

Geography and College Choice: A Systematic Literature Review Using Critical Race Spatial Analysis

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Abstract

This systematic literature review analyzed the theoretical frameworks and methodological approaches higher education researchers used to examine the intersections between geography and student college choice. The literature review was guided by Critical Race Spatial Analysis, a conceptual framework and methodological approach for studying the interconnections between race, racism, space, and educational opportunity. The synthesis and analysis of 24 peer-reviewed empirical journal articles revealed that higher education researchers typically failed to employ a theoretical framework to conceptualize these intersections or relied on race-neutral economic perspectives to study geographic disparities in college choice. The analysis of the methods used by higher education researchers found that scholars over-relied on quantitative research approaches, such as regression analyses. These findings suggest that future research examining the intersections between geography and college choice should consider employing critical, raced-gendered, and spatial theories, as well as qualitative or mixed methods to address pressing gaps in college choice research.

Keywords: college choice, critical race spatial analysis, higher education, geography, geography of opportunity

“Yet, as social scientists, we should seek to better understand what Yeakey (2000) referred to as ‘structured silences’ (p. 290). Our theories and methods may limit our ability to hear the voices and document the experiences of traditionally underserved children and families. In most discussions about science and metropolitan America, the risks of uneven geography of opportunity are largely omitted.” (Tate, 2008, p. 397)

Past president of the American Educational Research Association (AERA), William F. Tate IV, focused his 2008 presidential address on the *geography of education opportunity* in metropolitan regions of the United States (U.S.). Borrowing from Brigg’s (2005) phrasing of *geography of opportunity* as it relates to housing choice, Tate (2008) explored whether advancements in science and related industries in the Dallas metroplex and St. Louis metropolitan area positively influenced educational outcomes for local community

members. Using geographic information systems (GIS) software and spatial data, Tate demonstrated that residents from St. Louis County and St. Charles County were most likely to benefit from the clustering of biotechnology companies, compared to residents from St. Louis City and Earth City, who experienced significant unemployment and family poverty. Students from the two counties performed higher in science and mathematics than students from the two cities, positioning county residents to take advantage of biotech employment opportunities in the cities. Based on these findings, Tate (2008) argued that an “uneven geography of opportunity” (p. 407) in the St. Louis region disproportionately affected the lives and educational outcomes of working-class Black residents, emphasizing the importance of considering the role of geography in educational research.

In addition to this presidential address, Tate and other educational scholars have emphasized the importance of thinking geospatially and employing geospatial methods in educational research to investigate educational inequities and (in)opportunities. In 2012, Tate et al. argued that improving access and opportunity to science, technology, engineering, and mathematics (STEM) learning in urban cities of the U.S. requires that educational researchers and practitioners consider the unique geospatial arrangements of cities. For instance, the scholars argued that issues of concentrated wealth and poverty influenced opportunity structures like access to STEM and related educational attainment.

Also implementing geospatial thinking and methods, Hoglebe and Tate (2012) found that the relationships between Algebra I performance and other educational variables varied across 471 school districts in Missouri due to the centrality of place and the variation in poverty levels across place. Furthermore, Hoglebe and Tate (2017) found that geography influenced participation in advanced math courses in Missouri, as attending schools in larger metropolitan areas provided students with greater access to advanced coursework. These conceptual and methodological articles demonstrate that access to educational opportunities is not equitably distributed across geographies and that ignoring the geography of education opportunity serves to exacerbate “economic and racial segregation and disparity” (Hoglebe & Tate, 2017, p. 127).

This systematic literature review extends Tate and others’ lines of research, which position geography as a central rather than a marginal factor in determining educational (in)opportunity, especially for Students and Communities of Color¹ living in historically underserved and underinvested communities. This review focuses on how geography has been utilized by researchers studying student college choice, a subfield of higher education research that investigates whether and where students decide to attend college (McDonough, 1997).

Historically, college choice models have focused on how access to information influences students’ decision-making. Hossler and Gallagher’s (1987) widely cited three-phase model emphasizes how students collect and assess various types of information about higher education institutions through three temporal stages, including (a) predisposition, (b) search, and (c) choice. Other leading theorizations, such as those by Cabrera and La Nasa (2000) and Perna (2006), have updated Hossler and Gallagher’s

¹ Following the writing and theorizing practices of critical race scholars (e.g., Pérez Huber et al., 2017), the terms *Students of Color* and *Communities of Color* are intentionally capitalized to reject the standard grammatical norm as a means of moving toward empowerment and social and racial justice for groups of people that are institutionally marginalized.

thinking, providing a more comprehensive understanding of college choice and incorporating factors such as distance and institutional location. Still, these models are theoretically grounded in a framework that assumes all students have equal access to college-related information and that students' decision-making processes are independent of their geographic contexts, where choices are structured and made (López Turley, 2009).

This systematic literature review examines how higher education scholars have used geography as a conceptual lens, methodological tool, or quantifiable measure in their empirical studies to analyze student college choice. Notable studies by López Turley (2009) and Hillman (2016) have employed geography of opportunity theories and geospatial methods to demonstrate that the locations, quantity, and quality of higher education institutions in the U.S. are stratified by race and social class. However, these new geographic understandings and applications do not forefront the permanence of race and racism in the U.S. or consider how the unevenly built postsecondary landscape *is* the spatialization of a racist and inherently unequal society. From this perspective, variables such as distance and institutional location are not neutral—particularly when considering redlining and other residential segregation practices and policies that impact access to educational resources and opportunities. Accordingly, this literature review draws on a Critical Race Spatial Analysis (CRSA) in education framework (Vélez & Solórzano, 2017), which offers conceptual and methodological principles grounded in critical race theory (CRT), to study the intersections between race, racism, space, and educational opportunity. The following research question guides this literature review: What theoretical frameworks and methodological approaches do higher education researchers use to examine the intersections between student college choice and geography?

Conceptual Framework

In this literature review, I draw on CRSA in education framework (Vélez & Solórzano, 2017) to analyze the theoretical and methodological decisions of higher education scholars who center geography in their research on student college choice. Vélez and Solórzano (2017) defined CRSA as “an explanatory framework and methodological approach that accounts for the role of race, racism, and white² supremacy” in dividing, constricting, and constructing “space to impact the educational experiences and opportunities available to students based on race” (p. 20). CRSA requires that educational researchers (a) foreground the color-line and its intersection with other forms of subordination, (b) challenge race-neutral representations of space, (c) spatially express the lived experiences of Students of Color, their families, and their communities as sources of strength, (d) center a transformative solution, (e) utilize a transdisciplinary knowledge base, and (f) refuse to allow maps to speak for themselves. These six tenets guide educational researchers in their conceptual and methodological analysis of the intersections between race and space, as well as the collective impact of these intersections on the educational experiences and opportunities of Students of Color.

² Following the writing and theorizing practices of critical race scholars (e.g., Pérez Huber et al., 2017), the term “white” is intentionally lowercased to reject the standard grammatical norm as a means of rejecting the grammatical representation of power that capitalization brings to the term “white.”

Unlike the previously referenced conceptualizations of *geography of opportunity*, CRSA is grounded in a CRT in education framework (Solórzano, 1997, 1998; Solórzano & Delgado Bernal, 2001; Solórzano & Yosso, 2001). A CRT in education framework forefronts the role of race and racism in producing unequal educational experiences and outcomes for Students of Color. For critical race educational scholars, beginning with the permanency of racism in the U.S. is an essential first step in eliminating racial inequities and achieving social justice in education.

In addition to CRT, a CRSA framework is theoretically rooted in a critical race understanding of space. Specifically, Vélez and Solórzano drew on Du Bois's (1903/1999) articulation of *the color-line* to argue that the construction of space and the educational and life opportunities afforded to people within or outside of particular spaces are manifestations of a racist U.S. society. For critical race spatial scholars in education, *uneven geographies* and constrained college choices are products of a racist society.

This review will use a CRSA framework, specifically the first and second tenets that correspond with its conceptual grounding in CRT and the critical race concept of the color-line, to analyze the (de)centering of race and racism in the theoretical choices of higher education scholars who study the intersections between geography and student college choice. If issues of race, racism, and the color-line are not foregrounded in researchers' theorizations, then race-neutral representations of space are upheld, and addressing limited educational opportunities becomes more difficult. The first and second tenets of CRSA on foregrounding the color-line and challenging race-neutral representations of space conceptually argue that an analysis of space must include an analysis of race and racism because these systems of oppression shape the construction of geographic and social spaces and, thus, the educational opportunities within them that are (in)accessible to Students of Color. Such educational inequities will be left unexamined and unchallenged if scholars' theorizations and examinations of space remain race-neutral.

A CRSA framework also provides a methodological approach for documenting the impact of the color-line on the educational experiences and opportunities of Students of Color. Vélez and Solórzano (2017) theorized *the map* as a valuable tool that educational researchers can leverage to display and analyze racial inequities in education across space. Vélez and Solórzano's methodological approach to mapmaking differs from previous utilizations of the map because they contend that maps and their respective mapmakers cannot be disentangled from "issues of positionality, power, the varied construction of knowledge, multiple subjectivities, and the politicized nature of representation" (p. 11). These issues are seldom raised by higher education researchers who use the map to spatialize the "geography of opportunity."

To address issues of power present in the research and mapmaking process, Vélez and Solórzano (2017) suggest that maps must be "ground-truthed" (p. 22). *Ground-truthing* through a CRSA approach entails inviting community members to verify and update the data displayed on the maps. A CRSA methodological approach, specifically the third and sixth tenets, will be used in this review to analyze the methodological choices of higher education scholars who use the map and other spatial techniques to study the intersections between geography and college choice. Through these tenets, Vélez and Solórzano contend that, in addition to displaying the role and consequences of race and racism through GIS and maps, honoring the lived experiences and voices of Students of Color is not only

necessary but a methodological imperative for reappropriating colonial and imperial spatial tools for social justice aims.

In sum, CRSA offers both conceptual and methodological implications for educational researchers interested in theorizing and visualizing the role of race and racism in the everyday lives, educational experiences, and opportunities of Students and Communities of Color. It differs from previously used geography of opportunity theories and approaches in student college choice research because the application of CRSA necessitates that issues of race and racism be brought to the forefront of investigations of spatial injustice and educational inequity, and that there is significant alignment between theory and method. Scholars employing geospatial strategies in student college choice research may find an *uneven geography of opportunity* in specific communities. Still, they may be unable to fully comprehend and explain why such educational disparities exist and affect particular student groups if they do not ground their methodological approaches and findings in perspectives that seek to dismantle racial and intersecting systems of oppression and pursue social justice, such as CRT. This review focuses on the application of geographic theories and methods by higher education researchers studying college choice, aiming to document the synergy between scholars' theoretical perspectives and methodological approaches, as well as the empirical and real-life consequences of overlooking the role of race and racism in theorizing and measuring college (in)opportunity.

Method

This systematic literature review aimed to understand the theoretical frameworks and methodological approaches used by higher education scholars to examine the intersections between student college choice and geography. This primary research question guided the selection of two databases, the development of search terms and inclusion and exclusion criteria, and the analysis of the articles through a CRSA conceptual framework and methodological approach.

Data Collection

Databases and Search Terms

Two online digital libraries of research were targeted for this literature review, including ERIC (Education Resources Information Center), an education-focused library, and JSTOR (Journal Storage), a multidisciplinary library with an education subject focus. Using the advanced search tool in both databases, I searched for the truncated term “geograph*” to capture words such as geography, geographic, geographical, and others, and the quoted phrase “college choice” to limit the results to studies that focused on the student college choice process.

“Geography” was used as a search term given Tate’s (2008) contributions to the educational literature regarding empirical evidence of an “uneven geography of opportunity” in the U.S. In this review, geography refers to the physical location and spatial distribution of U.S. higher education institutions in relation to the locations where students reside. Although geography was the only spatial term considered in this review, the articles that surfaced from the use of this term applied and measured other spatial synonyms like

proximity, distance, and location in their studies, suggesting that the search term geography was an all-encompassing term that revealed other studies similarly engaged in conducting spatial research on the student college choice process.

Additionally, the term “college choice” refers to a student’s decision about whether and where to attend college (Daché-Gerbino, 2017; McDonough, 1997). This review is specifically interested in how the geographic context in which students’ decisions occur shapes their choice of a particular college (López Turley, 2009). The ERIC search yielded 231 results, and the JSTOR search returned 617 results.

Inclusion Criteria

To refine the searches, only peer-reviewed journal articles published between 2008 and 2020 were considered. Although other empirical research on student college choice has referenced geography before 2008 (i.e., De Oliver, 1998; Goenner & Pauls, 2006; Leppel, 1993; Lyddon & Prince, 1991; McConnell, 1965; McDonough et al., 1997; Morcol & McLaughlin, 1990; Stewart & Post, 1990; Weiler, 1994), this date range was intentionally chosen to assess how geography had been taken up by college choice researchers following Tate’s (2008) geographic-centered AERA presidential address. Additionally, most of the research referenced above that addressed geography was conducted in the 1990s, a geographic and educational context different from the one Tate described.

Furthermore, around the same time as Tate’s presidential address, López Turley (2009) published a seminal piece that employed a geography of opportunity perspective to theorize and map access to college opportunities. Higher education scholars typically cite this article as one of the first to center geography in college choice research (i.e., Hillman, 2016; Daché-Gerbino, 2017). The centering and salience of geography to educational research during the late 2000s, most notably led by scholars like Tate and López Turley, was a pivotal turning point in the field of educational research. The year 2020 was chosen as the final year, given the start of the COVID-19 pandemic in the U.S. that impacted students’ college choices (Puente, 2022).

Excluding reports, books, and book chapters, the ERIC search resulted in 61 articles, and the JSTOR search resulted in 41 articles. The titles, abstracts, and keywords of these 102 peer-reviewed articles were then analyzed according to the development of additional inclusion criteria. First, the articles reviewed needed to be situated within a U.S. context, meaning that any studies conducted in international contexts were excluded, including 27 articles from the ERIC search and four from the JSTOR search. Although the international scholarly community has much to contribute to interrogating the intersections between geography and college choice, this review is rooted in a historical and theoretical genealogy that unapologetically forefronts the permanence of racism (Bell, 1992; Ladson-Billings & Tate, 1995; Solórzano, 1997) in shaping the U.S. geography, the U.S. higher education landscape, and the college choices available to students in racialized U.S. geographies.

Another criterion was that the articles reviewed for this analysis needed to focus on the student college choice process. Based on this criterion, nine articles from the ERIC search were excluded for focusing on topics such as the role of higher education institutions, the college experiences of adult learners, the decision-making processes of graduate students, and student debt, among other topics. The third criterion was that the articles needed to use geography as a lens or tool in their studies on student college choice. Despite using

geography as a search term, JSTOR returned 24 studies that did not reference geography in any way and were therefore excluded from the final analysis.

Lastly, articles were required to be empirical studies to better understand how researchers employed geography to assess student choice. Therefore, three literature reviews were excluded from ERIC and two from JSTOR. Furthermore, four book chapters were excluded from the JSTOR results, and five other articles were excluded because they were duplicates from the ERIC search. The final number of analyzed peer-reviewed articles was 24, detailed in alphabetical order in Table 1 (see Appendix A).

Data Extraction

Given the focus of this literature review was to understand the theoretical frameworks and methodological approaches of higher education scholars who study the role of geography in student college choice, information that was extracted from the 24 peer-reviewed articles included (a) research question(s), (b) conceptual or theoretical framework, (c) method or methodology, and (d) findings related to geography.

Data Analysis

The articles ($n = 24$) were analyzed using CRSA, which accounts for the theorization and measurement of space through a Critical Race Theory (CRT) in education framework (Solórzano, 1997). In coding for the theoretical frameworks, I was explicitly attuned to how researchers included a theory or theoretical concept in their studies to conceptualize the intersections between geography and college choice. I also considered whether the frameworks employed by researchers included an analysis of race and racism and whether their frameworks had a critical element to document and challenge inequities in college choice as products of structural and spatial issues, rather than attributing them to students' faults for choosing the incorrect college.

For the methodologies, I coded researchers' use of quantitative, qualitative, or mixed methods applications of geography. Higher education researchers who utilize geography will likely employ geospatial analysis (Hillman, 2017), a method traditionally associated with quantitative research approaches (Pavlovskaya, 2009). A CRSA methodological approach necessitates that the voices of communities marginalized by the spatialization of race, racism, and other structures of oppression are included in the collection and analysis of spatial data. Vélez and Solórzano (2017) refer to the verification of quantitative and spatial data by students and community members as "ground-truthing" (p. 22), which can potentially be pursued through qualitative or mixed methods research approaches.

Results

Four themes emerged following a review of the literature on student college choice through a Critical Race Spatial Analysis framework. The following themes are (1) the color-line is undertheorized, (2) college choice inequities are challenged through holistic, sociological, and critical geographic theoretical frameworks, (3) spatial realities are masked through quantitative methodological approaches, and (4) geographic data is ground-truthed through qualitative and mixed methods approaches. The first and third themes synthesize how scholars have traditionally theorized and measured geography in

college choice research. The second and fourth themes highlight the possibilities of employing critical theories and qualitative and mixed methods research approaches to examine geography in college choice research. The theoretical frameworks, as presented in the article, are listed in Table 2, and the methodological approaches are outlined in Table 3.

Table 2
Theoretical Frameworks of Articles Reviewed

Sub-Theme	Quantity of Articles
A-Theoretical Perspectives	8
Economic Perspectives	6
Holistic Approaches	2
Sociological Approaches	3
Critical Geographic Approaches	5

Table 3
Methodological Research Approaches of Articles Reviewed

Sub-Theme	Quantity of Articles
Regression Analysis	13
Geospatial Analysis	4
Questionnaires	2
Qualitative Research	3
Mixed Methods Research	2

The Color-Line is Undertheorized

Eight higher education researchers did not employ theoretical frameworks in their studies to articulate the intersections between race, space, and college choice. Another set of scholars ($n = 6$) over-relied on race-neutral economic perspectives (Table 2).

A-Theoretical Perspectives in College Choice Research

Two researchers who did not employ theoretical frameworks in their studies focused on the role of geography in students' decisions to attend community colleges. Barreno and Traut (2012) analyzed the factors influencing students' attendance at a West Texas public two-year community college. Additionally, O'Connor (2010) examined the effect of geography on the community college enrollment of Hispanic³ students compared to the chosen point of entry into higher education for Black and white students. These scholars did not employ a race- and space-centered theoretical framework to build their arguments.

Two additional studies, with no guiding theoretical frameworks, focused on the role of geography in the type of institution students chose to enroll in. Alm and Winters (2009) examined the factors that affect a student's decision to enroll in an institution within the University System of Georgia (USG) and the factors that affect a student's choice among USG institutions. Gurantz et al. (2016) investigated the impact of a College Board-created initiative, the National Hispanic Recognition Program (NHRP), on the college enrollment and completion of high Preliminary SAT/National Merit Scholarship Qualify Test (PSAT)-scoring Hispanic students. Although both studies explored the connections between geography and college choice, the scholars' analyses were not guided by any theoretical framework.

Other researchers have considered the role of geography in students' choices of selective colleges. Wilson and Adelson (2012) examined the characteristics of the college choices of "academically talented" high school students from North Texas. Also, they considered the factors that predict the selectivity of students' choices. Their sample was primarily consisted of white students from higher socioeconomic backgrounds. The scholars did not employ any theoretical framework to make sense of the decision-making processes of this privileged student sample. Griffith and Rothstein (2009) examined the effects of distance on students' decisions to apply to a selective four-year institution and whether these effects differ for low-income students. Although the researchers were concerned with the role of college proximity and family income in college choice, these two factors were not a part of an organizing theoretical framework in the study.

Like Wilson and Adelson's study, Skinner (2018) investigated the characteristics of college choice but for a nationally representative cohort of students in the U.S. He pursued two lines of inquiry, including choosing between colleges and whether to attend college. Although Skinner focused on the role of cost, distance, and college match in student college choice, he did not employ any theoretical framework. He expressed concern about the geographic structuring of college opportunities for "underrepresented populations" (p. 177). However, this call to action falls short of employing a critical geographic theoretical framework from the onset of a study's design.

Lastly, one study that did not employ any theoretical framework but did have a racial focus was Van Camp et al.'s (2009) study on Black undergraduate students' decision to attend Historically Black Colleges and Universities (HBCUs). Interestingly, the researchers identified "geography" as a non-race-related factor. Yet, most HBCUs are located in the Southern U.S. region, a geography home to racially momentous events, including the American Civil War, Jim Crow laws, and the American Civil Rights Movement.

³ I use the term *Hispanic* to reflect the chosen term of the authors' cited throughout this article.

Economic Perspectives in College Choice Research

Two studies employed economic perspectives to examine the role of geography in the choices made by community college students. Joshi et al. (2009) investigated the factors that led students to choose any two-year institution over any four-year institution using a utility maximization model, which captures the idea that students should decide which college to attend based on a rational evaluation of costs and benefits. Although these costs and benefits will vary from student to student, it is assumed that the student should “enroll in the best institution that would accept them” (Freeman, 2017, p. 80), highlighting how this theoretical framing privileges factors of institutional prestige, status, and selectivity. Through a utility maximization model, Joshi et al. suggested that students should only select two-year institutions if their expected utility is greater at a two-year college than at any other competitive option.

Unlike Joshi et al. (2009), who analyzed the relationship between student characteristics and college choice, Jabbar and Edwards (2020) examined the relationship between institutional factors (e.g., distance, cost, selectivity) and the transfer decisions of Texas community college students through a human capital model of decision-making. The scholars were concerned with the selectivity of institutions that community college students transferred to, arguing that institutional quality has significant implications for post-college earnings.

Two other studies also employed economic perspectives to analyze the role of geography in college choice. Using a utility choice model, Chung (2012) investigated the choice of a for-profit college for a representative sample of the for-profit student population in the U.S. Chung argued that utility maximization is typically a function of individual student characteristics and other college-specific attributes. Chung theorized that geographic exposure to for-profit providers could influence students’ college choices.

Nurnberg et al. (2012) also drew on a utility perspective to analyze the matriculation decisions made by students accepted into Williams College, a private liberal arts institution in Massachusetts. They proposed a framework for the matriculation decision that included consumption, cost, and factors specific to attending a “top college,” such as increased lifetime earnings and non-financial occupational benefits. Nurnberg et al. argued that students should matriculate at Williams College if attending Williams exceeds the value of their other options.

Finally, two researchers combined multiple theories and concepts from the field of college choice to analyze students’ decision-making processes, although these two studies still heavily emphasized economic perspectives. Jabbar et al. (2019) drew on (a) economic models of decision-making (e.g., Hilmer, 1997; Manski, 1993), (b) theorizations on the college choice set (e.g., Bell, 2009; Hossler & Gallagher, 1987; Tierney, 1983), and (c) perspectives on college proximity (e.g., Hillman & Weichman, 2016; López Turley, 2009) to examine the types of four-year institutions that Central Texas community college students considered in their choice sets. The scholars drew on various theories related to college choice to specifically examine how individual and structural barriers influenced the decision-making processes of transfer-intending students.

Yoon (2019) also drew on multiple theoretical perspectives, including (a) human capital theory, (b) college proximity theory, and (c) relational marketing theory, to explain why students who prefer to learn online still choose nearby colleges. Through human

capital theory, Yoon hypothesized that e-learners would choose the most affordable college to minimize the cost of attending college. He also hypothesized that e-learners would choose the nearest college because college proximity theory states that students choose colleges that are “logistically, financially, and emotionally” convenient (López Turley, 2009, p. 129). Furthermore, he hypothesized that an institution would have a larger share of in-state e-learners if located in a more populous area. The final framework he employed was relational marketing theory, in which he hypothesized that in-state e-learners would choose colleges that offered high-quality student services. Overall, Yoon’s theoretical framework considered cost, convenience, and quality of education and student services.

College Choice Inequities are Challenged through Holistic, Sociological, and Critical Geographic Theoretical Frameworks

Whereas the 14 articles in the first theme did not consider the role of the color-line in defining college opportunity, 10 other researchers drew on a range of holistic, sociological, and critical geographic theoretical frameworks to challenge inequities in college choice (Table 2).

A Holistic Approach to College Choice Research

Two studies focused on students’ desire to attend college close to home using holistic theoretical approaches. Freeman (2017) examined the college-going decisions of first-generation, low-income, rural “Hispanic” community college students from the meatpacking town of Winstead, Kansas. He argued that “Hispanic” students were not “undermatching” at community colleges. As explained by Freeman, academic undermatching is “a theory of misalignment” (p. 78) in that high-achieving students are not applying to, enrolling in, or graduating from selective higher education institutions commensurate with their high academic ability. Instead, rural Hispanic students purposefully chose to attend the community college in Winstead because this meatpacking community was their home. Freeman challenged academic undermatch theory and instead proposed an “ecological perspective of college fit” (p. 90) to explain the college choices of rural “Hispanic” students, which encompasses overlapping social, economic, and family issues and dynamics.

Ovink et al. (2017) also complicated the widespread use of academic undermatch theory in college choice research by adopting a holistic theoretical approach. They examined the college enrollment, completion, and postgraduate outcomes of a nationally representative sample of students in the U.S. who preferred to attend college close to home. They referred to their theoretical orientation as the “preferences approach,” which theorizes students’ college choices outside economics-based models of choice that have normalized “choice” from the perspectives and enrollment patterns of students from high-income backgrounds. In this way, Ovink et al. focused on students’ autonomy in selecting a college they preferred, rather than adhering to dominant utility maximization perspectives in college choice research. Still, these two studies overlooked the role of larger structures of dominance in limiting the availability of high-quality local colleges for students who choose to attend college near their homes.

A Sociological Approach to College Choice Research

Three articles drew on sociological theoretical approaches to study student college choice. Núñez and Crisp (2012) employed Bourdieu's (1977) concepts of capital and habitus to compare the college enrollment decisions of Mexican American students with those of Puerto Rican students. They were particularly interested in understanding the differences in enrollment between two-year and four-year institutions for these two ethnic student groups. The researchers theorized distance and geographic location as habitus, defined as students' perceptions and expectations of college opportunities shaped by their families, schools, and communities.

González Canché (2018) also drew on Bourdieu's work, namely stratification theory (Bourdieu, 1986), to examine whether out-migrating to attend college improves educational and financial outcomes for a nationally representative sample of students in the U.S. González Canché argued that this theory serves as a critical lens for the study of student out-migration, as those who can afford to out-migrate to attend college are likely to come from wealthier backgrounds, which produces stratification in education.

Lastly, Morton et al. (2018) used the theoretical concept of social capital (Coleman, 1988) to examine the perspectives and experiences of prospective rural college students. The social capital framework employed in this study includes (a) obligations, expectations, and trustworthiness, (b) informational channels, and (c) norms and effective sanctions. Coleman's framework was used to theorize that familial and community norms may be potential barriers to college access for rural students. It also theorized parents, teachers, and counselors as forms of social capital for rural students' pursuit of higher education. All three articles that employed a sociological perspective did not analyze racism in exploring inequities in college choice mediated by geographic location.

A Critical Geographic Approach to College Choice Research

Three researchers used the "geography of opportunity" concept in their studies on student college choice. López Turley (2009) used this concept to investigate the college choices of a nationally representative sample of students in the U.S. She argued that commonly used college choice models, namely Hossler and Gallagher's (1987) three-phase student college choice model, are primarily concerned with the sequential temporal stages of the college choice process and overlook the significant role geographic context plays in students' college choices.

Hillman (2016) built on López Turley's work by employing the concept of geography of opportunity to examine the number of public and private colleges within commuting zones and how these numbers varied across racial and socioeconomic lines. The geography of opportunity concept allowed him to theorize structural inequality as embedded in the U.S. postsecondary landscape, disproportionately affecting "Hispanic" communities. Jabbar et al. (2017) extended López Turley and Hillman's research on the geography of college opportunity by employing this concept to study the spatial distribution of community college students' choice sets across two community college systems in Central Texas. This concept was used to theorize students' transfer destinations as bounded by geography, given that community college students often have work and family obligations. Of the three studies, only Hillman's study intentionally included a line of questioning about the intersections between race, space, and college choice.

Two studies used critical geographic approaches to examine how broader structures of colonialism, racism, and sexism play out in space and consequently impact students' college choices. Daché-Gerbino (2017) introduced a Postcolonial Geographic Epistemological (PGE) framework to explain how external and internal campus racial climates shape college access and choice for Black, Latinx, and white residents of Monroe County and the City of Rochester in New York. External campus racial climates refer to the history, culture, and physical location of college campuses, while internal campus racial climates refer to the structural diversity within these campuses. The PGE framework consists of three sections, including (a) postcolonialism as an organizing epistemological and methodological frame, (b) critical geographic theories, and (c) campus and residential data, in this case, campus data for Monroe County colleges and residential data for Monroe County and the City of Rochester, which were mapped using GIS. Daché-Gerbino asserted that this framework is concerned with uncovering the racialization and spatialization of power, which is evident through the concentration of particular racialized groups in specific geographies and colleges.

In another study, Daché-Gerbino et al. (2018) drew on Chicana Feminist Epistemology (CFE; Delgado Bernal, 1998) to highlight the intersections between racism, sexism, and classism, as well as their collective impact on the for-profit college choices of Latina high school students from low-income urban areas in Western New York. A Chicana Feminist Epistemology helped Daché-Gerbino et al. theorize Latina youth as raced-gendered targets of academic capitalism with a mirage of college "choice." These two studies were the only studies that explicitly named "racism" in their spatial analyses and that attributed students' constricted college choices to larger structures of oppression.

Spatial Realities are Masked through Quantitative Methodological Approaches

Of the 24 articles, 19 employed quantitative research approaches to assess the role of geography in students' college choices (Table 3). The overwhelming majority of articles used regression analysis ($n = 13$), while six used geospatial analysis ($n = 4$) or survey research ($n = 2$).

Regression Analysis in College Choice Research

Logistic Regression. Five articles (Chung 2012; Jabbar & Edwards, 2020; Núñez & Crisp, 2012; O'Connor, 2010; Skinner, 2019) used various types of logistic regression, a type of statistical method used to model the relationship between a dependent variable, typically binary, and one or more independent variables, to study the role of geography in student college choice. Núñez and Crisp (2012) used blocked sequential logistic regression models, a type of logistic regression in which the predictor variables are entered into the model in blocks rather than all at once, to identify the variables that influenced the college choice and enrollment patterns of a national sample of Mexican American ($n = 1,100$) and Puerto Rican students ($n = 520$) from the Beginning Postsecondary Students (04/06 data set). This approach enables researchers to examine how different sets of variables contribute to predicting the dependent variable in a step-by-step manner. In the last regression model block, variables related to students' college choice considerations, such as distance from their permanent home and the location of their particular college, were added. The researchers found that both groups of students traveled longer distances from

their homes when they chose to attend four-year institutions, with a highly statistically significant relationship for Mexican American students ($\beta = .002, p < .001$) and Puerto Rican students ($\beta = .01, p < .01$). Although not significant for Mexican American students, choosing a college based on location was positively related to the likelihood of Puerto Rican students attending a four-year institution ($\beta = .79, p < .01$).

O'Connor (2010) employed a multistep logistic regression, a type of logistic regression where variables are added to the model in multiple steps, to determine the effect of geography on the community college enrollment of 436 Hispanic students compared to its effect on the enrollment of 451 Black and 4,214 white students. This regression type is useful for identifying influential variables, understanding the incremental impact of different predictor sets on the outcome, and improving model accuracy. Geography was measured as three distinct variables, including (a) the importance of living at home while in college, (b) urbanicity, and (c) residence in a "Strong Hispanic State" (SHS). O'Connor found that living at home was a highly statistically significant geographic variable ($p < .001$), influencing students' choice of a two-year college over a four-year college when living at home was considered "somewhat" or "very" important. In Model 2, the association was strong ($\beta = -.92$) and remained significant in Model 3 ($\beta = -.66$). This geographic variable did not have a statistically significant interaction with Hispanic origin, meaning that Hispanic students were not more affected by this variable than white students. Still, O'Connor found that Hispanic and white students were significantly more likely to attend a community college when they indicated that living at home was important. Urbanicity was found to have no significant effect on the choice of a community college by Hispanic students. Lastly, he found that Hispanic students residing in an SHS displayed increased odds of attending a four-year college. In Model 2, this association was statistically significant ($\beta = .62, p < .01$), and it strengthened in Model 3 ($\beta = .88, p < .001$).

Chung (2012) used a multinomial logit regression, a regression model used to predict an outcome with more than two possible choices, to determine whether students self-select into U.S. for-profit colleges or whether external factors influenced their decision to attend for-profit colleges. Given the various reasons students may self-select into for-profit colleges, such as self-selection, geographic exposure to for-profit providers, tuition pricing, or other random circumstances, Chung used this approach. To construct her student sample, she drew on the National Education Longitudinal Study of 1988 (NELS:88) and the associated Postsecondary Education Transcript Study (PETS: 2000). Of the 6,001 students, 309 were identified as choosing for-profit colleges, highlighting that these students constitute a small share of the total postsecondary enrollment population. Chung found that students self-select into for-profit colleges for various reasons, including because of the concentration of for-profit colleges in a student's county. A 10% increase in the proportion of for-profit schools was linked to a .6% rise in the probability of students choosing a for-profit college.

Finally, two higher education scholars (Jabbar & Edwards, 2020; Skinner, 2019) used conditional logistic regression, a type of regression model used to analyze matched data, to examine students' college choice and transfer decisions. This type of regression allows researchers to isolate the effect of key predictors on the outcome. Skinner (2019) employed the conditional logistic choice model (McFadden, 1973) to predict students' college choices, estimating models of unconditional attendance, application, and attendance

conditional on application. Skinner analyzed the college enrollment decisions of a nationally representative sample of high school graduates ($n = 9,050$) drawn from the Educational Longitudinal Study (ELS) of 2002. He also examined the college choice preferences of specific subgroups of students, including students with high SAT scores ($n = 3,020$) and low-income backgrounds ($n = 1,270$). Skinner defined the distance between the student and their chosen college as “an interactive characteristic of the student-college pair” (p. 157). In choosing colleges, Skinner found that the overall cohort of students was sensitive to cost and distance. Distance was significant in all three models at the $p < .05$ level, with odds ratios of .18 in the first model, .27 in the second, and .82 in the third. The high-SAT student subgroup was less sensitive to distance than the full sample, with odds ratios of .27 in Model 1 and .35 in Model 2 (both significant at $p < .05$), and .86 in Model 3, which was only marginally significant at $p < .10$. In contrast, the low-income student subgroup was more sensitive to distance to four-year colleges across all models, with odds ratios of .10 in Model 1, .21 in Model 2, and .61 in Model 3—all significant at the $p < .05$ level. While cost and distance were considered when choosing colleges, Skinner found that these factors did not significantly impact college enrollment when controlling for local labor market conditions and student characteristics. This finding was consistent across the subgroups examined.

Jabbar and Edwards (2020) also employed conditional logistic regression to explore the four-year transfer choices of 94,710 Texas community college students. Using the Integrated Postsecondary Education Data System (IPEDS), Jabbar and Edwards calculated the distance from a student’s two-year institution to each four-year institution in their college choice set. The scholars found that students were less likely to transfer to particular institutions if those destinations were farther away. “Non-traditional students,” defined as those 25 years or older at the time of transfer, were especially sensitive to distance ($\beta = -.01, p < .001$).

Probit Model. The second most commonly used regression model type in the reviewed literature was the probit model, which was employed in three articles. This model estimates the probability of a binary or categorical outcome when a normal distribution assumption is preferable. Griffith and Rothstein (2009) used a bivariate probit model with selection, an extension of the standard probit model that accounts for selection bias when analyzing two related binary outcomes, to examine the college application decisions of youth in the U.S. They were specifically interested in the decision to apply to a selective four-year college for low-income students. The scholars found that students with a family income of less than \$25,000 were significantly less likely to apply to any four-year college, with a marginal effect of $-.16$, significant at the $p < .01$ level. Income did not impact the likelihood of applying to a selective college. Further, a greater distance between a student’s home and a selective four-year institution was associated with fewer applications to these institutions. In the probit model, this relationship had a marginal effect of $-.05$, which was statistically significant at the $p < .01$ level. In the bivariate probit model with selection, the marginal effect was $-.03$, also significant at the $p < .01$ level. The scholars also found that low-income students were not more sensitive to distance than their high-income peers.

Nurnberg et al. (2012) used data for the Williams College classes of 2008-2012 ($n = 2,573$) to generate probit results about the matriculation decision at Williams College. The scholars found that the matriculation decision was influenced by the distance between

Williams College and the student's home, with a marginal effect of $-.19$ ($p < .01$), with most applicants coming from the Northeastern U.S. region.

Lastly, Joshi et al. (2009) employed a probit model to examine the factors that led a sample of students ($n = 2,295$) from the National Longitudinal Survey of Youth (NLSY97) to choose a community college over a four-year college. Regarding their results on the significance of location, the researchers found that students from the West were more likely to choose a two-year institution than students from other regions. Compared to students from the West, those from the Northeast (marginal effect = $-.15$), North-Central ($-.13$), and South ($-.08$) were significantly less likely to choose a two-year institution ($p < .001$).

Linear Regression. Two articles (Ovink et al., 2017; Yoon, 2019) used linear regression, a statistical modeling technique widely used to analyze the relationship between a dependent variable and one or more independent variables by fitting a linear equation to the data. Yoon (2019) employed a multiple regression technique, a statistical technique that extends simple linear regression and is used to model the relationship between a dependent variable and two or more independent variables, to explain e-learners' preference for enrolling in nearby online colleges. The Homeland Infrastructure Foundation-Level Data (HIFLD) dataset provided him with multiple geospatial data for the postsecondary institutions in the IPEDS dataset, including proximity. Yoon found that e-learners' online college choices could be predicted by the proximity of colleges and the quality of online education. Proximity was statistically significant at a p -value of less than $.01$, with coefficients of $\beta = .75$ in Model 2, $\beta = .78$ in Model 4, and $\beta = .78$ in Model 5. He further explained that e-learners were willing to sacrifice the quality of education if it meant enrolling in an online college that was geographically convenient and accessible, highlighting the critical role of convenience in their local college choice.

Ovink et al. (2017) were the only researchers who used linear probability models, a type of regression model used to estimate the probability of a binary outcome, and ordinary least squares (OLS), a method used in linear regression to estimate the relationship between one or more independent variables and a dependent variable, to study student college preferences and post-college outcomes using the Education Longitudinal Study of 2002. The researchers first employed linear probability models to investigate the student characteristics associated with the dominant phenomenon of "undermatching," as measured by test scores and grades. Undermatching is when students attend a college for which they are academically overqualified. Ovink et al. included the availability of a "match school" within 50 miles of the student's home and interactions between college proximity and student characteristics in the models. They then used OLS to compare the college graduation rates and early employment outcomes of students believed to "undermatch" with those who did not. The scholars found that lower levels of parental income and education, lower academic achievement, lack of proximity to a match school, and a preference for a low-cost college close to home consistently predict undermatching. Living at home during college was statistically significant in all models ($p < .001$) and remained so even when institutional selectivity was included. The estimated effect was a 16 percentage-point increase in the probability of undermatching in Model 2, 2 percentage points in both Models 3 and 4, and 14 percentage points in Model 5. The scholars also found that students who lived within 50 miles of a match college and rated living at home during college as "very" or "somewhat important" were significantly less likely to

undermatch, with a 7 percentage point decrease in probability ($p < .05$), underscoring the critical role of college proximity in predicting academic undermatching—particularly for low-income students who prefer low-cost, nearby institutions.

Multilevel Models. Two articles (López Turley, 2009; Wilsdon & Adelson, 2012) used multilevel models, a type of regression model that extends traditional linear regression and accounts for nested data structures, to examine students' college choices. López Turley (2009) investigated the effect of college proximity on a national sample of students' college applications and enrollment. Her analytic sample consisted of 17,013 high school seniors from 4,027 zip codes in the NELS:88. She defined “college proximity” as a college located within a 24-mile radius of students from rural or suburban backgrounds and a 12-mile radius of students from urban backgrounds. In level two of her model, López Turley included zip-code-level predictors, such as the number of colleges in proximity, the median income of the zip code area, urbanicity, and region. Using a multilevel modeling approach, she found that each additional college in proximity was associated with a small but significant increase in the odds of applying to college ($\beta = .01$ in Models 1 and 2, $p < .001$), and specifically in the odds of applying to a four-year college ($\beta = .02$ in Models 1 and 2, $p < .001$). She also found that students from low-income backgrounds were more likely to enroll in any college when located near a college ($\beta = .00$, $p < .01$).

Wilson and Adelson (2012) also employed multilevel modeling to identify the college-level and student-level variables associated with selecting a selective college among a high school student sample ($n = 275$) of primarily white students from higher socioeconomic backgrounds, drawn from four suburban schools in North Texas. The distance variable was included at the first level of the model, measured as the distance in miles from the student's high school, and at the second level of the model, measured as the average distance in miles from the student's college choice to their high school. The scholars found that factors such as high SAT scores, high grades, and students' willingness to travel farther distances from home for college were statistically significantly related to the college's selectivity. Students tended to plan to attend more selective colleges when those colleges were farther away than the average distance of the other schools they applied to. This trend was especially strong among students from Schools A and B, with $\beta = .06$ for School A ($p < .001$) and $\beta = .04$ for School B ($p < .05$). Both these schools had International Baccalaureate (IB) programs and higher rates of economically disadvantaged students than the other two schools included in the study.

Poisson Regression. Hillman (2016) was the only scholar to use Poisson regression analysis, a type of generalized linear model used to model count data, to examine the variance of college quantity and quality across 709 commuting zones in the U.S. using multiple federal data sources, including the IPEDS, the U.S. census, and the National Center for Health Statistics. He used predefined commuting zones in his study, which are clusters of rural, suburban, and urban communities that are economically and socially integrated, to map the number of colleges by sector in each commuting zone. Hillman found that, compared to white and Asian communities, communities with larger Hispanic populations had significantly more two-year colleges ($IRR = 1.11$, $p < .10$), fewer four-year colleges ($IRR = .82$, $p < .05$), fewer selective four-year colleges ($IRR = .64$, $p < .01$), and fewer moderately selective four-year colleges ($IRR = .84$, $p < .05$). Commuting zones with lower educational attainment also had significantly fewer four-year colleges ($IRR =$

.94) and more two-year colleges ($IRR = 1.04$) nearby, both at a significance level of $p < .01$.

Geospatial Analysis in College Choice Research

Four researchers incorporated geospatial analysis—including GIS, quasi-experimental designs like regression discontinuity, and a gravity model—into their research on student college choice (see Table 3).

GIS and Maps. Two researchers, Daché-Gerbino (2017) and González Canché (2018), utilized GIS software and methods to analyze and map spatial data related to students' college choices. Daché-Gerbino (2017) used data from the U.S. Census and the IPEDS to map the concentrations of full-time student enrollment in the 11 colleges and universities in Monroe County, New York, along with the racial/ethnic makeup of the residential areas surrounding the campuses. Using GIS software, Daché-Gerbino produced three maps that overlaid the full-time enrollment of Latinx, Black, and white students with (a) the Black population, (b) the Latinx population, and (c) the white population. In doing so, the author argued that “a spatial-racial latch” exists in Monroe County. Colleges with higher enrollments of white students were located in predominantly white areas in the county’s suburbs. In comparison, colleges with higher enrollments of Black and Latinx students were found in the City of Rochester. Collectively, these maps revealed that white suburban spaces were remnants of a continuing neoliberal colonial project that yielded uneven geographic development in racialized cities like Rochester and consequently limited the college (in)opportunities available to Black and Latinx city residents.

Additionally, González Canché (2018) used geographical network analysis (GNA)—a GIS method used to study and analyze spatial networks—and propensity score modeling—a statistical technique used in observational studies to reduce selection bias and estimate causal effects—to understand the effects of students’ out-migration decisions on educational and financial outcomes using a nationally representative sample of students derived from the Education Longitudinal Study (ELS) of 2002. Using GNA, he conceptualized “nearby college enrollment” (NCE) as (a) in-state enrollment; (b) enrollment within a student’s 20 closest institutions; and (c) enrollment within a 20-mile radius for non-rural students or a 40-mile radius for rural students. This measure differs from “within-state out-migration,” which refers to students who attended college within their home state but traveled outside their local community for college. Then, González Canché tested the impact of NCE and within-state out-migration on the educational and financial outcomes of students using propensity score modeling. González Canché found that compared to students who “out-migrated out of state,” students identified as “within-state out-migrants” attained similar academic ($-.07, p < .01$) and salary-based outcomes ($-3,373.85$) as the former group with lower loan debt ($-4,983.23, p < .001$). He also found that students who enrolled in any of their five closest college options—defined by the NCE measure—displayed worsened outcomes.

Regression Discontinuity. One researcher, Gurantz et al. (2016), used regression discontinuity (RD), a quasi-experimental statistical method for estimating causal effects when treatment is assigned based on a predetermined cutoff point in a continuous variable. Gurantz et al. (2016) used an RD design to examine whether the National Hispanic Recognition Program (NHRP) impacted the college application and enrollment decisions of a national sample of PSAT highest-scoring 11th-grade Hispanic students. They drew on

four sources of data (i.e., College Board, National Student Clearinghouse, Common Core of Data and Private School Survey, and the Integrated Postsecondary Education Data System) to compare the educational outcomes of students who were eligible for the NHRP with those who were not recognized by the program. Gurantz et al. reported that Hispanic NHRP recipients were more likely to enroll at a four-year institution instead of a two-year institution ($\beta = .02, p < .05$), including higher likelihoods of enrolling at out-of-state colleges ($\beta = .05, p < .01$) and public flagship universities ($\beta = .03, p < .01$). These effects were mainly driven by the West and Southwest, given high concentrations of Hispanic students in these regions. Additionally, NHRP recognition had an impact on degree completion outcomes, such that Hispanic students were more likely to earn their degrees out-of-state, with effects of $\beta = .03$ across all regions, $\beta = .04$ in the West region, and $\beta = .03$ in the Southwest region (all significant at $p < .01$). Gurantz et al. attributed these positive effects to the program's impacts, which included identifying students as exceptional academic performers, as well as targeted outreach and financial incentives from colleges that recruit NHRP scholars.

Gravity Model. One study used a gravity model to study the migration of college students. Gravity models are used in spatial analysis to predict the movement of people between two locations. Alm and Winters (2009) drew on data from the National Center for Education Statistics, the School District Demographics System, and the Integrated Postsecondary Education Data System to study the intrastate migration of Georgia public high school graduates who matriculated as first-time freshmen into one of the 33 institutions within the University System of Georgia (USG). They examined two questions: (a) what factors affect enrollment in any USG institution, and (b) what factors determine a student's choice between a college or university within the USG system. In both cases, the scholars found that distance was a meaningful factor for both research questions.

Regarding their first research question on the role of distance in students' attendance at any USG institution, Alm and Winters estimated a log-linear gravity model using OLS and found that distance had a significantly negative relationship with enrollment, with a coefficient of $-.08$ ($p < .01$). For their second research question, they grouped USG institutions into two categories—colleges and universities—and examined how distance to the nearest institution of each type affected enrollment. They found that distance to the closest college was negatively related to overall USG enrollment, with a coefficient of $-.01$ ($p < .01$), while distance to the closest university was not statistically significant. To analyze students' choices between colleges and universities more directly, the authors estimated a Tobit model to account for zero-censored enrollment flows. Results from the Tobit model showed that college enrollment decreased as distance to the nearest college increased (coefficient = $-.65, p < .01$), and increased as distance to the nearest university increased (coefficient = $.13, p < .05$). In contrast, estimates from the OLS model showed that university enrollment decreased with greater distance to the nearest university (coefficient = $-.09, p < .01$) and increased with distance to the nearest college (coefficient = $.24, p < .01$). These results suggest that living closer to a college was related to higher rates of college enrollment, while living closer to a university was related to higher rates of university enrollment, emphasizing the important role of distance on students' choice of institutional type within a single higher education system.

Questionnaires in College Choice Research

Two sets of researchers, Barreno and Traut (2012) and Van Camp et al. (2009), employed survey and questionnaire instruments to analyze the factors influencing students' college choices. Barreno and Traut (2012) used a pre-developed survey to investigate why students chose to attend a public two-year community college in West Texas. Eighty students completed the survey, and the majority ($n = 51$) identified as Hispanic. Students were asked to respond to 12 Likert-scaled questions with response options ranging from “strongly disagree” to “strongly agree” on 12 factors that had been previously established as important determinants of students' community college enrollment. The only factor related to geography was “campus location,” which measured how much the location of the two-year community college mattered to students. Barreno and Traut found that campus location was one of the top two factors determining students' enrollment in the community college, with 54 of 80 students (67.5%) responding that they “agree” or “strongly agree” that location influenced their enrollment at the West Texas community college under study. Of Hispanic students, 72.5% agreed or strongly agreed that campus location influenced their decision to attend the community college. This response rate differed significantly from that of the other racial/ethnic groups at the $p < .05$ level. Additionally, 56.5% of full-time students agreed or strongly agreed that the campus location influenced their decision to attend community college. This rate was statistically significant at $p < .05$ compared to other enrollment statuses.

Additionally, Van Camp et al. (2009) recruited 167 Black undergraduate students enrolled in a private research Historically Black College and University (HBCU) in the Mid-Atlantic region to better understand the race-related reasons for choosing an HBCU. They also investigated the differences in these reasons across the Black student sample. To achieve their first aim, the researchers employed a 17-item questionnaire that included race- and non-race-related reasons for attending an HBCU. The school's geography was categorized as a non-race-related factor and was measured by two items: the location of an HBCU and the distance students preferred to be from home. Students were asked to rate their responses to the 17 questions on a 10-point Likert scale with response options ranging from “not very much” to “very much.” Using factor analysis, Van Camp et al. found that Black students primarily chose to attend an HBCU for race-related reasons, such as wanting to be around other Black students and having opportunities to pursue racial self-development. The correlation between choosing an HBCU for its racial focus and racial self-development was statistically significant and positive ($r = .52, p < .01$). While the correlation between geography and the decision to attend an HBCU was not statistically significant, geography still influenced some students' choices—particularly those who preferred to study on the East Coast, where HBCUs are most concentrated.

Geographic Data is Ground-Truthed through Qualitative and Mixed Methods Approaches

A small number of college choice scholars ($n = 5$) employed qualitative ($n = 3$) and mixed methods ($n = 2$) research to analyze geography based on participants' lived experiences (Table 3).

Qualitative Methods in College Choice Research

Individual Interviews. Jabbar et al. (2019) conducted 60-minute, semi-structured interviews with 95 enrolled students from two community colleges in Central Texas to examine their four-year institution choice sets, defined as the list of institutions from which they select. The scholars stated that the interviews allowed them to construct a more meaningful understanding of students' choice sets compared to alternative methods such as surveys. Jabbar et al. found that geography, financial concerns, and the institution's quality influenced students' choice sets. Students who defined their choice sets based on geography prioritized maintaining their current jobs and living near their families while attending college. Other reasons for geographical constraints included a preference for remaining in their current location and the availability of distance-learning options.

Descriptive Phenomenology and Semi-Structured Focus Group Interviews. Morton et al. (2018) used a descriptive phenomenological approach to examine the perspectives and experiences of 10 prospective college students from a rural high school in the southeastern U.S. The researchers conducted two 45-minute, semi-structured focus groups, with five students in each group. Students represented a range of racial and ethnic identities, including African American ($n = 3$), Latina/o ($n = 3$), White ($n = 3$), American Indian ($n = 1$), and multiracial ($n = 1$). Morton et al. found that rural students faced significant barriers in pursuing higher education, including a lack of access to Advanced Placement (AP) and International Baccalaureate (IB) classes and college advisors. Still, rural youth described having access to an abundance of social capital—including school, community, and family capital—that motivated them to pursue higher education.

Ethnography, Focus Groups, and Individual Interviews. Lastly, Freeman (2017) drew on ethnographic data, including focus groups with 36 rural "Hispanic" community college students from Winstead, Kansas, and two interviews with individual staff members at the school district level to examine the college-going decisions of rural Hispanic students. Focus groups were used as the primary method because they allowed participants to guide the conversation and made them feel comfortable expressing their thoughts among peers. Freeman found that rural Hispanic students purposefully chose to attend the local community college because they prioritized relationships with family and attachments to place over factors like institutional prestige, consistent with the theoretical predictions of higher education scholars who employ academic undermatch theory.

Mixed Methods in College Choice Research

Two scholars, Jabbar et al. (2017) and Daché-Gerbino et al. (2018), used mixed methods research approaches to study student college choice, incorporating both geographic information systems (GIS) mapping and interviews in their respective studies. Jabbar et al. (2017) used geospatial analysis and qualitative methods to examine the geographic constraints students faced in their transfer choice sets. Specifically, they studied students enrolled in two community college systems in Central Texas. Using ArcGIS, a geographic information systems software, they mapped the distance between students' homes and the four-year institutions students considered in their transfer choice sets. Jabbar et al. conducted 100 in-depth, semi-structured interviews with students from the two community college systems to further unpack the role of geography in shaping students' transfer destinations. Across the maps and interviews, the researchers found that students'

choice sets were geographically constrained for several reasons, including a preference for their current location, family relationships and responsibilities, financial considerations, career considerations, and transportation concerns.

Additionally, Daché-Gerbino et al. (2018) used a sequential mixed methods approach to study the for-profit college choices of 16 Latina high school students from low-income urban areas in Western New York. The researchers first conducted open-ended interviews with the students in this mixed methods design. The interview findings were then extended using American Community Survey (ACS) data and ArcGIS software. The researchers specifically mapped income and housing estimates for the Latina students' residential area. Daché-Gerbino et al. found that for-profit colleges, which were concentrated in predominantly Latina neighborhoods, target and appeal to the Latina students who live in those areas. They also found that as Latina students progressed through high school, they became more likely to choose a for-profit college as their preferred institution. This second finding highlights the crucial role of college proximity in influencing the choice of for-profit colleges for college-going Latinas, who are often influenced by the options immediately available to them.

Discussion

This systematic literature review used a Critical Race Spatial Analysis (CRSA) approach to synthesize 24 peer-reviewed journal articles between 2008 and 2020 that focused on the role of geography in college choice. An analysis of scholars' theoretical frameworks and methodological approaches revealed that some scholars ($n = 8$) did not apply a theory to conceptualize the role of geography in shaping and constraining students' college choices. These same eight articles also used quantitative research approaches to measure geography as a static variable. There appears to be a relationship between race-neutral ideologies, quantitative research methods, and supposedly objective data sources in the field of college choice research.

The relationship between neutral or absent theoretical lenses and quantitative research approaches is problematic for two reasons. Numbers (Garcia et al., 2018) and maps that rely on secondary data sources (Vélez & Solórzano, 2017) cannot speak for themselves. Numbers and maps are not neutral, as the quantitative information they convey is shaped by the sociopolitical context in which it arose (Covarrubias & Vélez, 2013). Lacking a critical theoretical lens to analyze quantitative data and spatial maps promotes abstract and deficit analyses. These analyses, in turn, uphold white supremacy (Covarrubias & Vélez, 2013; Garcia et al., 2018; Vélez & Solórzano, 2017). As the literature synthesized in this article demonstrates, those most affected by racial and spatial inequities in pursuit of higher education are institutionally marginalized students, along lines of race, socioeconomic status, and gender. Tate (2008) suggested that if scholars do not attend to the *uneven geography of opportunity* in their research and through critical theoretical lenses, racial and spatial inequities in educational outcomes and opportunities will continue to widen.

Further, only two articles examined the role of race, racism, and other structures of oppression in both conceptualizing and measuring racial and spatial disparities impacting college choice (Daché-Gerbino, 2017; Daché-Gerbino et al., 2018). These two studies are arguably consistent with a Critical Race Spatial Analysis approach, as they foreground the role of the *color-line* in limiting students' college opportunity based on the intersections of

race and space. Considering that higher education researchers have found disparities in college choice to be race-based (Patton, 2016), it is problematic that scholars who seek to include geography as a variable in their studies do not explicitly connect race, space, and education. A Critical Race Spatial Analysis approach can fill pressing gaps in higher education researchers' theorizations about racial and spatial disparities in college choice.

Although not all scholars challenged the role of race and racism in space and college choice, some adopted critical theoretical approaches (i.e., holistic, sociological, and geographic) to critique race-neutral, dominant ideologies, such as academic undermatch theory and utility maximization models. Such holistic approaches provided alternative ways of thinking about college choice as a preference. This perspective aligns with a CRSA framework because it highlights students' agency in choosing a college to attend despite potentially "undermatching." Sociological perspectives challenged the reproduction of societal power dynamics evident in students' college choices. Still, an explicit analysis of race and racism was missing in these articles that analyzed the spatialization of power structures in students' college choices. Lastly, three studies drew on the concept of the *geography of opportunity*, as outlined in Tate's (2008) presidential address, while others drew on a Postcolonial Geographic Epistemological (PGE) framework and Chicana Feminist Epistemology (CFE). The articles that employed a critical theoretical approach drew on a transdisciplinary knowledge base to challenge college (in)opportunities and the structures of colonialism, racism, sexism, and classism that spatially play out in Communities of Color, thereby constricting the college choices of Students of Color.

In addition to analyzing the theoretical frameworks employed by higher education scholars who study the intersections between geography and college choice, their methods were also synthesized and assessed. Vélez and Solórzano (2017) state that the map is one of the essential methods that can be used to study space, yet it is severely underutilized in educational research. Across the 24 peer-reviewed empirical studies, five scholars used the map to display relationships between college choice and geography. Only one scholar centered this method in her research design and analysis (Daché-Gerbino, 2017). Not only is the map underutilized in college choice studies that measure geography, but there is also a dominant top-down approach to its use. Scholars did not invite community members to "ground-truth" (Vélez & Solórzano, 2017, p. 22) their secondary data sources and maps, an important element of a Critical Race Spatial Analysis approach that entails inviting community members to verify and update data displayed on GIS maps. College choice researchers should engage students and community members in data collection, analysis, and GIS mapmaking to ensure that final map products illustrating higher education inequities are consistent with students' lives and spatial realities (Puente & Vélez, 2023); otherwise, such maps, spatial trends, and analyses are "hypothetical at best" (Vélez & Solórzano, 2017, p. 22).

Only three studies employed qualitative research methods, such as interviews and focus groups, to measure geography as a lived and experienced factor. These approaches are reminders of the possibilities of non-quantitative approaches to geography (Pavlovskaya, 2009). Interviews and focus groups prompt participants to reflect on the various and nuanced ways geography impacts their daily lives and college (in)opportunities. When used alone, quantitative approaches and maps may overlook the

nuanced insights provided by qualitative approaches, which elicit the unique stories of students marginalized by the spatialization of systems of oppression.

Lastly, two scholars (i.e., Daché-Gerbino et al., 2018; Jabbar et al., 2017) used mixed methods research to examine the intersections between geography and college choice. These scholars also employed critical frameworks, such as Chicana Feminist Epistemology and the concept of the geography of opportunity. These studies are relatively new and offer much to higher education researchers interested in capturing spatial trends and students' voices simultaneously. Indeed, a Critical Race Spatial Analysis methodological approach suggests that engaging critical community expertise is the most effective alternative to relying solely on quantitative methods or underutilizing the map's visual and analytical power. The maps in both studies were informed by their critical theoretical frameworks and participants' experiences, which led to rigorous and robust understandings of how geography influenced students' college choices, particularly for Students of Color and low-income students.

Implications for the Role of Geography in College Choice Research

I provide three implications for researchers interested in centering geography critically as a theoretical lens and methodological tool in their studies on student college choice. By applying geography in this manner, higher education researchers can more effectively theorize and measure the impact of an unevenly distributed U.S. postsecondary landscape on college choice.

Center a Critical Understanding of Geography in College Choice Theories and Models

Higher education researchers must center geography as a factor impacting students' decisions, especially students marginalized within a settler colonial, white supremacist, racist nativist, capitalist, and cis-hetero-patriarchal U.S. context. Traditional college choice theories and models must be revised to incorporate geography into the framing of college choice. Additionally, future frameworks must consider the spatialization of the U.S. higher education system and how its purposeful layout is rooted in larger structures of dominance. Theories such as the geography of opportunity (Hillman, 2016; López Turley, 2009; Jabbar et al., 2019), the ecological perspective of college fit (Freeman, 2017), and the Postcolonial Geographic Epistemological framework (Daché-Gerbino, 2017) center geography and challenge traditional and privileged understandings of college choice. These emerging and interdisciplinary geographic theories must be employed and extended in college choice research to holistically and responsibly understand students' decision-making processes in spatially unjust geographies (Soja, 2010).

Reimagine Geography as a Mixed Methods Research Approach with Liberatory Potential

Given the dominant use of quantitative methods in college choice research, higher education researchers should explore alternative methodological approaches to document the vital role of geography in the student college choice process. Quantitative methods alone are limited in providing a nuanced understanding of how geography uniquely impacts

the decision-making processes, especially for racialized student groups (e.g., Garcia et al., 2018). Mixed methods research approaches enable institutionally marginalized students to voice the spatial injustices they encounter while pursuing higher education. Supplementing quantitative geographic data with qualitative data can serve as a form of liberation for marginalized students whose experiences would otherwise be documented in a limited way, and whose unique lived experiences and spatialities would arguably be obscured using statistical methods alone.

Reimagine Geography as a Collaborative and Community-Driven Research Methodology

A final implication for higher education scholars is to disrupt the power dynamics embedded in research that create a power differential between the researcher and the participant (Fierros & Delgado Bernal, 2016). Scholars should not only employ research methods that elevate the voices of institutionally marginalized students but also conduct spatial research *with* the students and communities under study. Research on racial and spatial injustice should come from the people directly impacted by these structures of dominance. The 24 studies synthesized in this review employed a traditional top-down approach, in which researchers had sole authority to choose the research questions to be addressed, the methods to be employed, and the findings to be reported. These studies were conducted without direct input from the students whose voices and perspectives could have been engaged to co-construct knowledge about a spatial phenomenon they have personally experienced.

One of the studies reviewed (Daché-Gerbino et al., 2018) drew on the racialized and gendered experiences of the first author, a former student within the urban school district under study, to inform the research design. Daché-Gerbino et al.'s study was also the only one that referenced positionality and stressed the importance of conducting research with and for one's community. Including "an inside researcher" must be coupled with collaborative and community-driven research methodologies that provide institutionally marginalized students and communities with the necessary tools to examine and transform their experiences. Including students and community members as co-collaborators in the research process is a methodological implication that higher education scholars must consider achieving higher education equity and spatial justice.

Conclusion

About a decade and a half ago, William F. Tate IV and other scholars began to emphasize the importance of thinking geospatially and employing geospatial methods in educational research (e.g., Hogebe & Tate, 2012; Tate, 2008; Tate et al., 2012). Since this call to consider the role of geography in mediating educational processes and outcomes, 24 empirical studies have been published between 2008 and 2020 that used geography as a theoretical lens or methodological tool to study student college choice. This small but growing subfield of transdisciplinary higher education research, which investigates the role

of geography in college choice, has mainly relied on race-neutral theoretical perspectives. Yet, this same research has found that those most affected by an uneven geography of opportunity are racialized students. Most of these studies primarily employed quantitative research approaches, which provided a comprehensive overview of unequal spatial patterns in college choice. However, these approaches cannot capture the voices and educational experiences of racialized students impacted by the unevenly distributed postsecondary landscape in the U.S. The research demonstrates a relationship between the use of race-neutral ideologies and the implementation of supposedly objective quantitative research approaches and data sources by scholars studying the role of geography in college choice. Future research on college choice that applies geospatial thinking and methods should consider frameworks like CRSA, which provide educational researchers with conceptual and methodological guidance on using geography critically to investigate and visualize educational inequities and (in)opportunities, and to work toward racial and spatial justice in higher education scholarship.

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Appendix A

Table 1
Articles Selected for Review

Citation	Research Question(s)	Geography	College Choice	Theoretical Framework	Methodological Approach	Findings
Alm & Winters (2009)	1. What factors affect a student's probability of enrolling in a USG institution? 2. Conditional upon enrollment in a USG institution, what factors affect a student's choice among USG institutions?	Straight-line distances measured in miles from each USG institution to each of the 175 Georgia public school district centroids and between institutions	33 University System of Georgia (USG) institutions: 3 research universities, 2 regional universities, 13 state universities, 2 state colleges, and 13 two-year colleges	NA	Quantitative: Gravity model	1. The overall probability of attending any USG institution decreases with the distance to the nearest USG college 2. Demand for more prestigious institutions is less elastic with respect to distance than less prestigious institutions
Barreno & Traut (2012)	What factors influence a student's decision to attend a community college?	The location of a community college campus in West Texas	Public, two-year community college	NA	Quantitative: Survey	1. The top six reasons for selection were transferability of courses, available academic programs and quality, campus location, cost, available educational facilities and technology, and advice from family and friends 2. The next six reasons were financial aid, college reputation, campus safety, college website, campus activities and recreational facilities, and athletic teams and sports
Chung (2012)	Do students self-select into the U.S. for-profit colleges,	Constructed the variables related to the relative	For-profit colleges	Utility model of college choice	Quantitative: Multinomial logit regression	1. Students self-select into for-profit colleges

	or is the choice of the for-profit sector accidental or due to reasons external to students?	distances between colleges and the concentration of colleges in a county				2. Choice of for-profit is affected by community college tuition 3. Choice of for-profit is also heavily influenced by the student's socioeconomic background and parental involvement in the student's schooling 4. Students with higher school absenteeism are more likely to enroll into for-profit college 5. The concentration of for-profit colleges in the student's county is important for the choice of for-profit college
Daché-Gerbino (2017)	How does a Postcolonial Geographic Epistemological (PGE) framework explain the relationship between the external campus (residential factors) and the internal campus (institutional factors)?	Theorized external and internal campus racial climates as postcolonial geographies in the city of Rochester in Monroe County, New York	In Rochester: 1 community college, 1 for-profit institution, and 1 four-year college In the suburban southeast: 5 colleges/universities: 1 community college, 1 for-profit institution, and 3 four-year colleges	Postcolonial geographic epistemological (PGE) framework	Quantitative: GIS mapping	1. A postcolonial spatial-racial latch of external and internal campus racial climate 2. The concentration of suburban places of interest as sites of the neoliberal colonial project of uneven geographic development and the lack of suburban bus routes
Daché-Gerbino et al. (2018)	1. What factors influence the college choice decisions of Latina students from low-	Location of proprietary institutions and their proximity to Latinas'	Proprietary institutions	Chicana Feminist Epistemology	Sequential mixed methods: Open-ended qualitative interviews	1. The location of proprietary institutions and their proximity to the Latinas' residential area

	income urban areas as they consider proprietary institutions? 2. How does a Chicana feminist analysis further explain the college choice decisions of Latinas from low-income areas as they consider proprietary institutions?	residences in the city of Ridgewood in Western New York			first, then GIS mapping	1a. Proprietary recruitment strategies and marketing appeal 1b. Latinas living in the sample areas facing financial constraints attending a local proprietary institution. 2. There is a relationship between students' grade-level in school with their draw to local for-profit institutions, revealing how proximity, recruitment and marketing influence college choices as Latina students enter higher grades
Freeman (2017)	Do rural, Hispanic community college students show signs of academic undermatch?	Factors such as proximity to home, familismo, place attachments, social networks, geographic location, sense of belonging, and academic validation in Winstead, Kansas	Community college	Ecological perspective of college fit	Qualitative: Ethnographic data, including focus groups & individual interviews	1. The students contended with overlapping social, economic, and family issues that constrained the college selection process and prompted their decision to attend community college 2. Attending the community college was a "balancing act" requiring continual juggling, prioritization, and compromise 3. Among the salient topics students faced were a lack of

						familiarity with the college environment; reliance on individual and institutional support systems; conflicts of work, time, and family; the importance of attending college close to home; doubts about self-efficacy; and financial insecurity
González Canché (2018)	1. Do students who did not out-migrate to attend college have different educational and financial outcomes from students who out-migrate within their home state? 2. Do students who did not out-migrate have different educational and financial outcomes from students who out-migrated beyond the borders of their home state? 3. Do students who out-migrated within their home state have different educational and financial outcomes from students who out-migrated and left their home state to go to college?	Students' proximity to institutions of higher education categorized into three comparison groups: 1. nearby college attendees, 2. in-state out-migrants, and 3. out-of-state out-migrants	Nearby college enrollment (NCE): 1. In-state enrollment within ones' 20 closest institutions 2. Enrollment within a 20-mile or 40-mile radius to differentiate between nonrural and rural students' residential locations	Stratification theory and the counterfactual or potential outcomes framework	Quantitative: Geographical network analysis (GNA) & propensity score modeling	1. The typical in-state versus out-of-state definition exaggerates the assumed benefits of "migrating" 1a. Within-state out-migrants attained similar academic and salary-based results while incurring significantly lower undergraduate loan debt compared with students who out-migrated out of state 2. The study offers evidence of geographical skills mismatch associated with students' worsened outcomes when enrolling in their 5 closest options
Griffith & Rothstein (2009)	1. What factors are important during the college	The distance in miles between the zip code of	Two-year colleges, non-selective four-year colleges,	NA	Quantitative: Bivariate probit model	1. Distance to a selective 4-year college has a significant

	application process? 1a. Specifically, what roles do family income and proximity of selective schools have on the decision of whether to apply to a selective college?	the student and the zip code of the school. College proximity was then defined using the maximum distance to each school type	and selective four-year colleges		with selection	impact on the probability that a student will apply to a selective school 2. Low-income students do not seem to be any more sensitive to distance than their high-income peers.
Gurantz et al. (2016)	1. Are the college application and enrollment decisions of high-achieving Hispanic students impacted by the National Hispanic Recognition Program (NHRP)?	The geographic concentration of NHRP students and the geographic distribution of where they earn their degree, with a focus on West and Southwest regions, namely California and Texas	Attend college, two-year college, recruiting institution, core seven recruiting institution, other non-core recruiting institutions, four-year college, out-of-state college, flagship, private, Barron's: most competitive, Barron's: highly competitive plus, Barron's: highly competitive, and Barron's: less competitive	NA	Quantitative: Regression discontinuity (RD) design	1. The NHRP has strong effects on college attendance patterns, shifting students from two-year to four-year institutions, as well as to colleges that are out-of-state and public flagships 2. NHRP shifts the geographic distribution of where students earn their degree, and increases overall bachelor's completion among Hispanic students who traditionally have had lower rates of success
Hillman (2016)	1. To what extent does the number of local colleges vary by the racial/ethnic and socioeconomic profile of the community? 2. Are these characteristics associated with	Identified the number of accessible colleges that are located within commuting distance of the nation's total population	Public two-year colleges, public four-year colleges, private two-year colleges, and private four-year colleges	Geography of opportunity	Quantitative: Poisson regression analysis	1. The number of local colleges varies along lines of race and class 2. Communities with large "Hispanic" populations and low educational attainment have the fewest alternatives

	having more public or private colleges within a commuting zone?					nearby, while white and Asian communities tend to have more
Jabbar & Edwards (2020)	<p>1. For students who start at a community college, what institutional characteristics or features (e.g., distance, selectivity) predict where community college students ultimately transfer?</p> <p>2. How does the importance of these characteristics vary across different types of students?</p>	<p>1. Distance variable: A measure of kilometers between a community college attended in Texas and the institutions in each student's choice set</p> <p>2. Urbanicity variable: The reference group is a transfer to an urban institution in Texas</p>	Public, flagship university, research university, HBCU	Human capital model of decision-making	Quantitative: Conditional logistic regression	<p>1. Most transfers were to a relatively small subset of public, research institutions, despite a large and diverse set of options</p> <p>2. Results also indicate notable student subgroup preferences associated with measures of institutional support and quality for schools in student choice sets</p>
Jabbar et al. (2019)	1. What kinds of colleges and universities are in transfer-intending students' choice sets, and how are these choice sets shaped by individual and structural barriers?	A list of four-year colleges and universities within a 200-mile radius from each community college in Central Texas was created using the buffer feature in ArcGIS	2 public community college systems	<p>1. Economic models of decision-making</p> <p>2. Theorizations on the college choice set</p> <p>3. Perspectives on college proximity</p>	Qualitative: Individual, semi-structured interviews	<p>1. Significant heterogeneity among the sample of community college students seeking transfer to four-year institutions</p> <p>2. Geography, financial concerns, and quality of institution all played a role in student considerations</p>
Jabbar et al. (2017)	<p>1. What role does geography play in community college students' decision-making processes?</p> <p>2. How do these patterns differ for first-generation students and</p>	Driving distances between students' homes and the universities they were considering in Central Texas	2 public community college systems	Geography of opportunity	Mixed methods: GIS mapping & semi-structured qualitative interviews	1. Students' choice sets are geographically constrained, but for many students these zones are geographically large

	African American or Latino/a students?					
Joshi et al. (2009)	Why do students choose a two-year over a four-year institution?	Location variables: 4 U.S. regions: Northeast, South, West, and North-Central	Two-year community colleges and four-year colleges	Utility maximization model	Quantitative: Probit model	1. Students choosing to go to a community college compared to a four-year college are more likely to work longer hours when in college, have lower academic performance, and come from lower income family background
López Turley (2009)	1. How are colleges distributed (by type) in relation to where students live? 2. Net of other student and geographic factors, are more colleges in proximity associated with higher odds of applying to and enrolling in college? Are more four-year colleges in proximity associated with higher odds of applying to and enrolling in a four-year college? 3. By which mechanism or mechanisms does college proximity affect students' college choices?	College proximity: Measured by the number of colleges (by type) that were located within a specified mile radius of each student, which varies according to each area's urbanicity (i.e., 12 miles for urban students and 24 miles for rural or suburban students)	Public four-year colleges, private nonprofit four-year colleges, private for-profit four-year colleges, public two-year colleges, private nonprofit two-year colleges, private for-profit two-year colleges, public less than two-year colleges, private nonprofit public less than two-year colleges, private for-profit public less than two-year colleges	Geography of opportunity	Quantitative: Multilevel models	1. High school seniors have a wide range of colleges in proximity 2. Each additional college in proximity is associated with a small but significant increase in the odds of applying to college, especially a four-year college
Morton et al. (2018)	1. What are students' perception of	Geographical location of each participant's	Highly-ranked four-year institution	Social capital theory	Qualitative: A descriptive phenomenological	1. Students expressed fears, worries, and concerns

	<p>their home communities?</p> <p>2. What are students' perspectives on attending college?</p> <p>3. What sources of social capital do students mobilize as they prepare for college?</p>	<p>high school in the U.S. Southeast was identified. Rurality was determined using the National Center for Education Statistics' urban-centric locale definitions based on high school attended</p>			<p>approach using focus group interviews</p>	<p>regarding their ability to attend and be successful in college</p> <p>2. Students reported having limited access to resources needed for attending and completing college</p>
<p>Nuñez & Crisp (2012)</p>	<p>1. How do Mexican American and Puerto Rican students compare in terms of demographic characteristics, forms of capital, and qualities of habitus?</p> <p>2. What demographic characteristics, forms of capital, and qualities of habitus are significantly related to Mexican American and Puerto Rican students' decision to enroll at 2- versus 4-year institutions?</p> <p>3. How do these predictors of enrollment at 2- versus 4-year institutions compare for Mexican Americans and Puerto Ricans?</p>	<p>Location of institution</p>	<p>Two-year colleges and four-year institutions</p>	<p>Bourdieu's concepts of cultural capital and habitus</p>	<p>Quantitative: Blocked sequential logistic regression models</p>	<p>1. Mexican American first-time beginning college students were almost twice as likely as their Puerto Rican counterparts to start postsecondary education at two-year institutions</p> <p>2. Mexican American and Puerto Ricans' decisions to enroll at a 2- or a four-year institution were uniquely influenced by students' age, cultural capital, academic capital, and quantity and quality of colleges considered</p> <p>3. Broader contextual factors like citizenship status and geographical location also influence Mexican Americans' and Puerto Ricans' educational</p>

						access to four-year institutions
Nurnberg et al. (2012)	What are the matriculation decisions made by students accepted to Williams College?	Applicant's zip code, home state, and country	Williams College: A highly selective liberal arts college in Western Massachusetts	Utility perspective	Quantitative: Probit model	1. Applicant quality, the net price a particular student faces, the applicant's race and geographic origin, plus the student's artistic, athletic and academic interests are strong predictors of whether or not the student will matriculate
O'Connor (2010)	What is the effect of geography on Hispanic students' chosen point of entry into higher education, as compared to other ethnicities?'	Geographic variable: Importance of living at home while attending college, urbanicity, and Strong Hispanic States (SHS): New York, Texas, Florida, and California	Two-year and four-year colleges	NA	Quantitative: Multistep logistic regression	1. Bachelor's aspiring "Hispanic" students were significantly more likely to enroll in a community college compared to white and Black students 2. Hispanic students who resided in New York, Texas, Florida, or California, were significantly more likely to enter the system of higher education through a four-year school and not a two-year school when compared to white or Black students
Ovink et al. (2018)	1. To what extent do students' preference to attend college close to home and the	Geographic considerations, such as student preferences, geographic region, and	Very selective (most competitive, highly competitive); selective (very competitive);	Preferences approach	Quantitative: Linear probability models & ordinary least squares (OLS)	1. Student preferences for low-cost, nearby colleges, particularly among low-

availability of proximal match colleges influence whether or not students enroll in a match institution?
 2. What are the effects of college match and “mismatch” for students’ college completion and postgraduate outcomes, including employment and income?

college proximity

somewhat selective (competitive); nonselective (less selective, noncompetitive); 2-year college; no college

income students, are associated with higher rates of undermatching even among students who are qualified to attend a “very selective” institution
 1a. However, this relationship is weakened when students live within 50 miles of a match college, demonstrating that proximity matters
 3. Attending a selective postsecondary institution does influence post-college employment and earnings, with less positive results for students who undermatch as compared with peers who do not
 4. Non-academic factors are important in shaping college decisions and post-college outcomes, particularly for low-income students

Skinner (2019)

What are the college enrollment decisions of students who graduated from high school in the mid-2000s?

Distances between each student-college pair were computed using the student’s base-year census block group of residence and

Two-year colleges: In-state public, in-state private non-profit, out-of-state public, out-of-state private non-profit
 Four-year colleges:

NA

Quantitative: Conditional logistic choice model

1. Cost, distance, and match continued to be important in the choice between colleges
 2. Characteristics of the most-likely college choice appear less important

		institution's coordinates	In-state public, in-state private non-profit, in-state private for-profit, out-of-state public, out-of-state private non-profit, out-of-state private for-profit			in the choice of whether to enroll at all when controlling for student characteristics and local labor market conditions 3. Subpopulation analyses on students with high SAT scores and students with low family income indicate some differences in the way these particular students chose college 4. Choice characteristics were most significant in the application stage
Van Camp et al. (2009)	1. What are the race-related reasons for students' choice of an HBCU? 2. Are different reasons for choice of an HBCU associated with different college activities?	Geography of the school, measured by location in the mid-Atlantic region and how far students wanted to be from home	A private, research Historically Black College and University (HBCU)	NA	Quantitative: Questionnaire & factor analysis	1. Two race-related reasons for college choice: the race focus of the institution and the opportunity students have to advance their racial development 2. Students also indicated choosing an HBCU for reasons other than race, such as academics, finances, geography, and social life 3. Race-related reasons were associated with intentions to engage in race-related behavior, whereas non-race-related

						reasons were not
Wilson & Adelson (2012)	<p>1. What are the characteristics of college choices among academically talented high school students?</p> <p>2. What factors predict the selectivity of the colleges chosen by academically talented students?</p>	Distance variable measured as the miles away from the student's high school in level 1, and measured as the average miles of student's college choice from their high school in level 2 in North Texas	Large state schools, smaller state schools, private schools, elite out-of-state schools, and a local community college	NA	Quantitative: Multilevel modeling	<p>1. Students selected colleges with higher mean SAT scores when prestige of the college was the reason, the students had higher achievement, and the college was farther away</p> <p>2. Academic self-concept and perceived challenge of their high school curriculum had no effect on the college selectivity</p>
Yoon (2019)	<p>1. Which local institutions tend to have a relatively larger number of in-state e-learners compared to other institutions in the same state?</p> <p>2. Which institutional factors influence e-learners' choice to enroll at nearby colleges?</p>	College proximity: A variable in HIFLD was modified by calculating the shares of institutions in the same state to minimize the impact of differences in population across each state	Private four-year, for-profit four-year, public two-year, private two-year, and for-profit two-year, which were categorized into three groups: 1. nonselective, 2. selective, and 3. highly selective	<p>1. Human capital theory</p> <p>2. College proximity theory</p> <p>3. Relational marketing theory</p>	Quantitative: Multiple regression technique	<p>1. Convenience and quality of education are significantly associated with each local institution's share of exclusively online learners in the same state</p>