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Sexual Orientation and Gender Identities

Among NCAA Athletes: A Pilot Study

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Both research and the foci of various sport governing bodies highlight the importance of LGBTQ+ inclusion in collegiate sport. Still, the sexual orientation and gender identities (SOGI) of NCAA varsity athletes are not systematically tracked or known. The purpose of this study was to estimate the percentage of current NCAA athletes who identify as LGBTQ+ and to explore how those identities are represented across sport, institutional, and geographic variables. Athletes from randomly selected institutions completed an online questionnaire about their sexual orientation and gender identity. Of the 880 responses analyzed, 14.2% (n = 125; [14.17%-14.23%]) of the athletes identified as LGBQ+ and 1.6% (n = 14; [1.596%-1.604%]) identified as transgender and/or nonbinary. Significant differences in the representation of sexual orientation identity were found by NCAA division, sport type (men’s, women’s, mixed sport), and political climate of the institution at which athletes competed. Based on these findings, we provide recommendations for future research and allyship education which better address the identities and demographics of athletes’ competing at the college level.

Keywords: LGBTQ+, demographics, intercollegiate athletics
Each year, over 500,000 college-aged students participate in intercollegiate athletics (NCAA, 2021a). As of September 2020, 1,098 active and provisional member institutions competed within the National Collegiate Athletic Association (NCAA), the largest association of post-secondary athletic programs in the United States (NCAA, 2020). Relative to gender equity, the NCAA has compiled data on certain demographic characteristics of athletes at their member institutions through an annual self-report since the 2011-2012 academic year (NCAA, 2021a). While these data are fruitful for understanding trends with respect to sex and race/ethnicity within NCAA sport, a swath of data has not been collected, including athletes’ sexual orientation, gender identities, or affiliation with lesbian, gay, bisexual, transgender, queer, and nonbinary (LGBTQ+) communities. Such information may offer insight into the ways NCAA sport systems do or do not support marginalized athletes.

Other entities have attempted to capture this information. In 2019, the Association of American Universities (AAU) found that nearly 17% of over 180,000 undergraduate and graduate students identified as lesbian, gay, bisexual, queer, asexual, or as questioning their sexual orientation. Of the sample, 1.7% of students identified as transgender, nonbinary, and/or are questioning their gender identity (AAU, 2019). Applying those percentages to the 504,619 athletes competing in NCAA-sponsored or emerging sports across Divisions-I, -II, and -III sports in 2019-2020 academic year (NCAA, 2020), it could be estimated that over 80,000 athletes identify as LGBTQ+ or are questioning their sexual orientation and/or gender identity. Notably, this approximation is ten times that of the most recent estimation from sport scholars who suggest 8,000 NCAA athletes are LGBTQ+ (Turk, 2018). Given this vast discrepancy, a more accurate assessment of the sexual orientation and gender identities (SOGIs) of NCAA athletes may offer further insight into the LGBTQ+ athlete population.

The aims of this study were to capture data on the sexual orientation and gender identities of current NCAA athletes and to provide a preliminary method of doing so in future, longitudinal research. In the following subsections, we outline the ways we met these aims by exploring the sexual orientations and gender identities of NCAA athletes in different sports, institutions, and regions.

**Sexual Orientation and Gender Identity**

Sexual orientation and one’s gender are separate, though often conflated, identities. Sexual orientation refers to the gender(s) to which an individual is (or is not) emotionally, romantically, and/or sexually attracted (Baeth, 2021). For some, sexual orientation includes the gender(s) of the people with whom someone engages in a physical, sexual, or romantic activity. For others, sexual orientation includes only who a person is attracted to, or not, as people may or may not act on their attractions. Sexual orientation is considered fluid and thus, can change over a person’s lifetime or in different situations. Rather than a series of mutually exclusive categories, sexual orientation is widely considered to be a spectrum where sexual identities and orientations are complex and resist easy, or binary, classification (Abrams, 2019).

Gender identity is an individual’s “conception of oneself” as a specific gender, typically as male, female, both, or neither (Ghosh et al., 2020). Gender expression is the outward manifestation of gendered behavior and appearance (Ghosh et al., 2020). Most people are assigned as female or male at birth by medical doctors based on their external genitalia. While sex is commonly thought to be straightforward (male and female), scientists have identified at least six markers of sex: chromosomes, gonads, hormones, secondary sex characteristics,
external genitalia, and internal genitalia. While these markers may align along a female-typical or male-typical path, that is not always the case and most experts agree that there are no definitive markers of sex (Karkazis, 2019). Cisgender (cis) people identify with the gender they were assigned at birth. People whose identity does not match the gender they were assigned at birth often identify as transgender (trans) but might not identify as strictly male or female. These individuals might identify as gender queer or nonbinary (Ghosh et al., 2020). Notably, one’s gender identity is not necessarily connected to, or correlated with, one’s sexual orientation (Ghosh et al., 2020). Gender identity is also not necessarily correlated with one’s gender expression: the way a person communicates their gender through external means such as clothing, hairstyles, appearance, and/or mannerisms. However, just as sexual orientation is fluid, one’s gender identity and outward gender expression may shift.

Further, recent researchers suggest that one’s sexual orientation identity does not fully capture their experiences, especially during undergraduate study when students navigate complex social dynamics over time (Knight & Hope, 2012; Stratton et al., 2013; Yarhouse et al., 2009). The first few years of undergraduate study are often the period in which people form their personal identities and develop behaviors with lasting mental and physical effects (Arnett, 2000; Hong et al., 2016; Savin-Williams & Diamond, 2000). This period may include the development of newly formed identities. For instance, in 2011, Wentz and Wessel found “none of the gay and lesbian students [they] interviewed expected ever to identify as such at the time of enrollment” (p. 3). As identities are likely to evolve while in college, it is imperative for researchers to ask students about their identities in concert with their age or year in college and ideally, to track students’ identities throughout the entirety of their collegiate athletic careers.

To this end, sexual orientation identities are more nuanced than might be represented in a binary-based question on a survey (Knight & Hope, 2012; Stratton et al., 2013; Yarhouse et al., 2009). Accordingly, Savin-Williams (2006) and Yarhouse et al. (2009) explored sexual orientation by distinguishing variables of attraction, behavior, and identity. Knight and Hope (2012) found 31.2% of self-identified heterosexual college students had attractions and/or same-sex sexual contact. Vrangalova and Savin-Williams (2010) similarly reported that most women and approximately half of men in their study indicated that they experienced same-sex attractions. To account for differences in identities, attractions, behaviors, and relationships might more accurately encompass one’s sexual orientation, we asked athletes about their sexual orientation in a way that encompassed such multiple variables rather than as a binary-based identity (e.g., man or woman).

**LGBTQ+ Student-Athletes in the NCAA**

Collectively, research on LGBTQ+ college-aged students has suggested homophobia and transphobia continue to be serious problems at universities throughout the United States, and Athletics is not immune to such issues (Havey, 2021). Several researchers have documented the extensive homophobia, transphobia, and prejudice directed at LGBT athletes (see Anderson, 2019 for a full list). This collective prejudice may lead athletes to feel unsafe disclosing their sexuality (i.e., “coming out”) (Kroshus & Davoren, 2016). Closeted LGBTQ+ athletes may

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1 Researchers have studied specific subgroups within LGBTQ+ communities and utilize different definitions for studying such communities. To maintain clarity and to uphold the intent of other researcher’s previous studies, we use language and acronyms consistent with their original works. Any language used by the authors of this paper will include the acronym LGBTQ+.
experience harmful psychological effects (by not feeling understood or like they can reveal their identities without facing repercussions) and impaired athletic and/or academic performance (Anderson et al., 2019; Turk, 2018; Wolf-Wendel et al., 2001). However, many athletes have also named fears of retribution if they come out included negative attitudes of the coach (Stoelting, 2012), a fear of losing one’s scholarship (Krane, 1997), hostile team environments (Mann & Krane, 2018), and the belief that athletes who are openly LGBTQ+ will damage alumni and recruiting relationships (Pariera et al., 2021). While there is burgeoning research on trans students in U.S. colleges (Beemyn, 2003; Beemyn et al., 2005; Effrig et al., 2011), little research on the experiences of trans collegiate athletes yet exists (Lucas-Carr & Krane, 2011). To better understand the experiences of LGBTQ+ collegiate student-athletes across the NCAA, we first need to know who LGBTQ+ athletes across NCAA institutions are.

There is immense diversity amongst active and provisional NCAA member institutions, and similar diversity in the experience of student-athletes at those respective institutions. Of the 1,098 NCAA-sponsored institutions, 31.9% compete at the Division-I (D-I) level, 27.6% at the Division-II (D-II) level, and 40.5% at the Division-III (D-III) level. D-I institutions typically have a higher median undergraduate enrollment and can offer multi-year, cost-of-attendance athletics scholarships. D-II institutions can offer partial scholarships while D-III institutions do not offer scholarships. As a result, D-I institutions are considered the most prestigious and competitive, offering scholarships to the highest performing athletes.

NCAA athletes compete in 21 NCAA-sponsored men’s sports, 25 sponsored or emerging women’s sports, and eight mixed-team (men’s and women’s) sports (NCAA, 2021a). In 2019, men made up a majority (56%) of NCAA athletes (NCAA, 2020). Athletes in men’s sports are often less accepting of LGBTQ+ individuals than athletes in women’s sports (Roper & Halloran, 2007; Southhall et al., 2011). In turn, women’s teams may offer a safer space than men’s for athletes to explore and share their SOGIs (Petty & Trussell, 2018). Pariera et al. (2021) found that collegiate female athletes who identified as LGBQ were less concerned than LGBQ male athletes about alienation from their team and heard less homophobic language from teammates.

Just as analyses on LGBTQ+ athletes in the NCAA have been limited, so too has research on whether LGBTQ+ athletes congregate in certain divisions or in men’s sport or women’s sport. Type of academic institution also may impact the experience for LGBTQ+ athletes. In the NCAA broadly, 43.4% of institutions are public and at the D-I level, in particular, 63.7% are public. Fine (2012) found that a school being public was the greatest predictor of whether it had an LGBTQ student center. Coley and Das (2020) further reported that LGBTQ groups were more likely to exist at public institutions. In contrast, Kane (2013) found religious institutions were less likely to have an LGBTQ+ group as they “have the ability to discriminate against students on the basis of sexual orientation and gender” (Coley & Das, 2020, p. 9). In turn, religious institutions may collectively be less welcoming to LGBTQ+ athletes, or in the least, provide fewer resources and access to support for LGBTQ+ athletes. LGBTQ+ student centers and student groups play an important role in improving the campus climate for all LGBTQ+ students, including athletes (Coley & Das, 2020).

More broadly, LGBTQ+ peoples’ experiences vary across regions of the United States (Goldberg et al., 2020). Of the nearly 9.5 million LGBT adults living in the US in 2014, over half were estimated to live in southern and midwestern states, where nondiscrimination policies were/are minimal (Hasenbush et al., 2014). States and institutions with non-discrimination policies that explicitly protect LGBTQ+ communities offer climates with lower rates of bias and microaggressions against LGBTQ+ students (Garvey et al., 2017; Woodford et al., 2016) and LGBTQ+ students have decreased anxiety and stress, and increased self-esteem and pride on campuses that implement such policies (Woodford et al., 2018).
Regional impacts are further complicated when considering the political climate of the state in which an institution resides. Coley and Das (2020) found an increased likelihood of LGBTQ student groups existing on college campuses in more liberal states (i.e., designated “blue” in the 2016 presidential election) whereas “red” states tend to overlap with southern and midwestern regions where more LGBTQ+ adults live. Considering the potential impact of institution type (e.g., public or private), regional characteristics by LGBTQ+ nondiscrimination policies, and regional political climates, we further extended our second research question to consider whether LGBTQ+ athletes are more likely to compete for schools based on specific institutional characteristics and location.

To our knowledge, no researchers have systematically examined the number of LGBTQ+ NCAA athletes. To that end, our primary was to capture data on the sexual orientation and gender identities of current NCAA through two research questions. Our first research question was: What are the sexual orientations and gender identities in the NCAA and with whom do they share or not share that information? For our second research question, we asked: What are the extant demographics (i.e., division, sport type, institutional type, region, and political climate) of varsity athletes identifying as LGBTQ+ in NCAA sport?

Method

Participants

Participants (N = 880) competed in 31 of 54 NCAA-sponsored or emerging sports at 97 different NCAA institutions. The average age of participants was 19.6 years old (SD = 1.4 years). When asked about their year in school, 27.4% (n = 241) identified as a first-year, 27.2% (n = 239) as a sophomore, 22.3% (n = 196) as a junior, 17.7% (n = 156) as a senior, 4.4% (n = 39) as a fifth-year student, and 1.0% (n = 9) as other. The NCAA extended eligibility of college athletes as a result of the COVID pandemic. Thus, student-athletes may have been in their first or second year of graduate school but eligible to participate on an NCAA team. We therefore reviewed the ages of the nine athletes who identified as other and retained them if they were 25 or younger.

When asked about race/ethnicity, 71.5% (n = 631) identified as Caucasian/White (non-Hispanic), 6.3% (n = 55) identified as African American/Black, 4.5% (n = 40) identified as Hispanic or Latino, 2.3% (n = 20) as Asian or Pacific Islander, 0.5% (n = 4) as Native American, and 3.3% (n = 29) as more than one race or ethnicity. Remaining participants (11.4%, n = 101) identified as other, preferred not to answer, or did not respond. When asked about their political identity, 45.9% (n = 404) identified as Very Liberal/Liberal/Somewhat Liberal, 18.5% (n = 163) as Moderate, and 25.6% (n = 225) as Somewhat Conservative/Conservative/Very Conservative. The remaining participants (23.8%, n = 210) identified as other, preferred not to answer, or did not respond.

Instrumentation

Drawing from Rankin et al. (2011) and Liddle et al. (2004), we developed a brief survey to capture demographic information from current athletes at NCAA-sponsored institutions. Questions assessed the sport(s) in which they participate, institution, gender identity, sexual orientation identity, race/ethnicity, religious identity, and political identity. To allow individuals to self-identify (which may not be captured with one label), participants were able to select...
multiple identities at once (Badgett et al., 2009). Students could also select other and write in a response that best fit their identities.

Klein et al. (1985) indicated that “the individual’s sexual orientation is composed of sexual and non-sexual variables which differ over time” (p. 38). To more fully capture the multi-dimensional and dynamic nature of sexual orientation, we provided athletes with a modified version of the Klein Sexual Orientation Grid (KSOG; Klein et al., 1985). The KSOG assesses sexual orientation by asking about six characteristics: sexual attraction, sexual behavior, sexual fantasies, emotional preference, social preference, self-identification, and Hetero/Gay lifestyle. The purpose of this study, we only asked athletes about their (a) sexual attractions, (b) sexual behavior (c) emotional preference using the definitions provided by Klein et al. (1985) in addition to self-identification in our demographic questions. For example, for sexual attraction participants were asked to respond to the statement, “Currently, I find myself sexually attracted to...”. For each item, participants responded by selecting one of the following: (a) mostly people of the same gender as me, (b) mostly people of the opposite gender as me, (c) same and opposite gender evenly, (d) people with all gender identities, or (e) none of the categories listed (i.e., I do not experience sexual attraction to any gender). These response options were modified from the original KOSG which employed the outdated continuous Kinsey scale (Kinsey, 1969) ranging from 0 (exclusively heterosexual) to 6 (exclusively homosexual) as response options. Further, the KSOG examines sexual orientation across three times: past (i.e., more than one year ago), current i.e., within the last year, and ideal (i.e., if it was your own choice) to represent the fluidity of sexual orientation (Klein et al., 1985). For instance, one statement read: “In the past, I have found myself sexually attracted to:” or “Ideally, I would have deep emotional connections with:” Thus for each of the three areas, we also asked for the past, present, and ideal, resulting in 9 items in the current study. The survey was pilot tested with seven former NCAA athletes. Minor revisions were made for clarity.

**Procedures**

After institutional review board approval was obtained from the first author’s institution, we created a randomized sample of 500 institutions that when extrapolated, represented the overall ratios of NCAA schools by division, conferences, and sports programs. Two teams from each institution were randomly selected for recruitment. We asked the head coach of each selected team to send a description of the study and an anonymized link to their athletes over email or group text. Participants were asked to review an implied consent form and were directed to the survey which took fewer than 5 minutes to complete.

Data were collected from July 12 to October 1, 2021. Coaches who did not respond to the initial request were sent four reminder emails. We emailed the senior woman administrator (SWA) at institutions with non-responsive athletes twice during the data collection period to ask them to encourage coaches to send the study description and survey link. Finally, we left ringless voicemails for the head coaches of non-responding teams three days prior to the end of data collection to ask them to send the study description to their athletes. After October 1st, we closed the survey and responses were downloaded into SPSS version 27.0 for analysis.

**Data Analysis**

Initially, 1,036 individuals opened the URL to complete the study. Participants who did not consent to the study or complete all required items (i.e., institution, sport, age, sexual orientation, and gender identity) were removed. No other missing data exited in the dataset.
Survey responses were also reviewed to ensure respondents met the inclusion criteria (i.e., were 18 years or older and currently participated on an NCAA varsity sport). Data were recoded and frequencies, 95% confidence intervals, and chi-square analyses were calculated. For specific analyses, participants were excluded if they did not meet the requirements for the analysis. For example, participants who responded “prefer not to say” as either their sexual orientation or gender identity, they were removed from those respective analyses. Sample sizes for each analysis are subsequently reported in tables. Alpha level was set at .05 and was computed as the effect size for chi-square analysis, where .1 was considered a small, .3 a medium, and .5 a large effect (Cohen, 1992). A modal analysis was conducted for open-ended items.

Results

Our first research question was: What are the sexual orientations and gender identities in the NCAA and with whom do they share or not share that information? First, we assessed the proportion of sexual orientations represented in the NCAA. Among the 880 participants, 85.0% (n = 748; 95CI: 84.97%-85.03%) identified as heterosexual/straight, 7.7% (n = 68) identified as bisexual, 2.6% (n = 23) as asexual, 2.0% (n = 18) as lesbian, 1.6% (n = 14) as queer, 1.0% (n = 10) as gay, 0.9% (n = 18) as pansexual, and 1.0% (n = 9) identified as other, including typed-in submissions such as “demisexual” and “questioning.” In total, 14.2% (n = 125, 95CI: 14.17%-14.23%) of participants identified as LGBTQ+. The remaining 1.8% (n = 16) preferred not to answer.

We then asked participants to indicate their gender identities. In our sample, 97.8% (n = 861; [97.795%, 97.805%]) identified as cisgender, 1.6% (n = 14; [1.596%, 1.604%]) identified as transgender and/or nonbinary, and 0.6% (n = 5) preferred not to answer. More specifically, 66.6% (n = 586) identified as woman/feminine, 31.9% (n = 281) as man/masculine, 0.3% (n = 3) as nonbinary/gender nonconforming, 0.7% (n = 6) as gender queer/fluid, 0.1% (n = 1) as transgender woman/feminine, 0.1% (n = 1) as androgynous, and 0.5% (n = 4) as other, writing in their identities such as agender and women/masculine. Totals were greater than 880, as participants were able to select multiple sexual orientation and/or gender identities.

We asked LGBTQ+ participants if they shared their sexual orientation and/or gender identity with their teammates and coaches with an open-ended question. Of the 94 LGBTQ+ participants who responded, approximately one-third (n = 31) indicated that they openly shared their identity, one-third indicated that they did not (n = 29), and the remaining third indicated that they shared with some, but not others (n = 34). Two noted that they openly shared their identity because of the inclusive cultures of their teams. A bisexual athlete player wrote: “the team is very inclusive and I felt very comfortable opening up about myself.” Among those who did not share their identity, several described being uncomfortable or worried about the reactions of their teammates or coaches, that they only shared their identity with close friends but not teammates or coaches, or that they were still questioning their identities. Some only shared their identity with certain teammates while five were publicly “out” only to their teammates and explicitly stated that they do not share the information with their coaches. Regularly, athletes explained that they shared their identity only if it came up in conversation.

2 Hereafter, we use LGBTQ+ to denote the athletes in our study that identified as lesbian, gay, bisexual, queer, pansexual, or other sexual orientations that are not heterosexual/straight.
Of the transgender and/or nonbinary participants \((n = 4)\), one indicated that she shared her gender identity and three indicated they did not. The one who did, reported: “As a transgender woman … I feel ethically I should let my teammates and family know who I am, so they don’t feel scared or threatened. I never want my team to be afraid of me.” Two of the four athletes who identified as trans/nonbinary stated that they are still learning about their identity while the last, who identified as gender queer/fluid, wrote, “I do not… people get nervous when asked about gender and normally prefer not to answer.”

We then asked participants about their sexual orientation with respect to their sexual attractions, sexual behavior, and emotional preference across three points (in the past, present, and idea) using the modified KSOG. One-third of athletes \((34.2\%, \ n = 271)\) identified at least one same-gender attraction. Among heterosexual participants, one-quarter \((25.3\%; \ n = 219)\) identified at least one same-gender attraction and 1.2\% \((n = 8)\) identified a same-gender attraction on all nine items. Specifically, 21.3\% \((n = 49)\) of heterosexual men and 27.5\% \((n = 120)\) of heterosexual women identified at least one same-gender attraction. On average, heterosexual participants identified a same-gender attraction on 0.7 \((SD = 1.6)\) of the 9 items whereas LGBQ+ participants identified a same-gender attraction on 5.6 \((SD = 3.2)\) of the items.

For our second research question, we asked: What are the extant demographics (i.e., division, sport type, institutional type, region, and political climate) of varsity athletes identifying as LGBTQ+ in NCAA sport? To address our second research question, we examined the breakdown of sexual orientation and gender identities across sport and institutional characteristics. For the purposes of comparison, we collapsed sexual orientation identities into two categories: LGBQ+ (14.2\%, \(n = 125\)) and exclusively heterosexual/straight; \((84.0\%, \ n = 739)\). Similarly, we collapsed gender orientation into gender nonconforming (GNC)3 \(1.6\%, \ n = 14\) and cisgender \((97.8\%, \ n = 861)\). Participants who preferred not to respond were removed from remaining analyses. Consequently, sample sizes were reduced to 864 for sexual orientation and 875 for gender identity, thus slightly impacting the overall percentage of LGBQ+ and GNC athletes relatively to the adjusted totals.

First, we compared across NCAA divisions. In our sample, 23.3\% \((n = 205)\) competed in D-I sport, 20.0\% \((n = 176)\) in D-II, and 56.7\% \((n = 499)\) in D-III. The percentage of LGBQ+ individuals was significantly smaller among D-II athletes compared to D-I and D-III. No significant differences were found in the proportion of individuals who identified as GNC across D-I, D-II, and D-III institutions. LGBQ+ individuals were significantly more likely to be participating in women’s sports or mixed sports, compared to men’s sports. No significant differences were found for GNC representation in women’s sports, mixed sports, or men’s sports. Frequencies and chi-square analysis are presented in Table 1.

We also compared sexual orientation and gender identity representation across a series of attributes of the NCAA institution. No significant differences were found in the percentages of LGBQ+ athletes who attended private or public institutions. We then compared the frequency of LGBTQ+ identities at secular and religiously affiliated institutions. No significant differences were found in the percentages of LGBTQ+ athletes who attended institutions with a religious affiliation or not. Chi-square analyses for institutional variables are presented in Table 2.

We then explored differences in representation across U.S. regions as defined by Hausenbush et al. (2014). No significant differences in representation were found across sexual

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3 Hereafter, we use GNC to denote the athletes in our study that identified as gender nonconforming, meaning transgender woman/feminine, nonbinary/gender nonconforming, gender queer/fluid, androgynous, and other gender identities that are not cisgender.
### Table 1

**Representation of LGBTQ+ Athletes across Sport Variables**

<table>
<thead>
<tr>
<th></th>
<th>Sexual Orientation</th>
<th></th>
<th>Gender Identity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>LGBQ+</td>
<td>Heterosexual</td>
<td>GNC</td>
</tr>
<tr>
<td><strong>Division</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Division-I</td>
<td>23.3% (205)</td>
<td>14.8% (30)</td>
<td>85.2% (173)</td>
<td>1.5% (3)</td>
</tr>
<tr>
<td>Division-II</td>
<td>20.0% (176)</td>
<td>8.7% (15)</td>
<td>91.3% (157)</td>
<td>1.1% (2)</td>
</tr>
<tr>
<td>Division-III</td>
<td>56.7% (499)</td>
<td>16.4% (125)</td>
<td>83.6% (409)</td>
<td>1.8% (9)</td>
</tr>
</tbody>
</table>

\[ N = 880 \]
\[ \chi^2(2) = 6.02, p = .049, w = .08 \]
\[ \chi^2(2) = 0.41, p = .81, w = .02 \]

**Gender**

<table>
<thead>
<tr>
<th></th>
<th>Sexual Orientation</th>
<th></th>
<th>Gender Identity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>LGBQ+</td>
<td>Heterosexual</td>
<td>GNC</td>
</tr>
<tr>
<td>Men’s</td>
<td>30.9% (272)</td>
<td>6.3% (17)</td>
<td>93.7% (254)</td>
<td>0.7% (2)</td>
</tr>
<tr>
<td>Women’s</td>
<td>67.7% (592)</td>
<td>18.4% (106)</td>
<td>81.6% (471)</td>
<td>2.0% (12)</td>
</tr>
<tr>
<td>Mixed</td>
<td>1.8% (16)</td>
<td>12.5% (2)</td>
<td>87.5% (14)</td>
<td>0% (0)</td>
</tr>
</tbody>
</table>

\[ N = 880 \]
\[ \chi^2(2) = 21.86, p < .001, w = .16 \]
\[ \chi^2(2) = 2.29, p = .32, w = .05 \]

*Note.* Frequencies reported in % (n).

### Table 2

**Representation of LGBTQ+ Athletes across Institutional Variables**

<table>
<thead>
<tr>
<th></th>
<th>Sexual Orientation</th>
<th></th>
<th>Gender Identity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>LGBQ+</td>
<td>Heterosexual</td>
<td>GNC</td>
</tr>
<tr>
<td><strong>Type</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>72.5% (638)</td>
<td>15.7% (98)</td>
<td>84.3% (528)</td>
<td>1.6% (10)</td>
</tr>
<tr>
<td>Public</td>
<td>27.2% (239)</td>
<td>11.1% (26)</td>
<td>88.9% (209)</td>
<td>1.7% (4)</td>
</tr>
<tr>
<td>Service Academy(^a)</td>
<td>0.3% (3)</td>
<td>33.3% (1)</td>
<td>66.7% (2)</td>
<td>0% (0)</td>
</tr>
</tbody>
</table>

\[ \chi^2(2) = 0.41, p = .82, w = .02 \]
\[ \chi^2(2) = 0.41, p = .82, w = .02 \]

**Religious Affiliation**

<table>
<thead>
<tr>
<th></th>
<th>Sexual Orientation</th>
<th></th>
<th>Gender Identity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>LGBQ+</td>
<td>Heterosexual</td>
<td>GNC</td>
</tr>
<tr>
<td>Religiously Affiliated</td>
<td>39.2% (345)</td>
<td>13.9% (47)</td>
<td>86.1% (292)</td>
<td>1.7% (6)</td>
</tr>
<tr>
<td>Secular</td>
<td>60.8% (535)</td>
<td>14.9% (78)</td>
<td>85.1% (447)</td>
<td>1.5% (8)</td>
</tr>
</tbody>
</table>

\[ \chi^2(1) = 0.16, p = .68, w = .14 \]
\[ \chi^2(1) = 0.08, p = .78, w = .01 \]

*Note.* Data reported in % (n). \(^a\) Service academies were excluded from the chi-square given the small sample size.
orientation or gender identity across the five regions. Institutions were further classified based on the 2020 presidential election (National Archives, 2020) as a proxy indicator for the political climate of the institution’s region (Coley & Das, 2020). The representation of LGBQ+ individuals was significantly greater at institutions in blue states than red states. No significant differences were found in GNC representation between blue and red states. Chi-square analysis for region and political climate are presented in Table 3.

Table 3  
Representation of LGBTQ+ athletes across Regional Variables

<table>
<thead>
<tr>
<th>Region</th>
<th>Total</th>
<th>Sexual Orientation</th>
<th>Gender Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>LGBQ+</td>
<td>Heterosexual</td>
</tr>
<tr>
<td>Midwest</td>
<td>27.6% (243)</td>
<td>12.9% (31)</td>
<td>87.1% (209)</td>
</tr>
<tr>
<td>Mountain</td>
<td>1.6% (14)</td>
<td>21.4% (3)</td>
<td>78.6% (11)</td>
</tr>
<tr>
<td>Northeast</td>
<td>54.5% (480)</td>
<td>14.9% (70)</td>
<td>85.1% (400)</td>
</tr>
<tr>
<td>Pacific</td>
<td>2.8% (25)</td>
<td>24.0% (6)</td>
<td>76.0% (19)</td>
</tr>
<tr>
<td>South</td>
<td>13.4% (118)</td>
<td>13.0% (15)</td>
<td>87.0% (100)</td>
</tr>
</tbody>
</table>

χ²(4) = 3.11, p = .54, w = .06  χ²(4) = 4.50, p = .34, w = .07

Political Climatea

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Sexual Orientation</th>
<th>Gender Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>LGBQ+</td>
<td>Heterosexual</td>
</tr>
<tr>
<td>Blue State</td>
<td>78.7% (676)</td>
<td>16.1% (109)</td>
<td>83.9% (567)</td>
</tr>
<tr>
<td>Red State</td>
<td>21.3% (185)</td>
<td>8.7% (16)</td>
<td>91.3% (167)</td>
</tr>
</tbody>
</table>

χ²(1) = 6.31, p = .01, w = .09  χ²(1) = 1.72, p = .19, w = .04

Note. Data reported in % (n). aParticipants at an NCAA institution outside of the United States were removed from this analysis.

Discussion

The purpose of this study was to capture estimates of LGBTQ+ identities amongst current NCAA athletes and to explore the representation of those identities across sport, institution, and regional characteristics. Below, we discuss our findings in light of current literature, outline novel findings that might inform future research, and offer recommendations for sport practitioners and sport legislators.

Sexual Orientation and Gender Identities of NCAA Athletes

Our findings suggest that 14.2% – potentially over 78,000 current, NCAA athletes – identify as LGBTQ+, substantially more than previous estimates (Turk, 2018). These findings
closely parallel percentages of LGBTQ+ college students reported by the Association of American Universities in 2019. Coupled with our findings that LGBTQ+ athletes attend institutions in all three NCAA divisions, institutions with religious affiliations, and institutions in regions of the United States with the least legal protections for LGBTQ+ people, we suggest more attention to this population is necessary as are more resources to support them. The percentages of athletes who identified as bisexual (7.7% of our sample) and asexual (2.6%) are noteworthy as little is known about these populations of athletes and virtually no resources specific to bisexual or asexual identities exist for sport practitioners, like coaches (NCAA, 2016).

Perhaps less unexpected was our finding that the majority of athletes who identified as LGBTQ+ in our sample were not out, or were selectively out, to their teammates or coaches. Because no known previous researchers have examined which students are out, and to whom, it is difficult to infer whether these data are consistent with other students. The unprompted, but clearly articulated, write-in responses from athletes that they explicitly do not share their sexual identities with their coaches suggests some athletes fear physical or psychological harms, fear repercussions relative to their athletic career, and/or worry about negative reactions from their coaches if they were to come out. We suggest, then, that more research into whether and how coaches might create spaces where athletes feel comfortable being openly LGBTQ+ is necessary.

The percentage of GNC athletes was also consistent with the general student population as 1.6% of our sample identified as GNC compared to 1.7% of college students (AAU, 2019). In our sample, there was more diversity in gender identities than expected based on previous studies of athletes (Turk, 2018). Still, the number of GNC athletes who were out about their gender identities and explorations was extremely limited. Significantly, the one trans woman athlete who was out shared her gender identity because “I should let my teammates … know who I am so they don’t feel scared or threatened.” This statement, while not generalizable, speaks to how some trans athletes might understand their place in sport as scary for their teammates and peers.

Our survey questions regarding individuals’ SOGIs attempted to expand gender beyond a binary representation by offering multiple, open-ended options where one could express their identity without reducing it to one category. Given the higher-than-expected number of athletes who were questioning their gender or identified as nonbinary in our sample, we recommend all students be asked about their gender identities in this way by researchers and practitioners to fully understand how athletes are exploring and understanding their gender identities.

In line with Klein and colleagues (1985), we asked athletes to provide a comprehensive account of their sexual orientation identities including their attractions, behaviors, and emotional preference in the past, present, and ideally. A quarter of heterosexual athletes identified at least one past, current, or ideal attraction, relationship, or deep emotional connection with individuals of the same gender, same and opposite gender evenly, or all gender identities. These findings align with previous researchers’ notions that one’s self identification alone (e.g., heterosexual, lesbian, etc.) does not fully capture one’s sexual orientation, meriting future research into sexual orientation in a more nuanced manner in and beyond sport (Klein et al., 1985; Knight & Hope, 2012; Wentz & Wessel, 2011).

The discrepancy between the number of athletes who identify as LGBQ+, and who ideate as potentially LGBQ+ may signal that homophobia and heterosexism are alive and well in collegiate sport (Stratton et al., 2013). Moreover, the stigmas associated with same-gender attractions are seemingly less tenable for LGBQ+ cisgender men than women. These findings are perhaps unsurprising as women’s sport has demonstrated a somewhat more welcoming space for diverse sexual orientations than men’s sport (Pareira et al., 2021). Still such questions about LGBQT+ identities deserve further examination. These findings were emphasized when we examined the representation of LGBTQ+ identities by sport and institutional characteristics.
Sexual Orientation and Gender Identity by Sport and Institutional Characteristics

In our analysis of whether LGBTQ+ representation was consistent across sport, institutional, and regional variables, we found LGBTQ+ athletes were more likely to compete in women’s and mixed-team sports. This is perhaps because those team spaces are generally more accepting of LGBTQ+ identities (Pareira et al., 2021). However, a deeper analysis into why this trend exists and persists could offer further insights into the ways SOGIs manifest in the generally sex-segregated system of NCAA men’s and women’s sports.

Additionally, we found that NCAA athletes who identify as LGBQ+ were more likely to compete at the D-I and D-III level than at the D-II level. We speculate that this finding may be attributed to two combined factors. Athletes may be less likely to compete, or to come out, if they are LGBQ+ at the D-I or D-II levels based on previously noted fears of retribution (such as a fear of losing one’s scholarship – something only possible in D-I and D-II institutions). That said, D-I institutions often have access to the largest budgets and departments. Plausibly, individuals at the D-I level may have more access to diversity training and mental health support, providing increased support for D-I athletes not otherwise accessible to D-II and D-III student-athletes. Consequently, at the D-II level, where performance is still the focus and scholarships can still be levied, but resources are not as readily available, individuals with LGBQ+ identities may feel less welcomed or supported.

Next, we examined the prevalence of LGBQ+ identities based on types of institutions. We found no differences in LGBQ+ or GNC representation across regions. However, when the states in which institutions are located were classified based on the 2020 presidential election as a proxy indicator for political climate, LGBQ+ athletes were more frequently enrolled in institutions in blue states, which tend to be located in the Northeast and West, as opposed to red states, primarily situated in the Midwest, Mountain, and South regions. These findings parallel Coley and Das’s (2020) findings that collegiate LGBTQ student groups are more common in Democratic-leaning states. Athletic departments within more politically liberal states may be more attractive to athletes who identify as, or may identify as, LGBQ+, as blue states tend to afford LGBTQ+ individuals greater protections based on SOGI.

Unlike Cooley and Das (2020), however, we found no differences between public and private institutions or secular and religiously affiliated institutions. This is perhaps because there is immense diversity amongst institutions with religious affiliations. Some religiously-affiliated institutions are more secular in nature than others. For instance, only a small percentage of religiously affiliated institutions have sought a Title IX exemption to mandate religious practices in the everyday lives of their students. It could also be inferred that some religious institutions may recruit athletes who are not associated with the religion that the institution is affiliated. In those cases, even if the institutions’ religious affiliation is not welcoming to LGBTQ+ communities, they may be welcoming to an athlete who is LGBTQ+, but not religious. Such findings suggest that deeper assessments of who competes for religiously affiliated institutions and the intersectional identities of those athletes may offer novel insights.

No significant differences were found in the percentages of GNC athletes by sport, division, institution, region, or political climate. This is likely due to the small number of GNC participants, thus making it difficult to detect meaningful differences across groups. Further quantitative research with larger sample sizes is warranted to understand the representation of GNC NCAA athletes.
Implications

These findings have several implications for sport administrators, coaches, and LGBTQ+ advocates especially as we estimate that over 70,000 NCAA athletes identify as LGBTQ+, one-quarter of the heterosexual athletes have same-gender attractions, and as others may be questioning their SOGI. Education and resources on inclusive SOGI practices have been shown to improve the mental and physical health of all athletes (Cunningham, 2015; Krane, 2016; Theriault, 2017). As such, education is imperative for administrators, coaches, and officials to learn to create inclusive athletic environments reflective of the athletes in that environment.

Educational trainings that acknowledge who LGBTQ+ athletes are across sports and institutions, may better equip leaders, teammates, and peers to combat homophobia, transphobia, and other forms of sexual and trans prejudice. Luckily, trainings of this kind already exist; Organizations like Athlete Ally, TransAthlete.com, and Inclusion Playbook offer regular, free education focused on collegiate athletics. Notably, Athlete Ally has a free online training curricula that is also designed to educate around LGBTQ+ issues in collegiate sport. Other resources that are specifically designed for athletic administrators and personnel also exist. For instance, sports information personnel can learn more about best practices from College Sports Communicators’ (formerly CoSIDA’s) LGBTQ+ Subcommittee’s webinars and sports medicine professionals can utilize best practices offered by the National Athletic Training Associations’ Advisory Subcommittee on LGBTQIA+ cultural competency (see references).

Alternatively, athletic departments can seek support from on and off campus LGBTQ+ groups. LGBTQ+ groups can help identify and address the needs and experiences of LGBTQ+ athletes and bring awareness to potential biases in athletics. Developing a relationship between these two groups may enable athletes and staff members to benefit from local and timely information, creating a more accurate understanding of an institution’s unique campus and regional climates. (Griffin & Taylor, 2012) The involvement of athletics administrators, directors, and coaches is significant as athletes are more likely to be engaged and visible in promoting inclusion and partnership when they perceive supportive attitudes and stronger social justice beliefs from athletics staff (Toomey & McGeorge, 2018). Collaboration between LGBTQ+ campus groups and athletics departments may serve to increases awareness and visibility via panels, trainings, Pride nights, workshops, speakers, and visibility campaigns.

The stigmatization of LGBTQ+ identities and of SOGI exploration make coming out difficult for athletes. Creating spaces where athletes feel welcomed and empowered is critical for their mental health, athletic performance, and academic success. This is especially important at institutions that do not necessarily offer as much support or education (such as smaller institutions and religiously affiliated schools).

These findings may have significant impacts on future NCAA policy, especially for trans and nonbinary athletes, for whom less is known. As of August 2023, nineteen of the United States discriminate against trans and nonbinary NCAA athletes by not allowing them to compete on teams that align with their gender identity (regardless of whether they have followed the NCAA’s guidelines) (Movement Advancement Project, 2023). For athletes in the remaining thirty-one states, in January of 2022, the NCAA enacted a new iteration of their transgender athlete policy which uses a sport-by-sport model to address trans athletes’ eligibility. As a result, each sport has different regulations around WHICH athletes can compete, HOW, and what kinds of medical care they will need to undergo to do so. Based on the current and low number of trans and nonbinary athletes competing in the NCAA, we suggest these disparate policies be reconsidered by the NCAA such that all athletes (given the very low number of them) who are trans or nonbinary and undergoing hormone replacement therapy to compete be managed on a
case-by-case basis by the NCAA’s Sport Science Institute and Office of Inclusion. More research that is inclusive of GNC athletes (a larger group than expected based on prior findings), the teams, divisions, and sports in which they compete, and the policies that impact them are needed.

**Limitations**

Within the cross-sectional design of this study, data are descriptive and provide only a snapshot of the gender identities and sexual orientations of current NCAA athletes. Given the fluidity of these variables, the timing of contacting athletes (i.e., only some were in their competitive season), the impact of the COVID-19 pandemic on NCAA sport (see Ruihley & Li, 2020), and the immense turnover of athletes in the NCAA (2021b), estimates from our results may have been affected.

While extensive efforts were made to recruit a representative sample, we acknowledge that some groups are underrepresented in this study, such as: cisgender men; Black, Hispanic/Latino, and Asian athletes; and, athletes attending institutions in the Mountain and Pacific regions. Given that one-third of LGBQ+ athletes in our sample did not openly share their identity, our sample may also be biased based on the use of coaches and SWAs as gatekeepers in our recruitment. Coaches who are inclined to promote LGBTQ+ inclusion may have been more likely to share the study and athletes on those teams may have felt more compelled to respond. Conversely, anti-LGBTQ+ coaches may have been less likely to encourage participation. Finally, LGBTQ+ athletes face more harassment in sport and are more likely to leave sport than their non-LGBTQ+ peers (Turk et al., 2019). Our sample does not represent the subpopulation of athletes who have left sport as a result of harassment or intimidation.

Given the small sample size of subpopulations within our study, we often collapsed levels of variables to allow for stronger statistical comparison. For example, we aggregated athletes who identified as asexual, bisexual, gay, lesbian, pansexual, queer, and other as LGBQ+. In doing so, we were able to make comparisons across sport, institutional, and regional variables, but lost intricacies specific to each distinct identity. A greater understanding of the experiences of athletes having individual identities (i.e., asexual or gender queer/fluid) would be better captured with substantially larger sample sizes and analysis by individual identity rather than across a heterogenous grouping.

**Future Research**

The current study serves as a strong pilot, providing essential, initial estimates of NCAA athletes’ SOGIs. Still, replication and extension with a substantially larger sample of athletes would allow for more meaningful analysis. For example, in the current study we could only explore the proportional differences of LGBTQ+ identities among men’s, women’s and mixed sport or across NCAA divisions to make meaningful statistical comparisons in sport. A larger sample size would allow researchers to drill down further individual sports and not treat all of men’s sport or D-II sports as a monolith. Additionally, greater sample sizes would allow for exploration of other institutional affiliation characteristics not accounted for in the current study (e.g., Historically Black Colleges and Universities, women’s colleges, and so forth) which may have an impact the experience of an LGBTQ+ student-athlete. Further, athletes’ race and ethnicity, religious identities, and areas of study could be examined across sexual and gender identities with a larger sample of athletes.

Beyond an extension of the study using sample size, another iteration could include a longitudinal study that analyzes NCAA athlete’s experiences throughout the entirety of their
collegiate athletic careers. As LGBTQ+ athletes may not anticipate identifying as such at the start of their collegiate careers (Wentz & Wessel, 2011), surveying a sample of athletes annually during their athletic careers may offer researchers and practitioners a more nuanced understanding of the formation of sexual orientation and gender identities of athletes as well as the academic and athletic persistence and outcomes for LGBTQ+ athletes at individual institutions and on specific teams. Further, sexual orientation is largely assessed through a single item asking individuals to self-identify. Future researchers, using cross-sectional and longitudinal designs, should continue to explore sexual orientation through a multi-dimensional and dynamic framework to better comprehend the nuances of sexual orientation. Extensions could also be made to explore the fluidity of gender identity during this critical time of identity exploration.

One important outcome from this study is the higher-than-expected representation of asexual (2.6%), bisexual (7.7%), and nonbinary (0.7%) identities amongst NCAA athletes. Little is known about the unique experiences of athletes with these identities and how their identities influence their collegiate sport experience and vice versa. Future research might consider exploring the lived experiences of these athletes to complement the current literature.

**Conclusion**

Given the paucity of data and information on the SOGI of LGBTQ+ athletes who compete at the NCAA level, much ground was covered in this pilot study. To begin, more athletes identify as LGBTQ+ than predicted in previous literature. However, the rates of athletes being out about their identities remain consistently low. Participation of LGBQ+ athletes converge in more welcoming climates (i.e., women’s sport, D-I and D-III sport, blue states). Reasons for this could be the conservative nature of collegiate sport or the historic repression of queer identities and behaviors within the United States more broadly.

The SOGI of the collegiate athletes surveyed in this study were more complex than anticipated, perhaps because metrics used in the past to understand LGBTQ+ identities have been lacking. The sexual orientation and gender identities amongst collegiate athletes were nuanced and dynamic. Such findings suggest that policies and practices offered by NCAA-affiliated institutions should be similarly dynamic and considerate of the diverse representation of athletes in those spaces.

**References**


Women’s College Coalition. (n.d.). Find a women’s college that’s right for you. https://www.womenscolleges.org/
