

The Impact of Institutional Characteristics on Latino Male Graduation Rates in Community Colleges

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This study examined the impact of select institutional characteristics (e.g., attendance intensity, degree of urbanization, institutional size, governance type) on Latino male graduation rates in public, two-year institutions. Data were collected from the Integrated Postsecondary Education Data System (IPEDS) and included the 2008 completion rates of degree/certificate-seeking Hispanic male students from 254 public two-year, degree-granting institutions. Findings from this study revealed that select institutional characteristics do in fact result in differential graduation rates for these students. Specifically, findings indicated that Latino males are more likely to achieve at institutions with higher full-time enrollment and at suburban colleges. Implications for practice and further research are extended.

Each year, Latino males matriculating into the postsecondary education system are faced with the option of choosing between three varying public institutional types. According to the U.S. Department of Education, 26.4 percent of Latino males will enroll in a public, four-year college or university, while another 2.3 percent will attend a ‘less than two-year’ institution (e.g., career colleges, occupational centers). Yet, the majority of these college-going males (71.3 percent) will attend a public, two-year college (U.S. Department of Education, 2009a). Although the participation of Latino males in public two-year colleges is considerably higher, these institutions struggle to facilitate success for this population. For example, after their first year of enrollment in community college, 12.9% of Latino males will have left without return. By year two, 35.2% will have either left without return or will no longer be enrolled. Over time, this trend increases, as 57.6% of Latino males either leave college without return or are no longer enrolled after six years (U.S. Department of Education, 2009b). These data represent students who did not attain a degree or certificate.

Thus, the majority of Latino male students seeking a postsecondary education, particularly within public, two-year institutions, will not attain their academic goals. The success rates of this group are unsettling, even while considering the few Latino males who may have

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successfully transferred or are attending college without certificate or degree goals. This is unfortunate given the need to educate the nation's fastest growing demographic group, which is projected to comprise nearly 30 percent of the U.S. population by 2040 (U.S. Census Bureau, 2008).

STUDY PURPOSE

Various studies on two-year colleges suggest that institutional type and characteristics contribute to successful student outcomes (Goble, Rosenbaum & Stephan, 2008; Mullin, 2010; Waller, Tietjen-Smith, Davis & Copeland, 2008; Wassmer, Moore & Shulock, 2004). Such research prompted the author's interest for this study, which suggests that some community colleges facilitate better outcomes for Latino males than others. Thus, the author sought to identify which institutions were more likely to generate successful outcomes for this group. The purpose of this study was to investigate Latino male graduation rates in public, two-year institutions. Specifically, the researcher was interested in determining the influence (if any) of select institutional characteristics (e.g., attendance intensity, degree of urbanization, institutional size, governance type) on graduation rates among Latino males.

This study focuses on the role that institutions play in facilitating differential outcomes for Latino males. With regard to graduation, students entering a two-year program would be expected to graduate in two years, thereby referred to as graduating within 100% of normal time. For this investigation, the researcher viewed graduation rates at 150% of normal time, thus indicating that students entered into a two-year program and completed within three years. By employing this liberal calculation of the graduation rate, the researcher was able to capture data on students who: a) may have needed to take remedial coursework during initial semesters in college; b) may have attended college part-time; or c) may have encountered one or two semesters of low performance but managed to persist. Thus, this study was guided by the following four research questions: Is there a difference in mean institutional graduation rates among Latino males by the following institutional characteristics: 1) attendance intensity; 2) institutional size; 3) urbanization; and 4) governance type? The following null and alternative hypotheses were employed in this study:

Null Hypotheses: there will be no differences in Latino male graduation rates and select institutional characteristics (Questions 1-4)

Alternative Hypotheses: there will be differences in Latino male graduation rates and select institutional characteristics (Questions 1-4)

This study is one of few (if any) focused on Latino males in public, two-year colleges that specifically explore the role of institutional characteristics on their persistence and graduation rates. The researcher hopes that the findings from this study may be used to initiate further insights about institutions that facilitate positive outcomes (as measured by graduation rates) for Latino males. The following section will review relevant literature on Latino students in two-year colleges.

RELEVANT LITERATURE

There is currently little (if any) research on Latino males in public, two-year colleges, particularly with regard to the impact of institutional characteristics on student outcomes. Rather, many scholars have provided insight on the effect of individual and/or institutional characteristics on Latino community college students, as a whole. For example, using local data from the Transfer and Retention of Urban Community College Students (TRUCCS) survey, Hagedorn, Chi, Cepeda, and Mclain (2007) examined the impact of critical mass at nine institutions within the urban Los Angeles Community College district (LACCD). Specifically, the researchers were interested in the relationship between the representational value (RV) of Latino students and Latino faculty on the academic success of Latino students enrolled at these campuses. Findings revealed a positive relationship between student success and enrollment in transfer/non-remedial courses at institutions with high-to-moderate RV of Latino students. Their findings also suggested that the presence of Latino faculty increases the availability of role models for students, fostering a sense of belonging and social integration among Latino students. Thus, this study implies that the presence of Latino students and faculty provides a level of comfort that encourages success amongst Latino students.

In a qualitative study by Bensimon and Dowd (2009), the researchers investigated the “transfer choice gap” (p. 635), which the authors referred to as the phenomenon of students who are academically eligible to transfer to a highly selective university, but choose to transfer to a less selective institution, or not at all. Bensimon and Dowd were interested in understanding the pre-transfer experiences of three Latina and two Latino students from Long Beach City College who had been eligible to transfer to a University of California (UC) campus, but had chosen to pursue their education at another institution. Findings indicated that students’ lack of knowledge and uncertain goals were increased by the institution’s lack of resources, specifically “institutional agents” (p. 641). Of the five students interviewed, only one chose to apply and transfer to a highly selective private, four-year university. The student’s success was exemplified by the relationships with institutional agents (faculty, academic counselors, other administrators) that provided him with knowledge of the transfer process, resources to cross the “cultural border” (p. 651) of two-and four-year institutions, and personal mentoring. These ethnographies illustrated the significance that positive and supportive institutional agents have on the success of Latino students.

Although other scholars (Cejda & Rhodes, 2004; Crisp & Nora, 2010; Nora & Rendón, 1990; Nuñez, Sparks, and Hernández, 2011; Suarez, 2003) have examined additional factors (e.g., individual, social, institutional, cultural) impacting Latino success in two-year colleges, others have explored the topic of two-year college student success as a whole. Such investigations have yielded four recurrent themes. First, the literature suggests that institutions with *higher percentages of students of color* tend to have lower retention, graduation, and transfer rates than those with lower percentages of such students (Bailey, Calcagno, Jenkins, Kienezl & Leinbach, 2005, Calcagno, Bailey, Jenkins, Keinzl & Leinbach, 2007; Goble et al., 2008). For example, in a study conducted by Wassmer, Moore, & Shulock (2004), the researchers examined institutional characteristics of public, two-year colleges in California that were predictive of transfer. Their findings indicated that institutions with higher percentages of Latino and African American students experienced significantly lower transfer rates than those with lower percentages of these student groups.

Second, student outcomes are directly related to the *composition of college faculty*. Researchers have found that institutions with higher percentages of full-time faculty members

are significantly more likely to have higher retention and graduation rates than those with lower percentages of such faculty (Bailey et al., 2005; Calcagno et al., 2007; Goble et al., 2008; Jacoby, 2006). One example of these findings is from Jacoby's (2006) examination of 1,209 public, two-year colleges. Using three types of analyses and employing various definitions of graduation rates, his study revealed that larger percentages of part-time faculty were negatively predictive of student success. In addition to faculty composition, other researchers have also suggested that faculty compensation is an important factor to consider in relation to student success. Such outcomes were demonstrated in a study by Windham and Hackett (1997), in which the researchers used state-level data from the Florida community college system to illustrate that a higher level of faculty compensation leads to greater levels of student success.

Third, the literature suggests that *institutional size* is also related to student outcomes. In a recent study by Goble et al. (2008), the retention rates among low, middle, and high achieving students were examined and compared with select institutional characteristics. Findings indicated that high achieving students perform better at mid-sized institutions rather than at large institutions (15,000 or more students). Researchers also found that middle achieving students had higher retention rates at smaller institutions in comparison to larger schools. In terms of graduation rates, other studies suggest that students attending medium-sized colleges (1,000-5,000 students) are less likely to graduate than those attending smaller institutions (1,000 students) (Bailey et al., 2005; Calcagno et al., 2007). In addition, both Wassmer et al. (2004) and Windham and Hackett (1997) found that students attending colleges with larger enrollments tend to have greater levels of student success.

Fourth, an institution's *degree of urbanization* is another characteristic related to student outcomes. Determining a college's degree of urbanization depends on its proximity to urban centers. Generally, classifications include: rural, town, suburban, and urban. In their analysis of retention rates for full- and part-time students, Waller and Teitjen-Smith (2009) found that part-time students performed better at city and suburban institutions than at rural institutions. Their study also found that full-time students had higher retention rates at suburban colleges in comparison to town and rural institutions. Furthermore, research from Goble et al. (2008) demonstrated better performance rates of mid-level achieving students at suburban colleges than at urban colleges.

As previously mentioned, these four themes (e.g., percentage of students of color, faculty composition, institutional size, and degree of urbanization) have primarily been explored with an emphasis on the general student population within two-year colleges. Such studies have prompted an interest for further research on public, two-year institutions and the impact of select institutional characteristics on Latino male student success. The following section will review the methods employed in this study.

METHODS

Data Collection

This study utilized data from the Integrated Postsecondary Education Data System (IPEDS), which is an online tool that allows users to examine variables on individual or multiple institutions. IPEDS provides data from more than 6,700 Title IV postsecondary institutions (those institutions approved by the government to award federal student financial aid). Each year, these institutions use IPEDS surveys to collect data in seven primary areas: institutional characteristics, institutional cost, human and financial resources, institutional finances, student

persistence and graduation, enrollment data, and student financial aid (U.S. Department of Education, 2010).

In particular, the institutions investigated in this study were delimited to public, two-year, degree-granting institutions. Considering that the focus of this study was to examine differences (if any) in Latino male graduation rates by institutional characteristics, the population was further delimited to institutions where a minimum of 30 Latino male students were accounted for in the cohort being examined. Consequently, the final population of institutions included in this study consisted of 254 public, two-year, degree-granting institutions. Graduation rate data was computed using 2008 completion rates from degree/certificate-seeking Hispanic male students for each institution at 150 percent of normal time. A completion ratio was calculated by dividing completers within 150 percent of normal time by the adjusted cohort (revised cohort minus exclusions). The institutional variables examined in this study included:

- Attendance Intensity – This variable reflects classifications of student enrollment intensity, such as: higher/medium full-time, mixed part-time/full-time, and higher part-time. Due to the limited number of Latino males enrolled at higher full-time status, the researcher collapsed the medium and higher full-time variables into one.
- Institutional size – This variable represents a classification of full-time enrollment types, including: small (500-1,999), medium (2,000-4,999), large (5,000-9,999), and very large (10,000 or more). Due to the limited number of Latino males enrolled at very small institutions, the very small and small variables were collapsed into one.
- Urbanization – The degree of urbanization variable reflects the following classifications: rural (census-defined rural territory outside an urban cluster), town (inside an urban cluster and outside an urbanized area), suburban (territory outside a principal city and inside an urbanized area), and city (territory inside a principal city and inside an urbanized area).
- Institutional governance – This variable represents two categories reflecting the formal organization of a college. The first includes colleges that are part of a system or corporate entity, and the second includes colleges that are not part of a system or corporate entity. In other words, this variable identifies institutions that are part of a multi-campus or single-campus district.

Data Analysis

Exploratory data analysis was conducted in order to ensure that the assumptions of ANOVA were met. Analyses indicated that homogeneity of assumptions were violated and that data were non-normally distributed. Further, there was a wide range of 'n' sizes on factor levels; as a result, omnibus tests were conducted using nonparametric procedures. Specifically Kruskal-Wallis analysis of variance was used to examine mean differences of factor levels. The researcher selected this procedure given that the outcome variable was continuous while the independent variables (referred to as factors) were categorical, having three or more levels. Follow up tests (post-hoc procedures) were conducted using the Mann-Whitney U test. In all, this study examined four research questions pertaining to the differences in Latino male graduation rates in public, two-year, degree-granting institutions. Such areas included, attendance intensity (1 x 3 design), institutional size (1 x 4 design), urbanization (1 x 4 design), and governance type (1 x 2 design). In addition, effect sizes were calculated when necessary

using the following eta square scale: small (.01), medium (.06), and large (.14) (Green and Salkind, 2011). The results demonstrate 95 percent confidence intervals.

Limitations

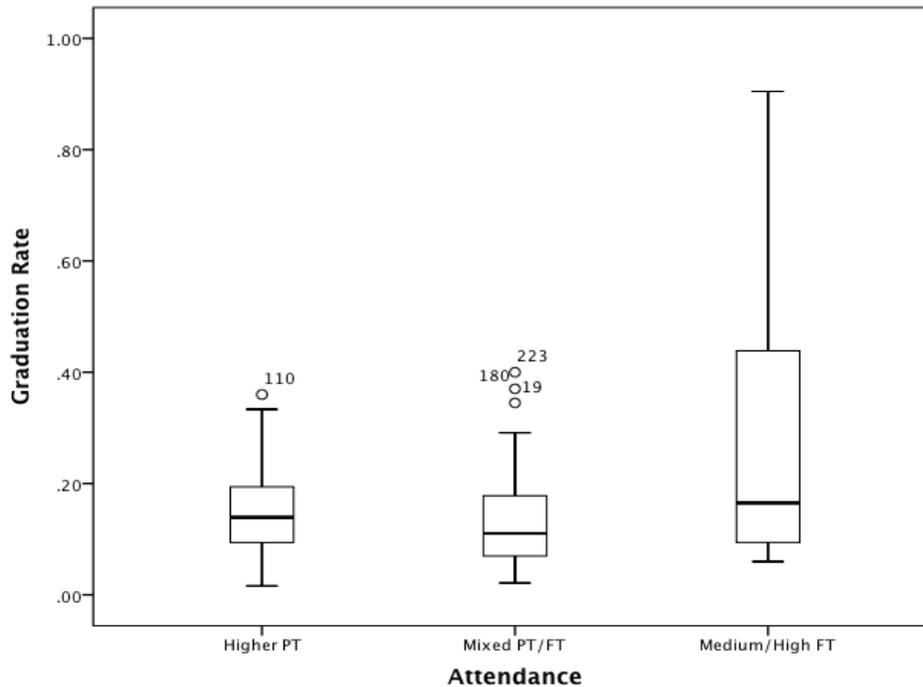
As with any study, this too has its limitations. First, due to sample size limitations across the examined factor levels, factorial ANOVA could not be employed. Thus, it is possible that interactions may be taking place between the multiple factors examined. Second, IPEDS only provides data on graduation rates for full-time, first-time, degree and certificate seeking students. Considering that community colleges serve a large population of part-time, non-degree seeking, and non-credit students (Gonzalez, 2011), this set of data is limited to a specific type of student. According to Offenstein and Shulock (2009), only 39 percent of community college students fit the federal government's criteria for inclusion in IPEDS. Third, IPEDS does not distinguish between remedial and non-remedial students. This is an important factor considering that remedial students generally take longer to complete their degrees than non-remedial students (Gonzalez, 2011). Lastly, because federal financial aid policy requires students to be degree or certificate seeking in order to receive aid, it is possible that students attending community college for other reasons (e.g., personal enrichment or skill-building) incorrectly indicate that they are seeking a certificate or degree in order to receive aid (Offenstein & Shulock, 2009). Therefore, the researcher chose to use a graduation rate of 150% of normal time in an effort to mitigate some of the challenges associated with IPEDS data. While this section provided an overview of the study's methods, the following section will address its findings.

FINDINGS

The first analysis examined was whether institutional attendance intensity (e.g., higher/medium full-time, mixed part-time/full-time, and higher part-time) resulted in differential graduation rates among Latino males. A Kruskal-Wallis test was used in addition to the one-way ANOVA. On this question, the Kruskal-Wallis test was significant, $X^2(2, N=253) = 7.88, p < .05$. Thus, the null hypothesis was rejected using this procedure. Eta squared can be calculated in Kruskal-Wallis analysis of variance by using the following formula: $\eta^2 = \chi^2/N-1$ (Green & Salkind, 2008). This calculation revealed a small-to-medium effect size (.031), indicating that the factor (attendance intensity) accounted for more than 3.1% of the variance in the outcome (graduation rates). Follow-up tests were conducted using the Mann-Whitney test. The comparison of higher part-time to mixed part-time/full-time revealed significant differences, $z = -2.111, p < .05$. The mean rank score for higher part-time was 126.7, while the mean rank score for mixed part-time/full-time was 106.7. Additional significant differences were evident between mixed part-time/full-time and higher/medium full-time, $z = -2.305, p < .05$. The mean rank score for mixed part-time/full-time was 44.79, while the higher/medium full-time mean rank score was 63.00. However, given the small 'n' size for medium/high full-time institutions, this comparison should be viewed with caution. In addition, no significant differences were found between higher part-time and higher/medium full-time institutions. See figure 1 below.

Figure 1.

Distribution of graduation rates by institutional attendance intensity profile.

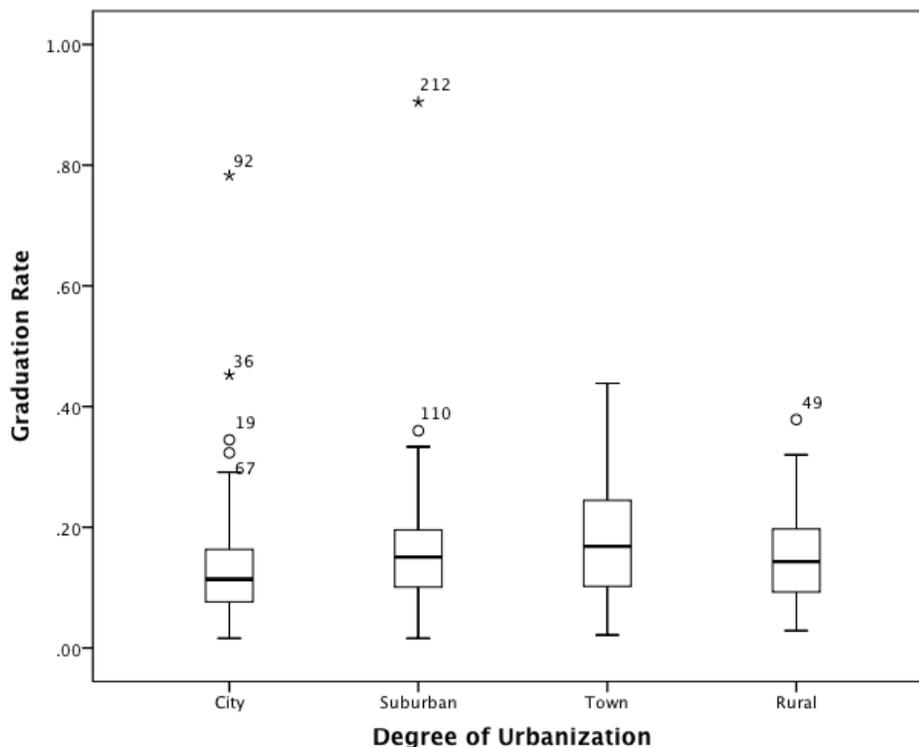


The second analysis examined graduation rate difference by institutional size (e.g., very small/small, medium, large, very large) among Latino males. A Kruskal-Wallis test was also used in addition to the one-way ANOVA. On this question, the Kruskal-Wallis test was not significant, $X^2(3, N=253) = 7.13, p > .05$. As a result, we failed to reject the null hypothesis. In general, non-significant findings indicated that small institutions had the highest mean rank at 166.6 with gradually decreasing mean ranks as follows: very large (129.2), large (121.7), and medium (121.6).

Degree of urbanization (e.g. city, suburban, town, rural) was the third analysis examined for differential graduation rates among Latino males. The researcher once again used a Kruskal-Wallis test in addition to the one-way ANOVA. On this question, the Kruskal-Wallis test was significant, $X^2(3, N=253) = 9.70, p < .05$. Thus, the null hypothesis was rejected using this procedure. Calculation of eta squared for Kruskal-Wallis analysis of variance revealed a small-to-medium effect size (.04), indicating that the factor (urbanization) accounted for 4% of the variance in the outcome (graduation rates). Follow-up tests were conducted using the Mann-Whitney test. In comparison of city to suburban revealed significant differences, $z = -2.346, p < .05$. The mean rank score for city was 88.70, while the mean rank score for suburban was 108.06. Additional significant differences were evident between city and town, $z = -2.246, p < .05$. The mean rank score for city was 69.76, while the mean rank score for town was 90.00. Post-hoc comparisons for the following were not significant: city vs. rural, suburban vs. town, suburban vs. rural, and town vs. rural. See figure 2 below.

Figure 2.

Distribution of graduation rates by institutional degree of urbanization.



The fourth analysis in this study examined whether governance (e.g., system or corporate entity vs. non-system or corporate entity) was associated with mean differences in institutional graduation rates among Latino males. On this question, the Kruskal-Wallis test was not significant, $X^2(1, N=253) = 1.60, p > .05$. Thus, the researcher failed to reject the null hypothesis. Non-significant findings indicated that multi-campus institutions had the highest mean rank at 132.4 and single campus institutions had a lower mean rank of 120.7.

DISCUSSION

This study provided insightful exploratory findings into the institutional characteristics associated with differential graduation rates of Latino males at public, two-year colleges. Regarding enrollment, findings indicate that students perform better at institutions with higher/medium full-time enrollment. Although there is limited extant literature on the impact of enrollment patterns on student outcomes at the institutional level, others have investigated this topic using student-level analyses. For example, Crisp and Nora (2010) found that full-time enrollment was positively correlated with persistence, transfer, or degree attainment of Latino community college students during their second year of college. These findings infer that full-time enrollment is related to both student-level and institutional-level graduation outcomes for Latino males.

Differences in degree of urbanization were also found to be associated with graduation rates of Latino males. Similar to findings from Goble et al. (2008), this study illustrated that students performed better at suburban colleges than at urban (i.e., city) colleges. Although the

literature also suggests that suburban colleges outperform other campus types (e.g., rural and town), this study found no significant differences for such comparisons. On the other end of the urbanization spectrum, town colleges had surprisingly higher graduation rates than city colleges. This differs from Waller and Teitjen-Smith (2009) whose analysis found that students performed better at suburban colleges in comparison to town and rural institutions.

While extant literature suggests that institutional size is related to student outcomes, this study found no significant differences in graduation rates for Latino males. Unlike Wassmer et al. (2004) and Windham and Hackett (1997) who found that students attending larger colleges have greater levels of student success, this study illustrated non-significant findings when comparing small, medium, large, and very large institutions. In terms of institutional governance, this investigation also indicated no significant differences between multi-campus and single campus institutions with regards to Latino male graduation rates.

IMPLICATIONS AND CONCLUSION

Although many studies on Latino students in community college have focused on individual factors impacting their persistence and attainment (Bensimon & Dowd, 2009; Cejda & Rhodes, 2004; Crisp & Nora, 2010; Hagedorn et al., 2007; Nora & Rendón, 1990; Nuñez, Sparks, and Hernández, 2011; Suarez, 2003; Zell, 2010), very little research has been conducted to explore whether institutional types result in differential outcomes, specifically for Latino males attending public, two-year colleges. Findings from this study revealed that select institutional characteristics do in fact result in significantly different graduation rates for these students. Thus, this research may be helpful for practitioners at varying educational levels (e.g., middle and high school, post-secondary) that are interested in supporting the educational success of Latino males. Such insights may be used by school districts to build partnerships with institutions that demonstrate higher graduation rates (e.g., suburban, higher/medium full-time enrollment) for these college-going males.

In their study, Bensimon and Dowd (2009) found that success rates of Latino community college students increased when students had positive relationships and interactions with “institutional agents” (p. 641). Thus, partnering institutions may coordinate informal classroom presentations in which representatives from colleges speak directly with Latino male youth. Presenters may include staff members from specific student services departments, such as admissions and financial aid. Other ‘institutional agents’ that can participate in assisting Latino male youth are Latino college males. Current Latino male students may be asked to share their college experiences through student panels, small group meetings, or one-on-one mentoring roles. These presentations should serve as opportunities to share information about the college, as well as allow prospective students to ask questions.

Another coordinated activity between partnering institutions may include campus visits to colleges with characteristics indicative of greater student success. With current Latino male students as tour guides, prospective Latinos can be introduced to key campus representatives or particular points of interest, such as the library, bookstore, administration building, or any other location that is significant of a college’s history. Several researchers have noted that students’ expectations and aspirations are socially constructed through their interactions with institutional agents (McDonough, 1994; McDonough & Calderone, 2006). These interactions also have important implications for students’ sense of belonging and socialization (Hurtado & Carter, 1997). As such, campus visits may serve as instrumental opportunities for Latino youth to experience a campus environment firsthand.

In addition to the implications for educators, further research is needed to better understand specific institutional-level factors affecting differential outcomes for Latino males. Similar to Padilla's (1991, 1994) expertise model for student success, which focuses on the strategies that successful minority students employ to overcome barriers to academic success, researchers can utilize this theoretical framework to identify institutional-level factors that facilitate positive Latino male student outcomes. For example, further research could examine programming, processes, and practices of two-year, public institutions with higher full-time enrollment, which this study identified as producing greater graduation rates for Latino males. Such findings may be informative for improving success at predominately part-time institutions. Future studies should also be conducted with suburban community colleges to determine which institutional factors lead them to be more successful in graduating Latino male collegians. In particular, emphasis should be given to examining whether a unique organizational culture, offerings, or programming exists within these colleges (e.g., minority male initiatives, learning communities, summer bridge programs, etc.).

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