

ABSTRACT

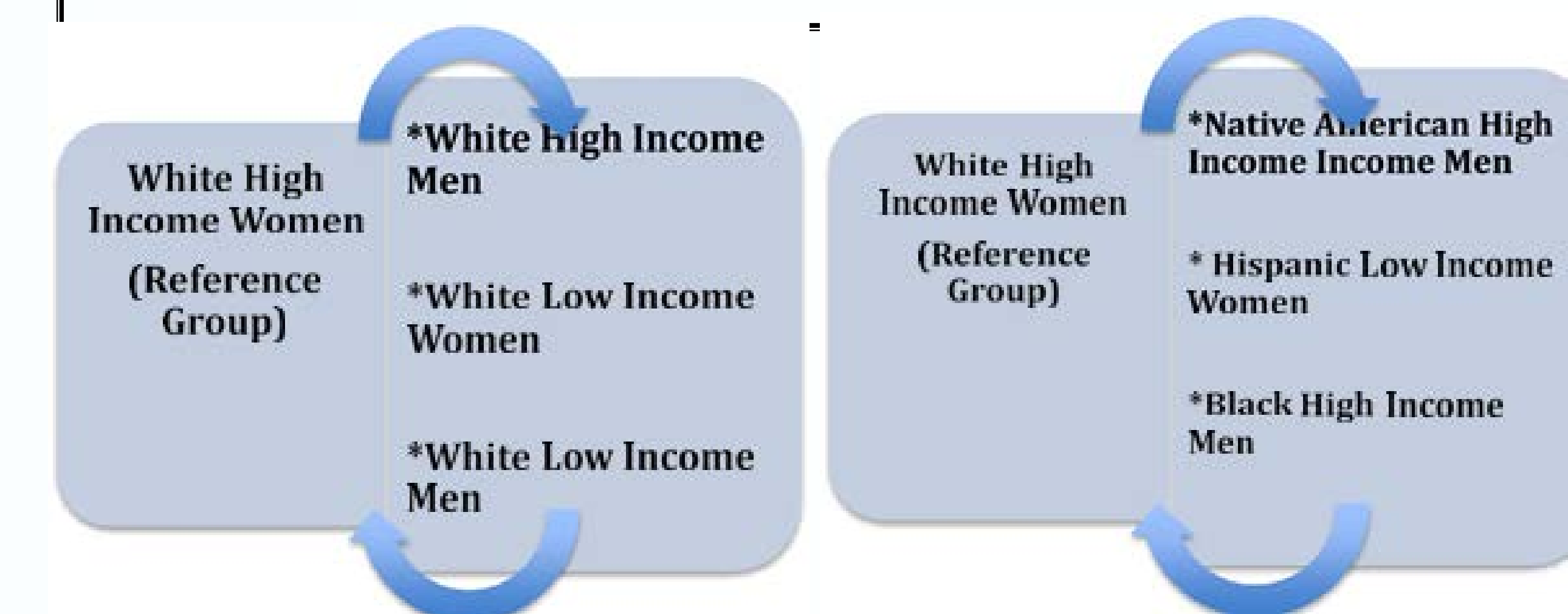
We appeal to critical race theory and intersectionality to examine achievement gaps at a large public university in the American southwest from 2000 to 2015. Using white, high-income women as our reference group, we report linear combinations of marginal effects for six-year graduation rates and developmental course taking across 20 distinct social locations varying according to race-ethnicity, gender, and class. We find substantial achievement gaps that remain unseen in conventional models treating such characteristics as independent. Nearly every group has a significantly lower likelihood of graduation compared to the reference group, and there is substantial variation in estimated achievement gaps. Low-income, American Indian men are approximately 45 percent less likely to graduate within six years relative to the reference group. For high income, black men this gap is approximately 30 percent. Our paper proposes a method and praxis for exploring the complex, interdependent relationship between race-ethnicity, gender, and class.

RESULTS / PROGRESS / OUTCOMES

- Table 1 reveals that over the period 2000–2008, 41 percent of students completed within six years. Developmental course-taking is common over both the sample periods: approximately 40 percent of students were required to take at least one developmental mathematics or English course over these cohort years.
- As shown in Table 3 below, nearly every group (not high-income Hispanic and Asian women) has a significantly lower likelihood of graduation compared to high-income white women. We estimate especially large achievement gaps for students in American Indian and black social locations. For example, American Indian low-income men are approximately 45 percent less likely to graduate within six years relative to the base group (white high-income women). For black high-income men this gap is approximately 30 percent (although cell sizes are unreasonably small), which is surprisingly similar to the estimated achievement gap for low-income white men.
- Every social location, with the exception of high-income white and Asian men, has a higher probability of developmental English placement at SPU than high-income white women. Social locations that have large estimated achievement gaps are low-income Asian men and women (34–35 percent), low-income American Indian men (34 percent), and low-income Hispanic men (31 percent).
- Black students experience the largest achievement gap in mathematics, with low-income black women being 36 percent more likely to be placed in a developmental course relative to high-income white women. It is clear however, that low-income women of color are much more likely to be placed in such a course when compared to high-income white women.

DISCUSSION

The achievement gap in higher education is often the topic of conversation in NM. Although well intentioned, the idea of using income as a proxy for the racial/ethnic (or gender gap) is not born out by any empirical analysis that considers the simultaneity of race, gender, and class. A rigorous equity-impact analysis of proposals to limit the NM lottery scholarship or any other type of financial aid / higher education resource is needed before policy decisions are made. We recommend a moratorium on policy changes that only look at household income for awarding universal lottery scholarships. We find that one unintended consequence could be that vulnerable racial and ethnic minorities communities may be disproportionately affected even if they are in the high income bracket. A policy change limiting access to the lottery by income could further exacerbate the “achievement gap” for racial and ethnic minorities. Going forward, policy changes should examine race, gender, and class together for advancing equity-based policies.



PURPOSE / METHODS

To examine disparities in completion rates and developmental course-taking in college, we use an administrative data-set from SPU, a large Hispanic-serving research university in the southwestern United States. Data capture the population of first-time, full-time students matriculating in the fall from 2000 to 2015. We estimate saturated logistic models for three outcomes: the six-year completion rate, developmental English course-taking, and developmental mathematics course-taking. Models are saturated in that they include a full set of gender, race, and class dummy variables, as well as all possible interactions.

Table 1. Descriptive Statistics, Graduation and Remediation Models

Variable	2000 - 2008	2000 - 2015
Graduated within 6 Years	0.406	-
Developmental English	0.294	0.268
Developmental Mathematics	0.326	0.301
Any Developmental	0.431	0.397
Female	0.582	0.577
White	0.406	0.371
Black	0.03	0.024
Hispanic	0.444	0.499
American Indian	0.069	0.058
Asian	0.05	0.047
Low-Income	0.539	0.498
Observations	6,427	13,953

Table 3: Multilevel Logistic Estimates of Probability of 6-Year Graduation by Race, Ethnicity, Gender, and Class, 2000-2008

Variable	Marginal Effect	Sig.	Standard Error	Cell Size
White, High-Income Women (Base)	-	-	-	869
White, Low-Income Women	-0.142	***	0.026	594
White, High-Income Men	-0.137	***	0.025	705
White, Low-Income Men	-0.288	***	0.031	440
Black, High-Income Women	-0.226	***	0.069	57
Black, Low-Income Women	-0.185	***	0.059	76
Black, High-Income Men	-0.305	**	0.126	18
Black, Low-Income Men	-0.223	***	0.077	45
Hispanic, High-Income Women	-0.033		0.026	599
Hispanic, Low-Income Women	-0.225	***	0.024	1,094
Hispanic, High-Income Men	-0.172	***	0.029	462
Hispanic, Low-Income Men	-0.24	***	0.027	699
American Indian, High-Income Women	-0.093	*	0.055	85
American Indian, Low-Income Women	-0.396	***	0.05	186
American Indian, High-Income Men	-0.371	***	0.072	66
American Indian, Low-Income Men	-0.453	***	0.066	108
Asian, High-Income Women	0.0009		0.071	50
Asian, Low-Income Women	-0.137	***	0.046	128
Asian, High-Income Men	-0.211	***	0.069	54
Asian, Low-Income Men	-0.217	***	0.055	92
Likelihood Ratio Statistic				48.23
Residual Intra-class Correlation				0.025
Observations				6,427

CONCLUSIONS

The sedimentation of intergenerational intersecting structural configurations of inequality vis-à-vis race-gender-class in education, employment, wages, wealth, health, and criminal justice for entire categories of people in our state took a long time. Consequently, social justice liberatory movements will also require continued strategic dedicated and sustained social justice efforts over a long period of time; however, as long as historic and ongoing intersecting race-gender-class gaps are not interrogated, they remain invisible and inactionable.

REFERENCES (APA STYLE)

For a full list of references please see:
López, N., Erwin, C., Binder, M., & Chavez, M. J. (2017). Making the invisible visible: advancing quantitative methods in higher education using critical race theory and intersectionality. *Race Ethnicity and Education*, 0(0), 1–28. <https://doi.org/10.1080/13613324.2017.1375185>

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