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The Upward Mobility Potential in U.S. Intercollegiate Athletics: A Critical Examination of NCAA Division I College Baseball Players' Hometown Demographics

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American meritocratic ideology positions sports as level playing fields in which individuals, regardless of their background, can ascend with the right combination of ability and effort. Yet few studies challenge the sport-meritocracy ideology by empirically examining the socioeconomic backgrounds of college athletes (Allison et al., 2018). Studies of youth sport participation show that community-level income shapes athletic opportunities suggesting class is a strong barrier to physical activity (NWLC, 2015; Sabo & Veliz, 2008; Tompsett & Knoester, 2022). Class inequalities are exacerbated in sports with robust privatized youth systems like baseball (Klein et al., 2020; Post et al., 2022). Utilizing a unique quantitative dataset of NCAA Division I college baseball players (n = 19,987), we consider the extent to which a community's socioeconomic levels and racial demographics shape the chances of someone becoming a college baseball player. We compare college baseball players' hometown income levels and racial demographics to their home state and to U.S. averages. We also consider differences across competitive divisions (i.e., Non-Power 5 vs. Power 5). Findings show that college baseball players—regardless of conference affiliation—commonly come from affluent, nonminority cities, with high education and income levels, indicating that socioeconomic status is a significant predictor of college athletic participation.

Keywords: College sports access; Youth sport opportunities; Meritocracy; Class reproduction; Baseball; Athlete demographics

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Introduction

American meritocracy espouses that society is hierarchically organized by earned achievement, not inherent social status. Meritocracy is substantiated by mobility institutions, or places for individuals to learn, develop, and test their abilities (Coakley, 2015). These institutions often have winnowing mechanisms and gatekeepers to identify and select which individuals transcend to subsequent levels (Lareau, 2011). Sports and education are prominent mobility institutions for people to gain the skills to better their economic standing (Coakley, 2015). Sports, in particular, are presented as free and accessible institutions that provide outsized chances for those from low-income backgrounds to better their life outcomes (Eitzen, 2016; Hawkins, 2013).

U.S. college sports are commonly believed to provide upward mobility opportunities (Hextrum, 2021). In part, the sport-meritocracy ideology resonates in intercollegiate athletics because higher education has different educational and admission standards for talented athletes (Hextrum, 2022; 2023). But whether these irregular admission processes offer upward mobility chances remains underexplored by sport researchers (see Allison et al., 2018; Hextrum, 2021; Macaulay et al., 2019). Critical scholars of sport and meritocracy most often examine the racially exploitative labor conditions undergirding men's football and basketball (e.g., Beamon, 2008; Eitzen, 2016; Hawkins, 2013; Sack & Staurowsky, 1998). Macaulay and colleagues (2019) argue this research does not connect the inequalities across the high school and college planes. Rather, researchers focus on youth and high school sport *or* college sport inequalities. Furthermore, Hextrum (2021) argues researchers underexplore class and race inequities in sports beyond men's football and basketball.

This research gap is striking as studies of youth sport participation show that family socioeconomic status (SES) and community-level income shape athletic opportunities suggesting class is a strong barrier to physical activity (NWLC, 2015; Sabo & Veliz, 2008; Tompsett & Knoester, 2022). Youth sport researchers have also tracked how higher-SES families and communities have contributed to the rise of privatized or *pay-to-play* youth systems offering superior, specialized, and year-round training (Project Play, 2022; Merkel, 2013; Zarrett & Veliz, 2020). Since 2010, the U.S. youth sport industry increased 55%, now compromising a $15.3 billion industry (Gregory, 2017). This industry is supported by affluent families who invest in their children's athletic futures (Hextrum, 2021).

Baseball was one of the first sports to develop privatized, competitive youth leagues (Edgerton, 2009; Ogden & Warneke, 2010). Starting in the 1980s, cities began defunding their little league baseball teams under the premise that private baseball clubs could serve community needs (Ogden, 2000). This policy disproportionately impacted lower-income and racially minoritized areas that could not attract or fund private clubs (Ogden & Hilt, 2003). Surveying the impact of these policies, Ogden and Hilt (2003) found that private baseball teams are concentrated in majority-White suburbs and are more likely to place players on college teams (Ogden & Hilt, 2003). Private baseball clubs also offer a different athletic experience than

public teams. For instance, Ogden and Hilt (2003) found that White suburban areas play 50-150 games per year whereas public baseball teams in majority-racially diverse communities play 10-15 games per year (Ogden & Hilt, 2003). The availability and quality of sport opportunities impacts participation rates (Project Play, 2022). A survey of today's youth baseball players found that 62% came from families earning over $100,000 a year, 67% were White, 72% had a least one parent with a bachelor's degree, and 33% played baseball year-round and had a private coach (Post et al., 2022). Such trends suggest that baseball players are more likely to come from whiter, more educated, and wealthier communities.

Despite baseball's status as a prominent club sport, researchers have yet to examine the backgrounds of college baseball players. Several quantitative researchers have examined the community characteristics of college and professional men's football and basketball players' hometowns identifying that athletes from higher socioeconomic status (SES) areas have greater opportunities to ascend (Allison et al., 2018; Dubrow & Adams, 2012; Macaulay et al., 2019). Tompsett and Knoester (2022) followed cohorts of high school athletes to college and determined that SES was the biggest predicator of intercollegiate athletic participation. These initial studies critiquing meritocracy in college sports have called for additional, more nuanced, and more expansive research into the extent to which SES shapes athletic opportunities (Allison et al., 2018; Dubrow & Adams, 2012; Hextrum, 2020a; Macaulay et al., 2019; Tompsett & Knoester, 2022).

Another reason for studying baseball is it remains one of the more popular sports in U.S. high schools and colleges. Today, baseball (n = 482,740) is the fourth most played boys' high school sport behind football (n = 1,037,234), track (n = 605,354), and basketball (n = 540,769) (NFHS, 2022). Becoming a high school athlete often requires years of specialized youth training, especially in popular sports (Macaulay et al., 2019; Tompsett & Knoester, 2022). Opportunities to play baseball in college significantly decline with just over 36,000 roster spots or about a 7% chance of ascending to the next level (NCAA, 2015). With entrenched youth-level class and race barriers in one of America's most popular sports, socially advantaged players may have outsized chances in earning a spot on a college baseball team.

The current demographics of college baseball players also suggest race and class barriers in the sport. Currently, college baseball is one of the whitest sports, with 76% White players and only 6% Black players (NCAA, 2022). While the NCAA does not provide SES information about athletes, a recent study into the number of first-generation college players—a well-vetted proxy for class (Pascarella et al., 2004; Stephens et al., 2014) — indicated baseball may draw from wealthier communities (Farrey & Schreiber, 2017). Baseball tied with golf (both 13%) for the third lowest rate of first-generation male athletes. Only two sports, swimming (9%) and tennis (6%), had lower rates. Compare these numbers to the sports with the highest first-generation student populations—still relatively low—football (23%), basketball (19%), and track (19%) (Farrey & Schreiber, 2017).

In response to calls for research into college athletes' class backgrounds, this study examines the extent to which baseball provides meritocratic opportunities.

Utilizing a unique quantitative dataset of college baseball players (n = 19,987), we consider how a community's socioeconomic levels, educational levels, and racial demographics shape the chances of someone becoming a college baseball player. We compared college baseball players' hometown characteristics—income, education attainment, and demographics—to their home state and U.S. averages. We also considered differences in competitive divisions, comparing players across Non-Power 5 conferences and Power 5 conferences. Findings showed that college baseball players, regardless of their conference affiliation, were more likely to come from affluent, nonminority cities with high education and income levels suggesting that socioeconomic status is a significant predictor of college athletic participation.

Literature Review

Upward mobility narratives are premised on individualism—the notion that an individual with the right combination of talent, disposition, and ability can socially ascend regardless of their background (Coakley, 2015). Individualism obscures the role of families, institutions, communities, and social structures in shaping access to society's most valued resources, including sports (Hextrum, 2021, 2023). The rise of privatized youth sports has increased the economic barriers to participation (Merkel, 2013; Sabo & Veliz, 2008). As a result, economic investments have become a pre-condition to play sports. In the early 2000s, researchers began tracking increases in parental monetary investments into their children's sport participation. One study found that parental spending on elite youth athletes—those who competed on private club teams and aspired to become college or Olympic athletes—spent 3-12% of gross (pre-tax) household annual income on youth sports (Baxter-Jones & Maffulli, 2003). A larger and more representative sample of youth participating in all sports levels (e.g., for low-stakes recreational teams) found parents spend closer to 3% of the pre-tax income on sports (Dunn et al., 2016). Spending on sports is also difficult to track because of the escalating "hidden costs" including travel, lodging, and meals for competitions, private coaching, and tournament fees (Hextrum, 2018, 2020a, 2021; Project Play, 2022). More recent studies find parents of elite, college-bound athletes spend tens of thousands of dollars per year on sports (Eckstein, 2017; Hextrum, 2018, 2020a, 2021; Project Play, 2022).

Parental income to pay the escalating sport fees is only one factor connecting sport and SES. Studies indicate that wealthier families use their income to fund superior neighborhood-level infrastructure such as sports facilities and schools (Karabel, 2005; Lareau, 2011; Messner, 2009; Weis et al., 2014). Messner (2009) identified how affluent families select where to purchase a home and send their children to school, in part, on the quality of athletic facilities. These trends have generated a youth sports "arms race" where towns increase taxes to build lavish facilities in the hopes of luring wealthy families, increasing property values, and improving the local economy (Gregory, 2017). Youth baseball exemplifies the youth sports arms race as suburban areas have added semi-professional stadiums. The parental and community investments in sports have attracted top coaches and program (Merkel,

2013). In turn, higher income communities have more sports, and more quality sport experiences than lower-income areas (Merkel, 2013; Sabo & Veliz, 2008). The net effect of parental and community investments in sports is an unequal distribution of opportunities to play across the U.S. with sport deserts in low-income, urban, and rural communities and sport oases in higher-income, White, suburban communities (Sabo & Veliz, 2008; USDHHS, 2019).

Unequal school funding for sports exacerbates athletic inequities across American communities (Hextrum, 2021; NWLC, 2015). American schools are largely funded by property taxes linking neighborhood wealth to education quality (Weis et al., 2014). Schools in White, affluent, suburbs host more sports than any other community as parents can fund athletics either through tax dollars or paying fees (Zdroik & Veliz, 2016). A study examining 25 years of school-based extracurricular data found that middle- and upper-class youth have increased their sport participation overtime, widening the gap with lower-income youth (Meier et al., 2018). Tompsett and Knoester's (2022) quantitative cohort study tracked 10th graders to college and found that athletes attending high schools with plentiful sports had greater odds of playing in college. Specifically, the researchers identified that a 10th grader's chances to play in college increased by 3% for each additional sport offered at their high school. Overall, they concluded that athletic advantages are cumulative—higher SES families often attend higher SES schools with more sports, better facilities, and expert coaches, all of which are favorable to college athletic participation (Tompsett & Knoester, 2022). Relatedly, highly educated parents are more likely to enroll their children in sports for positive socialization purposes and to build their future college resumes (Freidman, 2013; Hextrum, 2021; Messner, 2009). Thus, communities with higher education levels may have higher rates of youth sport participation.

Researchers have also found that affluent youth are more likely to combine athletic playing opportunities, competing for private clubs *and* school teams (Hextrum; 2018, 2019, 2021; McGovern, 2018; Sabo & Veliz, 2008; Tompsett & Knoester, 2022). One survey of college baseball players' athletic histories found that 90% played on private teams and 98% played on high school team (Ogden & Warneke, 2010). The researchers concluded that college players have greater access to opportunities to play and refine their skills—competing on multiple teams and in varied venues (Ogden & Warneke, 2010).

The long-standing impact of racial housing discrimination in the U.S. has intertwined community and school resource allocation with race and class (Rothstein, 2017; Weis et al., 2014). White and Youth of Color live in different race/class opportunity structures, of which sport is a prominent mechanism (Allison et al., 2018). White youth are more likely to live in and attend majority-White schools whereas Youth of Color are more likely to live in racially diverse communities (NWLC, 2015). Therefore, a community's demographics can indicate the availability and quality of athletic opportunities as White suburban communities are more likely than any other region to host club, travel, and high school teams in a wide range of sports (Sabo & Veliz 2008). Conversely, Hispanic and Black communities are seven to

nine times more likely than White communities to have no athletic facilities, forcing youth in these areas to travel long distances to play sports (Moore et al., 2008).

The demographics of a given sport also drive participation (Dubrow & Adams, 2012). Baseball, once a sport with significant Black representation, has become increasingly White (Klein et al., 2020). The race/class linked barriers to play youth baseball have led to a rapid decline in racial minorities ascending to college and professional leagues providing fewer diverse role models in the sport (Ogden & Hilt, 2003). Concurrently, prominent Black role models in football and basketball have drawn Black youth away from baseball and toward these sports (Ogden & Hilt, 2003). Conversely, White athletes are evenly represented across a range of sports, including those with significant racial diversity like basketball and football (NWLC, 2015; Zarrett & Veliz 2021). As a result, White youth are less likely to consider how their race shapes their athletic opportunity (Hextrum, 2020b).

Collectively, this research demonstrates how community demographics—SES basis, educational levels, and racial demographics—are strong indicators of athletic opportunities. To understand how communities impact the chances for upward mobility via baseball, we combined insights from the previously mentioned literature with three studies into elite athletes' hometown characteristics (Allison et al., 2018; Dubrow & Adams, 2012; Macaulay et al., 2019). Dubrow and Adams (2012) examined the social origins of 155 National Basketball Association (NBA) players and found that professional athletes came from higher SES communities than national averages. They also considered racial demographics and found that lower-income Black players have much lower odds of becoming an NBA athlete than higher income Black and White players. Allison et al. (2018) examined the hometowns of the ESPN top 100 drafted National Football League (NFL) athletes. They too found that hometowns mattered in athletic attainment, especially along racial lines. Their results indicated that drafted Black football players were more likely to come from hometowns that were denser, more socioeconomically disadvantaged, and more racially diverse than Black non-drafted athletes. In contrast, White drafted athletes were more likely to come from *less* socioeconomically disadvantaged hometowns than White non-drafted football players. Macaulay et al. (2019) conducted the only quantitative study to date examining how hometown characteristics shape college access. They compared the hometown characteristics of 7,670 high school football recruits and found that colleges recruit from racially and economically diverse communities. Yet high schools that produced the *most* overall football recruits were private and in wealthier communities.

Based on existing literature, we designed a quantitative study to explore how community-level factors shape opportunities to become a college baseball player. Our research design was guided by the following questions:

> 1) Do the socioeconomic and demographic characteristics of neighborhoods influence college baseball participation?
>
> 1a.) Are the hometowns of college baseball players demographically and socioeconomically representative of their state and na-

tional averages, respectively?
1b.) Are college baseball players evenly represented across income levels? Or are they clustered in certain income groups such as *below* or *above* their state average?

2.) Are the educational outcomes (represented through rates of earned high school diplomas and bachelor's degrees) within the hometowns of college baseball players representative of their state and national averages, respectively?

3.) Are there hometown-level socioeconomic, demographic, and educational (such as college attainment) differences between Power 5 and Non-Power 5 recruited baseball players?

Methodology

Data and Sampling

This observational study analyzed the extent to which community characteristics shape the chances of someone becoming a college baseball player at Power 5 versus Non-Power 5 NCAA Division I schools. We designed a quantitative study using descriptive statistics, linear regression, and *T*-tests to observe whether certain variables linked to community-level SES influenced college athletic ascendance. Our study design was based, in part, on Allison et al.'s (2018) examination of the community background characteristics of NFL players. Their study utilized descriptive statistics and *T*-tests to determine the statistical significance of neighborhood characteristics in shaping a sport-opportunity structure. Our study design expanded on Allison et al.'s by creating a larger data set, considering the linkages between youth and sport college access, and testing a community's education levels as a statistically significant variable. Furthermore, our study created more nuanced categories and analyses for SES by comparing community averages to their respective state averages. Doing so, avoided the distortions that can arise from regional median income variations.

As a novel study with limited access to individual-level data, we designed our methodology to identify broad patterns of residence and SES in Division I college baseball across competitive levels. We anticipated that college baseball players were more likely than not to come from communities with higher levels of median income than the state or national average. We also anticipated relationships between community income and racial demographics. We hypothesized that baseball players were more likely to come from majority-White and higher-income communities. Finally, we anticipated that Power 5 players would be more likely to come from higher income and majority-White communities than Non-Power 5 players.

To address our research questions, we created an original database utilizing NCAA rosters and U.S. Census Data. Through publicly available team rosters, we gathered individual-level data on all hitters and pitchers who played Division I baseball between 2014 and 2018. Researchers have used athletic rosters to study the

reproduction of power through cultural representations and patterns of institutional access (e.g., Hextrum, 2019; Musto & McGann, 2016). The rosters included players' baseball statistics and biographical details (i.e., college team, college conference, hometown, height, weight, years played). As our primary research interests concerned players' socioeconomic backgrounds—not their actual baseball performance—we collected data on each player's hometown and home state.

We then created a second dataset from the U.S. Census Bureau Quickfacts of the player's community-level characteristics. Before pairing the roster data with Census data, we removed all duplicates (i.e., players who competed for multiple years in the study's timeframe) and any players whose hometowns were missing or unlisted in the U.S. Census (i.e., international students). This left 19,987 players from 306 colleges. All 50 states and Washington DC were represented.

Since incomes and standards of living vary widely across the U.S., SES measures must account for regional differences (Allison et al., 2018; Eckstein, 2017). With this in mind, we collected hometown-level, state-level, and national-level data. We designed a macro in Excel to iterate through and scape data from each city's entry, pair the entry to state and national data, and relocate the information into a new Excel file. Collecting state-level data allowed for subsequent comparisons between a city and its state average to attenuate to regional income variations.

Our comparisons utilized the following variables to understand the relationship between community characteristics and athletic opportunity structures:

1. *Median household income* – the median income of every household in a player's hometown
2. *Per capita income* – the mean income of every person in a player's hometown
3. *High school diploma rate* – Percentage of people over 25 years old who attained a high school diploma in a player's hometown
4. *Bachelor's degree rate* – Percentage of people over 25 years old who attained a bachelor's degree in a player's hometown
5. *Minority city* – A player's hometown is classified as a "minority city" if the percentage of People of Color living in a city is larger than the state average.
6. *Nonminority city* – A player's hometown is classified as a "nonminority city" if the percentage of People of Color living in a city is smaller than the state average.
7. *Power 5* – any school that is a member of the Southeastern (SEC), Atlantic Coast (ACC), Big Ten, Big 12, or Pacific-12 conferences
8. *Non-Power 5* – all Division I schools outside of the Power 5 conferences

We gathered variables 1-4 directly from the Census. Since the college rosters did not list players' racial identity, we created our own measure for race by comparing a player's hometown to their state average. In instances where the hometown had greater racial diversity than their state, we classified this community as a "minority city." If the city's percentage was lower than their state, then we classified that

community as a "nonminority city." We selected this approach due to the limitations associated with researchers assigning a racial category based on photographs (see Musto & McGann, 2016) and because of our interest in how community-level factors shape athletic opportunities.

Finally, we theorized that differences may exist across Division I. To measure these differences, we compared two competitive levels: Power 5 and Non-Power 5 schools. We elevated Power 5 schools as these conferences are the most athletically competitive, have the largest budgets, and are more prestigious. Thus, "Power 5-ness" was the study's independent variable and the SES factors—median household income, median per capita income, high school diploma rate, and bachelor's degree or higher rate—were the dependent variables.

Data Analysis

We conducted *T*-tests to determine the variables' level of significance related to our research questions (Allison et al. 2018). Our *T*-tests analyzed the statistical significance of differences in the variables' means compared to the national average. Next, we conducted a linear regression to examine the correlation between bachelor's degree percentage and median household income. We selected these variables for the regression based on research presented in the literature review and our preliminary results (Table 2).

To answer the first two research questions, we compared hometown SES to state SES averages. We classified players' hometowns as above or below the state median in each of the SES variables. Doing so revealed whether a community SES exceeded state-level SES averages. This analysis also attenuated for regional differences and fluctuations in income. For example, a median household income of $75,000 is below California's median ($78,672) but well above Alabama's median ($52,035). Next, we created histograms of median household income and bachelor's degree rate for more detailed insights into players' SES. Finally, we addressed the third research question by comparing the results among subgroups, considering differences across conference affiliation in our results.

Results

The analyses demonstrated a strong connection between socioeconomic status and college baseball participation. Due to limitations in publicly accessible individual-level data about college baseball players, and the observational nature of our study, we could not demonstrate that higher community-level SES *causes* increased chances of college baseball participation. Nevertheless, our methods show a positive, statistically significant relationship between SES and college baseball participation. Findings suggest that baseball is not an even playing field. Aspiring athletes living in cities with higher incomes and higher education levels have greater opportunities to become college baseball players.

Findings showed that the majority of DI college baseball players' hometowns had median incomes higher than their state average (see Table 3). Their hometowns

exceeded the national income average by 20%. Furthermore, players' hometowns had higher educational attainment rates then their state averages. Simply noting that most players came from high SES areas understates the discrepancy. Players were concentrated in high income brackets and high education levels, indicating SES combined with educational attainment inform athletic access.

Table 1 displays the participant data. As expected, Non-Power 5 participants were overrepresented, as there are fewer Power 5 schools. Unexpectedly, minority cities were overrepresented—57% of players' hometowns were more racially diverse than their state. This finding was surprising because 70% of college baseball players are White (NCAA, 2022). Our discussion elaborates on possible factors for this discrepancy.

Table 1
Background characteristics of players represented in the study

	All Players	Power 5	Non-Power 5
Total Population	19,987	4,308	15,679
Minority City	11,435	2,584	8,851
Nonminority City	8,329	1,687	6,643

Table 2 addresses research questions 1 and 2 through the national-level comparisons. Players' hometowns had higher educational attainment and income levels than the general U.S. population. The gap was largest in college attainment. The U.S. national average (mean) for earned bachelor's degrees is 32.1%. Baseball players' hometowns had 39% college attainment (with a slightly higher percentage, 40.1% for Power 5 baseball players). *T*-tests revealed a statistically significant difference in bachelor's degrees, with a *T score* of 62.059 and *p value* less than 0.0001.

Across all comparison groups, players' hometowns also had higher incomes. Whereas the national per capita income is $34,103, players came from communities with a per capita income of $38,524. Again, this gap was statistically significant as *T*-tests generated a *T score* of 39.419 and a *p value* less than 0.0001. The gap was even larger for median household income. Baseball players' hometowns had a median household income of $74,784 whereas the U.S. median income is $62,483. Earnings in baseball players' hometowns were $12,301 more per year—nearly a 20% increase—than the national average. This gap was statistically significant as the *T score* was 51.683 and the *p value* less than 0.0001.

The descriptive statistics listed in Table 2 did not yield relevant insights about competitive levels. The differences across Power 5 and Non-Power 5 were marginal. Power 5 players' hometowns earned only $700 more in median income than Non-Power 5 players. Moreover, the community educational levels are nearly identical. These findings suggest no significant differences across conference type when compared to national averages.

Table 2

Descriptive Statistics of hometown level variables for college baseball players

	US	All Players *Mean*	All Players *T score**	All Players *Median*	Power 5 *Mean*	Power 5 *Median*	Non-Power 5 *Mean*	Non-Power 5 *Median*
High school diploma	88%	89.6%	35.814	90.6%	89.8%	90.7%	89.5%	90.5%
Bachelor's degree	32.1%	39%	62.059	36.7%	40.1%	37.1%	38.7%	36.5%
Per Capita Income	$34,103	$38,524	39.419	$34,479	$39,004	$34,479	$38,392	$34,479
Household Income	$62,483	$74,784	51.683	$64,995	$74,220	$63,315	$74,939	$64,495

* *T score* compared *mean of all players* (column 2) to the *national average* (column 1)

Table 3

Percentage of players whose hometown level variables are stronger than their state

	All Players	Nonminority	Minority
High school diploma	66.1%	82.7%	54.1%
College degree	63.6%	68.3%	60.5%
Per Capita Income	56.3%	68.8%	47.1%
Median Household Income	52.3%	70%	39.3%

Analyses presented in Table 3 addressed the state aspect of research questions 1 and 2. A community's educational levels were significant for sports participation. As predicted, most players' hometowns exceeded their state educational levels—66.1% for high school degrees and 63.6.% for college. Racial differences were evident, as nonminority cities had much higher educational attainment (82.7%) than minority cities (54%).

Our data showed that a city's education level is a key determinant for players in minority cities. The minority cities in our study had higher educational attainments—represented in high school diploma rate (54.1%) and bachelor's rate (60.5%)—than their state averages. These percentages surpassed national averages for the typical minority city. Higher educational attainment in racially diverse cities may reflect linkages between educational levels and SES as the minority cities in our study had higher incomes than the average minority city.

Yet minority cities were less likely to exceed their state-level incomes averages than nonminority cities. Fewer players lived in minority cities *above* their state per capita (39.3%) and median household income (47.1%). This finding suggests there may different mobility pathways in minority versus nonminority cities. Again, data show that *most* players' hometowns outstrip their state's household (52.3%) and per capita income (56.3%). Therefore, we find that baseball players' hometowns are more likely to have higher incomes and education levels.

Table 3 demonstrated that 52.3% of players came from hometowns whose median household income is higher than its state. Yet this test did not reveal *how* much higher or whether players were concentrated in certain income brackets. To address this limitation, we created two distribution charts for income: Figure 1 depicts the distribution of players' hometown in buckets of absolute income and Figure 2 compares buckets of hometown income to state income. Figures 1 and 2 demonstrate the magnitude of these differences, namely that baseball players' hometowns are generally more well off than the average U.S. city. Figure 2 reveals that hometowns' below the state average were still within 80-100% of the median. Furthermore, few to no cities in the dataset reflect the poorest conditions in the U.S. Despite 31% of Americans being below the 0.6 ratio mark, only 3.71% of players' hometowns have a ratio below 0.6. Instead, a proportion of players came from some of the most affluent communities in the U.S. Findings indicated that baseball players are concentrated in the higher income brackets of their state. These trends extend to education (Figure 3). The majority of baseball hometowns have higher bachelor's degree rates than their state. Nearly 7% of hometowns have twice the bachelor's degree rate of their state.

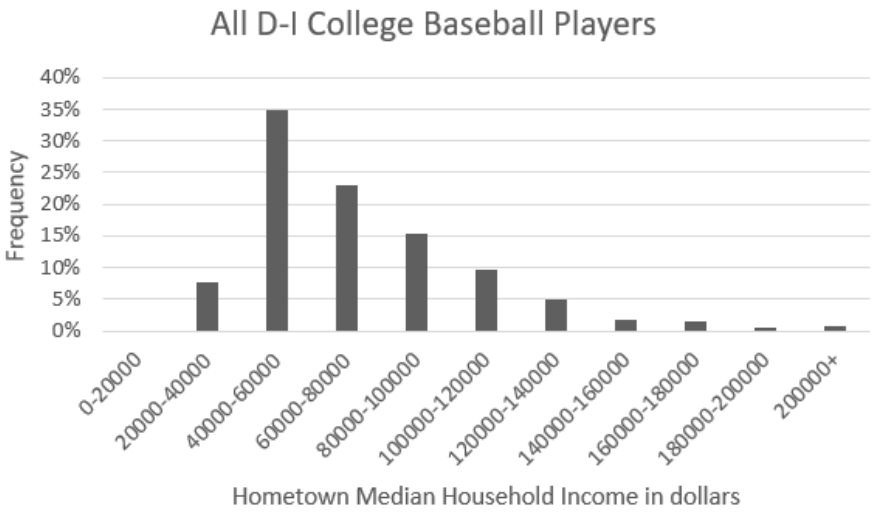

Figure 1
Distribution of DI Baseball Players Across Community Income

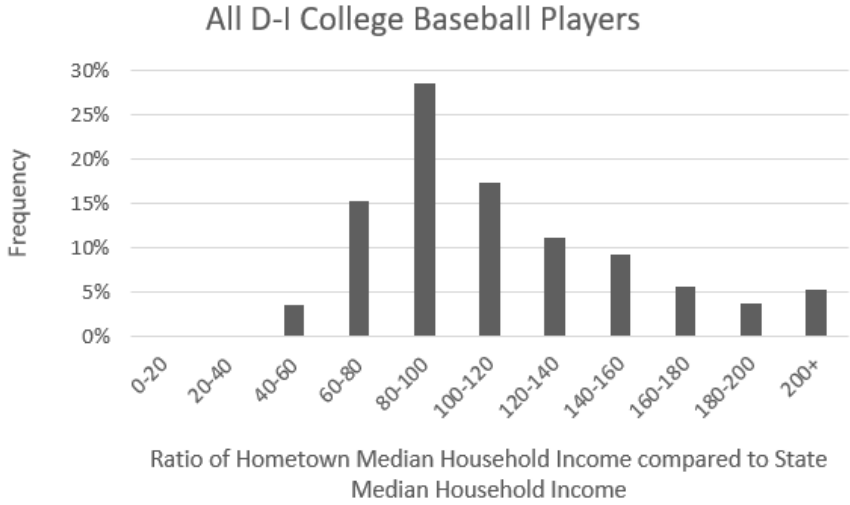

Figure 2
Distribution of DI Baseball Players Across Community Income Levels relative to State Income

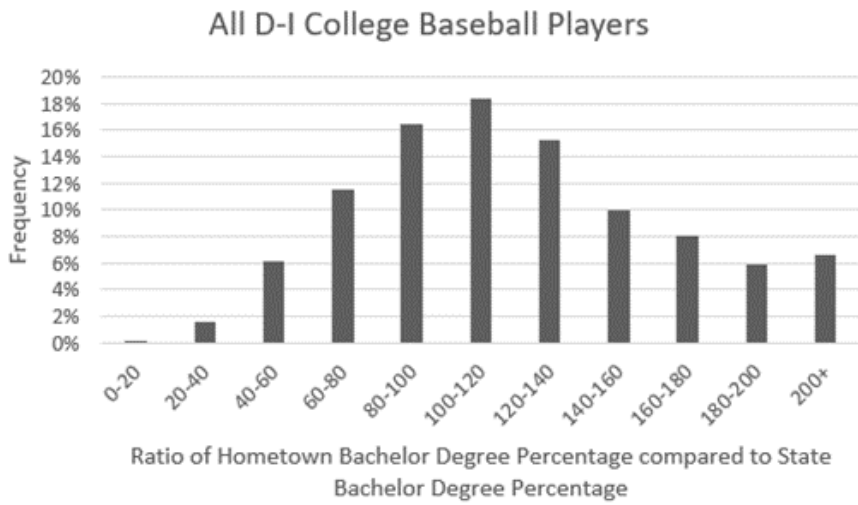

Figure 3
Distribution of DI College Baseball Players Across Community Education Levels

Our final test applied a linear regression to understand the connection between educational attainment and income. To do so, we standardized bachelor's degree percentages and median household incomes by converting them to z-scores. Next, we conducted a linear regression of those z-scores in R. The resulting regression was *z score of bachelor's degree percentage = 0.777 * z score of median household income* with a correlation coefficient of 0.826 and a coefficient of determination of 0.682. This suggests, as found in national studies, that income and education level are highly interconnected, leading to a compounding effect in the positive direction (more educational resources in higher-income communities) and the negative direction (less resources in lower-income communities). Taken together, these effects compound the difficulties for players in lower-income communities to ascend to college. They also multiply the advantages for players in higher-income communities to ascend to college.

Table 4
Percentage of players whose hometown variables are stronger than their state, by conference

	Power 5	Non-Power 5
High school diploma	67.5%	65.8%
College degree	66.7%	62.7%
Per Capita Income	58.8%	55.6%
Household Income	51.9%	52.4%

The third research question examined whether differences exist across Power 5 and Non-Power 5 schools. To address this question, we compared the percentage of Power 5 players to Non-Power 5 players whose hometowns are stronger in each variable than their state. We observed slight differences across the athletic competitive levels. The largest gap was in educational attainment as 66.7% of Power 5 hometowns compared to 62.7% of Non-Power 5 hometowns had higher rates of bachelor's degrees than their state. We also found that Non-Power 5 had more players above their state household income leading to an inconclusive result for our third research Question.

Limitations

The study's main limitation is available data. Our study created proxy values for players' SES based on their hometowns; individual-level data on family SES would generate more accurate insights. Individual-level data is especially important for players from larger metropolitan areas with large discrepancies in SES within their borders. The Census data provided other challenges. We were unable to match all players with Census data. These absences arose either through typos on the roster or if their hometown population was less than 5,000 (such hometowns are excluded from the Census QuickFacts). Players without hometown data were removed.

Our study was also limited by incomplete racial data. Without self-identified racial categories, we approximated a player's race through community demographics. We found the community-level demographics did not neatly align with college-level demographics. Similar to community income, the demographics of a city do not reflect the racial segregation that may exist *within* a city. This is especially true for large metropolis areas like Dallas, TX; Los Angeles, CA; and Chicago, IL. These limitations do not subtract from the study's conclusions as we found consistent trends across players hometowns compared to state and national averages. But these limitations do provide compelling reasons for the NCAA to provide anonymized individual-level data on college athletes' backgrounds (including their racial identity, parental educational level, household income, among other important data points) so researchers can conduct more sophisticated and nuanced analyses of the inequalities in opportunity structures for youth to become college-level athletes.

Discussion

Despite limitations, our findings offer key insights into how SES—represented through community-level resources—shape unequal opportunities to play college baseball. Though the study is observational, and causation cannot be concluded, it nonetheless provides strong evidence linking SES and college baseball participation. This study generated a unique, large dataset examining the background characteristics of DI baseball players. We merged individual-level data (n = 19,987) pulled from DI rosters with U.S. Census data across four variables—high school attainment, college attainment, per capita income, and median household income—to question

American sporting meritocracy and whether all youth have equal chances to play baseball. We conducted several distinct comparisons to determine how community income influences baseball participation.

While interest, talent, and ability remain important drivers for sport access, our findings confirm a persistent class gap in athletic opportunities (Kanters et al., 2013; Meier et al., 2018; Tompsett & Knoester, 2022). We extended existing research by centering baseball—an understudied sport in sport-meritocracy inquiries. Our research is the first to use quantitative analyses to study the SES characteristics of the hometowns of elite college baseball players. Our research is also the first to consider conference-level differences or whether class became a *more* prominent mechanism as one ascends the competitive levels.

Research question 1 asked if baseball players came from similar backgrounds as their state and national averages. This question drove our inquiry into meritocracy. If baseball players resembled their state and national averages, we could assume that baseball offers relatively equal playing opportunities. Our findings indicated that baseball players came from significantly wealthier communities than the national average. To ensure this finding did not emerge from regional variations in income, we compared players to their state average. Again, we found baseball players came from higher income areas than their state averages. We also considered whether players were clustered in certain income categories and found players concentrated in higher income brackets. Conversely, we found relatively few players from lower income communities, suggesting fewer community resources erodes baseball participation. This finding suggests affluence shapes baseball participation.

Study insights confirm existing research linking class, community resources, and youth sport opportunities (e.g., Project Play, 2022; Sabo & Veliz, 2008; Tompsett & Knoester, 2022; Zarrett et al., 2020; Zdroik & Veliz, 2016). We extended these studies to examine whether these inequities "trickle up" into college-level participation (NWLC, 2015). Our findings indicate that persistent youth inequalities influence college playing opportunities. As discussed in the limitations section, we lacked self-reported data on players' SES. As other researchers have called for, we recommend institutions release such data so researchers can conduct more accurate analyses (Allison et al., 2018; Hextrum, 2021).

Our second research question examined whether baseball players come from hometowns with educational outcomes similar to or different from state and national averages. Again, we found most baseball players' communities were at or above state and national educational levels. We also examined whether a community's educational level surpassed income in predicting college baseball participation. As reflected in *T*-test results, we found a statistically significant relationship between a community's educational level and college baseball participation. This finding may reflect the strong link between educational level and class. It may also mirror a pattern noticed in qualitative studies. Qualitative researchers have tracked affluent families turning to sport to reproduce their class standing (e.g., Eckstein, 2017; Friedman, 2013; Hextrum, 2018, 2019, 2021; Messner, 2009). The belief is

that competitive, elite sports cultivate the dispositions and characteristics needed to ascend society's education and employment winnowing mechanisms (Friedman, 2013; Messner, 2009). Some studies have also pointed to well-educated families explicitly investing in sports for special admission advantages, as parents with college degrees are better positioned to game a competitive college selection process (Eckstein, 2017; Hextrum, 2018, 2019, 2021). Without more refined measures and analyses, we cannot address parental motivations. But the data suggest college baseball players were immersed in highly educated communities. Subsequent studies could analyze how parental education shapes the college-sport opportunity structure.

We also considered how race informed the college-sport opportunity structure. Dubrow and Adams (2012) contend studies of sport access often examine race *or* class, thereby minimizing the interactive effects of raced-classed discrimination. In response, we examined whether there were significant differences in the racial makeup of baseball players' hometowns. Based on the literature—stating that White people are more likely to live in White majority cities—we anticipated around 70% of players coming from majority-White cities (Rothstein, 2017). Yet, baseball players in our sample were more likely to come from minority cities than nonminority cities. The Census data collection approach may contribute these discrepancies. The Census tracks the demographics of an entire city and does not adequately capture patterns of neighborhood residential racial segregation that track with income (Rothstein, 2017). The Census also folds smaller, suburban areas or outlying residences into large urban centers. Doing so, distorts the half-century pattern of White flight and residential segregation in which White people used their racial and class advantages to create racial enclaves, concentrate tax dollars in their borders, and subsequently defund larger, urban centers (Rothstein, 2017; Weis et al., 2014). We believe this discrepancy in our finding provides further support for why individual-level class *and* race data should be available to researchers.

Even with this limitation, our study did find some possible interactive race/class trends in the minority cities in our dataset. The minority cities in our sample had higher income and higher education levels than the typical minority-majority city. This suggests that only certain Players of Color frequently reach DI baseball, and that SES barriers block many others. In other words, racial diversity in the study correlates with economic advantages, making it highly unlikely that someone would be *both* low-income and a Player of Color. This finding extends qualitative research purporting that baseball has greater racial and SES barriers compared to other popular sports (football and basketball) (Brown & Bennett, 2015).

Finally, we considered links between conference affiliation and SES. We predicted that Power 5 players would come from higher-SES hometowns than Non-Power 5 players. Here, we found no significant differences across the conference types. One possible explanation could be the path to becoming a baseball player is so barrier ridden that *which* college matters little. We recommend future researchers' study whether these effects resonate across other competitive measures, for instance, comparing DI overall to DII and DIII players.

Conclusion & Implications

The sport-meritocracy ideology minimizes how entrenched economic and racial inequalities limit access to a range of social goods including neighborhoods, schools, athletic fields, and employment. Our findings extend research into the background characteristics of elite football and basketball players by identifying how community-level SES shapes baseball participation. Contributing to research showing that individual and family investments are vital for sport success, (Hextrum, 2021; Kanters et al., 2013; Meier et al., 2018; Tompsett & Knoester, 2022) we demonstrated the importance of community characteristics for athletic attainment.

Inequality in athletic opportunity has a range of consequences. Sport participation generates better academic, health, and social outcomes (Kanters et al., 2013; Merkel, 2013; Meier et al., 2018; Zarrett et al., 2020). When playing opportunities are concentrated in higher income communities, athletic benefits go to socially advantaged youth, exacerbating broader social inequities (Meier et al., 2018). Expanding athletic opportunities for lower-income youth could minimize these effects and improve educational, physical and mental health, employment, and social outcomes.

Our study centered one benefit of youth sports—college participation—and found SES restricts intercollegiate baseball opportunities. College is a preeminent social good, in and of itself. But DI institutions offer additional, valued benefits including special admission, superior athletic resources, status, and prestige (Eckstein, 2017; Eitzen, 2016; Hextrum, 2021; Karabel, 2005). These findings suggest that already-privileged youth may receive a disproportionate amount of athletic resources throughout their lifespan, including college. In this sense, the college athletic admission system is not likely to provide upward mobility opportunities.

The athletic barriers at the youth and college level may also drive talent loss. As exposure ignites participation, fewer opportunities to play results in fewer potential college athletes (Project Play, 2022). Elite athletic programs probably do not recruit from the deepest possible talent pool. Instead, class barriers prevent many lower-income American youth from ever playing sports, or, if they do, persisting through the economic barriers at subsequent competitive levels. Having fewer potential athletes—due to SES, not interest, aptitude, or ability—erodes the talent base.

Professional baseball leagues have recognized a dwindling talent pool and have taken steps to equalize playing opportunities. One study found that 25 of 30 Major League Baseball teams now host “local, low-cost programming for baseball in low-income areas” run by the league office (p.17). In 2019, 155,000 youth signed up for these teams (Project Play, 2022). These actions by professional baseball to extend playing opportunities, won’t eradicate class inequalities in athletic participation. Widespread, public reinvestment in sports is needed, across neighborhoods, to ensure all youth, regardless of background, have opportunities to play.

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