, and economic realms and to encourage action against oppressive systems (Freire, 1970). Participants discussed the history of Latinos in American higher education, the importance of college attendance and graduation for Latinos, and their own reasons for attending college. This discussion was designed to facilitate student persistence in college by enhancing participant political consciousness of race and higher education, and stressed the importance of college completion as a mechanism for supporting the general needs of the Latino community within the United States.

Increasing awareness of cultural congruency. The purpose of this LEEP component was to develop participants’ awareness of the university climate and to build students’ skills in balancing their home and university responsibilities. Gloria, Castellanos, and Orozco (2005) describe university climate as an atmosphere that reflects White, middle-class, male values and histories. Thus, this section of the program focused on facilitating participants’ understanding of the university climate and the similarities and/or differences that they experience between their university and home environments. Participants wrote and then shared their university and home demands, and as a group, identified mechanisms to help balance these as complimentary instead of competing demands in a way that could better lead to college completion.
Results

Preliminary analyses

Histograms and box-plots on data normality and distribution for the outcome measures (social adjustment to college, critical consciousness, and cultural congruity) demonstrated normal distribution. Only participants who completed surveys on all variables were included in the analyses. Independent samples t-tests were conducted to examine pre-treatment equivalence of the intervention group (n = 40) and control condition (n = 41). Results indicated no statistically significant pre-treatment differences between groups with respect to social adjustment to college \( t(80) = -2.28, p = .88 \) and cultural congruity \( t(80) = -1.90, p = .48 \). However, results indicated significant pre-treatment differences between the intervention group and control condition with respect to critical consciousness \( t(80) = 3.98, p < .05 \), with the control group having significantly higher scores on a measure of critical consciousness than the intervention group.

A second set of independent samples t-tests was conducted to examine pre-treatment equivalence for the intervention group between the three university sites on the dependent variables – 13 students were from University A, 15 students were from University B, and 12 students were from University C. The following significant differences were found: University A scored significantly higher on critical consciousness than University B, \( t(44) = 2.55, p < .05 \); University A scored significantly higher on social adjustment to college than University C, \( t(36) = 3.21, p < .05 \).

Three-week post-treatment

Given the pre-treatment differences between groups on pre-treatment critical consciousness scores, we used analysis of covariance (ANCOVA) to covary out the pre-treatment differences in examining post-treatment differences between the treatment and control groups. The between-subjects independent variable for all analyses was group (treatment vs. control), the dependent variables were the outcome measures (social adjustment to college, critical consciousness, and cultural congruity), and the covariate for each analysis was pre-test scores of the corresponding outcome measure.

Regarding our first hypothesis that students who participated in the LEEP intervention would show significantly greater adjustment to college at three-week post-test than students in the control condition, we found a statistically significant difference in mean scores for social adjustment to college \([F(1, 76) = 9.16, p = .003, \eta^2 = .11, \text{ observed power} = .85]\), indicating that the LEEP intervention significantly and positively affected participant social adjustment to college in comparison to control participants. However, significant differences were not found for critical consciousness \([F(1, 79) = .16, p > .05] \) or cultural congruity \([F(1, 79) = .05, p > .05] \) between intervention and control groups.
Eight week follow-up

Because too few of the control group members responded at the 8-week follow-up (n = 8) to allow for ANCOVAs to be conducted with sufficient power, a repeated-measures multivariate analysis of variance (RM-MANOVA) was conducted to examine mean differences in outcome measures with time (pre-test, three-week post-test, and 8-week follow-up) being the within subjects independent variable for the intervention group only. The dependent variables were social adjustment to college, critical consciousness, and cultural congruity. Although mean scores in critical consciousness and cultural congruity were not found to be significantly different between the intervention and control groups with the ANCOVA analysis from pre- to post-test, we retained the outcome variables to explore potential change over time at follow-up.

We predicted in our second hypothesis that students who participated in the LEEP intervention would show improvement in social adjustment, critical consciousness, and cultural congruity over time. Significant difference in mean scores was found for critical consciousness [F(1, 32) = 4.56, p = .018, η² = .22, observed power = .74], indicating that critical consciousness significantly increased for LEEP intervention participants from pre-test (M = 3.16) to three-week post-test (M = 3.41) to eight-week follow-up (M = 4.22) occasions. A significant difference in mean scores was not found for social adjustment to college [F(1, 32) = .75, p > .05], despite improved mean scores over time (2.97 at pre-test, 3.06 at three-week post-test, and 3.18 at eight-week follow-up), or for cultural congruity [F(1, 32) = .34, p > .05], despite improved mean scores over time (4.67 at pre-test, 4.60 at three-week post-test, 4.81 at eight-week follow-up).

Discussion

Findings demonstrated that the effectiveness of LEEP on improving social awareness and skills among Latino college students was somewhat mixed. On the positive side, LEEP participants showed greater social adjustment to college in comparison to control students, although their social adjustment did not significantly change over time. Also, critical consciousness significantly improved over time for the LEEP participants, although this was not in comparison to control participants. On the other hand, LEEP participants demonstrated little to no improvements in critical consciousness or in cultural congruity in comparison to control students, and LEEP participants did not show improved cultural congruity over time. So, although findings were mixed, the effectiveness of LEEP appears to show some promise.

Social adjustment to college

Given that college adjustment is strongly associated with college success (e.g., Johnson, et al., 2008), the positive effects of the LEEP intervention on improving adjustment to college is particularly relevant and supportive of the potential utility of LEEP as a successful intervention for Latino college students. LEEP participants explored social awareness and also worked with peers to articulate their own experiences, learn from others, and gain motivation to socially adjust to their col-
lege environment by building and strengthening interpersonal connections with other Latinos on campus. The Building Community component of the LEEP intervention appears to have worked directly toward improving participants’ social adjustment to college as this was the component most theoretically related to college adjustment. For building community, students were asked to complete a writing activity and to share their responses with the larger group. Examples included: *Name five people who comprise “community” for you. How do these people support your success as a college student?* The purpose of this activity was to increase students’ awareness of their social surroundings and how their “community” impacts their college responsibilities. In addition to discussing the importance of building community, students completed exercises that were geared toward improving social connections with peers in the LEEP intervention such as an icebreaker that required participant interaction and personal sharing. Several LEEP participants began attending ethnic-based student organizations because other group members encouraged them to do so during the LEEP program. Thus, students were able to think about, discuss, and practice building community through the LEEP intervention.

**Critical consciousness**

Results for critical consciousness development were mixed. Statistically significant findings were not found between the intervention group and no-treatment control condition at three-week post-test, but as measured over time. LEEP participants did show significant improvements in critical consciousness from pre-test to eight-week follow-up. To increase critical consciousness students were provided with information about the history of Latinos in higher education that included graduation rates and historical milestones like the advent of student financial aid and affirmative action. Students were then asked to create a personalized definition of critical consciousness that incorporated their experiences within higher education and to share their definitions with group members. The finding related to critical consciousness suggest that the LEEP intervention did facilitate improved awareness of ethnic and cultural factors in higher education and highlighted the potential to improve students’ ability to perceive the political forces working within the college environment. This awareness, in turn, has been show to improve college success and retention by supporting students’ capacity to negotiate difficult environments (Solorzano, Villalpando, & Oseguera, 2005; Villalpando, 1994).

**Cultural congruity**

The cultural congruity of LEEP participants did not improve in comparison to students in the control group, although an increase in LEEP participant mean scores over time does demonstrates some level of positive change. Previous research has found a positive association between cultural congruity and self-esteem and with social support for college students (Constantine, Robinson, Wilton, & Caldwell, 2002) and so a focus on this construct in future intervention research continues to be important. The LEEP intervention target-
ed the construct of cultural congruity with the purpose of facilitating participants’ understanding of the university climate and to develop skills for improving a balance between university and home demands. The LEEP intervention specifically emphasized the importance of understanding some of the unique values and demands that are affirmed at PWIs. Many students discussed challenges with growing up in rural, predominately Latino and immigrant communities and how transitioning to university included a significant shift in social class and accompanying resources, language barriers, and differing ways of interacting with peers and family. Because of the complexity of these issues for the Latino students in this context, it is likely that the LEEP intervention was simply too brief and did not allow a sufficient gestation period for students to develop and process how to connect their family and university institutional values more effectively. Our findings suggest that future interventions should dedicate more time to the issue of identifying and enhancing a sense of cultural congruity among Latino students.

Strengths and limitations and research implications

This study possessed a number of strengths. Latino students were recruited in various ways that included using general list-serves and flyers, through residential life, through contacts with key diversity staff, and through student organizations and word of mouth. Students represented rich diversity with respect to gender, citizenship, parents’ educational background, and geographic location in the Pacific Northwest within the confines (and value) of conducting the study at three universities. The intervention was provided in the students’ naturalistic setting in non-clinical (such as counseling center) spaces, and in a brief format, making it economically feasible to replicate. Also, the LEEP intervention was prepared and delivered as a standardized curriculum that can easily be replicated for use with other student groups on college campuses. The LEEP intervention also integrated theoretical and practical interventions in a manner that was new and innovative, and so will hopefully inform future research and practice not only on intervention components but also on how to link and integrate theoretical constructs like Critical Race Theory. In particular, students noted the benefit of learning about the history of Latinos in higher education and that this knowledge helped contextualize their current experiences. This should be included in future intervention research studies. Finally, our investigation supported previous research in highlighting the importance of creating an ethnic-match between participants and group leaders as a way of improving a sense of belonging and connection for participants as a way to help improve social adjustment.

The limitations of the present study are related to the sample size and commensurately low statistical power, limitation in analyses used, and the length of the intervention. It is possible that greater overall N, and commensurately higher statistical power, would have allowed us to detect change and growth in the measured constructs more effectively. Additionally, because of the attrition of participants from
pre-test to follow-up, we utilized a much less desirable repeated measures analysis that included only our LEEP intervention group participants to explore treatment effects over time, and so our findings cannot be confidently interpreted as relating to LEEP or simply to the normal growth of participants as time passes. Also, while provided in a naturalistic setting, in a brief format, and in a manner that enhanced our ability to increase participant enrollment, the intervention would benefit by being longer, such as through multiple weekend contacts or even a term-long course. Future research might evaluate a range of programs for Latino and other underrepresented college students like university orientations, term-long courses, residence-life workshops for residential students, and summer leadership programs that focus on the constructs central to LEEP. All such formats would increase participant contact time to help flush out the LEEP components and help participants integrate new ideas and act on new skills learned over time. At a minimum, future research should replicate the LEEP intervention with a much larger group of randomly assigned Latino college students in a range of settings, and potentially with extended contact time, to fully evaluate its potential as an effective intervention to improve Latino university student success and retention.

Conclusion

While findings were not as robust as theoretically expected, one clear finding in this study is that the intervention demonstrated the importance of building a peer support network cognizant of the unique challenges faced by Latinos in the university. The LEEP intervention specifically targeted the importance of building a support network and was found to have improved students’ social adjustment to the college environment. In line with these findings, counselors and college affairs professionals can assist students in developing such community by encouraging them to join ethnic-based and other student organizations. Each of the universities that participated in the LEEP intervention had at least one of the following on-going campus groups: MEChA, SHP (Society of Hispanics in Engineering), Latino sororities and fraternities, and CAMP (College Assistance Migrant Program). Thus, there are many opportunities for students to engage with Latino peers who are focused on social support, academic success, and retention in higher education. It seems essential for universities to maximize the links and supports that already exist on campuses and to do so in more consistent and systematic ways for all incoming students, especially students traditionally underrepresented on college campuses. Furthermore, future interventions and support and retention programs would be significantly improved by adding the dimensions of the LEEP intervention as a way of facilitating Latino college student retention and success, and ultimately their contribution to the larger community.
References


