A CRITICAL QUANTITATIVE EXPLORATION OF COLLEGIATE STUDENT-ATHLETE ACADEMIC INVOLVEMENT

by

CARRIE VIRGINIA SMITH

(Under the Direction of Laura Dean)

ABSTRACT

The purpose of this study was to utilize critical quantitative methodology to analyze previously collected data by a nationally distributed survey instrument, with the goal of conceptualizing Academic Involvement as it pertains to collegiate student-athletes and their racial and ethnic identities. The researcher selected Critical Race Theory as the foundational critical theory upon which to frame the research design. The researcher requested responses from the 2014 administration of the Your First College Year survey, an instrument produced by the Higher Education Research Institute located at the University of California, Los Angeles. The information collected represented the constructs of (a) Academic Disengagement, (b) Ease of Adjustment to College, and (c) Habits of Mind in addition to demographic data. Responses from both collegiate student-athletes and collegiate student nonathletes were considered. Total scores from these three constructs were averaged to produce a composite score of the researcher-created construct of Academic Involvement. Statistical analysis and data disaggregation found that the magnitude of Academic Involvement is similar for student-athletes across racial and ethnic identities. Additional statistical analysis identified a five-factor structure for the construct of Academic Involvement that applied to a sample of collegiate student nonathletes and collegiate

student-athletes. The study seeks to shift the discussion about student-athletes to highlight their academic involvement, rather than discussing them from a deficit perspective. This discussion is framed by tenets of the critical quantitative methodology. Implications for student affairs practitioners working directly with student-athletes or on campuses with student-athletes, as well as implications for those desiring to use apply critical quantitative methods to their research and practice, are discussed in light of the findings from the statistical analysis.

INDEX WORDS: Student-athletes; critical quantitative research; race and ethnicity; academic involvement; Your First College Year survey; Critical Race Theory; data disaggregation

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DEDICATION

To my grandmother, Carrie Hawkins. You have shown unconditional love to your family while educating so many students as though they were an extension of your family. You have encouraged me throughout this entire process, and for that, I am forever grateful. Had the times and the culture been different when Pop was getting his doctorate, I have a feeling you would have been typing your own in addition to his! I am in awe of the compassion, wit, and strength that you possess. I am honored to be your namesake. Consider this dissertation one for both the Carrie's.

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CHAPTER 1

INTRODUCTION

The construct of involvement permeates the discussion of student affairs professionals who rely upon the research tying involvement to retention, persistence, and ultimately, graduation (Astin, 1984; Pascarella & Terenzini, 2005). Alexander Astin's research presents professionals and scholars alike with a definition of involvement, stating, "student involvement refers to the amount of physical and psychological energy that the student devotes to the academic experience" (Astin, 1984, p. 518). The academic experience, as Astin (1999) defined it, includes interaction with faculty and peers as well as studying and participation in extracurricular activities. Thus, a student's devotion of physical and psychological energy is positively related to progress and graduation.

If one embraces Astin's definition of involvement, then one would classify student-athletes as some of the most engaged students on college campuses based on the amount of time and energy they spend on their sports. Student-athletes are defined in this study as students who participate on varsity athletic teams, those teams that officially represent the institution, compete against other teams representing their institutions, and usually receive some level of funding from their institution (The College Board, 2017). Varsity sports are also overseen by different governing boards, the largest of which is the National Collegiate Athletic Association (NCAA). The NCAA sponsors 24 different sports at over 1100 colleges and universities in America (NCAA, 2017). The NCAA's membership includes more than 460,000 student-athletes (NCAA, 2017). The National Association of Intercollegiate Athletics (NAIA), the second largest

governing body of athletics, reports more than 250 colleges as members, which includes roughly 65,000 student-athletes (NAIA, n.d.). Student-athletes make up roughly two percent of the total number of traditional age (18-24 years old) college undergraduates; however, at some institutions, they may comprise 50% of the undergraduate population or more (National Center for Education Statistics, 2016; NCAA, 2016).

Despite attending vastly different types of institutions, student-athletes share several common experiences, most notably, the dedication of a large portion of their time and energy to participation in their sport (Harmon, 2010). Researchers have found that student-athletes report time constraints as a reason they are not involved in non-athletic activities on campus (Harmon, 2010; Paskus & Bell, 2016). Ironically, that lack of time is a result of a dedication of time and energy – Astin's definition of involvement – to a school sponsored activity, varsity athletics.

Race and Student-Athletes

College students' levels of engagement and involvement are greatly influenced by their racial and ethnic identity (Harper & Hurtado, 2007). Similarly, student-athletes have reported that their college experience is affected by their racial identity (Comeaux, 2008; Harper, 2009). In the NCAA alone, of the more than 460,000 student-athletes, roughly 30% identify as a race that is not White (NCAA, 2016). Furthermore, the student-athletes within that 30% identify as many different racial and ethnic identities, each of which carries a different experience. Much of the existing research focuses on student-athletes who identify as Black, which ignores the other racial identities held by student-athletes (Harper, 2009). Most importantly, much of the research and many of the reports about student-athletes, specifically those of Color, involve the comparison of student-athletes to nonathletes, or White student-athletes to non-White student-athletes, or the perception of student-athletes by non-student-athletes (Bernhard, 2014; Clopton,

2010; Comeaux & Harrison, 2007; Engstrom & Sedlacek, 1991; Potuto & O'Hanlon, 2007; Wolverton, 2010). In comparing one group to another, researchers are in danger of contributing to a dichotomy where one group is "right" and the other is "wrong." Specifically, quantitative researchers who use statistical tests that norm one group inherently place value on the normed population, which insinuates that the individuals within one population should aspire to be a part of the normed population. This colonial approach often fails to acknowledge the influence of sociological constructs, like race, on the discussion of the data (Perna, 2007). Thus, whether intentional or not, the collected and analyzed data can perpetuate marginalization of those people not in the constructed norm.

A Dominant Narrative of Student-Athletes

Perceptions of student-athletes have contributed to a larger narrative about varsity athletics and the students who participate in them. Nonathlete peers often have negative perceptions of the student-athletes at their institution (Engstrom & Sedlacek, 1991; Simons, Bosworth, Fujita, & Jensen, 2007; Winiger & White, 2015). Nonathlete peers may believe that student-athletes are not held to the same academic standards as other students (Simons et al., 2007). Studies have also shown that nonathlete peers do not perceive student-athletes to have any interest in academics (Simons et al., 2007). Researchers like Engstrom, Sedlacek, and McEwan (1995) and Baucom and Lantz (2001) gathered similar information from faculty, who held negative perceptions of student-athlete academic preparation. Simultaneously, faculty, staff, and nonathlete peers also report that they believe student-athletes receive special treatment from the university (Engstrom, Sedlacek, & McEwan, 1995; Simons et al., 2007). This perceived institutional favoritism can lead to faculty and staff ignoring the needs of student-athletes based on misinformation and incorrect assumptions.

Therefore, one could speculate that when discussing lack of involvement of student-athletes, they may be referring to the academic facet of involvement. Academic involvement of student-athletes has been heavily debated especially in light of academic cheating scandals (Tracy, 2017), reports of sport-specific easy majors and curriculum (Trahan, 2014), and the National Collegiate Athletic Association's (NCAA) continued emphasis on increasing graduation rates and progress toward degree. Instruments like Your First College Year (YFCY) (Higher Education Research Institute (HERI), n.d.) survey use Astin's Theory of Involvement to reflect a broader, more inclusive idea of involvement. Thus, in order to shift the narrative about student-athletes, I analyzed data collected by the YFCY from students who identify as collegiate athletes to explore and contextualize student-athlete Academic Involvement using statistical analyses derived from student-athlete responses rather than relying on anecdotal interactions with student-athletes or research focusing on non-student-athlete perspectives.

The Connection between Student-Athletes and Student Affairs

Historically, student affairs professionals have advocated for those students who were not able to advocate for themselves or who were governed by systems in place that were beyond their control (ACPA, 2006). In this moment, student-athletes are those students. Constrained by the demands of the college student-athlete schedule, yet wrongly portrayed as over-privileged, student-athletes are, by Astin's definition, fully engaged members of our college campuses. Student-athletes exist in a chaotic environment navigating the multiple cultures - society, NCAA, institution, sport - that govern their lives. To explore the involvement of student-athletes without acknowledging the "intercentricity of race" and the "centrality of experiential knowledge" of student-athletes of Color would be irresponsible and oppressive (Milner & Howard, 2013, n.p.). Thus, in the presented study, I have utilized methodology that names race and ethnicity as central

to understanding all students, as a way to discuss and reframe student-athlete Academic Involvement.

Utilizing Quantitative Criticalism

Frances Stage (2007), pioneer of critical quantitative research methodology, explained, "The quantitative criticalist seeks to forge challenges, illuminate conflict, and develop critique through quantitative methods in an effort to move theory, knowledge, and policy to a higher plane" (p. 8). Quantitative criticalism encourages researchers to revisit large datasets and incorporate critical frameworks to ask rigorous questions as part of the analysis and interpretation of the findings (Oseguera & Hwang, 2014). Historically, quantitative methods have developed linear predictive models that present dominant groups as the norm, resulting in the creation of harmful narratives about marginalized and non-dominant populations (Coakley & Awad, 2013). Instead of testing existing linear models, quantitative criticalists utilize high level statistical tests to disaggregate and analyze data from a different perspective than what has previously been done (Stage, 2007; Teranishi, 2007). Through this process, researchers present new perspectives of groups and constructs within a quantitative study (Alcantar, 2014; Stage, 2007; Stewart, 2013).

Purpose of the Study

The purpose of this study is to look at those constructs that, based on literature and my own personal experience, relate most closely to the Academic Involvement of college student-athletes, from a quantitative criticalist perspective. Rather than gathering new data, I utilized existing data from a nationally distributed instrument to identify levels of Academic Involvement with the intent of acknowledging the systemic racism that permeates the structures, instruments, and narratives related to student-athletes. In addition, I used statistical analyses that do not focus

on the norming of non-student-athletes or student-athletes who identify as any specific race or ethnicity. Finally, I used multivariate analyses and critical discussion to explore whether the structure of the construct of Academic Involvement is the same for student-athletes and student nonathletes.

Operational Definitions

The following definitions are used throughout the study and frame the research questions, discussion and results.

Academic Disengagement

Academic disengagement "measures the extent to which students engage in behaviors that are inconsistent with academic success" (HERI, 2011, p. 12).

Academic Involvement

This is a construct that is an unweighted composite variable (Mulaik, 2010) derived from the mean of the means of total scores of the YFCY, HERI-created constructs of Academic Disengagement, Ease of Academic Adjustment to College, and Habits of Mind. When discussing Academic Involvement in this paper, I use the term magnitude to indicate the level of Academic Involvement captured by the responses in the YFCY survey. The range of score for Academic Involvement is 1 – 3.33, with 3.33 being the largest magnitude of Academic Involvement that could be measured with the YFCY.

Ease of Academic Adjustment to College

The YFCY conceptualizes the construct of ease of academic adjustment to college as "the ease with which students adjust to the academic demands of college" (HERI, 2011, p. 13).

Habits of Mind

Habits of mind is a measure of "the behaviors and traits associated with academic success" (HERI, 2011, p. 11). HERI (2011) uses the habits of mind construct to discuss what they refer to as "the foundation for lifelong learning" (p. 11).

Student-Athlete

This term encompasses students at postsecondary institutions who participate in varsity level athletics at member institutions of one of the following governing bodies: the National Collegiate Athletic Association (NCAA), the National Junior College Athletic Association (NJCAA), or the National Association of Intercollegiate Athletics (NAIA).

Varsity Athletics (Intercollegiate Athletics)

These terms, used interchangeably in this paper, refer to teams that represent the institution in an official capacity, compete against varsity teams from other institutions, and usually receive money and resources from their institution (The College Board, 2017).

Research Questions

In this study, I pose the following research questions:

- RQ1: What is the magnitude of Academic Involvement of collegiate student-athletes and collegiate student nonathletes?
- RQ2: What is the magnitude of Academic Involvement of student-athletes that identify as the different races and ethnicities as specified by the Your First College Year (YFCY) survey:
    - a: What is the magnitude of Academic Involvement for White student-athletes?
    - b: What is the magnitude of Academic Involvement for Black student athletes?

    - c: What is the magnitude of Academic Involvement for American Indian student-athletes?
    - d: What is the magnitude of Academic Involvement for Asian student-athletes?
    - e: What is the magnitude of Academic Involvement for Hispanic student athletes?
    - f: What is the magnitude of Academic Involvement for student-athletes who identify as two or more races?
    - g: What is the magnitude of Academic Involvement for student-athletes who selected "other?"
- RQ3: What is the structure of the construct of Academic Involvement?
- RQ4: Is the structure of the construct of Academic Involvement the same for student nonathletes and student-athletes?

Currently, the annual reports from the administration of the YFCY do not present information specifically from student-athlete respondents, nor do the reports include information and analysis of student-athletes who identify as specific races or ethnicities. Quantitative criticalist Frances Stage (2007) wrote, "The reality of statistical significance is such that even if as much as 10 to 15 percent of our sample has a noteworthy experience that produces a positive outcome, the experience would likely be statistically insignificant in an analysis…usually we would be better off knowing more about the 10 to 15 percent whose experience differs from the norm" (p. 96-97). In adhering to this central tenet of quantitative criticalism, I have disaggregated data during this study to present discussion about these marginalized groups. The racial and ethnic groups named in these research questions reflect the HERI-constructed variable called RACEGROUP, which is a variable that collapses certain races and ethnicities into larger

categories. For example, Hispanic would include respondents who identified as Puerto Rican, Mexican, Chicano, or Latino.

In addition, Academic Involvement is not a construct that HERI has presented based on their statistical analyses to determine constructs. Therefore, in order to utilize the term Academic Involvement for collegiate student-athletes, as I have defined it, further analyses are needed to ensure that the way the instrument measures the construct is appropriate for student-athletes. Finally, upon answering these research questions, I then frame the discussion of my results through the lens of quantitative criticalism resulting in further critique of the overall interpretation and use of data to influence policies, procedures, narratives, and stereotypes.

Researcher Subjectivity Statement

Critical quantitative work, unlike traditional quantitative work, calls for the researcher to examine their own autobiography as it relates to the research (Carter & Hurtado, 2007). I am an upper middle-class, White woman who attended college as a student nonathlete. I am part of the population by which many of the studies involving student-athletes are normed. I am a lifelong college athletics fan who appreciates and is in awe of the physical talents that student-athletes possess and present. I am also a consumer of the now ubiquitous, and often salacious, media stories about student-athletes, like those focusing on cheating scandals (VineyardDawg, 2014), receiving illegal financial payments during college (Getlin & Robinson, 2013), and sexual assault and misconduct (Blinder, 2013). Thus, like the media, through my interest in these stories, I contribute to the student-athlete masternarrative in which college athletes are in some way privileged, above the law, and at college for any reason except a degree.

Simultaneously, I have worked with student-athletes at different universities who represent what I see as the counternarrative. They are high-achieving academically, have a desire

to achieve multiple advanced degrees, and are committed to a career beyond athletics. They devote time and energy to their sport, their classes, their family, and their passions. My experiences, however, are only anecdotal evidence of student-athlete involvement. My story is only one, and thus does little to move toward a change in perception of student-athletes.

I was socialized into research through the scientific method, with a love for its structure, order, and production of Truths. Many of these Truths were established or determined by White researchers, like myself, who had the privilege of participating in scientific endeavors and sharing their voices. Over time, my experiences and exposure to people and places, as well as my belief in the fluid context of people's lives and the influence of people's identities and environments, have changed my previously unwavering commitment to numbers and percentages, norms, and outliers. I have spent most of my career in jobs and environments where numbers spoke louder than anecdotes, and accountability and mathematical "proof" determined budget allocations and staffing expenditures. As I furthered my education, my viewpoint expanded. My idea of asking questions evolved to include a deeper questioning of oppressive and dominant societal structures, many of which I contribute to and of which I am a part. Instead of thinking about things critically, I began to understand Critical frameworks and the way they could be applied to the research questions I wanted to ask. Bowleg's (2008) idea of the contextualized scientific method, a philosophy where the structure of the scientific method is present, yet the researcher acknowledges the effects of the context in which the research is taking place, resonated with me. The way I make meaning has changed, and I cannot ignore the effect of sociohistorical context on my thoughts, values, and beliefs. Quantitative criticalism presents a research methodology that captures my worldview as a researcher – a dedication to social change and a loyalty to quantitative research and the ability to directly affect change. This study

represents the application of three specific personal tenets: my philosophy about research, my belief in the importance of using a critical lens with the "master's tools" of quantitative methods (Coakley & Awad, 2013; Lorde, 1984), and my dedication as a researcher to naming my privilege and using my voice and my power to re-conceptualize existing processes. In sum, this study is a way of moving past my positive personal anecdotes about student-athlete Academic Involvement and toward a data-driven story that can affect positive change.

A New Direction

Critical Race Theorist Richard Delgado (2000) stated that as researchers and theorists, we "take seriously new social thought only after hearing it so often that its tenets and themes begin to seem familiar, inevitable, and true" (p. 485). With this study, I analyzed existing data to start the movement toward a broader understanding of both student-athletes and Academic Involvement, with the hope that eventually, the idea of academically involved student-athletes across racial and ethnic identities is the new normal.

CHAPTER 2

LITERATURE REVIEW

The literature presented in this chapter provides the context necessary to understand the concept of student-athlete Academic Involvement and the nature of this study. The first section contains information about critical theory and critical quantitative research, the foundation of this study. The second section addresses the theoretical framework of this study, Astin's Theory of Involvement. The final section highlights the common experiences of student-athletes, including those experiences considered unique to certain racial and ethnic subgroups of student-athletes. The section also discusses the current narrative about student-athlete involvement on college campuses.

The Critical Approach

Critical theory challenges the idea of traditional theory, which assumes research will have the same results no matter the context of the study and no matter who the researcher is (Edgar, 2006). Instead, the idea behind critical theory is that all participants and concepts presented, analyzed, and interpreted do not exist in a "cultural vacuum" (Edgar, 2006, p. 32). Researchers and philosophers utilizing critical theory consider the historical, political, and sociological contexts that frame the questions, procedures, and subjects involved in the research (Edgar, 2006). Furthermore, researchers use critical theory with the eventual goal of emancipation of marginalized groups from oppressive structures deeply rooted within society (Edgar, 2006). Finally, Habermas challenged the assumption that "if one shares enough of the cultural assumptions and language skills of the person one is studying, one will be able to understand

them" (Edgar, 2006, p. 33). Therefore, integral to the use of critical theory is the acknowledgement and discussion of the relationship between the researcher and the subjects, specifically in the context of history, politics, and sociology.

Concepts of Critical Race Theory

Critical theory comes in many forms, including but not limited to Critical Race Theory, feminism, Marxism, and queer theory (Mertens, 2005). Given that this study focuses on exploring the involvement of student-athletes who identify with different racial groups, I will utilize Critical Race Theory (CRT) which "…promotes an impending need for researchers and decision makers to recognize the systemic racial prejudices that exist within social, political, economic, and educational structures through the voices of the oppressed party" (Porter & Maddox, 2014, p. 28). Researchers using CRT must first acknowledge the existence and ubiquity of racism (Delgado & Stefancic, 2012). Then, researchers can utilize CRT to discuss educational systems as one component of many within a larger society built with inequitable power structures (Lynn, Yosso, Solorzano, & Parker, 2002).

CRT is defined by its central tenets which serve as the foundation for all scholarship conducted in this arena. These tenets include: (a) permanence of racism, (b) uncovering the counternarrative, (c) Whiteness as a form of property, (d) the concept of interest convergence, and (e) critiquing the meritocracy (Delgado & Stefancic, 2012). In order to embrace this theoretical framework fully, researchers need acknowledge each of the aforementioned tenets (DeCuir & Dixson, 2004).

Permanence of racism speaks to the power and influence of race; no longer on the periphery of conversation, researchers using CRT view race as permeating the thoughts, actions, policies, and interactions of people (Delgado & Stefancic, 2012). Additionally, this tenet alludes

to the othering of members of society as well as the continued oppression despite perceived successes or victories during civil rights movements (Bell, 1995; Delgado & Stefancic, 2012). This tenet also alludes to the concept of colorblindness or color neutrality. CRT challenges the notion that the ultimate sign of progress and acceptance is not seeing color or race; instead, CRT urges members of society to recognize the centrality of race in each and every situation. Critical race theorists specifically argue that decisions cannot be made without consideration of race (Berguson, 2003). Furthermore, researchers using CRT warn that the belief in colorblindness allows racism to exist in a more subtle and subversive way (Berguson, 2014; Lynn, Jennings, & Hughes, 2013).

The term masternarrative describes the "story" that repeatedly has been told and passed down through multiple generations of dominant populations. At the same time, storytelling has long been a tool used to challenge common assumptions about oppressed populations as well as help people within those populations discuss their pain and common experiences (Ladson-Billings, 1998; Lynn, Jennings, & Hughes, 2013; Maddox et al., in press). In CRT, counter storytelling is a method of presenting the stories of marginalized populations as told by marginalized populations (Ladson-Billings, 1998). In addition to "legitimizing experiences," counternarratives also present information in a way – stories – that "[W]hites may be more willing and able to hear" (Berguson, 2003, p. 54).

Whiteness as property refers to the power and privilege of Whiteness. Race does not exist on a binary between one color and another; however, power and privilege have historically been associated with Whiteness, or the perceived lack of Color. In the United States, Whiteness, a physical characteristic, a phenotype, has been tied to property ownership since the colonization and enslavement of people of Color by people who presented as White (Harris, 1993). White

privilege is directly connected to White people taking property from people of Color, which resulted in economic and subsequently political power. As laws and policies have been created in the United States, they have primarily and overwhelmingly been created for White people by White people (Bell, 1993; Harris, 1993). Thus, with Whiteness came power, and with power came the societal construction of Whiteness as normal and anything not White as abnormal. Therefore, researchers utilizing CRT must name and recognize that Whiteness has been socially constructed as the norm (Berguson, 2003; Soloranzo, 1998). Through this acknowledgement, researchers are able to discuss dismantling those structures that have been created through colonization and a history of oppression.

Interest convergence is a concept about how decisions are made and rationales presented. Critical race theorists challenge the idea that decisions that benefit marginalized populations are motivated by progress; instead, critical race theorists purport that policies and protocols are actually tied to self-serving political and economic interests of the dominant White population (Lynn, Jennings, & Hughes, 2013). For example, a university may open a center dedicated to cultivating opportunities for students of Color. Upon further review, that center may also allow the university to receive positive publicity, thus increasing national reputation or improving faltering statistics. Critical race theorists question whether the university is dedicated to improving opportunities for students of Color, or whether they needed something for positive press, thus making a policy with a positive outcome, but with the wrong motivation.

Finally, researchers employing CRT discuss the critique of meritocracy – if one works hard, then one will be successful (Berguson, 2003). The dedication of White people to the belief in societal meritocracy often blinds them to the idea that systemic exclusion and denial of opportunity occurs for people of Color (Berguson, 2003). CRT specifically names that

governmental structures, or those organizations similar in bureaucratic structure, are not designed for equity, nor are they designed to acknowledge or confront the hierarchy of socially constructed concepts like race (Lynn, Jennings, & Hughes, 2013).

White Researchers Using CRT

As CRT is a framework or lens dedicated to expanding the discourse around equity and societally engrained racism (DeCuir & Dixson, 2004), it is important to address how researchers who identify as White can responsibly employ its tenets. White researchers cannot understand the full reach of their privilege, but they can continually explore and name the way their privilege influences the studies they conduct, the way they ask questions, and the methods they select to use (Quaye, 2014). White researchers must be careful to not purport to tell the counterstories, but instead use their privilege as a way to support the counterstories experienced by, and told by, marginalized populations (Berguson, 2003). While White researchers cannot fully understand the experiences of people of Color, they can theorize about race and include its tenets as a framework for discussion (Berguson, 2003). In addition, White researchers must be prepared for the questions about selecting to use CRT (Berguson, 2003). Specifically, I must constantly and consistently have as my foundation two beliefs. First, I must name and be prepared to discuss the perception and interpretation of my research as a colonization of a methodological framework (CRT) that was created by, and in some opinions, intended for the use of researchers of Color (Berguson, 2003; Chadderton, 2012). Second, I must continually acknowledge that my research does not undo, excuse, or forgive ways that I have contributed to White supremacy (Chadderton, 2012).

Critical work that is quantitative in nature provides the opportunity for the researcher to create questions that reflect the tenets of CRT and to perform analyses that do not norm

dominant White populations. When examining an existing dataset, White researchers have the opportunity to discuss the creation and administration of the survey instrument. They also have the ability to critique the way demographics are gathered, thus discussing whether race is a peripheral piece of collected data or if it is utilized to guide the discussion and analyses of the data. Researchers using CRT, in particular White researchers, must be aware of how their research controls and produces knowledge (Berguson, 2003).

Quantitative Criticalism

When deciding to use quantitative research, researchers often focus on methods rather than epistemological assumptions (Hathaway, 1995). In addition to time and resources, some researchers also select their methodology by focusing on what type of method will provide them the answers to their questions or the data that they desire (Hathaway, 1995).

Research in the Quantitative Criticalist Frame

Cynthia Alcantar (2014) examined variables used to indicate civic engagement of college students. She noted the discrepancy between a dataset that reported low levels of civic engagement of Latina/o college students and the literature about the importance of civic and community engagement in the Latina/o community. Alcantar (2014) pointed out that many of the variables used to indicate college student civic engagement were tied to voting in elections and making financial donations to community causes. Alcantar dismissed voting and financial donations as appropriate measures for the Latina/o college student population, given the existing statistics that show the substantial percentages of Latina/o college students who are undocumented, and thus not provided the right to vote in elections, or who are from a socioeconomic background that would prohibit a financial donation to a cause or candidate. Instead, she pointed out activities like volunteering in the community as more appropriate

representations of civic engagement for the Latina/o college student population. Removing voting and financial donations from the indicators of civic engagement changed the statistical narrative about Latina/os to present a more accurate view of their desire and dedication to engaging in their communities.

Even researchers more well-known for their qualitative work have embraced the idea that quantitative research can result in positive change. Dafina-Lazarus Stewart (2013) utilized quantitative criticalism with a nationally recognized dataset, the College Senior Survey administered by the Cooperative Institutional Research Program (CIRP). Ze analyzed the dataset using chi-square tests and descriptive statistics to show that minoritized students are not a homogenous group, but instead have complex unique experiences. For example, Black and Asian American students had dramatic differences between pre-college characteristics and involvement experiences (Stewart, 2013). Through zer study and through utilizing this critical approach, ze challenged assumptions about minoritized students that national datasets often perpetuate.

Astin's Theory of Involvement

Alexander Astin presented a theory of involvement that showcased involvement as an active term related to attachment, commitment, devotion, and participation in college (Astin, 1984). Astin (1984; 1999) suggested that involvement was "the how" of student development. In his theory, Astin suggests that a student's time is more precious than any fiscal resource possessed by an institution. In essence, the amount of time that a student has and chooses to devote to a particular task or activity signifies involvement. Therefore, faculty, staff, administrators, and other stakeholders in students' lives are in constant pursuit of students' time (Astin, 1984). Astin's (1975) initial study connected involvement to persistence. According to Astin, students dropped out of college when their time was devoted to activities and obligations

outside of school. He gave examples of parenting, off-campus jobs, and commuting as activities to which students devoted time and energy, and that therefore affected students' abilities to spend time on institutional activities (Astin, 1977).

Astin (1999) proposed five basic postulates related to involvement. The first postulate expanded upon Astin's basic definition of involvement. Astin stated that the investment of time and energy may be very task specific, such as serving as an executive board member in student government, or it may be more generalizable, such as a student's entire collegiate experience. The second postulate referred to a continuum of involvement on which students operate. Simply, the amount of time and energy spent, or the level of involvement, may differ from student to student. While one student may be involved in three student organizations for a few hours each semester, another student may be involved in one activity for several hours a week. In his third postulate, Astin discussed the quantitative and qualitative features of involvement. Essentially, students may spend a certain number of hours studying (quantitative), but they may only be skimming the reading while also watching television, which can affect their comprehension (qualitative).

The last two postulates of Astin's involvement theory provide guidance for building student programs and interventions. These postulates serve as the theory or framework from which research questions and designs have been created (Astin, 1999). One of these postulates is a summary statement of Astin's core belief: effective policies and programs will be those that are designed to increase involvement. Inherent in the way the postulate is written is the need to test its premise.

In the final postulate or "proposition" as Astin referred to it, Astin proposed that students' levels of involvement in activities will be directly proportional to the amount of learning and

development that they receive from engaging in these activities. This postulate serves as an integral piece of the theoretical framework for the proposed study. Higher education professionals utilize the measure of involvement as a predictor or indicator of student learning and development (Harper & Quaye, 2015). They utilize instruments such as the Your First College Year survey in order to do so. Astin (1999) suggested that future research focus on "assessing different types of involvement" (p. 527), including measuring the amount of time and energy students devote to various activities or objects. I selected Academic Involvement as my area of focus for this study because of multiple factors. First, much of the research about student-athletes, including that conducted by the National Collegiate Athletic Association (NCAA) focuses on the experiences of student-athletes in the classroom, their grade point averages, and trajectory of study (Paskus & Bell, 2016). These are represented in the constructs and line items selected to measure Academic Involvement. Second, as I worked to gain access to existing data, my conversations with the research professionals at HERI led me to focus in on the student-athlete experience that I feel is most often poorly represented in mainstream media: academics. Finally, academics are central to the college experience, regardless of institutional type, and regardless of whether a student participates in varsity athletics or not.

I also designed this study to reflect Astin's interest in examining involvement as it relates to other variables. Specifically, Astin (1999) encouraged using his theory of involvement to determine whether specific student characteristics, such as race and ethnicity, were related to various types of involvement.

Even though Astin conceptualizes involvement as having qualitative and quantitative components, some researchers argue that involvement does not capture the depth of participation in an activity (Harper & Quaye, 2015). Instead, some researchers differentiate the term

involvement from engagement, using the latter to represent a measure of effort exerted during the activity in which a student is involved (Harper & Quaye, 2015). Engagement refers to the amount of time and effort students put into an activity or object, but it also encompasses the "institutional conditions," such as resource allocation and educational policies, that influence students' levels of devotion to activities (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2007, p. 11). I was not able to disaggregate the data from the YFCY by institution. Therefore, I am not able to discuss the effect of the resources and policies of each institution, an integral piece of the definition of engagement. I will discuss this further in the limitations section of Chapter Three.

Experiences of Student-Athletes

Student-athletes attend a variety of different institutions which shape their experience. However, inherent in their participation in a varsity sport is a common culture that includes specific experiences (Shulman & Bowen, 2001).

NCAA Oversight

One common experience that sets student-athletes apart from their nonathlete peers is the relationship they have with the governing boards that oversee intercollegiate athletics. These governing boards set policies and standards to which student-athletes must adhere in order to continue participation in their sport. While there are several organizations that oversee intercollegiate varsity athletics, there are two organizations, the National Association of Independent Athletics (NAIA) and the National Collegiate Athletic Association (NCAA), that oversee more than 525,000 student-athletes at about 1350 higher education institutions (NAIA, n.d.; NCAA, 2017). In 2014, 47 institutions participated in the Your First College Year survey (HERI, 2014). Of those 47 institutions, 44 have athletic programs, and 43 of those 44 athletic programs are governed by the NCAA (NCAA, 2017), which is also the larger of the two

organizations in terms of both institutional membership and total student-athletes. Therefore, I will focus on the policies and structure of the NCAA in my discussion.

The NCAA is comprised of three divisions, Division I, Division II, and Division III, under the auspices of one common theme, the dedication to "the well-being and lifelong success of college athletes" (NCAA, 2017, para. 1). The NCAA (2017, p. 2, para. 2) also espouses several core values, mainly its adherence to the "collegiate model of athletics" which is defined as "an avocation balancing their academic, social, and athletics experience." The divisions were created in 1973 as NCAA membership grew in order to group institutions with likeminded philosophies and student-athlete opportunities (NCAA, 2017). The divisions each make up a relatively similar percentage of the NCAA's total membership. As of 2017, Division I, II, and III, make up 36, 25, and 39 percent of the membership respectively (NCAA, 2017). Perhaps the most distinguishing factor between the divisions is the availability of athletic scholarships. In Division I, 56 percent of student-athletes receive athletic-based aid, which is similar to Division II where 60 percent of student-athletes receive athletic-based aid (NCAA, 2017). In contrast, Division III institutions offer no athletic-based aid; however, roughly 80 percent of the student-athletes at Division III institutions reportedly receive non-athletic based aid (NCAA, 2017). Therefore, for Division I and II student-athletes, there may be both a reliance on institutional funds and a reliance on sports participation in order to remain eligible for athletic-based aid. In contrast, student-athletes at Division III institutions may be able to continue receiving scholarships even if they decide to step away from athletic pursuits. Scholarships and aid are especially relevant given that a student's financial dependence on an institution, including, but not limited to the athletic department, has an effect on their collegiate experience, including, but not limited to, their involvement (Astin, 1999; Pascarella & Terenzini, 2005).

Another key difference between the divisions is the concept of athletic eligibility. In order to be eligible to participate in Division I or II sports, student-athletes must maintain a 2.2 or 2.3 grade point average (GPA); in Division III, the student must adhere to the academic standards set by the institution (NCAA, 2017). Therefore, GPA is an indicator of academic performance, but it is also a measure by which the NCAA determines whether or not a player is eligible to participate in varsity sports. Specifically, the NCAA focuses on the completion of credit hours in addition to GPA to evaluate eligibility (NCAA, 2017). In Division I and II, student-athletes must make adequate progress toward a degree, as defined by the NCAA, in order to be considered eligible (NCAA, 2017). While Division I institutions have the most stringent regulations, Division II and Division III institutions often have higher overall graduation rates than Division I schools (NCAA, 2013; 2017).

Common Culture

Regardless of what NCAA Division institutions student-athletes attend, shared experiences within student-athlete culture exist. Student-athletes lead overscheduled lives with very little control over what that schedule looks like, and they concurrently develop competence mentally and physically in a way that is unique to student-athletes (Hill, Burch-Ragan, & Yates, 2001; Noel, 2010). Specifically, student-athletes experience their developmental processes differently due to effects of the psychological stress to perform well on the field, the pressure to remain eligible through adequate classroom performance, and the physical exhaustion that comes with devoting hours to practice and games (Howard-Hamilton & Sina, 2001). Furthermore, due to strict schedules, NCAA policies, and institutional expectations in the classroom and on the field, student-athletes may not be afforded the same opportunity to develop autonomy, a

developmental hallmark of the college experience (Chickering & Reisser, 1993; Howard-Hamilton & Sina, 2001; Valentine & Taub, 1999).

Involvement in intercollegiate athletics is connected to positive and negative outcomes (Astin, 1993). Students participating in intercollegiate athletics report higher levels of self-rated physical health as well as positive feelings about student life (Astin, 1993; 1999). Simultaneously, they report feelings of isolation from nonathlete peer groups and lower scores on standardized tests like the Graduate Record Examination (Astin, 1993; 1999). Much of the literature connects student-athletes' lack of available time with the reports of isolation or decreased academic performance (Astin 1993; 1999; Harmon, 2010).

Even though consumers often hear reports of over-privileged student-athletes who experience a form of hero worship (Cooper & Hawkins, 2012; Watt & Moore, 2001), college student-athletes still report feeling stereotyped on their campuses, isolated from campus and community opportunities, and unprepared for life after sport (Engstrom & Sedlack, 1993; Engstrom, Sedlacek, & McEwen, 1995; Lally & Kerr, 2005). Comeaux (2012) coined the term "athlete microaggression" to refer specifically to those microagressions associated with the identity of being a varsity athlete. In addition, student-athletes report that they perpetuate negative narratives about student-athletes through stereotyping each other (Comeaux, Griffin, Bachman, & Porter, 2017). As a coping mechanism, some student-athletes report actively self-segregating from nonathlete students, thus exacerbating any existing isolation they may already feel (Comeaux, 2012; Comeaux & Harrison, 2007; Harmon, 2009; Howard-Hamilton & Sina, 2001; Melendez, 2008; Watt & Moore, 2001). Researchers note that these feelings of isolation eventually manifest themselves in poor academic performance or disengagement; specifically, student-athletes experiencing these feelings are hesitant to participate in class discussions and

group projects (Comeaux & Harrison, 2007). These types of scenarios are, in part, why at some institutions, students and faculty even consider student-athletes "socially impotent," a term suggesting that they do not possess social capital in the classroom or anywhere outside of their team atmosphere (Watt & Moore, 2001, p. 13).

Perhaps most notably, student-athletes report that their full schedules and exhausting hours sometimes make interpersonal growth difficult (Harmon, 2010; Valentine & Taub, 1999). The NCAA conducts the Growth, Opportunities, Aspirations, and Learning of Students in College (GOALS) study every 4-5 years (NCAA, 2017). The aim of the GOALS study is to capture the experience and measure the overall well-being of student-athletes at member institutions (NCAA, 2017). According to the most recent findings from the GOALS Study in 2015, student-athletes in all three divisions report they are devoting more time to athletics than in previous years; the same study also found that they are spending an increased amount of time on academic pursuits (Paskus & Bell, 2016). For example, at the Division I level, student-athletes report a median of 34 hours a week dedicated to athletics and 38.5 hours a week devoted to academics (Paskus & Bell, 2016). While the majority of student-athletes who participated in the GOALS study reported feeling positive about keeping up with academic obligations, they also stated that they wanted more time for social activities (Paskus & Bell, 2016). In addition, student-athletes noted their desire to participate in a study abroad experience, but said their current time commitment kept them from doing so (Paskus & Bell, 2016). In sum, student-athletes are devoting more time on academics and more time on athletics than ever before. While institutions can provide various support systems and interventions, they cannot provide student-athletes with the precious resource of more time in a day.

The NCAA purports that participation in varsity athletics is an "avocation" (NCAA, 2017, p. 2, para. 2). According to the GOALS study, across all three divisions, student-athletes spend 28.5 – 34 hours per week on their sport. If one defines a full-time job as 40 hours a week, then the aforementioned range is far more than half those hours. Research indicates that students who hold a part time job on campus (20 hours or less) are often more likely to succeed academically and persist (Astin, 1999). In contrast, the opposite is true for students who hold full-time jobs (40 hours) off campus, given that they cannot devote as much time and energy to their academics (Astin, 1999; Pascarella & Terenzini, 2005). If student-athletes are spending more than twenty hours a week on their sport, both on and off campus, then one can speculate that it will have a direct effect on their ability to be involved with other aspects of the institution, including their academics.

Student and Athlete

All student-athletes share two identities: student and athlete. While the identity of athlete, and the experiences typically attached to it, may give student-athletes great opportunities (Potuto & O'Hanlon, 2007; Seller, Kuperminc, & Damas, 1997), the athletic identity may also affect the way student-athletes perform academically and interact with their environments (Harmon, 2009; Hill, Burch-Ragan, & Yates, 2001; Jolly, 2008; Yopyk & Prentice, 2005). Researchers acknowledge that the addition of "intercollegiate athlete" to a student's identity can have beneficial results. For example, student-athletes may experience a form of hero worship, which can result in a positive self-image (Watt & Moore, 2001). Others report that their student-athlete identities make their social lives easier and expose them to more diverse populations than their nonathlete counterparts (Cooper & Hawkins, 2012; Howard-Hamilton & Sina, 2001).

For some, the balance between the two identities – student and athlete – is difficult and has a direct effect on academic performance and confidence. In a study investigating identity salience (between the student identity and the athlete identity) among student-athletes, Yopyk and Prince (2005) primed student-athletes with either their student or athlete identities and then examined how that affected their academic performance and self-regard. Priming refers to the researcher openly naming the student-athlete as either a student or an athlete prior to their completion of an academic assignment. Specifically, the researcher is emphasizing one of those two identities to the participant. They found that "athletes primed with their athlete identity reported significantly lower academic self-regard than did athletes primed with their student identity" (Yopyk & Prince, 2005, p. 332). In sum, the relative salience of different identities may influence student-athletes' academic performance (Watt & Moore, 2001; Yopyk & Prentice, 2005). In some situations, poor academic performance is a direct contrast to student-athletes' experiences in their athletic pursuits, where they may physically excel. This is especially important as student-athletes may formulate their "ego identity" based on their athletic success, which may increase the negative effects of poor academic performance (Howard-Hamilton & Sina, 2001). Therefore, in addition to a low GPA resulting in the ineligibility of a student-athlete, poor academic performance may lead to longer, deeper emotional effects. These effects may then have a similar negative influence over other aspects of the students' lives.

Variation in Experience by Race or Ethnicity

College students' experiences vary depending on a variety of factors. In particular, a student's race shapes the way they interact with their environments (Strange & Banning, 2001). This is no different for student-athletes. While the NCAA does not separate student-athletes by race intentionally, race may function as the tacit trait by which social norms and cliques are

formed (Harmon, 2009). Student-athletes of Color may have different experiences from their White student-athlete counterparts. Student-athletes of Color are a historically marginalized group existing within a unique culture often isolated or divided from other student populations on campus (Bowen & Levin, 2003; Njororai, 2012; Shulman & Bowen, 2001). While student-athletes as a population report feeling stereotyped, student-athletes of Color have reported that they believe the marginalization they feel is a result of their racial identity, or at least, the effect of the intersection between their identities of race and athlete (Comeaux, Griffin, Bachman, & Porter, 2017).

Many researchers express the struggle of student-athletes, particularly student-athletes of Color, to feel a sense of belonging on their campuses (Benson 1991; Bernhard, 2014; Melendez, 2008; Watt & Moore, 2001). Some student-athletes of Color report that they must work harder than other students to demonstrate to their faculty and instructors that they are committed to their academics (Person, Benson-Quaziena, & Rogers, 2001). These differences may be exacerbated when students attend predominantly and historically White institutions (PWIs).

Discussing student-athletes from a dichotomous frame (White student-athletes and student-athletes of Color) would be antithetical to the tenets of critical quantitative research. While systematic power and privilege are given to Whiteness, grouping different racial and ethnic identities can dilute their individuality thus further marginalizing them. Unfortunately, the literature regarding student-athletes of Color who do not identify as Black or African-American is so sparse that studies often discuss student-athlete experiences from the dichotomous Black versus non-Black student-athlete subpopulation (Cooper, Davis, & Dougherty, 2017; Person, Benson-Quaziena, & Rogers, 2001). Specifically, a search using Galileo for 1998 - 2018 using the racial and ethnic identities listed by HERI, in conjunction with the keywords “athletes,”

"student athletes," "college athletics," and "college sports," yielded little substance specific to individual identities other than Black. Therefore, in the next section, I aim to synthesize literature about the racial and ethnic identities as listed in the Your First College Year survey. The racial and ethnic identities that I've highlighted in the next section reflect the choices from which respondents to the YFCY can choose.

Student-athletes who identify as American Indian/Alaska Native. The NCAA (2017) reported that 1895 student-athletes identified as American Indian or Alaska Native in 2013-2014. This represents less than 1 percent of the total number of student-athletes reported as participants by the NCAA that year. Much of the research regarding student-athletes reflects the lack of student-athletes who identify as American Indian/Alaska Native through the small number of participants holding that identity in the research. I was unable to find any studies that discussed student-athletes who identified as American Indian/Alaska Native as a stand-alone population.

This is in direct contrast to the still ongoing and active research related to perceptions of Native American symbols, mascots, and continued cultural appropriate in college sports (Bresnahan & Flowers, 2008; King, 2004). Further, societal viewpoints about athletes possessing the identities of American Indian/Alaska Native often reflect widespread racist stereotypes labeling these student-athletes as wild or physically dominant without intellectual depth (King, 2004).

At tribal colleges and universities (TCUs), the numbers of students identifying as American Indian/Alaska Native is higher; however, none of these institutions are affiliated with the NCAA (NCAA, 2018). Therefore, the voices and responses of these students are not captured in the majority of research conducted, nor do they have the funding that their NCAA member

counterparts have, thus making the student-athlete experience difficult to compare (Talahongva, 2009).

Student-Athletes who identify as Black. Much of the research surrounding athletes of Color focuses on student-athletes who identify as Black or African-American (Person, Benson-Quaziena, & Rogers, 2001). Many Black student-athletes report that stereotypes affect their academic performance (Comeaux & Harrison, 2007; Martin, Harrison, Stone, & Lawrence, 2010; Melendez, 2008; Watt & Moore, 2001; Yopyk & Prentice, 2005). For example, some athletes have felt like their identity as "athlete" caused faculty members and classmates to see them as academically inept (Martin, Harrison, Stone & Lawrence, 2010; Melendez, 2008; Watt & Moore, 2001). Martin, Harrison, Stone and Lawrence (2010) studied high achieving Black male student-athletes at academically selective PWIs and found that despite their academic successes, they still felt as though they constantly needed to prove themselves. Other studies specifically refer to the "dumb jock" phenomenon, where faculty, administration, and other students perceive student-athletes as academically incapable based solely on their participation with a sports team and regardless of actual academic performance (Cooper & Hawkins, 2012; Howard-Hamilton & Sina, 2001).

Melendez (2008) conducted a qualitative study that examined Black male student-athletes' experiences at a PWI. These student-athletes felt more than stereotyping; they discussed feelings of mistrust towards not only teachers and other students, but also White teammates, coaches, and White members of the community in which the school was located (Melendez, 2008). Interestingly, Black student-athletes have acknowledged that they must overcome these feelings of mistrust or inadequacy with their Black nonathlete classmates (Martin et al., 2010; Melendez, 2008). Black student-athletes may feel like Black nonathlete

students see them as inferior because they arrived at the university on an athletic scholarship as opposed to admittance based on academic achievement and capabilities (Melendez, 2008).

Student-Athletes who identify as East Asian, Filipino, or Southeast Asian. The YFCY lists the identities of East Asian, Filipino, and Southeast Asian as separate choices that a participant could select as their racial and ethnic identity. The NCAA instead only documents an identity of Asian, and therefore, it is not possible to show the participants in NCAA sports based on the racial and ethnic identities the YFCY provides respondents. The NCAA reported that 7,578 student-athletes identified as Asian in 2014 (NCAA, 2017). This represents roughly 1.5% of all NCAA student-athletes documented as participating in a varsity sport in 2014.

Usually when Asian student-athletes are mentioned, the authors or researchers are discussing their lack of participation in athletics. In an interview with *Sports Illustrated* (Fuchs, 2017), Natalie Chou, a women's basketball player at Baylor University in the 2000's, explicitly discusses the lack of student-athletes who identify as Asian, explaining that she did not have any role models. Even when looking more broadly at nonathlete students who identify as Asian, researchers find that they have a higher level of inactivity and disinterest in college athletics than their non-Asian nonathlete counterparts (Suminski, Petosa, Utter, & Zhang, 2002).

Student-Athletes who identify as Hispanic, Mexican American/Chicano or Puerto Rican. In 2014, 24,864 or roughly 5.2% of all NCAA student-athletes identified as Hispanic/Latino, per the choices of identity on the NCAA demographic report (NCAA, 2017). The NCAA does not capture more specific subpopulations within the racial and ethnic identities of Mexican American/Chicano or Puerto Rican. Furthermore, the literature discusses them as a larger combined group.

In addition to acknowledging the negative impacts that can result from attending a Predominantly White Institution (PWI) as a minority, Mexican student-athletes also report feeling like cultural outsiders within the athletic department, even among other student-athletes of Color, in particular those who identify as Black (Romo, 2011). Hispanic student-athletes are often mentioned as participants in larger studies about race and student-athletes, but they are often collapsed into larger groups such as non-Black student-athletes of Color or student-athletes of Color (Comeaux, Griffin, Bachman, & Porter, 2017; Cooper, Davis, & Dougherty, 2017). This may be a result of the how the research question is posed or simply the number of Hispanic participants.

Student-Athletes who identify as Native Hawaiian/Pacific Islander. The NCAA reported 1725 student-athletes that identified as Native Hawaiian/Pacific Islander in 2014, which was less than 1% of the total number of registered NCAA student-athletes during that year (Irick, 2011). Literature regarding the experience of student-athletes who identify as Native Hawaiian or Pacific Islander is scarce. The connection to Mormon faith, island mysticism, and the racially charged idea of island accents or mysticism is often at the front of the discussion (Murphy, 2017). While the percentage of student-athletes who identify as Native Hawaiian and Pacific Islander is small, the number of successful collegiate athletes – Marcus Mariota, Manti Te'o, and most recently, 2018 National Championship winning quarterback Tua Tagovailoa at the University of Alabama – continues to increase, thus making the lack of research about this population evermore apparent.

Student-Athletes who identify as White. In 2014, there were 327,601 NCAA student-athletes who identified as White (Irick, 2011). This accounts for more than 68% of the total number of student-athletes governed by the NCAA. Due to White student-athletes comprising

the vast majority of all student-athletes in the NCAA, one could assume that almost all research related to student-athletes, in which the sample is not limited to a non-White race or ethnicity, captures the experience or perception of student-athletes who identify as White.

Student-Athletes who identify as Multi-racial. Multi-racial students are students who identify as one or more races. Both the YFCY and the NCAA use the term multi-racial without further delineation or categorization. Thus, this group of student-athletes is difficult to discuss as a homogenous group given that the identity represents many identities that are the intersection of various races and ethnicities.

The Potential for a New Discussion

Student-athletes are not a homogenous population. They have unique stories, complicated by the different identities that they possess. Regardless of race, gender, sport, or the intersection of any of these, student-athletes face some number of negative stereotypes in academic settings (Comeaux, Griffin, & Bachman, 2017). However, their common experiences, specifically those related to their development, the NCAA, and their lack of available time, create a culture ripe for research and exploration. Conducting research about student-athletes without discussing race would ignore both the identities student-athletes possess and the larger societal context in which we all exist. Researchers have discussed how interacting with surroundings can reinforce or thwart development and shape the experiences of student-athletes in a very direct way (Comeaux, 2012; Cooper & Hawkins, 2012; Melendez, 2008; Watt & Moore, 2001; Yopyk & Prentice, 2005). Even so, student-athletes still devote large amounts of time to the institution-sponsored activity, their sport (Paskus & Bell, 2016). Researchers and practitioners must ask if that devotion of time and energy in athletic endeavors serves as further isolation or if it indicates a deeper level of involvement.

CHAPTER 3

METHODOLOGY

In this study, I am reanalyzing previously collected data to discuss student-athlete Academic Involvement from a holistic perspective using a critical quantitative methodology, whose central tenets framed this study. Within this chapter, I outline the research process, questions, analyses, and specific limitations presented by this work.

Critical Quantitative Methodology

Critical quantitative work attempts to account for contextual elements that contribute to systemic inequities among diverse populations (Carter & Hurtado, 2007; Wells & Stage, 2015). In addition, quantitative criticalists, also called critical quantitative researchers, revisit existing data collection instruments and large datasets using a critical lens to present new models and frameworks that work against the reproduction of oppression in quantitative research (Perna, 2007; Wells & Stage, 2015). Frances Stage (2007), pioneer of the research methodology, explained, "The quantitative criticalist seeks to forge challenges, illuminate conflict, and develop critique through quantitative methods in an effort to move theory, knowledge, and policy to a higher plane" (p. 8). Critical quantitative researchers strive to ignore traditional methodological assumptions, honor critical tenets, and produce findings that allow for complex discussion around equity (Stage, 2007).

Paradigmatic Tension

Inherent in the use of quantitative critical methodology is the tension between the two paradigms in which a researcher must operate, postpositivism and the critical approach (Stage,

2007). I adhere to Mertens' (2005) conceptualization of paradigms and their characteristics. Mertens (2005) called the critical approach the transformative paradigm. For the purposes of this discussion, I will utilize the term transformative in place of Stage's critical approach. Research approaches fall along a methodological continuum, with quantitative research on one end and qualitative research on the other (Johnson & Christensen, 2012). Postpositivism, with its adherence to singular Truths and confirmation of theory, is usually tied to quantitative methodology, whereas many researchers associate the transformative paradigm with qualitative methodology, given the associated methods that allow for multiple interpretations of results (Mertens, 2005; Stage, 2007). In fact, research in the transformative paradigm, or using a critical approach, may be conducted using quantitative or qualitative methods (Mertens, 2005). Even though quantitative and qualitative methods can be used by researchers working in the transformative paradigm, the actual paradigm, or way of thought, does not, by definition, intersect nor overlap with postpositivism. In theory, the blending of the two paradigms seems impossible to execute in formal research. Therefore, researchers utilizing critical quantitative methodology must embrace "the permeability of the paradigmatic boundaries" and possess thorough understanding of the two paradigms (Mertens, 2005, p. 21).

Tenets of postpositivism. Inherently, quantitative research is tied to the scientific method, with the testing of hypotheses and the creation of models as the central focus of the research conducted using quantitative methods (Johnson & Christensen, 2012; Mertens, 2005). Postpositivism seeks to discover the Truth that exists, and it uses primarily quantitative methodology to find that Truth (Mertens, 2005). Researchers operating in this paradigm hold strong beliefs of objectivity and generalizability; however, they do not purport certainty in their findings (Mertens, 2005). Often criticized for their inability to conduct work that promotes social

justice (Johnson & Parry, 2015), postpositivists adhere to the guiding tenets of beneficence, respect, and justice (Mertens, 2005). Postpositivists also use their research as a tool not to give a definitive answer regarding a theory, but instead to "make a stronger case by eliminating alternative explanations" (Mertens, 2005, p. 14). Finally, postpositivists aim to remain neutral in research, removing any personal bias from the research process and interpretation of findings (Mertens, 2005). Postpositivists view neutrality as a way to adhere to their guiding tenets; by not acknowledging any bias, they believe they are conducting research as fairly as possible.

Tenets of the transformative paradigm. Researchers operating in the transformative paradigm center their research on social justice and the need for systemic change (Mertens, 2005). Rather than aiming simply to do no harm to participants, people operating in the transformative paradigm more specifically work to promote human rights. Unlike postpositivists, researchers working in the transformative paradigm believe in multiple perceptions of truth and reality. Mertens (2005) wrote, "the transformative paradigm stresses that acceptance of such differences of perceptions as equally legitimate ignores the damage done by ignoring the factors that give privilege to one version of reality over another, such as the influence of social, political, cultural, economic, ethnic, gender, and disability lenses in the construction of reality" (p. 32). Thus, researchers must acknowledge the complex context in which the research is conducted, and they must understand and name their subjectivity in order to remain true to the paradigmatic epistemology (Stage, 2007). While the methodology of research in the transformative paradigm may be varied, several aspects of the methodology must remain true. The researcher must try to include marginalized voices in each step of the research process (Mertens, 2005). The researcher must also acknowledge and account for differences in power among groups. Finally, the results

should be tied to an agenda for change, including, but not limited to, the equal distribution of resources (Mertens, 2005).

The approach of quantitative criticalism. Critical quantitative research takes Mertens' conceptualization of postpositivism and the transformative paradigm a step further by offering a hybrid paradigm where researchers can utilize critical theory as a lens through which they can ask critical questions; use quantitative methods, specifically higher level statistical testing, to answer those questions; and then discuss how their findings can call for change. Stage (2007) named the motivation of the researcher as a defining characteristic of critical quantitative work. A quantitative criticalist is investigating an idea, modifying an existing model, and aiming for equity as opposed to fairness (Stage, 2007). More specifically, quantitative criticalism encourages researchers to revisit large datasets and incorporate critical frameworks to ask questions that challenge the status quo as part of the analysis and interpretation of the findings (Oseguera & Hwang, 2014; Perna, 2007). Researchers have used quantitative methods to develop linear predictive models through analysis that norms dominant populations; however, in presenting dominant populations as the norm, researchers have contributed to the marginalization of non-dominant populations (Coakley & Awad, 2013). Instead of testing existing linear models, quantitative criticalists utilize various statistical tests to disaggregate and analyze data from a different perspective than what has previously been done (Stage, 2007; Teranishi, 2007). Through this process, researchers present new perspectives of groups and constructs within a quantitative study (Alcantar, 2014; Stage, 2007; Stewart, 2013).

The Instrument

I explored student-athlete involvement by reanalyzing data collected through the 2014 administration of the Your First College Year survey (HERI, n.d.). The Your First College Year

Survey (YFCY) is an instrument created collaboratively by the Higher Education Research Institute (HERI) & Cooperative Institutional Research Program (CIRP) at the University of California, Los Angeles (UCLA), and the Policy Center on the First Year of College at Brevard College (HERI, n.d.). Whereas HERI is the interdisciplinary center that conducts research and policy development based on the findings from the YFCY, CIRP is the organizational unit that administers the survey. The YFCY was designed and administered initially in 2000 as a follow-up assessment tool to the annual Freshman survey; now the survey is used more broadly as a standalone instrument "to identify features of the first year that encourage student learning, involvement, satisfaction, retention and success, thereby enhancing first-year programs and retention strategies" (HERI, 2016, para. 2).

Survey Instrument Construction

The instrument consists of forty questions, some of which encompass multiple line items to which a participant can respond as directed. Each line item of the YFCY gathers information related to an aspect of the complex college experience. The questions on the instrument (see Appendix A) are informed by literature, research, and statistical methods (HERI, 2017). Specifically, the YFCY reflects Astin's Theory of Involvement and its relationship to student learning and development. The YFCY focuses on the first year of college, which Astin (1999) believed was particularly affected by levels of involvement. Astin (1999) stated, "nearly all forms of student involvement are associated with greater than average changes in entering freshman characteristics" (p. 524).

Often researchers will identify larger categories of information through the grouping of particular line items in a survey instrument. Similarly, YFCY line items can be used in combination to represent larger measures. For example, one line item asks, "How often in the

past year did you ask questions in class?" The answer from that question would reveal if a student had frequently, occasionally, or never asked questions in class. The response to that item can be grouped together with other line items pertaining to involvement with faculty and academic pursuits to represent a measure of a larger trait such as "Academic Engagement." These larger traits are called "global measures," or constructs (HERI, n.d.). HERI utilizes Item Response Theory (IRT) to create these constructs, which serve as "standard measures" for universal application to institutions (Sharkness, DeAngelo, & Pryor, 2010). Thus, researchers within and external to HERI can use the national aggregate data from CIRP instruments, like the YFCY, as a common language for research, programming, discussion, and policy development.

At the conclusion of the 2011 administration of the YFCY, HERI researchers identified the following constructs through item response theory and exploratory factor analysis: (a) academic disengagement, (b) ease of academic adjustment to college, (c) faculty interaction: contact and communication, (d) satisfaction with coursework, (e) overall satisfaction, (f) sense of belonging, (g) positive cross-racial interaction, (h) negative cross-racial interaction, (i) civic awareness, (j) leadership, and (k) civic engagement (HERI, 2011; Sharkness, DeAngelo, & Pryor, 2010). As of the 2014 administration of the YFCY, no new constructs had been identified.

Psychometric Properties of the YFCY

The psychometric properties presented are based on the first YFCY administration at 50 pilot institutions in 2001. Using a variety of different analyses, HERI assessed split half reliability, construct validity, and content validity. First, HERI determined reliability using institutions rather than individuals as the unit of analysis. This decision was made based on the way that results from HERI are often presented as aggregates of the national response. Across

the institutional subsamples, the reliability coefficients were between .10 and .97, with an average reliability coefficient of .56. This presents a moderately reliable instrument; however, HERI cautions that, based on the small number of pilot institutions, and respondents at those pilot institutions, the estimates are conservative.

Construct validity was assessed through principal component analysis with varimax rotation used. Unlike with the reliability calculation, construct validity was determined using the student rather than the institution as the unit of analysis. The idea behind the principal component analysis is to see if the survey items that align with each other in regard to subject matter, also "cluster statistically" (HERI, 2001, p.2). Cronbach's alpha values ranged from .31 to .89. It should be noted that this procedure is replicated each year in order to ensure continued construct validity (Sharkness, DeAngelo, & Pryor, 2010). However, content validity is at the center of this study, and therefore, the procedure involving a panel of second-year UCLA students is not relevant given the focus on student-athletes.

Rationale for Selection of the YFCY

I selected the Your First College Year Survey (YFCY) for this study for several reasons. First, the ability to isolate responses from student-athletes is integral to this research. The YFCY includes a specific line item that asks students (participants) taking the survey to identify whether they have participated in intercollegiate athletics. Specifically, the line item reads "Since entering this college have you played intercollegiate athletics (e.g. NCAA or NAIA-sponsored)" (HERI, 2016). Participants have the option to select Yes or No. This allowed me to disaggregate and reanalyze the data with a focus on those participants who selected Yes in response to this statement.

Second, the instrument captures the educational outcome of involvement as defined by founding director of the Higher Education Research Institute (HERI), Alexander Astin. Therefore, Astin's theory of involvement, as discussed in Chapter Two, provided this quantitative study with a solid and consistent theoretical foundation.

Finally, I selected the YFCY survey based on its construct creation process. CIRP produced a technical report that discussed their analytical procedure as it relates to the creation of constructs for the YFCY (Sharkness, DeAngelo, & Pryor, 2010). The technical report, along with the critical quantitative framework, provided the basis for the statistical analysis proposed for RQ3 and RQ4.

Process

I sought and received access, through the process outlined by HERI (n.d.) on their website, to the 2014 administration of the Your First College Year (YFCY) dataset. Per HERI's (n.d.) policies, the most recent dataset available for researcher use is that which was administered three years prior to the proposed study. Given that I requested the information in the Fall of 2017, the 2014 administration of the YFCY was the most recent dataset available. Upon approval of my proposed study – the one discussed within this paper – I signed a research agreement that provided clarity as to the security and use of the data as allowed by HERI. In addition, I sought the approval of the University of Georgia Institutional Review Board (IRB), who deemed that this study was not human subjects research and therefore did not require approval from the board.

To reflect my focus on the academic facet of involvement, and after consulting with the principal researchers within HERI, I chose to look specifically at the constructs of (a) Academic Disengagement, (b) Ease of Academic Adjustment to College, and (c) Habits of Mind (see

Appendix B). I selected these constructs because they tie most closely to those behaviors related to the perception of the Academic Involvement of college student-athletes shown through literature (Benson, 1991; Comeaux, 2008; Romo, 2011) and my own personal experience working directly with collegiate student-athletes, across racial and ethnic identities, on their academic goals. My consultations with HERI also guided the selection of these constructs. Specifically, the professionals at HERI strongly encouraged the use of these specific constructs to represent Academic Involvement. They reported that their opinion and recommendation was based on the literature review I presented them in my proposal, as well as previously received and reviewed research proposals submitted to them.

Line items connected to Habits of Mind asked participants to respond to the statement "How often in the past year did you…" by selecting frequently, occasionally, or not at all. The line items include: (a) ask questions in class, (b) support your opinions with a logical argument, (c) seek solutions to problems and explain them to others, (d) revise your papers to improve your writing, (e) evaluate the quality or reliability of information you received, (f) take a risk because you felt you had more to gain, (g) seek alternative solutions to a problem, (h) look up scientific research articles and resources, (i) explore topics on your own, even though it was not required for class, (j) accept mistakes as part of the learning process, (k) seek feedback on your academic work, and (l) integrate skills and knowledge from different sources and experiences.

Line items connected to Academic Disengagement asked participants to respond to the statement, "Since entering college, indicate how often have you…" by selecting Not at all, Occasionally, frequently. The line items include: (a) come late to class, (b) turned in course assignment(s) late, (c) skipped class, (d) turned in course assignments that did not reflect your best work, (e) fell asleep in class, and (f) instant messaged/texted in class.

Line items connected to Ease of Academic Adjustment asked participants to respond to the statement, "Since entering this college, how has it been to…" by selecting Very difficult, somewhat difficult, somewhat easy, and very easy. The line items include: (a) understand what your professors expect of you academically, (b) develop effective study skills, (c) adjust to the demands of college, (d) manage your time effectively, and (e) develop close friendships with other students.

For the purposes of this study, I defined Academic Involvement as a composite unweighted variable, created through averaging the means of the total scores of the line items associated with each of these three constructs, (a) academic disengagement, (b) ease of academic adjustment to college, and (c) habits of mind (Mulaik, 2010).

For all three constructs, the survey instrument had interval scales, from which respondents could pick responses to closed statements. For academic disengagement and habits of mind, respondents could select from one of three choices: frequently, occasionally, not at all. For ease of academic adjustment to college, respondents had the choice of selecting very difficult, somewhat difficult, somewhat easy, or very easy, as their response.

Sample

Given that this study focuses explicitly on the 2014 administration, I will discuss the sample collected during that year only. In spring 2014, 10,170 students from forty-six institutions responded to the YFCY (HERI, 2014; HERI, 2017). For comparison, in spring 2016, fifty-four institutions participated in the administration of YFCY, resulting in a sample of 18,529 students (Bates & Bourke, 2016). Of the 46 institutions (see Appendix C) that participated in the 2014 administration of the survey, 40 are members of the National Collegiate Athletic Association (NCAA) (HERI, 2017; NCAA, 2018). Of the remaining six institutions, one is a member of the

National Junior College Athletic Association (NJCAA), two are members of a state-level regional conference unassociated with any national governing body, and three have no athletic association.

Student-Athlete Identity

A total of 10,170 participants responded during the YFCY survey administration in spring of 2014. Of those respondents, 1313 responded yes to the line item "Since entering this college have you played intercollegiate athletics (e.g. NCAA or NAIA-sponsored)" (HERI, 2016). Conversely, 6317 participants responded "No" to that line item, and 2540 participants did not enter a response. Therefore, I am making an assumption that the 1313 that responded yes to this line item are varsity student-athletes.

Data Analysis

In this section, I describe the statistical analyses used for each of the research questions posed. Further discussion of the results occurs in Chapter Four. Before performing any data analysis, I cleaned my data by identifying those respondents who provided an answer to every line item associated with the three chosen constructs. This allowed me to move forward with analysis only for a complete response, which prevented any calculation from including a 0 in place of a line item where someone did not respond. To do this, I selected a -1 for the missing value for the variables in the variable view of my dataset in SPSS. This indicated to SPSS that these cases should not be included in the analysis. The dataset only included those line items related to the HERI-created constructs of Academic Disengagement, Habits of Mind, and Ease of Academic Adjustment to College. For Academic Disengagement and Habits of Mind, respondents had the choice of selecting Not at All, Occasionally, or Frequently. These responses were coded as scores of 1, 2, and 3, respectively. For Ease of Academic Adjustment to College,

respondents had the choice of selecting Very Difficult, Somewhat Difficult, Somewhat Easy, and Very Easy. These answers were coded 1, 2, 3, and 4 respectively. Responses were reverse coded so that the higher the score always indicated a higher frequency of the construct measured. For the construct of Habits of Mind, no line item responses required reverse coding. For the construct of Academic Disengagement, all 6 of the line item responses were reverse coded. For the construct of Ease of Academic Adjustment to College, no line item response required reverse coding. I reverse coded the line item responses related to Academic Disengagement so that a value of 1 changed to a value of 3 and a value of 3 changed to a value of 1. Scores of 2 remained as such in the process.

- *RQ1: What is the magnitude of Academic Involvement of collegiate student-athletes and collegiate student nonathletes?*

To address this research question, I determined the total score of each of the three identified constructs – Habits of Mind, Academic Disengagement, and Ease of Academic Adjustment, by averaging the responses across line items. Then I averaged those three means to determine the unweighted composite variable score of total Academic Involvement. Mulaik (2010) discussed that averaging the means of constructs in order to derive a variable is appropriate when examining a construct through multivariate analysis that will include all of the line items used to create the composite variable score. Given that I will use multivariate analysis to explore the structure of Academic Involvement in RQ3 and RQ4, I chose this method of scoring.

Following the calculation of the composite score of Academic Involvement, I ran descriptive statistics to show the range, median, and mean of the Academic Involvement score for the entire sample as well as the sub-samples of student-athletes and student nonathletes.

- *RQ2: What is the magnitude of Academic Involvement of student-athletes who identify as the different races and ethnicities as specified by the Your First College Year (YFCY) survey:*
    - *a: What is the magnitude of Academic Involvement for White student-athletes?*
    - *b: What is the magnitude of Academic Involvement for Black student athletes?*
    - *c: What is the magnitude of Academic Involvement for American Indian student-athletes?*
    - *d: What is the magnitude of Academic Involvement for Asian student-athletes?*
    - *e: What is the magnitude of Academic Involvement for Hispanic student athletes?*
    - *f: What is the magnitude of Academic Involvement for student-athletes who identify as two or more races?*
    - *g: What is the magnitude of Academic Involvement for student-athletes who selected "other?"*

For these research questions, I disaggregated the data further so that I could determine the magnitude of Academic Involvement for the different races. I utilized the HERI-constructed derived variable RACEGROUP to define the categories present in the research questions as well as the categories by which I disaggregated the data. RACEGROUP is derived from the variable of RACE. RACE is composed of nine identities from which respondents can choose: (1) White/Caucasian, (2) African American/Black, (3) American Indian/Alaska Native, (4) Asian American/Asian, (5) Native Hawaiian/Pacific Islander, (6) Mexican American/Chicano, (7) Puerto Rican, (8) Other Latino, and (9) Other. HERI then collapses some of these categories into larger subsets of race/ethnicity in order to increase sample size numbers for each population, which results in more options for types of analysis. RACEGROUP has seven groups: (1)

American Indian, (2) Asian, (3) Black, (4) Hispanic, (5) White, (6) Other, (7) Two or more groups. American Indian includes the group American Indian/Alaska Native from the RACE groups. Asian includes Asian American/Asian and Native Hawaiian/Pacific Islander. Black includes African American/Black. Hispanic includes Mexican American/Chicano, Puerto Rican, and Other Latino. Other includes only those responses that selected Other from the choices in RACE. Finally, the group two or more races includes any respondent who selected more than one of the identities listed as an option for the line item connected to RACE.

Once these groups were disaggregated, I ran descriptive statistics to determine the mean, median, and range of the composite scores of Academic Involvement for each of the groups in research questions RQ2a – RQ2g. This analysis aimed to prevent intentional or unintentional norming of White student-athletes, or dominant populations, which stays true to central tenets of critical quantitative research and allows for the discussion of within group variability of student-athletes (Berguson, 2003; Stage, 2007).

- *RQ3: What is the structure of the construct of Academic Involvement?*

I used exploratory factor analysis to test the line items that literature identifies and professionals from HERI stated are part of the construct of Academic Involvement – those associated with Habits of Mind, Academic Disengagement, and Ease of Adjustment to College.

Specifically, using IBM SPSS, I conducted a principal components exploratory factor analysis on the responses from student nonathletes to determine the structure of the construct of Academic Involvement, a construct derived from the line items connected to Habits of Mind, Academic Disengagement, and Ease of Academic Adjustment. The factor analysis also determined the construct validity of Academic Involvement. I utilized an oblique rotation after looking at the correlation among components/factors purportedly related to Academic

Involvement in the correlation component matrix in the SPSS output and finding that more than one component was correlated at .32 or above (Mulaik, 2010). Then I determined the number of factors related to the construct of Academic Involvement by using the cutoff value of 1 for the listed eigenvalues and through observing the scree plot (Mulaik, 2010). Line-items with a factor loading greater than .4 in the pattern matrix were considered related to a specific factor (Mulaik, 2010). The reliability or internal consistency of the line items connected to Academic Involvement was assessed by the Cronbach's alpha coefficient, which was calculated through the reliability tests available in SPSS.

- *RQ4: Is the structure of the construct of Academic Involvement the same for student nonathletes and student-athletes?*

Upon completing the analysis for RQ3, I entered the factor structure presented for the student nonathlete respondents into the AMOS IBM software program. Then I used the data from the responses from student-athletes to confirm whether the structure for Academic Involvement, as determined for student nonathletes, held true for student-athletes. Through confirmatory factor analysis, I was able to determine the factor loadings present. The factor loadings represent the correlation between variables presented from the YFCY and the factors (or components) that I determined were connected to Academic Involvement. I then examined the factor loadings that were less than .7, and removed them from the structure given their lack of correlation with the presented factors. (Mulaik, 2010).

Limitations

This study has potential limitations in its methodology. I will be analyzing data collected from a number of institutional types and sizes. Given that I did not collect this data myself, I had no control over sampling procedures including participant institutions. Therefore, while the

student-athlete experience has many commonalities despite institutional type (Howard-Hamilton & Sina, 2001), certain line items may produce answers reflective of institutional culture and characteristics for which I cannot control. Additionally, the data from the YFCY includes perspectives from 43 of the more than 1100 member institutions of the NCAA. HERI does provide information about what institutions participated in the administration, but I am not able to disaggregate the data by institutional type or NCAA division. I am also unable to identify which institutions the 1313 student-athletes who responded to the 2014 administration of the YFCY attended.

Additionally, author subjectivity is present in the creation of the term of Academic Involvement. While the term, and the constructs that I used to determine the level of Academic Involvement for the respondents come from literature, consultation with statistical experts, and life experience, I cannot guarantee or assume that the use of Academic Involvement in other studies or contexts is consistent with the definition I have presented in this study. However, given that I am not aiming to compare groups, or norm any specific group, this potential limitation can also be interpreted as a way to adjust discourse and reframe discussions about student-athletes' Academic Involvement without assuming a deficit.

Limitations of the Instrument

Critical quantitative methodology allows me a framework from which to ask questions and consider alternative ways of analyzing and revisiting large datasets (Oseguera & Hwang, 2014; Stage, 2007). However, inherent in that critical approach is a discussion of the limitations of the design of the instrument, the way the questions are asked, and the sample that is collected. Of particular relevance to this study is the way that the YFCY is designed to collect information about respondents' racial and ethnic identities. On the 2014 questionnaire, respondents had the

option of selecting White/Caucasian, African American/Black, American Indian/Alaska Native, Asian American/Asian Native Hawaiian/Pacific Islander, Mexican American/Chicano, Puerto Rican, Other Latino, and Other. Respondents could mark all that they believed applied to them. While this list is still not exhaustive, it does allow for respondents to identify themselves in the way that they feel is most representative. For data analysis purposes, the YFCY has a category of variables known as derived variables. One of these derived variables is RACEGROUP. This allows for a more simplistic coding in the data in order to perform group by group analysis. The groups within the derived variable of RACEGROUP are American Indian, Asian, Black, Hispanic, White, Other, and Two or more race/ethnicity. The action of grouping different races and ethnic groups into larger categories created by researchers is extremely colonial and therefore antithetical to a critical framework. Even though these groups more closely mirror the way that the current literature discusses student-athletes of different racial and ethnic identities, I have utilized statistical analysis outlined above to provide the framework for discussion in Chapter Five.

Another limitation of this instrument, is that the data requested does not identify what institution the respondent attends. Therefore, I have no way of controlling for institutional type or culture. Further, I can not assume based on the institutional type, to what divisional segment of the NCAA or other governing body a respondent's institution belongs. Given the potential for institutional type and divisional segment to have an impact on student experience, I am unable to discuss this aspect of the student-athlete academic experience fully.

Despite some limitations, I have conducted a study that utilizes data collected through the administration of a statistically sound, valid, and reliable instrument. In addition, the data used for this study does present a cross section of student-athletes across NCAA divisions and

institution type, which reflects the research about the common experiences shared by student-athletes across institutions. My findings and implications focus on student-athletes as a population in an effort to shift perceptions and reframe discussion about the population as a whole.

CHAPTER 4

RESULTS

The purpose of this study was to utilize critical quantitative methodology (1) to examine magnitude of Academic Involvement of collegiate student-athletes and collegiate non-student-athletes, (2) to examine the magnitude of Academic Involvement of collegiate student-athletes who identify as different races/ethnicities, (3) to determine the structure of the construct of Academic Involvement, and (4) to see if this structure holds for student-athletes.

This chapter will include further overview of the participants' demographic information. In addition, this chapter provides the results of the statistical analyses used to investigate each of the aforementioned research aims.

Demographics

A total of 10,170 people responded to the 2014 administration of the YFCY survey (HERI, 2017). Of those 10,170, 12.9% (n=1313) identified as student-athletes, 62.1% (n=6317) identified as student nonathletes, and 25% (n=2540) did not respond to the line item that posed the question about student-athlete identity. Of the total pool of respondents, 34% (n= 3471) identified as male, and 66% (n=6699) identified as female. After collapsing the multiple choices of racial and ethnic identity into the derived variable choices, all respondents were categorized into the 7 groups of racial and ethnic identities. In summary, .2% (n=20) were identified as American Indian, 11.7 (n=1190) percent were identified as Asian, 5.3% (n=539)were identified as Black, 5.3% (n=539) were identified as Hispanic, 52.5% (n=5339) were identified as White,

1.5% (n=153) were identified as Other, and 23.1% (n=2349) were identified as having Two or more races. The remaining respondents (n=41) chose not to select an option for this line item.

Of the 10,170 respondents, 2089 attended public universities, 1563 attended private universities, 1712 attended public 4-year colleges, 2594 attended nonsectarian 4-year colleges, 781 attended Catholic 4-year colleges, 1345 attended other religious 4-year colleges, 67 attended and private 2-year colleges. These institutional designations were determined by HERI.

Student-Athletes

The racial and ethnic identities of the respondents, shown in Table 1, from the sample who identified as student-athletes and fully completed the survey are as follows: .2% American Indian, 5.3% Asian, 6.8% Black, 2.9% Hispanic, 70.8% White, 1.1% Other, 12.7% two or more races, and 0.2% chose not to respond. In addition, among this sample, 637 student-athletes identified as male, and 676 identified as female.

Table 1

Student-Athlete Respondents by Race/Ethnicity

	Frequency	Percent
American Indian	2	.2
Asian	67	5.3
Black	85	6.8
Hispanic	36	2.9
White	888	70.8
Other	14	1.1
Two or more race/ethnicity	160	12.7
Missing	3	.2
Total	1255	100.0

The data showed that 67 of the self-identified student-athletes attended public universities, 92 attended private universities, 96 attended public 4-year colleges, 659 attended

nonsectarian 4-year colleges, 143 attended Catholic 4-year colleges, 248 attended other religious 4-year colleges, and 8 attended private 2-year colleges.

Self-reported Grade Point Average (GPA)

While GPA is not explicitly mentioned in the research questions, it is a common measurement of academic achievement. Furthermore, GPA is used by college athletic governing bodies like the NCAA to determine eligibility to participate in athletics and thus could be considered a numerical reflection of the result of Academic Involvement. In the case of the YFCY, GPA is reported by the respondent and categorized by a letter grade rather than a number. For student-athletes who responded fully to the survey, 12.4% reported an A or A+, 22.1% reported an A-, 19.9% reported a B+, 19.6% reported a B, 13.1% reported a B-, 7.2% reported a C+, 4.4% reported a C, and .6% reported a D. The sample also showed that .5% stated that they did not receive grades in their courses, and 2 respondents did not provide an answer to the question. For student nonathletes, 19.9% reported an A or A+, 23% reported an A-, 19.3% reported a B+, 18.8% reported a B, 8.2% reported a B-, 5.4% reported a C+, 3.4 reported a C, and 1.1 reported a D. The sample also showed that .7% stated that they did not receive grades in their courses, and 3 respondents chose not to answer the question. Table 2 shows the comparison between the two groups, student-athlete and student nonathlete.

Table 2

Student-Athlete and Student Nonathlete Grade Point Averages (GPA)

	Student-Athlete		Student Nonathlete	
GPA	Frequency	Percent	Frequency	Percent
A or A+	156	12.4	1204	19.9
A-	277	22.1	1388	23.0
B+	250	19.9	1167	19.3
B	246	19.6	1133	18.8

B-	165	13.1	497	8.2
C+	90	7.2	329	5.4
C	55	4.4	204	3.4
D	8	.6	69	1.1
No grades	6	.5	44	.7
Missing	2	.2	3	.0
Total	1255	100.0	6038	100.0

Collegiate Student-Athlete Academic Involvement

RQ1: What is the magnitude of Academic Involvement of collegiate student-athletes and collegiate student nonathletes?

The total Academic Involvement mean score for student-athletes was 2.37, with a standard deviation of .25 and a range of 1.83. The total Academic Involvement mean score for student nonathletes was 2.30, with a standard deviation of .25 and a range of 2.06. The scores of Academic Involvement for student nonathletes have a slightly wider spread than the scores for student-athletes; however, the standard deviations and the means are very similar for both populations. These findings imply that the difference between Academic Involvement scores may not differ greatly between student-athletes and student nonathletes. While the tenets of quantitative criticalism discourage statistical tests that compare groups directly, this informal comparison presents numerical similarities between the Academic Involvement scores of student-athletes and student nonathletes, the former of which is often portrayed in mainstream media as a less academically involved population.

RQ2: What is the magnitude of Academic Involvement of collegiate student-athletes who identify as the different races and ethnicities as specified by the Your First College Year (YFCY) survey?

I calculated the means, ranges, minimum values, maximum values, and standard deviations of the unweighted composite score of Academic Involvement for respondents who

identified as student-athletes and who fully completed the survey and identified their racial and ethnic identity (n=1255). The possible range of scores for Academic Involvement ranged from 1 – 3.33. Table 3 breaks down these calculations by racial and ethnic identity.

Table 3

Academic Involvement Score for Student-Athletes by Racial or Ethnic Identity

Race/Ethnicity Group	N	Range	Minimum	Maximum	Mean	Std. Deviation
No response	3	.16	2.53	2.69	2.5889	.09146
American Indian	2	1.16	2.18	3.33	2.7556	.81710
Asian	67	1.36	1.53	2.89	2.2740	.29086
Black	85	1.56	1.50	3.06	2.3270	.29215
Hispanic	36	.96	1.96	2.92	2.3795	.24448
White	888	1.61	1.67	3.28	2.3396	.24065
Other	14	1.24	1.54	2.78	2.2313	.35862
Two or more race/ethnicity	160	1.78	1.55	3.33	2.3498	.29471

a: What is the magnitude of Academic Involvement for White student-athletes?

Of the 1255 student-athletes who fully completed the survey, 888 identified as White. The values of scores had a range of 1.61 with a minimum score of 1.67 and a maximum score of 3.28. The mean Academic Involvement score for student-athletes that fully responded to the survey and identified as White was 2.34 with a standard deviation of .24.

b: What is the magnitude of Academic Involvement for Black student-athletes?

Of the 1255 student-athletes who fully completed the survey, 85 identified as Black. The values of scores had a range of 1.56 with a minimum score of 1.50 and a maximum score of

3.06. The mean Academic Involvement score for student-athletes that fully responded to the survey and identified as Black was 2.33 with a standard deviation of .29.

c: What is the magnitude of Academic Involvement for American Indian student-athletes?

Only 2 of the 1255 student-athletes who fully completed the survey identified as American Indian. The scores for these two responses were 2.18 and 3.33. Therefore, the mean Academic Involvement score for student-athletes that fully responded to the survey and identified as American Indian was 2.75.

d: What is the magnitude of Academic Involvement for Asian student-athletes?

As stated previously in Chapter 3, the YFCY derives the variable for race by combining multiple ethnicities into one larger racial subgroup. The YFCY collapses these aforementioned identities into a group called Asian. Of the 1255 student-athletes who fully completed the survey, 67 identified as Asian. The values of scores had a range of 1.36 with a minimum score of 1.53 and a maximum score of 2.89. The mean Academic Involvement score for student-athletes that fully responded to the survey and identified as Asian was 2.27 with a standard deviation of .29.

j: What is the magnitude of Academic Involvement for Hispanic student-athletes?

Similar to the clustering of Asian ethnicities, the YFCY also combined the identities of Puerto Rican and Mexican American/Chicano to the identity of Hispanic. Of the 1255 student-athletes who fully completed the survey, 36 identified as Hispanic. The values of scores had a range of 1.96 with a minimum score of 1.53 and a maximum score of 2.92. The mean Academic Involvement score for student-athletes that fully responded to the survey and identified as Hispanic was 2.38 with a standard deviation of .24.

f: What is the magnitude of Academic Involvement for student-athletes who identify as two or more races?

Instead of offering respondents the choice of selecting Multi-racial, the YFCY groups together those respondents that selected multiple racial or ethnic identities into a group named two or more race/ethnicity. Of the 1255 student-athletes who fully completed the survey, 160 are a part of the two or more race/ethnicity group. The values of scores had a range of 1.78 with a minimum score of 1.55 and a maximum score of 3.33. The mean Academic Involvement score for student-athletes who fully responded to the survey and identified as two or more race/ethnicity was 2.35 with a standard deviation of .29.

g: What is the magnitude of Academic Involvement for student-athletes who selected "Other?"

The YFCY also provides respondents with the option of selecting "Other" when identifying their race or ethnicity. Presumably, these students would not identify as one or more race, but instead would not identify with any of the racial or ethnic identities listed as choices. Of the 1255 student-athletes who fully completed the survey, 14 selected the choice of Other. The values of these scores had a range of 1.24 with a minimum score of 1.54 and a maximum score of 2.78. The mean Academic Involvement score for student-athletes that fully responded to the survey and identified as Other was 2.23 with a standard deviation of .36.

Line Items and the Construct of Academic Involvement

RQ3: What is the structure of the construct of Academic Involvement?

The principal component factor analysis for the student nonathlete respondents' measure of Academic Involvement revealed a 5-factor structure indicating that 5 unique factors are related to the construct of Academic Involvement. The principal component analysis allowed for the reduction in variables from the initial instrument. Essentially, this analysis allowed me to

focus on the discussion and creation of 5 factors that are statistically connect to the concept of Academic Involvement. I found that 5 factors had an eigenvalue greater than 1 and accounted for 48.79% of the variance of the items. The scree plot (Figure 1) presents additional support for the 5-factor structure as it reflects the eigenvalues as they correspond for each factor.

Factor 1 included five items after the oblique rotation. These items were related to asking questions in class, critical problem solving, and providing support for arguments. Five items connected to lack of participation in class were associated with Factor 2. Specifically, all line items associated with the HERI-created Academic Disengagement construct were connected to Factor 2, except for the line item associated with the frequency of texting or instant messaging during class. Factor 3 included 4 out of the 5 items associated with the HERI-created construct of Ease of Academic Adjustment. The only line item associated with Ease of Academic Adjustment that did not have a factor loading greater than .4, and therefore is not associated with Factor 3, was related to peer relationship development. Factor 4 included 5 items related to accepting mistakes, making academic corrections, and implementing feedback. Factor 5 included 2 factors related to proactively exploring existing research. These results are further discussed in Chapter Five, specifically my conceptualization of them based on the analysis and the literature.

Table 4 shows the factor loadings for each line-item identified by the principal component analysis as being connected to one of the five factors. In the table, each line-item is listed by the name provided by HERI for analysis purposes. Those line-items with names beginning with MNDHAB refer to line-items associated with the HERI construct Habits of Mind. Line-items with names that begin with EASY refer to line-items connected to the HERI construct Ease of Academic Adjustment. Finally, the table shows items that begin with ACT and CLSACT. These line-items are associated with the HERI construct of Academic Disengagement.

The abbreviation of "rev" at the end of these line-item names indicates that they were reverse coded given the structure of the statements on the instrument. A full codebook of items used in this study from the 2014 YFCY shown in the pattern matrix is included in Appendix D.

Table 4

Pattern Matrix

Line-Items	Factors				
	1	2	3	4	5
MNDHAB01	.708	-.043	.052	-.152	.046
MNDHAB03	.710	-.053	.002	.098	-.084
MNDHAB05	.195	-.039	.029	.455	.228
MNDHAB06	.424	.150	.018	.301	-.007
MNDHAB07	.463	.063	-.007	.346	.065
MNDHAB08	-.040	.088	.116	.369	.548
MNDHAB09	.149	.154	.122	.259	.591
MNDHAB10	-.019	.088	.017	.614	.063
MNDHAB11	.213	-.166	.000	.557	-.056
MNDHAB12	.354	-.048	.009	.463	.065
MNDHAB02	.777	-.010	-.009	-.061	-.004
MNDHAB04	-.062	-.287	.002	.624	.004
EASY1	.039	.040	.672	-.048	.081
EASY2	-.020	-.088	.840	.001	.012
EASY3	-.022	.003	.885	-.088	.034
EASY4	-.081	-.146	.806	.006	-.042
EASY5	.183	.127	.364	.121	-.404
ACT17rev	.026	.693	-.012	-.030	.055
CLSACT01rev	.044	.630	-.032	-.138	.234
CLSACT04rev	-.088	.664	-.017	.042	-.139
CLSACT07rev	.026	.531	-.114	-.138	.035
CLSACT13rev	-.032	.487	-.021	.037	-.091
CLSACT15rev	-.148	.383	-.017	.303	-.500

The Cronbach's alpha for the instrument was .724 indicating that these items have a relatively high shared covariance and therefore measure the concept of Academic Involvement as I have defined it (Mulaik, 2010). The report of Item-Total Statistics showed that removing any of

the line items associated with Academic Disengagement would result in a higher Cronbach's alpha; however, the increase would be no more than .017. Given this statistic, I moved forward with interpreting the results derived from all of the line items shown in Table 5.

Table 5

Student Nonathlete Factor Eigenvalues

	Initial Eigenvalues		
Component	Total	% of Variance	Cumulative %
1	4.697	20.422	20.422
2	2.597	11.292	31.714
3	1.769	7.689	39.404
4	1.133	4.924	44.328
5	1.027	4.465	48.793
6	.958	4.164	52.957
7	.923	4.013	56.970
8	.878	3.816	60.786
9	.823	3.577	64.363
10	.800	3.479	67.842
11	.799	3.473	71.315
12	.759	3.302	74.617
13	.664	2.887	77.504
14	.656	2.851	80.355
15	.642	2.789	83.144
16	.620	2.697	85.841
17	.589	2.561	88.402
18	.569	2.473	90.875
19	.518	2.252	93.127
20	.477	2.075	95.202
21	.457	1.987	97.189
22	.338	1.469	98.658
23	.309	1.342	100.000

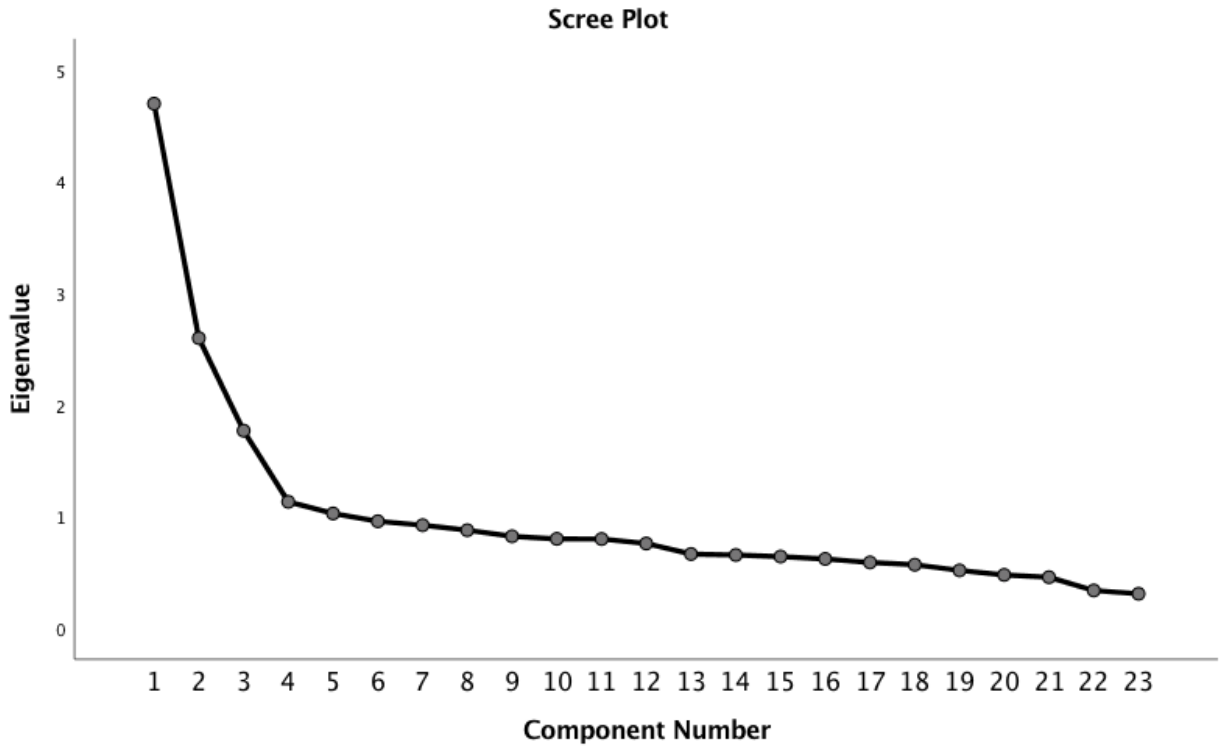

Figure 1. Number of Factors Related to Academic Involvement

Models for Collegiate Student-Athletes and Student Nonathletes

RQ4: Is the structure of the construct of Academic Involvement the same for student nonathletes and student-athletes?

Next, I conducted a confirmatory factor analysis using AMOS software to determine if the factor structure for collegiate student-athletes was the same as the structure I found for student nonathletes. I used the same factors found in my exploratory factor analysis to determine if the line items had a statistically significant connection to the five factors when this structure was tested with the sample of student-athlete respondents. The confirmatory factor analysis found that a five-factor model, created through the aforementioned exploratory factor analysis and reflected in the path model in Figure 2, was a fit for the student-athlete population suggesting that these five factors were connected to the construct of Academic Involvement when testing the model against the student-athlete respondents. The chi-square for the

confirmatory factor analysis was 722.73 and the root mean square error of approximation (RMSEA) was .049, indicating a good model fit for this population. Further, in looking at the standardized regression weights, which indicates the correlation between the line item and the factor, all factor loadings were above .4.

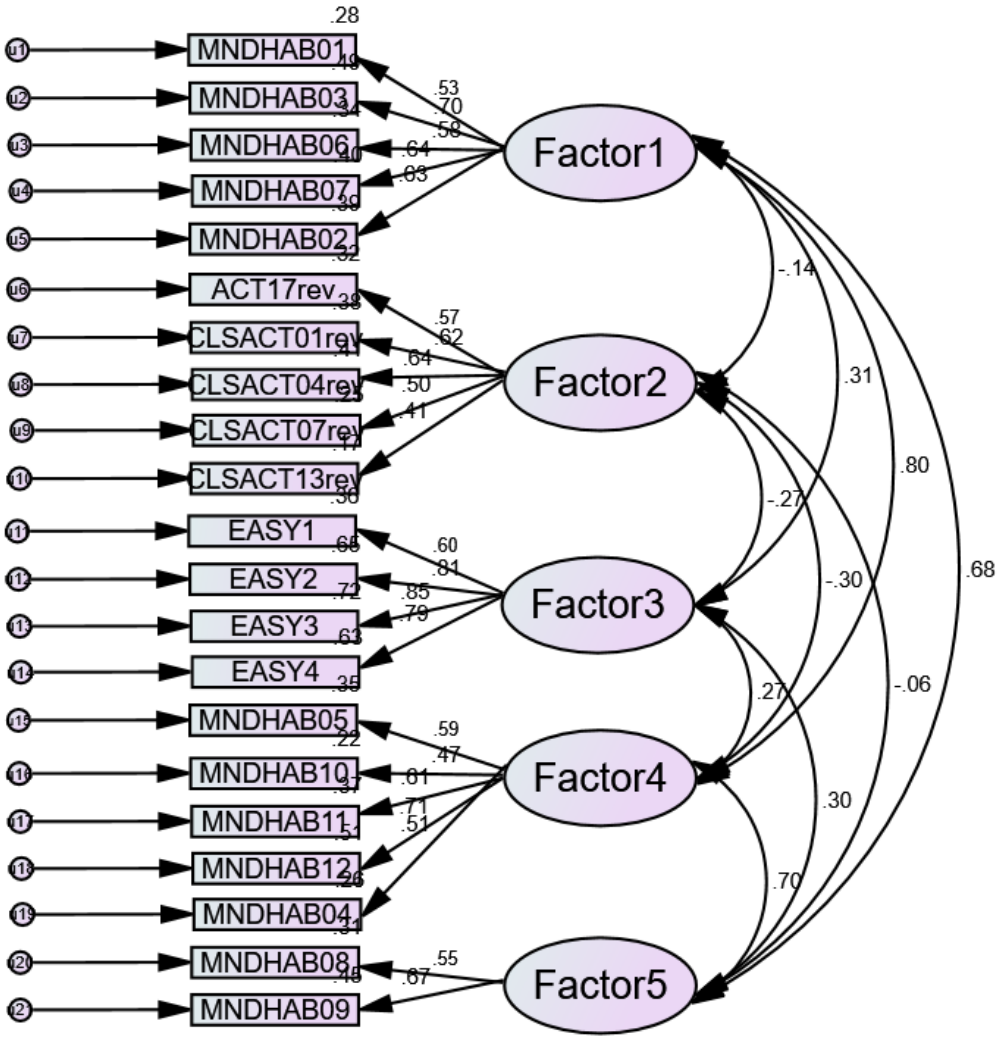

Figure 2. Path Diagram of Variables and Factors for Collegiate Student-Athletes

Summary of Results

Using a sample of 1255 respondents, I explored the construct of Academic Involvement, its structure and its statistical connection to line items presented in the YFCY. I reported the magnitude of Academic Involvement for collegiate student-athletes who identified as different races not to provide comparison, but instead, so that each statistic could be discussed on its own. In finding these results, I identified subsets of the population that are less represented than others in this instrument which merits further discussion in Chapter Five. Additionally, I was able to reduce the number of variables for discussion based on statistics rather than examining line-items and making speculations based on anecdotes or previous research that does not incorporate a critical quantitative perspective. Finally, the five-factor structure created for the collegiate student nonathlete population produced a model that I found to be a fit for the collegiate student-athlete population. This analysis provided the impetus for a more in-depth discussion in Chapter Five about how I conceptualize these five factors.

CHAPTER 5

DISCUSSION AND CONCLUSION

The motivation of the researcher in critical quantitative work is considered an integral and defining characteristic of the research itself (Stage, 2007). My motivation is to begin having conversations about collegiate student-athletes that are based on the interpretation of quantitative data through a critical eye. Quantitative criticalism is a hybrid paradigm (Stage, 2007) that charges me to ask questions using a critical frame, use statistical tests reflective of the central tenets of critical theory, and discuss my findings in order to call for change and make recommendations through a critical lens using quantitative data without colonialism overshadowing my results.

The common culture of collegiate student-athletes makes them the focus of research that examines them in comparison to their student nonathlete counterparts. They are often portrayed as less involved, less academically focused, and generally "less than." Instead, this study demonstrates the need to use a more critical perspective that places student-athletes at the center of research that focuses on their experiences through their voices rather than capturing the perspectives of others about student-athletes. Existing national survey instruments, like the Your First College Year survey (HERI, 2016), offer researchers the opportunity to gather responses from student-athletes, a college student population that is often difficult to access. Through data disaggregation similar to that done for the research questions presented in this paper, researchers can look specifically at collegiate student-athlete responses. Existing literature about the collegiate student-athlete experience provides a context that includes the student-athlete culture

reportedly shared by student-athletes across all divisions in the NCAA; this context then allows for a more critical and informed interpretation of the existing quantitative data.

The Application of Critical Race Theory

In this study, I utilize Critical Race Theory (CRT) as the foundational critical theory of quantitative criticalism. Thus, I am centering race and ethnicity when discussing Academic Involvement while also presenting a new perspective of the collegiate student-athletes who identify as these races or ethnicities. This approach reflects central tenets of critical quantitative work (Alcantar, 2014; Stage, 2007) and promotes a better understanding of racial and ethnic identities that have been underrepresented in prior discussion of student-athletes (Cooper, Davis, & Dougherty, 2017).

Whiteness as Property

One of the central tenets of CRT is the concept of Whiteness as property, a concept that names the historical connection between power and privilege and Whiteness (Delgado & Stefanic, 2012). Of the respondents to the YFCY in 2014, 888 identified as White; this number makes up almost 71% of the collegiate student-athlete population included in the survey. In fact, White respondents are the only racial and ethnic identity whose sample is large enough on which to conduct multivariate analyses, tests commonly used in critical quantitative analysis, and other tests that can result in a deeper understanding of the collected data. This restricts the information that can be gained from the responses of collegiate student-athletes who identify as any other race or ethnicity. Potentially, using the mean score of student-athlete Academic Involvement as quantitative evidence in conjunction with previously conducted research that reports the difficult academic experiences of student-athletes of Color – or Black, as is noted in much of the literature (Cooper, Davis, & Dougherty, 2017; Comeaux, 2012) – a researcher could suggest that

the scores presented for Academic Involvement for collegiate student-athletes as a whole may be traced to the high number of White student-athletes. Without disaggregating the data further to showcase the scores of different racial and ethnic identities, I run the risk of giving further power to Whiteness by reporting the large presence of White students in the sample as the justification for a larger magnitude of Academic Involvement.

The effects of a name. One of the limitations of the YFCY is that respondents have the choice of selecting from a fairly wide selection of racial and ethnic identifiers; however, they are still limited to the choices that are provided for them. Of the full sample (n=1313), 160 fit into the category of "Other" or "Two or more races/ethnicities." That is the second largest group within the sample, behind White students (n=888). While additional sociohistorical context would enhance the conversation about these student-athletes, I am not able to discuss them because I have such little information as to how they identify. White privilege, a concept often discussed under the auspices of the CRT tenet Whiteness as property, is directly connected to the repeated events in history where White colonists or settlers took the land or property of non-White people using force and without actual authority (Bell, 1993). In a similar colonial way, the YFCY and I, as a White researcher utilizing that data, have collapsed these groups into one larger group, thereby failing to acknowledge or recognize the unique characteristics, artifacts, and experiences of these racial and ethnic identities. For example, East Asian, Southeast Asian, and Pacific Islander all have cultures different from one another. To combine them into a group called Asian and discuss them as a whole group can be harmful to the narrative, and even more so, damaging to the retention of their culture in a larger, Whiter, more Western society like the one where the survey was administered. The Hispanic identity is reflected similarly with the provision of the choices Puerto Rican, Mexican/Chicano, and Latino. Even if respondents

selected one of the options offered, Hispanic is ultimately the group by which HERI disaggregates the data for analysis. As a result, these identifiers become othering rather than inclusive. Student-athletes of Color, like other students of Color, may not feel as though they are represented in the survey's choices for identity. While this potentially makes them less likely to participate fully in the survey, student-athletes of Color who do select from the list of identities may feel as though they are fitting into a category that has been constructed for them rather than selecting from an identity that they have named themselves.

The Permanence of Race in Data

Another central tenet of CRT, permanence of race, is reflected in this study. The permanence of race presents race as a foundational element of the construction of our society, and thus, unavoidable even within the context of research (Ladson-Billings, 1996). Hence, when discussing the data analyzed for this study, I created research questions designed to examine the magnitude of Academic Involvement held by collegiate student-athletes who identify as different races and ethnicities. Moreover, this tenet is the motivation for the explicit conversation about race in collegiate sports, both in this study and in the broader landscape of college athletics.

The comparison of Black and White. While the idea of comparing groups is antithetical to critical quantitative methodology (Stage, 2007), society has constructed comparisons between certain groups that have since become commonplace. Some comparisons are so engrained in the sociohistorical context of sport that I would be remiss not to address one of the most ubiquitous comparisons in the collegiate student-athlete landscape. Student-athletes who identify as Black and White are often the most visible populations of collegiate student-athletes, namely in mainstream media. The media lauds Black student-athletes for their athleticism or their ability to overcome difficult family dynamics, while they praise White student-athletes for intellect,

critical thought, and social skills (Billings, 2004). Those attributes associated with White student-athletes more easily connect to potential academic success, while the attributes connected to Black student-athletes have little connection to the academic experience (Billings, 2004; Carvahlo, 2014). The design of this study, its premise and objective, as well as the results from this study, shift the discussion away from characteristics related to athletic prowess and focus on those variables connected to the idea of Academic Involvement, which results in a different narrative about Black student-athletes in particular. Specifically, in this study collegiate student-athletes who identified as Black or who identified as White had roughly the same score of Academic Involvement. In fact, an equal amount of variance exists among scores of Academic Involvement for student-athletes who identified as Black or White. Further, for both collegiate student-athletes who identified as White and those who identified as Black, the mean score of Academic Involvement was higher than the mean score for student nonathletes, suggesting that student-athletes have a larger magnitude of Academic Involvement regardless of whether they identify as Black or White. These results open up a much larger narrative about how the results from my data analysis challenge the portrayal of student-athletes in mainstream media. Instead, these statistics serve as a foundation for the depiction of student-athletes as involved members of the community, both athletically and academically.

In reflecting on these identifiers, I can easily see why much of the research about student-athletes is qualitative. A small sample size does not necessarily prevent data analysis from occurring, whereas certain statistical tests cannot be performed unless there is a sample large enough to create sufficient statistical power for the analysis.

The Power of Data Disaggregation

Crucial to the discussion of my results is the utilization of data disaggregation. I disaggregated the data to show the magnitude of Academic Involvement for each of the selected races and ethnicities, and then I reported their scores not to compare across groups, but instead to highlight their Academic Involvement. I utilized descriptive statistics to capture a summary of the mean score of Academic Involvement for each group that HERI presents as an option in their derived variable called RACEGROUP. In doing so, I centered much of my analysis on race and ethnicity.

The highest mean magnitude of Academic Involvement was captured from the respondents who identified as American Indian. However, only two respondents who identified as American Indian were represented in the 2014 administration of the YFCY. In looking at the demographics report from the NCAA in the year 2013-2014, I found that the NCAA reported that 1898 (.3%) student-athletes identified as American Indian/Alaskan Native (NCAA, 2017). While I do not have access to the raw data from the NCAA to know how many of these student-athletes identified specifically as American Indian versus Alaskan Native, I know that this number of student-athletes is proportionate to the number of student-athletes in my study who identified as American Indian (.2%). The two scores of Academic Involvement calculated for these two respondents, 2.18 and 3.33, indicate high levels of academic involvement given that the range of possible score is 1-3.33. While, by statistical definition, these scores are not outliers, they are in the upper quartiles of the data and so provide the impetus for conducting research that captures the Academic Involvement of these students, perhaps from a qualitative view given the small size of the population.

Another interesting finding from this study is the number of student-athletes who identified as two or more races (12.7%). Only the identity of White had more student-athletes respond. "Two or more races" is not a clear identifier, given that a respondent could select two or more of any of the options for race or ethnic identity. Therefore, it is difficult to discuss this group without further disaggregating the responses to determine if there are other subgroups within this population that may have common experiences documented in previous research. The range of scores of Academic Involvement (1.55 – 3.33, a range of 1.78) for this identity was the widest of all the ethnic and racial identities presented in this study. This is similar to the range of scores for all student-athletes in the sample which was 1.83. This supports the need for further disaggregation of the demographic data to determine whether larger subgroups exist within the "Two or more races" subset of the sample. Much like descriptive statistics in this study have shifted the narrative about Academic Involvement for student-athletes, practitioners can use descriptive statistics to represent these subgroups more individually in discussion about student-athlete or student nonathlete Academic Involvement.

Constructing Academic Involvement

The construct of Academic Involvement is defined in Chapter 1 as an unweighted composite variable (Mulaik, 2010) derived from the mean of the means of total scores of the YFCY constructs of Academic Disengagement, Ease of Academic Adjustment to College, and Habits of Mind. The analysis used for RQ3 resulted in the underlying structure of the construct of Academic Involvement, including the identification of those line-items or variables that are connected to the factor. In looking at the line-items that are connected to the five factors, I have created names for these five factors that reflect the five groups of line-items connected to

Academic Involvement (Mulaik, 2010). In doing so, I am further defining Academic Involvement for continued use in discussion and future research.

Factor one. The first factor includes items related to finding out answers and proactively engaging with material in order to form opinions. Therefore, I am calling the first factor *Inquisitiveness*.

Factor two. I named the second factor *Lack of Academic Presence*, representing both mental focus and physical presence, as shown in the line-items connected to the factor. As noted previously, this factor included all of the items connected to the HERI-constructed factor of Academic Disengagement, except the line item "Since entering college, how often have you instant messaged/text messaged during class." This line item may not be related to a factor connected to Academic Involvement because of its reverse coding instruction. In some classes, faculty and students may encourage instant messaging or texting as a tool of engagement. More specifically, instant messaging or texting during class may not be seen as a sign of a lack of involvement in the same way that not attending a class at all is seen. Unlike the other factors presented, the name of this factor reflects the lack of positive action, presence. Given the way the associated line-items are phrased and reverse coded when scored, shifting this to a positive name would require a rewording of these line-items. Making adjustments to the line-items would change the instrument, which could affect its existing psychometric properties, thus affecting the analysis I have already performed.

Factor three. The third factor, *Academic Strategy Development*, is related to learning how to engage with academic material and professors using effective tools. Similar to factor two, the items associated with factor three include all items associated with the HERI-constructed item except for "Since entering college, how easy has it been to develop close friendships with

other students." While developing close relationship with peers does contribute to a sense of belonging, I do not believe it correlates to the other items which have a far more academic-specific focus.

Factor four. This factor includes items previously connected to the HERI-created construct of Habits of Mind. In this context, based on the specific line items that loaded onto this factor, the factor is called *Continual Academic Improvement*.

Factor five. Only two line items are related to this factor. These items are related to seeking out knowledge, in particular, research. Therefore, this factor is called *Research and Knowledge Seeking.*

In summary, I have named *Inquisitiveness, Lack of Academic Presence, Academic Strategy Development, Continual Academic Improvement,* and *Research and Knowledge Seeking* as the five factors that make up the structure of Academic Involvement. Even though Lack of Academic Presence is phrased from a seemingly deficit perspective, scores still indicate a student-athlete's decision to not take the negative actions listed in the line items. While much of the literature discusses the barriers that student-athletes must overcome given the dumb jock stereotype and the perception of academic disinterest (Comeaux, 2012), this study frames the discussion of student-athletes from a positive, action-oriented perspective. Specifically, these factors reflect decisions that student-athletes may take to see success in the academic arena of their college experience.

This structure was then confirmed for the student-athlete population through confirmatory factor analysis. Therefore, the items and factors that relate to Academic Involvement for student nonathletes are also appropriate for use in determining the Academic Involvement of student-athletes. If the same factors are connected to Academic Involvement for

student-athletes and student nonathletes, then student-athletes could assimilate into the larger student body in regard to academic support services. For some institutions, especially larger Division I member institutions, separate academic support services are available for student-athletes. Given the unique experience of student-athletes, support services targeted toward student-athletes are important; however, the similar factor structure related to Academic Involvement might challenge the idea that separate services are a necessity. On the other hand, having determined that the same factor structure for Academic Involvement exists for student-athletes and student nonathletes, existing programs and services created for student-athletes could be enhanced by looking to effective practices for academic support for all college students.

Additionally, the factors that comprise the structure reflect much of what the NCAA GOALS study reported in terms of Academic Involvement, specifically the report of feeling positive about the ability to engage with material and with professors, and to keep up in class (Paskus & Bell, 2016). This is further reflected in the results from RQ1 which showed that the mean score of Academic Involvement for collegiate student-athletes was 2.37 out of a possible 3.33. The midpoint of the range of possible scores is 2.17, and student-athletes have a mean score of Academic Involvement that is notably higher than that score. This is the type of simple statistical analysis that can reframe the conversation about student-athletes. If studies begin with the assumption that student-athletes have high levels of Academic Involvement, then what impact does that have on the program creation for this portion of college students? Further, if Academic Involvement as a construct was used as a tool to capture these positive actions, then what effect would that have from a public relations standpoint for an institution or an athletic department? In addition, the factors presented in this study provide a potential structure for an assessment tool that could be utilized by institutions or their athletic departments to gather

information and analyze it from a critical quantitative frame in order to measure levels of Academic Involvement over the course of enrollment. Such an assessment has the potential to indicate connections between participation in sport and academic success, or it could allow for the creation of specific interventions to address the factors connected to Academic Involvement. For some institutions, presenting the strength of Academic Involvement of their student-athletes could assist with recruiting or retention of student-athletes.

Critiquing the Measure of Academic Involvement for Student-Athletes

One of the central purposes of critical quantitative methodology, as demonstrated throughout this study, is to gain perspectives about new constructs through the analysis of existing datasets (Alcantar, 2014; Stage, 2007; Stewart, 2013; Teranishi, 2007). Academic Involvement, as a specific construct, was created, explored, and tested in this study. Utilizing exploratory and confirmatory factor analysis, I was able to show that the factor structure for Academic Involvement was applicable to both collegiate student-athlete and collegiate student nonathlete populations. Even so, the construct and the analysis merit further critique.

First, this factor structure was the result of testing the sample of respondents to the 2014 administration of the YFCY. Further testing and analysis should be conducted with datasets from multiple years in order to see if the structure remains appropriate, particularly for collegiate student-athletes. Second, inherent in the way I found the factor structure for Academic Involvement is the centering of student nonathletes. Critical quantitative methodology rejects the idea of norming one group like student nonathletes as the base for testing. However, in this case, I chose to create the factor structure in order to test whether the construct of Academic Involvement would even be applicable to student-athletes. Had the structure not been a fit, I

would have made recommendations to determine other constructs that were more appropriate for the academic facet of involvement for student-athletes.

What's Missing for Student-Athletes

Through analysis, I identified five factors, *Inquisitiveness, Lack of Academic Presence, Academic Strategy Development, Continual Academic Improvement,* and *Research and Knowledge Seeking,* as relating directly to the construct of Academic Involvement. I further confirmed that this five-factor structure applied for both the student-athletes and student nonathletes in my sample. However, part of my charge as a quantitative criticalist involves looking at the instrument and determining what I do not see represented in these line items, and suggesting what I believe should be there (Stewart, 2013). First, research and literature reflect that student-athletes are overscheduled and overcommitted, which prevents them from fully investing in academics or specific majors (Harmon, 2010; Paskus & Bell, 2016). Therefore, notably absent is the acknowledgement of the amount of time they spend making up assignments or arranging tests or assignments due to absences or travel for team activities. Potentially, such an indicator of proactive interaction with academics could increase levels of Academic Involvement specifically if we consider the factors listed above. Additionally, there is no item related to student athlete interaction with academic support staff, which may also be indicative of the student athlete experience and further, their Academic Involvement.

Justifying Academic Involvement

The analyses I selected to use for this study represent the type of data analysis suggested by quantitative criticalists (Alcantar, 2014). I used descriptive statistics so as not to norm one group, and I utilized multivariate analysis to determine underlying variables and relationships between factors and YFCY line items. While the analysis resulted in reframing discussion about

the Academic Involvement of student-athletes, in particular those from different racial and ethnic backgrounds, it is difficult for me to not see my analysis as a justification of the Academic Involvement of collegiate student-athletes rather than a display of achievement. I requested data from line-items and HERI-created constructs as suggested by both professionals at HERI and previously conducted research. I acknowledge that the selection of different line-items or constructs from HERI and the YFCY may have resulted in different results. Furthermore, I acknowledge the way my researcher bias influenced the way that I interpreted and presented the results and discussion shown in Chapter 4 and 5. For example, I am interpreting the results of this study without having every participated in varsity collegiate athletics. My understanding of the experience will therefore always be one of observation, either directly, or in the case of this study, based on the interpretation of the quantitative data I have.

Divisional Representation and its Effect

As mentioned in previous chapters, the majority of institutions that participated in the 2014 administration of the YFCY have athletic departments are governed by the National Collegiate Athletic Association (NCAA). These institutions are classified within all three NCAA divisions. Given the restrictions placed on the data by HERI to ensure that responses cannot be traced to specific institutions, I am unable to further disaggregate the data and perform analyses that would speak to any differences in Academic Involvement across the divisions. Literature supports the idea of a common experience for student-athletes (Gaston-Gayles, 2015; Harmon, 2010), but I would speculate that many people, when they think about the term "student-athlete," visualize the highly visible, revenue generating student-athlete like those in Division I football. However, these are only a fraction of the more than 450,000 student-athletes under the governance of the NCAA. In this study particularly, the respondents came from all three

divisions of the NCAA. Specifically, ten institutions are members of Division I, 11 institutions are members of Division II, and 19 institutions are members of Division III. The remaining three schools that participated and have athletic departments are either members of the National Junior College Athletic Association (NJCAA) or are members of independent regional conferences. Additionally, the racial and ethnic identities reported by student-athletes differ across sport and division, and therefore could have had an effect on the number of respondents for each identity, and ultimately, the mean scores of Academic Involvement. Additional research is needed to capture the nuances of each division and each sport as it relates to Academic Involvement.

Implications for the Student Affairs Practitioner

Much of my daily work involves providing support and assistance to students facing complex circumstances. My goal is to provide resources that are truly tailored to each individual student's needs. In practice, and in the moment of crisis or need for the student, the opportunity to individualize care is available. Inherent in individualized care is the inappropriateness of transferring the same network of resources or support from one student to another because the circumstances are never exactly the same. Simultaneously, I operate in an environment where I receive requests for data to validate, substantiate, or even explain the work that I am doing. It is difficult, if not impossible, to provide data that fully reflect the interventions from my office that are tailored to a person's circumstances. However, I recognize the ubiquity of the data-driven decision model in higher education. The stakeholders requesting data want numbers and statistics to present to other stakeholders. Numbers are the common language that become the foundation of policy. Therefore, I am charged with determining how I continue to use quantitative methods and data without abandoning my belief in the existence of the individualized student experience.

Implications for Practitioners Working with Data

For student affairs practitioners, critical quantitative methods are a step towards reconciling critical theory and quantitative methods. Practitioners should continue to see the power of data disaggregation, utilizing it as a tool to shape the stories that are told and change the masternarratives that have permeated the higher education, and specifically, the collegiate athletic landscape. This study produced results that present student-athletes and student nonathletes as similar in terms of Academic Involvement. However, the study also produced numerous questions for future research because of the lack of depth in the responses in a quantitative survey. While in practice, I can present statistics that I've found through data disaggregation and multivariate analysis, I still have not found a way that quantitative data can portray a truly individualized approach or story. Practitioners should work towards fluency in both quantitative and qualitative methods in order to understand their limitations and to allow for results from studies using the two methods to inform one another. Then, practitioners can apply this methodological knowledge through the selection of the method appropriate for the audience requesting the data.

In addition, practitioners utilizing quantitative methods should not abandon the critical approach. In speaking about the instruments selected for data collection, the statistical analysis chosen, and the presentation of the results, student affairs practitioners should openly discuss their bias and its potential impact on the work.

Practitioners also should acknowledge the power of their bias in the way they use data to tell a story or reflect their work. For example, in this study, I found that the mean score of student-athlete Academic Involvement is 71% of the total possible score. I also found that student nonathletes had a mean score of Academic Involvement that is 70% of the total possible

score. This additional piece of information provides a layer of context that shifts the discussion to present college student-athletes and nonathletes as having practically the same level of Academic Involvement. Another example is looking at the midpoint of the collected data. The mean score of Academic Involvement for collegiate student-athletes was 2.37 out of a possible 3.33. The midpoint of the range of possible scores is 2.17, and student-athletes have a mean score of Academic Involvement that is notably higher than that score. This is the type of simple statistical analysis that can reframe the conversation about student-athletes.

Additional opportunities exist for practitioners to use data to demonstrate other narratives about both student-athletes and their racial and ethnic identities. For example, the variable of racial and ethnic identity is derived from a larger list of options in the survey instrument. Practitioners could revisit the dataset and isolate other specific racial and ethnic groups that may have been collapsed for analytical purposes. In doing so, practitioners could identify other subsets of the student-athlete population that may be appropriate for further intervention. Practitioners could also perform comparison group analysis or engage in discussion that compares collegiate student-athletes to college student nonathletes who identify as these subsets not fully represented in the present study.

Through my choices in disaggregation and presentation of results, I am creating a story through the use of quantitative data. In practice, making intentional decisions about data can prove to be a great tool for influencing the formation of policy or the allocation of resources. Practitioners should utilize this tool, but they should do so ethically without misrepresenting the larger collegiate landscape, thereby potentially causing harm to students who are members of the population in discussion.

Implications for Practitioners Working with Student-Athletes

Some student affairs practitioners work closely with student-athletes either as part of their overall responsibilities or because student-athletes engage with their programs and services. For some institutions, collegiate athletics are siloed in a structure far from student affairs. At these institutions, designated practitioners serve the student-athlete population only. These practitioners may or may not consider themselves a part of the student affairs community even though the work they do is traditionally associated with student affairs. This study has implications for both of these groups.

For those practitioners who work with student-athletes, whether in student affairs positions or in roles within athletics, this study demonstrates the need to examine further marginalization of student-athletes with different racial and ethnic identities within their student-athlete culture. For example, the overwhelmingly White survey respondents in this study may be a reflection of the underrepresentation of certain racial and ethnic identities within athletics. For students who may already experience marginalization in society and on their college campuses, practitioners should not assume that those feelings of marginalization are lessened through participation in athletics. Professionals should acknowledge the potential for and existence of marginalization through the development of programs with explicit learning outcomes related to inclusion. This is also an opportunity for practitioners to utilize a critical framework for the development or review of existing programs and policies.

Identifying Opportunities for Collaboration

For practitioners who work primarily, or solely, with student-athletes, this study demonstrates the need for consultation between athletics and student affairs. Given that the multivariate analysis showed that the factor structure of Academic Involvement was the same for

student-athletes and student nonathletes, programs and interventions connected to academics offered in the two areas should mirror each other in many aspects. For example, the first-year experience is often discussed as a crucial time for students and their academic experience. The YFCY, the instrument used in this study, is a statistical representation of the first-year experience. As institutions continue to enhance the first-year experience in order to set students up for success, athletics should share the interventions they have used with student affairs to identify any gaps they may be filling or to provide a model that could be applied more widely to student nonathletes. Student affairs practitioners should reciprocate this sharing of information, especially since their programs may be more established or may have a group of participants with different demographic characteristics from the student-athlete population. Practitioners within athletic departments should also utilize existing institutional data, not just data from governing bodies like the NCAA, so that they can develop student-athlete focused programs, services, and supports, while also taking into account the institutional context. Additionally, using existing institutional data may help practitioners from athletics remain aware of the institutional landscape. Doing so could help practitioners connect the athletic experience and the institutional experience in a more intentional way.

Implications for the Aspiring Quantitative Criticalist

This study was my first application of critical quantitative research. In theory, the paradigmatic tension Stage (2007) discusses is a beautiful mess that resonates with me because it allows for the utilization of clean statistical methods while allowing for the open-ended critical approach in the choice of research design, the questions presented, and the discussion of the results. For researchers, scholars, and practitioners who decide to use this methodology, this study illuminates the difficulty in actually applying quantitative criticalism. Even though I have

taken great strides to avoid norming student nonathletes or student-athletes who identify as White in my statistical tests, it is difficult to discuss any population without societal norms, for example, encroaching upon the findings. Critical quantitative research names the societal norms at the outset of the research and then uses quantitative methods to provide for the discussion of new norms. However, critical quantitative research also uses the mathematical field of statistics, which fundamentally challenges some of the tenets of critical quantitative research.

Most statistical tests or calculations, specifically those used by social scientists, require the researcher to assume that the data is normal. Normal data means that a statistical norm has been acknowledged, which means that a score or indicator has been marked as "normal." Inferential statistics are then used to examine variations from the norm. In my application of this method, I found the conflict between this particular foundational element of statistics, the need to establish and compare to a norm, and this particular tenet of critical quantitative work, the need to consider new norms, to be challenging to reconcile. If I am trying not to norm any population, then how do I take into account the fact that I am statistically norming a certain score to which these populations should aspire? For practitioners who decide to embark on a critical quantitative project, it is imperative that they understand the need to discuss the existing norms, even if the goal of the research is not to create a new norm.

Finally, practitioners using critical quantitative methods should acknowledge that without comparison, there is no measure of progress. For example, the mean score of Academic Involvement for a certain population carries little value or implication without placing it in a larger context. Understanding where a student group falls within a certain institutional context is often most important to the stakeholders or consumers of this research. If a practitioner determines that one group of students has considerably lower levels of Academic Involvement,

then the practitioner can determine the appropriate intervention. Without the comparison between groups, the impetus for intervention may not present itself.

Conclusion

If the ultimate goal of critical quantitative research is to enact change through quantitative methods, then this study serves as a solid foundation for shifting the narrative about student-athletes through the use of data collected by a psychometrically sound instrument. This study presented evidence to show collegiate student-athletes as "academically involved" students. This statement is based on many things including the way that I defined Academic Involvement, the data I requested from HERI, and the analytical decisions I made. Therefore, my personal bias is apparent at every step of the research. Specifically, given that I have placed race and ethnicity at the center of this research, I acknowledge that as a White researcher, I will never fully understand the way the scope of my power and privilege effects the studies I create and conduct. I must commit to acknowledge continually my bias specifically in quantitative studies, where a transparent statement of researcher subjectivity is not traditionally expected given the connection to the postpositivist paradigm.

For student-athletes who identify as racial or ethnic identities that are not White, the complexities of their experience are greater, given the systemic marginalization that exists in society. The exploration and discussion of this marginalization is incredibly important; however, the presentation of the successes of these student-athletes in light of this systemic marginalization merits acknowledgement in both the research and in the public sphere.

In this study, I have demonstrated that when using statistical data, disaggregation and descriptive statistics can provide the first step toward discussing the academic involvement of student-athletes from all racial and ethnic backgrounds without comparison to one identity as superior.

Statistics and numerical data still speak loudly to policy makers and institutional leadership. In using a critical lens and quantitative methods, one must reconcile the disaggregated, analyzed, and interpreted data with the reality that, in order to perform certain analyses, researchers must combine identity groups potentially resulting in the loss of specific identities from the output. The easiest, most effective, and potentially ethical way to do this is to discuss what is missing from the data, to acknowledge the hindrances of choosing statistical analysis, and to push for studies and additional research about the populations that the statistical data may not be able to capture due to a lack of representation in collegiate athletics.

Finally, I acknowledge that much of the way I have discussed student-athletes is in comparison to what other researchers have determined is the definition of success as based on studies that focus on student nonathletes. In this study, I have identified a construct, Academic Involvement, whose composition fits for student nonathletes and student-athletes, which allows for discussion about Academic Involvement from a more equitable perspective. Furthermore, I have presented a study that utilizes existing data, namely responses from student-athletes themselves, that outline the positive actions collegiate student-athletes take and decisions they make in order to be academically involved. Student-athletes have long had the reputation of having one-dimensional collegiate experiences focused completely on the participation in their sport. This study reflects a different reality, and one that challenges us, as researchers and as administrators, to use critical methods to examine institutional data, ask different questions, and create an environment on our campuses where involvement and success are reflective of each student's context.

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APPENDIX A

YOUR FIRST COLLEGE YEAR SURVEY (HERI, 2016)

First Name
Middle Initial
Last Name
Email
Student ID number
When were you born?

For Spring 2017, were you still enrolled at [Institution name]?
Yes
No

In Spring 2017, did you take classes at a different college/university?
Yes
No

Which of the following best describes your situation in Spring 2017?
Enrolled full-time in a four-year college/university
Enrolled part-time in a four-year college/university
Enrolled full-time in a two-year college/university
Enrolled part-time in a two-year college/university

Did you do any of the following in Spring 2017? (Check all that apply)

Worked for pay full-time
Worked for pay part-time
Volunteered full-time
Volunteered part-time
Looked for work but did not find a job
Sought medical attention
Traveled
Stayed at home to be with or start a family
None of the above

Indicate the importance to you personally of each of the following reasons for leaving: (Mark only one)
(Very Important, Somewhat Important, Not Important)

I was placed on academic probation/suspension/expulsion

I was dissatisfied with my grades
I was not challenged academically
I felt the courses were too difficult
My preferred major was not offered
There were too many required courses
I did not feel a sense of belonging to the campus
There is a lot of tension on campus (e.g., racial/ethnic, sexual orientation, gender)
The location of the college was not right for me
The size of the college was not right for me
I was dissatisfied with the institution's social/cultural opportunities
I did not feel ready for college
I experienced health problems
I did not feel welcome due to my race/ethnicity
I did not feel welcome due to my sexual orientation
I did not feel welcome due to my gender
I had a family crisis
I had always intended to transfer
I felt lonely or homesick
I wanted to be closer to home
I felt my financial aid was inadequate
I could not afford to continue to attend
I encountered unexpected expenses
I needed to make more money
I could not find a job to help pay for college
It was too difficult to balance having a job and going to college
I wanted work experience
I wanted to start or focus on my own business
I felt a degree was not necessary for employment

Do you plan to return to (institution name)?

Yes
No

What do you plan to be doing in Fall of 2017?

Attending a four-year college/university full-time
Attending a four-year college/university part-time
Attending a two-year college/university full-time
Attending a two-year college/university part-time
Working for pay full-time
Working for pay part-time
Volunteering
Looking for work
Receiving medical treatment
Traveling

Staying at home to be with or start a family
I have no plans for Fall 2017

1. Your sex:
Male
Female

2. Are you:
(Mark all that apply)

White/Caucasian
African American/Black American
Indian/Alaska Native
East Asian (e.g., Chinese, Japanese, Korean, Taiwanese)
Filipino
Southeast Asian (e.g., Cambodian, Vietnamese, Hmong)
South Asian (e.g., Indian, Pakistani, Nepalese, Sri Lankan)
Other Asian Native
Hawaiian/Pacific Islander
Mexican American/Chicano Puerto Rican
Other Latino
Other

3. Do you identify as transgender?

Yes
No

4. What is your sexual orientation?

Heterosexual/Straight
Gay
Lesbian
Bisexual
Queer
Other

5. Are you currently a full-time or part-time student?

Full-time undergraduate
Part-time undergraduate
Not enrolled

6. What year did you first enter:

7. How often in the past year did you:

(Response Choices: Frequently, Occasionally, Not at all)

Ask questions in class
Support your opinions with a logical argument
Seek solutions to problems and explain them to others
Revise your papers to improve your writing
Take a risk because you felt you had more to gain
Seek alternative solutions to a problem
Look up scientific research articles and resources
Explore topics on your own, even though it was not required for a class
Accept mistakes as part of the learning process
Analyze multiple sources of information before coming to a conclusion
Take on a challenge that scares you

8. Since entering this college, how often have you interacted with the following people (e.g., by phone, e-mail, text, or in person):

(Response Choices: Daily, 2 or 3 times per week, Once a week, 1 or 2 times per month, 1 or 2 times per term, Never)

Faculty during office hours
Faculty outside of class or office hours
Academic advisors/counselors
Graduate students/teaching assistants
Close friends at this institution
Close friends not at this institution
Your parents/guardians
Your siblings or extended family

9. Do you have any concern about your ability to finance your college education?

None (I am confident that I will have sufficient funds)
Some (but I probably will have enough funds)
Major (not sure I will have enough funds to complete college)

10. How much of the past year's educational expenses (room, board, tuition, and fees) were covered from each of the following sources?

(Response categories: None, $1 to $2,999, $3,000 to $5,999, $6,000 to $9,999, $10,000 to$14,999, $15,000 or more)

Family resources (parents, relatives, spouse, etc.)
My own resources (income from work, work-study, etc.)
Aid which need not be repaid (grants, scholarships, military, etc.)
Aid which must be repaid (loans)

11. Since entering this college, how often have you felt:
(Response Choices: Frequently, Occasionally, Not at all)

Lonely or homesick
Isolated from campus life
Unsafe on this campus
Worried about your health
That your courses inspired you to think in new ways
That your job responsibilities interfered with your schoolwork
That your family responsibilities interfered with your schoolwork
Family support to succeed
That faculty provided me with feedback that helped me assess my progress in class
That my contributions were valued in class
That faculty encouraged me to ask questions and participate in discussions

12. Please rate your satisfaction with your college in each area:

(Response Choices: Very Satisfied, Satisfied, Neutral, Dissatisfied, Very Dissatisfied, Can't Rate/No Experience)

General education and core curriculum courses
Your overall academic experience
Career services
Classroom facilities
Computer facilities/labs
Library resources
Laboratory facilities and equipment
Technology resources
Academic advising
Student housing (e.g., res. halls)
Financial aid office
Financial aid package
Student health services
Student psychological services
Orientation for new students
Opportunities for community service
First-year programs (e.g., first-year seminar, learning community, linked courses, common book)

13. Rate yourself on each of the following traits as compared with the average person your age. We want the most accurate estimate of how you see yourself.
(Response Choices: Highest 10%, Above Average, Average, Below Average, Lowest 10%)

Academic ability
Artistic ability
Compassion

Creativity
Drive to achieve
Emotional health
Leadership ability
Mathematical ability
Physical health
Public speaking ability
Risk-taking
Self-confidence (intellectual)
Self-confidence (social)
Spirituality
Understanding of others
Writing ability

14. Since entering this college, how has it been to:

(Response Choices: Very Easy, Somewhat Easy, Somewhat Difficult, Very Difficult)

Understand what your professors expect of you academically
Develop effective study skills
Adjust to the academic demands of college
Manage your time effectively
Develop close friendships with other students

15. How would you rate yourself in the following areas:

(Response Choices: A Major Strength, Somewhat Strong, Average, Somewhat Weak, A Major Weakness)

Ability to see the world from someone else's perspective
Tolerance of others with different beliefs
Openness to having my own views challenged
Ability to discuss and negotiate controversial issues
Ability to work cooperatively with diverse people
Critical thinking skills
Ability to manage your time effectively

16. Since entering this college, how often have you:

(Response Choices: Frequently, Occasionally, Not at all)

Attended a religious service
Been bored in class
Demonstrated for a cause (e.g., boycott, rally, protest)
Studied with other students
Consumed beer

Consumed wine or liquor
Felt overwhelmed by all you had to do
Felt depressed
Performed volunteer work
Contributed money to help support my family
Asked a professor for advice after class
Worked on a local, state, or national political campaign
Socialized with someone of another sexual orientation
Been late to class
Posted on a course-related on-line discussion board
Performed community service as part of a class
Discussed religion
Discussed politics
Maintained a healthy diet
Had adequate sleep
Helped raise money for a cause or campaign
Publicly communicated your opinion about a cause (e.g., blog, email, petition)
Felt anxious

17. Please indicate the extent to which you agree or disagree with the following statements: (Response Choices: Strongly Agree, Agree, Disagree, Strongly Disagree)

I have felt discriminated against at this institution because of my race/ethnicity, gender, sexual orientation, religion, or disability status
I see myself as part of the campus community
There is a lot of racial tension on this campus
There is little that a person can do to be better at math - you are either "good" or "bad" at math
Sexual violence is prevalent on this campus
I have been able to find a balance between academics and extracurricular activities
Faculty empower me to learn here
If asked, I would recommend this college to others
At least one staff member has taken an interest in my development
I feel valued at this institution
Intelligence is something that can be improved by studying or working harder
In class, I have heard faculty express stereotypes based on race/ethnicity, gender, sexual orientation, religion, or disability status
I am interested in seeking information about current social and political issues
I feel a sense of belonging to this campus
At least one faculty member has taken an interest in my development
I feel I am a member of this college have effectively led a group to a common purpose
It’s important for me to be thinking about my career path after college
I have a clear idea of how to achieve my career goals

18. What is your overall grade average (as of your most recently completed academic term)?

A or A+

A-
B+
B
B-
C+
C
D
I did not receive grades in my courses

19. Please rate your satisfaction with your college in each area:

(Response Choices: Very Satisfied, Satisfied, Neutral, Dissatisfied, Very Dissatisfied)

Amount of contact with faculty
Ability to find a faculty or staff mentor
Racial/ethnic diversity of faculty
Racial/ethnic diversity of student body
Gender diversity of faculty
Class size
Relevance of coursework to everyday life
Relevance of coursework to future career plans
Overall quality of instruction
Respect for the expression of diverse beliefs
Availability of campus social activities
Overall sense of community among students
Overall college experience
Administrative response to incidents of:
    Campus emergencies
    Discrimination
    Sexual assaults

20. Please rate your agreement with the following statements: This institution has contributed to my:
(Response Choices: Strongly Agree, Agree, Disagree, Strongly Disagree)

Knowledge of a particular field or discipline
Knowledge of people from different races/cultures
Understanding of the problems facing your community
Understanding of national issues
Understanding of global issues
Ability to conduct research
Ability to work as part of a team
Problem-solving skills
Foreign language ability

21. To what extent have you experienced the following with students from a racial/ethnic group other than your own?

(Response Choices: Very Often, Often, Sometimes, Seldom, Never)

Dined or shared a meal
Had meaningful and honest discussions about race/ethnic relations outside of class
Had guarded, cautious interactions
Shared personal feelings and problems
Had tense, somewhat hostile interactions
Had intellectual discussions outside of class
Felt insulted or threatened because of your race/ethnicity
Felt ignored or invisible because your race/ethnicity
Studied or prepared for class
Socialized or partied

22. Where did you primarily live while attending college this past year?

On campus
Special interest housing
First-year student housing
Cultural or minority student housing
Single-sex housing
Special academic program housing
Other special interest housing
Regular college housing
Residence hall
Apartment
Fraternity or sorority housing
Other residential housing
Off Campus
At home with family
Fraternity or sorority house
Rented apartment or house
Other

23. Indicate the importance to you personally of each of the following:

(Response Choices: Essential, Very Important, Somewhat Important, Not Important)

Becoming accomplished in one of the performing arts (acting, dancing, etc.)
Becoming an authority in my field
Integrating spirituality into my life
Becoming successful in a business of my own
Obtaining recognition from my colleagues for contributions to my special field
Influencing the political structure

Influencing social values
Raising a family
Being very well off financially
Helping others who are in difficulty
Making a theoretical contribution to science
Writing original works (poems, novels, etc.)
Creating artistic works (painting, sculpture, etc.)
Developing a meaningful philosophy of life
Participating in a community action program
Helping to promote racial understanding
Keeping up to date with political affairs
Becoming a community leader
Improving my understanding of other countries and cultures

24. Since entering college have you:

(Mark Yes or No for each item)

Decided to pursue a different major
Remained undecided about a major
Failed one or more courses
Taken an honors course
Taken a remedial or developmental course
Enrolled in a formal program where a group of students takes two or more courses together (e.g., FIG, learning community, linked courses)
Participated in an academic support program
Participated in a common book or summer reading program in which all students read and discuss the material
Taken a course or first-year seminar designed to help first-year students adjust to college
Taken courses from more than one institution simultaneously
Taken a course exclusively online

25. Since entering this college have you:
(Mark Yes or No for each item)

Changed your career choice
Held a full-time job (approx. 40 hours) while taking classes
Joined a social fraternity or sorority
Joined a pre-professional or departmental club
Participated in an undergraduate research program
Played club, intramural, or recreational sports
Played intercollegiate athletics (e.g., NCAA or NAIA-sponsored)
Sought personal counseling
Strengthened your religious or spiritual beliefs/convictions
Had a roommate of a different race/ethnicity
Accumulated excessive credit card debt

Been a leader in an organization
Voted in a national, state, or local election
Been made aware of your college's sexual harassment/assault reporting policy
Participated in:
    Student government
    Leadership training
    An ethnic/racial student organization
    An LGBTQ student organization
    A women's advocacy group

26. Since entering this college, how much time have you spent during a typical week doing the following activities?

(Response Choices: Hours per week: None, < 1 hr/wk, 1-2 hrs/wk, 3-5 hrs/wk, 6-10 hrs/wk, 11-15 hrs/wk, 16-20 hrs/wk, Over 20 hrs/wk)

Attending classes/labs
Studying/homework
Socializing with friends in person
Using social media
Partying
Participating in student clubs/groups
Exercising/sports
Working (for pay) on campus
Working (for pay) off campus
Performing household/childcare duties
Commuting
Praying/meditating

27. Since entering this college, indicate how often you:

(Response Choices: Frequently, Occasionally, Not at all)

Turned in course assignment(s) late
Tutored another student
Contributed to class discussions
Discussed course content with students outside of class
Skipped class
Received tutoring
Communicated regularly with your professors
Worked on a professor's research project
Turned in course assignments that did not reflect your best work
Had difficulty getting along with your roommate(s)/housemate(s)
Witnessed academic dishonesty/cheating
Went home for the weekend
Received advice/counseling from another student

Fell asleep in class
Had difficulty getting the courses you need
Texted or used social media during class
Worked with classmates on group projects
Accessed your campus' library resources electronically
Made a presentation in class
Used the institution's course catalog (paper or online)

28. How would you characterize your political views?

Far left
Liberal
Middle-of-the-road
Conservative
Far right

29. Are you currently registered to vote?

Ineligible
Yes
No

30. If you could make your college choice over, would you still choose to enroll at your current (or most recent) college?

Definitely yes
Probably yes
Probably no
Definitely no
Not sure yet

31. Since entering this college, how often have you utilized the following services:

(Response Choices: Frequently, Occasionally, Not at all)

Study skills advising
Financial aid advising
Student health services
Student psychological services
Writing center
Disability resource center
Career services
Academic advising
Campus safety services (Safe Walk, Public Safety/Police Dept., etc.)

32. What do you think you will be doing in fall 2017?

Attending your current (or most recent) institution
Attending another institution
Don't know/have not decided yet
Not attending any institution

33. Military Status:
None
ROTC, cadet, or midshipman at a service academy
In Reserves or National Guard
On Active Duty
A discharged veteran NOT serving on Active Duty, in the Reserves, or in the National Guard

34. Please indicate your current major:

36. How confident are you that you can: (Mark one in each row)

(Response categories: Absolutely, Very, Moderately, Somewhat, Not at all)

Use technical science skills (use of tools, instruments, and/or techniques)
Generate a research question
Determine how to collect appropriate data
Explain the results of a study
Use scientific literature to guide research
Integrate results from multiple studies
Ask relevant questions
Identify what is known and not known about a problem
Understand scientific concepts
See connections between different areas of science and mathematics

37. Will you pursue a science-related research career?

Definitely yes
Probably yes
Uncertain
Probably no
Definitely no

38. Did you transfer to this institution from another college/university?

Yes
No

39. Is English your primary language?

Yes
No

40. Do you plan to do any of the following this summer?

(Mark Yes or No for each item)

Take courses at this institution
Take courses at another institution
Work for pay
Perform volunteer work
Participate in an internship
Travel

APPENDIX B

CONSTRUCTS AND CORRESPONDING LINE ITEMS

Habits of Mind

Since entering this college, how often do you:

- Ask questions in class
- Support your opinions with a logical argument
- Seek solutions to problems and explain them to others
- Revise your papers to improve your writing
- Evaluate the quality or reliability of information you have received
- Take a risk because you feel you have more to gain
- Seek alternative solutions to a problem
- Look up scientific research articles and resources
- Explore topics on your own, even though it was not required for a class
- Accept mistakes as part of the learning process
- Seek feedback on your academic work

Academic Disengagement

Since entering this college, how often do you:

- Come late to class
- Fall asleep in class
- Turn in course assignments late
- Skip class
- Turn in course assignments that did not reflect your best work
- Missed class for other reasons

Ease of Academic Adjustment to College

Since entering college, how has it been to:

- Understand what your professors expect of you academically
- Develop effective study skills
- Adjust to the academic demands of college
- Manage your time effectively

APPENDIX C

INSTITUTIONS AND CORRESPONDING ATHLETIC DEPARTMENT GOVERNANCE

National Collegiate Athletic Association Division I
Boston College
Campbell University (NC)
Fordham University
Mercer University
Miami University
Mount St. Mary's College
St. Mary's College of California
University of California – San Diego
University of Nevada - Reno
Wake Forest University

National Collegiate Athletic Association Division II
Eckerd College
Franklin Pierce University
Holy Family University (PA)
Mars Hill University
North Greenville University
Sonoma State University
St. Mary's University (TX)
Tarleton State University
University of Central Missouri
University of Central Oklahoma
Wofford College

National Collegiate Athletic Association Division III
Huntingdon College
Scripps College
Albertus Magnus College
North Central College (IL)
Principia College
Central College (IA)
Bates College
Stevenson University (MD)
Babson College
Regis College
Gustavus Adolphus College
Cazenovia College

Hamilton College
Medaille College
Case Western Reserve University
Wilkes University
Sewanee: The University of the South
Hollins University
Neumann University

National Junior College Athletic Association (NJCAA)
Cottey College

Regional Independent Conference
Miami University – Middletown
Miami University – Hamilton

No Athletic Program
University of Hawaii – West Oahu
San Francisco Conservatory of Music
Otis College of Art and Design

APPENDIX D

YOUR FIRST COLLEGE YEAR CODEBOOK FOR CONSTRUCTS RELATED TO ACADEMIC INVOLVEMENT

MNDHAB01	Habits of Mind: Ask questions in class
MNDHAB02	Habits of Mind: Support your opinions with a logical argument
MNDHAB03	Habits of Mind: Seek solutions to problems and explain them to others
MNDHAB04	Habits of Mind: Revise your papers to improve your writing
MNDHAB05	Habits of Mind: Evaluate the quality or reliability of information you received
MNDHAB06	Habits of Mind: Take a risk because you felt you had more to gain
MNDHAB07	Habits of Mind: Seek alternative solutions to a problem
MNDHAB08	Habits of Mind: Look up scientific research articles and resources
MNDHAB09	Habits of Mind: Explore topics on your own, even though it was not required for a class
MNDHAB10	Habits of Mind: Accept mistakes as part of the learning process
MNDHAB11	Habits of Mind: Seek feedback on your academic work
MNDHAB12	Habits of Mind: Integrate skills and knowledge from different sources and experiences
ACT17	Act: Come late to class
CLSACT01	Act in College: Turned in course assignment(s) late
CLSACT04	Act in College: Skipped class
CLSACT07	Act in College: Turned in course assignments that did not reflect your best work
CLSACT13	Act in College: Fell asleep in class
CLSACT15	Act in College: Instant messaged/texted during class