

# Lesbian, Gay, Bisexual, Transgender, and Queer Athletic Trainers: Collegiate Student-Athletes' Perceptions

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**Context:** Lesbian, gay, bisexual, transgender, and queer (LGBTQ) athletic trainers (ATs) face uncertain acceptance in the workplace.

**Objective:** To examine the perceptions of National Collegiate Athletic Association (NCAA) student-athletes toward ATs who identified as LGBTQ.

**Design:** Cross-sectional design.

**Setting:** Web-based survey.

**Patients or Other Participants:** A total of 623 (males = 212, females = 403, other = 8; age =  $19.7 \pm 1.4$  years) NCAA student-athletes completed the survey.

**Main Outcome Measure(s):** Participants completed a 19-item survey to assess their perceptions about the appropriateness of, quality of care from, and comfort with ATs who identified as LGBTQ. We asked 10 demographic questions and 2 questions regarding the student-athlete's exposure to individuals who identified as LGBTQ. Five matrix questions had 5 stems each to represent LGBTQ individuals on a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*) and 2 open-ended questions elicited qualitative data. We analyzed characteristics

of central tendency to evaluate the level of appropriateness, quality of care, and level of comfort perceived by student-athletes of ATs who identified as LGBTQ. We used Mann-Whitney *U* and Kruskal-Wallis tests for post hoc analyses where appropriate. We used grounded theory to identify themes in the answers to the open-ended questions.

**Results:** Participants indicated they would seek health care and would feel comfortable approaching an AT who identified as LGBTQ. Participants agreed it was appropriate for an LGBTQ AT to work with both male and female sports and did not agree that health care provided by heterosexual and LGBTQ ATs differed. The open-ended responses revealed 4 themes: professionalism, upbringing, situational concerns, and concerns about specific populations that affected their perceptions.

**Conclusions:** In general, the NCAA student-athletes had positive perceptions of ATs who identified as LGBTQ.

**Key Words:** inclusion, diversity, sexual orientation, underserved populations, gender

## Key Points

- The National Collegiate Athletic Association (NCAA) student-athletes had positive perceptions of athletic trainers (ATs) who identified as lesbian, gay, bisexual, transgender, or queer (LGBTQ) and perceived that it was appropriate for these ATs to provide care, regardless of the sex of the sport.
- The student-athletes indicated they would seek health care from and felt comfortable approaching ATs who identified as LGBTQ.
- According to the student-athletes, the quality of care provided by a heterosexual AT and an AT who identified as LGBTQ would not differ.
- Although sexual orientation, religion, or previous experiences with a family member or friend who identified as LGBTQ influenced the student-athletes' perceptions, these differences were not meaningful.

Lesbian, gay, bisexual, transgender, and queer (LGBTQ) athletic trainers (ATs) face uncertain acceptance as a minority in the workplace.<sup>1</sup> Little is known about the experiences of LGBTQ health care providers, particularly ATs. Previous researchers have examined the perceptions of LGBTQ individuals in regard to physician-patient relationships,<sup>2</sup> coach-athlete relationships,<sup>3,4</sup> coach-coach relationships,<sup>5</sup> athlete-athlete relationships,<sup>6</sup> and AT-student-athlete relationships<sup>7</sup>; however, we

found no literature addressing patients' perceptions of LGBTQ ATs.

Although recent events have increased the recognition, protection, and legal rights of the various LGBTQ populations, discrimination and disparities still exist.<sup>8</sup> Specifically, within the athletic realm is a complex and heterosexist culture,<sup>9,10</sup> maintained by stereotypes and harassment that negatively affects athletes: physically, mentally, and emotionally.<sup>3</sup> It is rare for athletic depart-

ments to have a diverse mix of heterosexual, lesbian, gay, and bisexual persons among the coaches and administrators.<sup>9</sup> Yet it remains unknown whether the culture of athletics resonates in the athletic training facilities and affects ATs as well.

Currently, no publications have described the current population of ATs who identify as LGBTQ, even though previous authors<sup>11</sup> found that gay and lesbian individuals were represented in all racial, economic, geographic, religious, cultural, and age groups. In general, the athletic training profession is becoming more inclusive and accepting of students and colleagues, regardless of color, national origin, race, religion, sex, or sexual orientation.<sup>7</sup> However, despite this move toward inclusivity, bias and discrimination (particularly gender discrimination) exist in athletic training.<sup>12,13</sup> Female ATs have experienced discrimination simply based on *hir* (gender-neutral pronoun, equivalent to *his or her*) gender.<sup>12</sup> Specifically, male football players were more comfortable with male ATs for treating both general medical conditions and sex-specific injuries and conditions,<sup>13</sup> although the athletes recognized that all ATs were required to take the same certification examination.<sup>12</sup>

In most athletic settings, including at the collegiate level, the AT is the first person on the medical team with whom the patient interacts.<sup>14</sup> Athletic trainers and patients agree that their relationships and rapport are important to the care and prevention of injuries.<sup>14</sup> The ATs must be able to develop the social support system necessary for all patients to feel secure with the treatment and service provided.<sup>14,15</sup> As the athletic training profession moves toward becoming more patient centered, gathering information about the values, beliefs, and perceptions of patients becomes increasingly important. We need to understand the perceptions of patients toward ATs who identify as LGBTQ. Therefore, the purpose of our study was to examine the perceptions of National Collegiate Athletic Association (NCAA) student-athletes in regard to the interactions with ATs who identified as LGBTQ. In particular, we aimed to assess the student-athletes' perceptions about the appropriateness of, quality of care from, and level of comfort with receiving care by an AT who identified as LGBTQ.

## METHODS

We used an observational cross-sectional design. Participants indicated their perceptions of statements regarding ATs who identified as LGBTQ on a Web-based survey we created using Qualtrics LLC Software (Provo, UT). The variables of interest were appropriateness of, quality of care from, and level of comfort with ATs who identified as LGBTQ.

### Participants

A total of 623 (male = 212, female = 403, other = 8; age =  $19.7 \pm 1.4$  years) NCAA student-athletes completed the survey. Participants were from Division I (n = 198), Division II (n = 161), and Division III (n = 264) institutions. Each participant was asked to complete the questionnaire regarding *hir* perceptions of ATs who considered themselves LGBTQ. No identifying participant or institutional information was collected. The Indiana

State University institutional review board approved this study, and each participant provided informed consent.

We recruited participants by contacting the NCAA compliance officers, athletic directors, and administrative assistants at every NCAA-associated university or college and asking them to forward the study information to their student-athletes. We used a multimodal approach by contacting 2 to 3 people at each institution to increase the likelihood of dissemination and participant responses. In total, 6041 e-mails were sent and 170 e-mails were undeliverable; thus, 5871 e-mails were successfully sent to compliance officers, athletic directors, and administrative assistants by the primary investigator using the Qualtrics Software. Due to the nature of secondary recruiting and the publicly inaccessible participant population, it was impossible to calculate the response rate.

### Instrumentation

We constructed a 19-item evaluation tool to assess student-athletes' perceptions of appropriateness of, quality of care from, and comfort with ATs who identified as LGBTQ. Each population was defined using the descriptions provided by the Human Rights Campaign<sup>16</sup> ([www.hrc.org/resources/glossary-of-terms](http://www.hrc.org/resources/glossary-of-terms)). Ten questions addressed demographics and 2 questions addressed the student-athletes' exposure to individuals who identified as LGBTQ. We created 5 matrix questions with 5 stems in each matrix to represent lesbian (women), gay (men), bisexual, transgender, and queer individuals or populations, as depicted in Table 1. Participants were asked to answer the question for each of the 5 populations using a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*).

The variables of interest were appropriateness, quality of care, and level of comfort (Table 2). Appropriateness was assessed by 2 questions regarding the appropriateness of an AT to both men's and women's sports who identified as each population on the LGBTQ spectrum. Quality of care was determined by asking the respondent to compare an AT who identified as LGBTQ with a heterosexual AT. Level of comfort was evaluated with 2 questions regarding the student-athletes' likeliness to seek care (1 = *definitely not*, 2 = *probably not*, 3 = *might or might not*, 4 = *probably yes*, and 5 = *definitely yes*) and comfort level (1 = *extremely uncomfortable*, 2 = *somewhat uncomfortable*, 3 = *neither comfortable nor uncomfortable*, 4 = *somewhat comfortable*, and 5 = *extremely comfortable*) for each population group.

Two open-ended items allowed the student-athletes to provide an explanation that *ze* (gender-neutral pronoun, equivalent to *he or she*) deemed appropriate. The first open-ended question asked the reason(s) the participant ranked *hir* level of comfort with accessing health care from an LGBTQ AT. The second open-ended item asked for an explanation of the reason(s) that the participant ranked *hir* opinions regarding the qualifications and appropriateness of LGBTQ ATs working with specific patient populations.

To validate the survey (content validity), we performed a content analysis, which relies on the opinions of experts to evaluate the content and organization of the tool.<sup>17</sup> We asked 2 survey research experts to ensure we were phrasing questions appropriately and using appropriate scales. We called on 2 additional experts on LGBTQ culture to ensure

**Table 1. Example of Matrix Question**

	Would you seek out health care from an athletic trainer who identifies as _____?				
	Definitely Not	Probably Not	Might or Might Not	Probably Yes	Definitely Yes
Lesbian (women)	_____	_____	_____	_____	_____
Gay (men)	_____	_____	_____	_____	_____
Bisexual	_____	_____	_____	_____	_____
Transgender	_____	_____	_____	_____	_____
Queer	_____	_____	_____	_____	_____

we were using the correct terminology and accurately assessing our variables of interest. Minor feedback was provided by the experts and modifications were made accordingly. After establishing consensus on the content and quality of our instrument, we completed a pilot study at our home institution to establish the internal consistency and feasibility of the instrument. A total of 51 student-athletes completed the questionnaire. The survey took 5 to 10 minutes to complete, making it feasible for the student-athletes to finish, which is known to increase the likelihood of completion and improve response rates.<sup>18</sup> We identified excellent internal consistency for the overall tool (Cronbach  $\alpha = 0.969$ ) and for each of the populations assessed (lesbian [women] = 0.818, gay [men] = 0.825, bisexual = 0.854, transgender = 0.865, queer = 0.865).

## Procedures

Participants for this study were recruited via e-mail. All NCAA institutions were identified using the NCAA Web site, and the e-mail addresses for the compliance officers, athletic directors, and administrative assistants were found on the Web site of each institution. The e-mail requested that the athletic department of each institution disseminate the survey on behalf of the researchers in an effort to reach and protect the student-athletes from any potential coercion from coaches or ATs who might be in a position to exert undue pressure to participate.

The e-mail described the study and provided directions for completing the questionnaire as well as a link to the questionnaire via an institutionally secure system (Qualtrics LLC, Provo, UT). We sent reminder e-mails every week for 4 weeks and closed the survey after the fifth week. If a participant clicked on the link, ze was directed to the informed consent page. Consent was indicated by clicking "I agree to participate." They then completed the questionnaire, answering only the questions they wanted to, and could close the browser at any time. Partial data were included in analyses; throughout the results, the

number of participants who responded to each item is indicated.

## Statistical Analysis

We performed analyses of central tendency to evaluate student-athletes' perceptions of appropriateness of, quality of care from, and level of comfort with ATs who identified as LGBTQ. We conducted comparative analyses between heterosexual and LGBTQ, questioning, intersex, asexual, or pansexual (QIAP) participants (Mann-Whitney *U*), previous experience with an LGBTQ individual as a close family member or friend (Kruskal-Wallis), previous experiences with an LGBTQ AT (Kruskal-Wallis), and religion (Kruskal-Wallis) on the 3 outcome variables (appropriateness, quality of care, and level of comfort). We used Mann-Whitney *U* tests for post hoc analyses where appropriate. Nonparametric statistics were conducted due to groups of unequal size; however, our data were heterogeneous (Levene statistic  $P > .05$  for a majority of the comparisons). Significance was set at  $P < .05$  a priori. Grounded theory was used to develop the codes that were extracted from the qualitative feedback. *Grounded theory* is a systematic evaluation of data that uses codes for grouping common themes to serve as the basis for a new theoretical framework.

## RESULTS

Among the participants ( $N = 623$ ), 403 (64.7%) identified as female, whereas 212 (34.0%) identified as male. Based on the publicly available NCAA demographic data (2016–2017, men = 280 025 of 497 632, 56.3%; women = 217 607 of 497 632, 43.7%), our sample was slightly skewed toward representing women.<sup>19</sup> Only 8 (1.3%) participants identified as *other* or *not listed*. Participants identified as Christian—all denominations ( $n = 436$ , 70.0%), non-Christian ( $n = 20$ , 3.2%), not religious or not practicing ( $n = 150$ , 24%), or not reported ( $n = 17$ , 2.7%). The majority of participants identified as heterosexual ( $n = 504$ , 80.9%), whereas the

**Table 2. Question Stems by Variable**

Variable	Question Stems
Appropriateness	(1) Rate your level of agreement with the statement: It is appropriate for an AT who identifies as _____ to provide health care to a male sport. (2) Rate your level of agreement with the statement: It is appropriate for an AT who identifies as _____ to provide health care to a female sport.
Quality of care	(1) Rate your level of agreement with the statement: The quality of health care differs between an AT who identifies as _____ and a heterosexual AT.
Level of comfort	(1) Would you seek out health care from an AT who identifies as _____? (2) How comfortable would you feel seeking health care from an AT who identifies as _____?

Abbreviation: AT, athletic trainer.

**Table 3. Differences Between Sexual Orientation for Appropriateness of, Quality of Care From, and Level of Comfort With Receiving Health Care From an LGBTQ AT**

Statement	Population	Mode	Mean $\pm$ SD (Range) <sup>b</sup>	
			Heterosexual (n = 461)	LGBTQQIAP (n = 89)
Would you seek out health care from an AT who identifies as ___? <sup>c</sup>	Lesbian	5	4.30 $\pm$ 0.98 (1–5)	4.75 $\pm$ 0.59 (3–5)
	Gay	5	4.22 $\pm$ 1.10 (1–5)	4.69 $\pm$ 1.94 (1–5)
	Bisexual	5	4.25 $\pm$ 1.01 (1–5)	4.71 $\pm$ 0.69 (1–5)
	Transgender	5	3.88 $\pm$ 1.29 (1–5)	4.62 $\pm$ 0.78 (1–5)
	Queer	5	4.07 $\pm$ 1.16 (1–5)	4.65 $\pm$ 0.76 (1–5)
How comfortable would you feel seeking health care from an AT who identifies as _____? <sup>d</sup>	Lesbian	5	4.20 $\pm$ 1.04 (1–5)	4.83 $\pm$ 0.57 (1–5)
	Gay	1	4.10 $\pm$ 1.22 (1–5)	4.69 $\pm$ 0.70 (1–5)
	Bisexual	5	4.11 $\pm$ 1.12 (1–5)	4.82 $\pm$ 0.67 (1–5)
	Transgender	5	3.70 $\pm$ 1.39 (1–5)	4.65 $\pm$ 0.83 (1–5)
	Queer	5	3.93 $\pm$ 1.24 (1–5)	4.75 $\pm$ 0.74 (1–5)
Rate your level of agreement with the statement: The <b>quality of health care</b> differs between an AT who identifies as _____ and a heterosexual AT. <sup>e</sup>	Lesbian	1	1.44 $\pm$ 0.87 (1–5)	1.28 $\pm$ 0.85 (1–5)
	Gay	5	1.44 $\pm$ 0.87 (1–5)	1.34 $\pm$ 1.02 (1–5)
	Bisexual	1	1.45 $\pm$ 0.79 (1–5)	1.30 $\pm$ 0.92 (1–5)
	Transgender	1	1.50 $\pm$ 0.95 (1–5)	1.36 $\pm$ 1.08 (1–5)
	Queer	1	1.47 $\pm$ 0.91 (1–5)	1.34 $\pm$ 1.02 (1–5)
Rate your level of agreement with the statement: It is appropriate for an AT who identifies as _____ to provide health care to a <b>male</b> sport. <sup>e</sup>	Lesbian	5	4.20 $\pm$ 1.06 (1–5)	4.61 $\pm$ 1.08 (1–5)
	Gay	5	4.06 $\pm$ 1.29 (1–5)	4.56 $\pm$ 1.13 (1–5)
	Bisexual	5	4.13 $\pm$ 1.21 (1–5)	4.56 $\pm$ 1.15 (1–5)
	Transgender	5	4.04 $\pm$ 1.27 (1–5)	4.55 $\pm$ 1.15 (1–5)
	Queer	5	4.11 $\pm$ 1.21 (1–5)	4.56 $\pm$ 1.29 (1–5)
Rate your level of agreement with the statement: It is appropriate for an AT who identifies as _____ to provide health care to a <b>female</b> sport. <sup>e</sup>	Lesbian	5	4.10 $\pm$ 1.26 (1–5)	4.69 $\pm$ 0.92 (1–5)
	Gay	5	4.33 $\pm$ 1.04 (1–5)	4.70 $\pm$ 0.93 (1–5)
	Bisexual	5	4.15 $\pm$ 1.21 (1–5)	4.72 $\pm$ 0.92 (1–5)
	Transgender	5	4.07 $\pm$ 1.27 (1–5)	4.66 $\pm$ 1.00 (1–5)
	Queer	5	4.14 $\pm$ 1.21 (1–5)	4.66 $\pm$ 1.00 (1–5)

Abbreviations: AT, athletic trainer; LGBTQ, lesbian, gay, bisexual, transgender, or queer; QIAP, questioning, intersex, asexual, or pansexual.

<sup>a</sup> Instrument is reproduced in its original format.

<sup>b</sup> Pairwise statistical difference between those who identified as heterosexual and those who identified as other (LGBTQQIAP).

<sup>c</sup> Scale: 1 = *definitely not*, 2 = *probably not*, 3 = *might or might not*, 4 = *probably yes*, 5 = *definitely yes*.

<sup>d</sup> Scale: 1 = *extremely uncomfortable*, 2 = *somewhat uncomfortable*, 3 = *neither comfortable nor uncomfortable*, 4 = *somewhat comfortable*, 5 = *extremely comfortable*.

<sup>e</sup> Scale: 1 = *strongly disagree*, 2 = *somewhat disagree*, 3 = *neither agree nor disagree*, 4 = *somewhat agree*, 5 = *strongly agree*.

remaining participants (n = 119, 19.1%) identified as LGBTQQIAP.

### Appropriateness

Participants agreed it was appropriate for an AT who identified as lesbian (4.3  $\pm$  1.1), gay (4.1  $\pm$  1.3), bisexual (4.2  $\pm$  1.2), transgender (4.1  $\pm$  1.3), or queer (4.1  $\pm$  1.2) to work with a male sport. Participants also agreed it was appropriate for an AT who identified as lesbian (4.2  $\pm$  1.2), gay (4.4  $\pm$  1.0), bisexual (4.2  $\pm$  1.2), transgender (4.1  $\pm$  1.2), or queer (4.2  $\pm$  1.2) to work with a female sport.

Participants who identified as LGBTQQIAP agreed more strongly that it was appropriate for ATs who identified as lesbian (Mann-Whitney  $U$  = 17 064.5,  $Z$  = -4.003,  $P$  < .001), gay (Mann-Whitney  $U$  = 16 412.5,  $Z$  = -4.392,  $P$  < .001), bisexual (Mann-Whitney  $U$  = 16 420.0,  $Z$  = -4.392,  $P$  < .001), transgender (Mann-Whitney  $U$  = 15 816.5,  $Z$  = -4.767,  $P$  < .001), or queer (Mann-Whitney  $U$  = 16 253.0,  $Z$  = -4.488,  $P$  < .001) to work with a male sport as compared with their heterosexual counterparts. Furthermore, the same participants more strongly agreed that it was appropriate for ATs who identified as lesbian (Mann-Whitney  $U$  = 16 060.0,  $Z$  = -4.974,  $P$  < .001), gay (Mann-Whitney  $U$  = 16 946.5,  $Z$  = -4.404,  $P$  < .001), bisexual (Mann-Whitney  $U$  = 15 517.5,  $Z$  = -5.178,  $P$  < .001), transgender (Mann-Whitney  $U$  = 15 588.0,  $Z$  = -5.224,  $P$  < .001), or queer (Mann-Whitney  $U$  = 16 053.0,  $Z$  = -4.927,  $P$

< .001) to work with a female sport as compared with their heterosexual counterparts (Table 3).

Participants who had a previous relationship with a friend or family member who identified as LGBTQ more strongly agreed that it was appropriate for ATs who identified as lesbian ( $\chi^2_2$  = 50.398,  $P$  < .001), gay ( $\chi^2_2$  = 77.856,  $P$  < .001), bisexual ( $\chi^2_2$  = 71.644,  $P$  < .001), transgender ( $\chi^2_2$  = 73.471,  $P$  < .001), or queer ( $\chi^2_2$  = 70.537,  $P$  < .001) to work with male sports. Furthermore, the same participants more strongly agreed that it was appropriate for ATs who identified as lesbian ( $\chi^2_2$  = 92.596,  $P$  < .001), gay ( $\chi^2_2$  = 58.380,  $P$  < .001), bisexual ( $\chi^2_2$  = 83.614,  $P$  < .001), transgender ( $\chi^2_2$  = 83.563,  $P$  < .001), or queer ( $\chi^2_2$  = 79.990,  $P$  < .001) to work with female sports than participants who had not had a previous interaction or were unsure (Table 4).

Participants who were uncertain about whether they had a previous interaction with an AT who identified as LGBTQ more strongly agreed that it was appropriate for ATs who identified as lesbian ( $\chi^2_2$  = 22.764,  $P$  < .001), gay ( $\chi^2_2$  = 30.063,  $P$  < .001), bisexual ( $\chi^2_2$  = 26.277,  $P$  < .001), transgender ( $\chi^2_2$  = 31.515,  $P$  < .001), or queer ( $\chi^2_2$  = 27.335,  $P$  < .001) to work with male sports. Additionally, participants who were uncertain about their interaction with an AT who identified as LGBTQ more strongly agreed that it was appropriate for ATs who identified as lesbian ( $\chi^2_2$  = 28.925,  $P$  < .001), gay ( $\chi^2_2$  = 26.092,  $P$  < .001), bisexual ( $\chi^2_2$  = 26.140,  $P$  < .001), transgender ( $\chi^2_2$  = 34.77,  $P$  <



**Table 4. Differences Between Those Who Had Previous Interaction With LGBTQ Family or Friends for Level of Appropriateness of, Quality of Care From, and Level of Comfort With Receiving Health Care From an LGBTQ AT**

Statement	Population	Mode	Mean $\pm$ SD (Range)		
			Yes (n = 486)	No (n = 114) <sup>b</sup>	Unsure (n = 19) <sup>c</sup>
Would you seek out health care from an AT who identifies as _____? <sup>d</sup>	Lesbian	5	4.50 $\pm$ 0.81 (1–5)	3.85 $\pm$ 1.12 (1–5)	3.68 $\pm$ 1.34 (1–5)
	Gay	5	4.46 $\pm$ 0.88 (1–5)	3.59 $\pm$ 1.34 (1–5)	3.79 $\pm$ 1.08 (1–5)
	Bisexual	5	4.47 $\pm$ 0.84 (1–5)	3.70 $\pm$ 1.18 (1–5)	3.68 $\pm$ 1.29 (1–5)
	Transgender	5	4.19 $\pm$ 1.13 (1–5)	3.18 $\pm$ 1.39 (1–5)	3.32 $\pm$ 1.42 (1–5)
	Queer	5	4.27 $\pm$ 0.95 (1–5)	3.41 $\pm$ 1.33 (1–5)	3.47 $\pm$ 1.35 (1–5)
How comfortable would you feel seeking health care from an AT who identifies as _____? <sup>e</sup>	Lesbian	5	4.48 $\pm$ 0.87 (1–5)	3.58 $\pm$ 1.13 (1–5)	3.84 $\pm$ 1.26 (1–5)
	Gay	5	4.43 $\pm$ 1.00 (1–5)	3.30 $\pm$ 1.44 (1–5)	3.42 $\pm$ 1.26 (2–5)
	Bisexual	5	4.42 $\pm$ 0.93 (1–5)	3.36 $\pm$ 1.26 (1–5)	3.58 $\pm$ 1.26 (1–5)
	Transgender	5	4.10 $\pm$ 1.22 (1–5)	2.87 $\pm$ 1.45 (1–5)	3.05 $\pm$ 1.35 (1–5)
	Queer	5	4.29 $\pm$ 1.06 (1–5)	3.13 $\pm$ 1.33 (1–5)	3.16 $\pm$ 1.30 (1–5)
Rate your level of agreement with the statement: The <b>quality of health care</b> differs between an AT who identifies as _____ and a heterosexual AT. <sup>f</sup>	Lesbian	1	1.32 $\pm$ 0.80 (1–5)	1.88 $\pm$ 1.09 (1–5)	1.68 $\pm$ 0.95 (1–3)
	Gay	1	1.33 $\pm$ 0.82 (1–5)	1.88 $\pm$ 1.11 (1–5)	1.68 $\pm$ 0.95 (1–3)
	Bisexual	1	1.33 $\pm$ 0.81 (1–5)	1.90 $\pm$ 1.15 (1–5)	1.68 $\pm$ 0.95 (1–3)
	Transgender	1	1.39 $\pm$ 0.92 (1–5)	1.93 $\pm$ 1.14 (1–5)	1.63 $\pm$ 0.90 (1–3)
	Queer	1	1.35 $\pm$ 0.85 (1–5)	1.93 $\pm$ 1.17 (1–5)	1.63 $\pm$ 0.90 (1–3)
Rate your level of agreement with the statement: It is appropriate for an AT who identifies as _____ to provide health care to a <b>male</b> sport. <sup>f</sup>	Lesbian	5	4.46 $\pm$ 1.05 (1–5)	3.89 $\pm$ 1.07 (1–5)	3.74 $\pm$ 1.20 (1–5)
	Gay	5	4.37 $\pm$ 1.13 (1–5)	3.19 $\pm$ 1.43 (1–5)	3.63 $\pm$ 1.34 (1–5)
	Bisexual	5	4.39 $\pm$ 1.11 (1–5)	3.40 $\pm$ 1.34 (1–5)	3.53 $\pm$ 1.07 (2–5)
	Transgender	5	4.32 $\pm$ 1.17 (1–5)	3.30 $\pm$ 1.35 (1–5)	3.58 $\pm$ 1.07 (2–5)
	Queer	5	4.37 $\pm$ 1.13 (1–5)	3.42 $\pm$ 1.28 (1–5)	3.68 $\pm$ 1.06 (2–5)
Rate your level of agreement with the statement: It is appropriate for an AT who identifies as _____ to provide health care to a <b>female</b> sport. <sup>f</sup>	Lesbian	5	4.43 $\pm$ 1.06 (1–5)	3.23 $\pm$ 1.40 (1–5)	3.68 $\pm$ 1.11 (2–5)
	Gay	5	4.51 $\pm$ 1.00 (1–5)	3.91 $\pm$ 1.05 (1–5)	3.74 $\pm$ 1.20 (1–5)
	Bisexual	5	4.45 $\pm$ 1.06 (1–5)	3.44 $\pm$ 1.32 (1–5)	3.53 $\pm$ 1.07 (2–5)
	Transgender	5	4.38 $\pm$ 1.14 (1–5)	3.31 $\pm$ 1.34 (1–5)	3.58 $\pm$ 1.07 (2–5)
	Queer	5	4.42 $\pm$ 1.09 (1–5)	3.43 $\pm$ 1.30 (1–5)	3.68 $\pm$ 1.06 (2–5)

Abbreviations: AT, athletic trainer; LGBTQ, lesbian, gay, bisexual, transgender, or queer.

<sup>a</sup> Instrument is reproduced in its original format.

<sup>b</sup> Pairwise statistical difference between those with previous interaction and those without.

<sup>c</sup> Pairwise statistical difference between those with previous interaction and those who were unsure.

<sup>d</sup> Scale: 1 = *definitely not*, 2 = *probably not*, 3 = *might or might not*, 4 = *probably yes*, 5 = *definitely yes*.

<sup>e</sup> Scale: 1 = *extremely uncomfortable*, 2 = *somewhat uncomfortable*, 3 = *neither comfortable nor uncomfortable*, 4 = *somewhat comfortable*, 5 = *extremely comfortable*.

<sup>f</sup> Scale: 1 = *strongly disagree*, 2 = *somewhat disagree*, 3 = *neither agree nor disagree*, 4 = *somewhat agree*, 5 = *strongly agree*.

.001), or queer ( $\chi^2 = 30.112$ ,  $P < .001$ ) to work with female sports. However, the participants who had worked with an LGBTQ AT thought it was more appropriate for queer ATs to work with male and female sports than did those participants who had not or were uncertain whether they had worked with an LGBTQ AT (Table 5).

Participants who identified as non-Christian or not practicing agreed more strongly that it was appropriate for ATs who identified as gay ( $\chi^2 = 16.619$ ,  $P < .001$ ), bisexual ( $\chi^2 = 10.617$ ,  $P = .005$ ), transgender ( $\chi^2 = 15.854$ ,  $P < .001$ ), or queer ( $\chi^2 = 14.701$ ,  $P = .001$ ) to work with male sports than did those who identified as Christian. No statistical differences were present between religious groups as to whether they thought ATs who identified as lesbian ( $\chi^2 = 4.335$ ,  $P = .114$ ) should work with male sports. Participants who identified as non-Christian or not practicing agreed more strongly that it was appropriate for ATs who identified as lesbian ( $\chi^2 = 19.039$ ,  $P < .001$ ), gay ( $\chi^2 = 8.127$ ,  $P = .017$ ), bisexual ( $\chi^2 = 14.694$ ,  $P = .001$ ), transgender ( $\chi^2 = 18.967$ ,  $P < .001$ ), or queer ( $\chi^2 = 17.791$ ,  $P < .001$ ) to work with female sports than did those who identified as Christian (Table 6).

### Quality of Care

Overall, participants did not agree that health care differed between a heterosexual AT and an AT who

identified as lesbian ( $1.5 \pm 0.9$ ), gay ( $1.5 \pm 0.9$ ), bisexual ( $1.5 \pm 0.9$ ), transgender ( $1.5 \pm 1.0$ ), or queer ( $1.5 \pm 1.0$ ). Participants who identified as LGBTQIAP were less likely to agree that health care differed between heterosexual ATs and ATs who identified as lesbian (Mann-Whitney  $U = 19961.5$ ,  $Z = -2.570$ ,  $P = .010$ ), gay (Mann-Whitney  $U = 20036.5$ ,  $Z = -2.492$ ,  $P = .013$ ), bisexual (Mann-Whitney  $U = 19968.55$ ,  $Z = -2.556$ ,  $P = .011$ ), transgender (Mann-Whitney  $U = 19584.5$ ,  $Z = -2.792$ ,  $P = .005$ ), or queer (Mann-Whitney  $U = 19745.50$ ,  $Z = -2.653$ ,  $P = .008$ ) as compared with their heterosexual counterparts (Table 3).

Participants who acknowledged previous interaction with an LGBTQ friend or family member were less likely to agree that health care differed between heterosexual ATs and ATs who identified as lesbian ( $\chi^2 = 37.432$ ,  $P < .001$ ), gay ( $\chi^2 = 36.224$ ,  $P < .001$ ), bisexual ( $\chi^2 = 37.647$ ,  $P < .001$ ), transgender ( $\chi^2 = 37.179$ ,  $P < .001$ ), or queer ( $\chi^2 = 38.106$ ,  $P < .001$ ; Table 4).

In addition, participants who had worked with an AT who identified as LGBTQ were less likely to agree that health care differed between heterosexual ATs and ATs who identified as lesbian ( $\chi^2 = 26.705$ ,  $P < .001$ ), gay ( $\chi^2 = 25.868$ ,  $P < .001$ ), bisexual ( $\chi^2 = 28.386$ ,  $P < .001$ ), transgender ( $\chi^2 = 38.336$ ,  $P < .001$ ), or queer ( $\chi^2 = 26.669$ ,  $P < .001$ ) than participants who did not have a previous

**Table 5. Differences Between Those Who Had Previous Interaction With an LGBTQ AT for Appropriateness of, Quality of Care From, and Level of Comfort With Receiving Health Care From an LGBTQ AT**

Statement	Population	Mode	Mean $\pm$ SD (Range)		
			Yes (n = 102)	No (n = 212)	Unsure (n = 259)
Would you seek out health care from an AT who identifies as _____? <sup>b</sup>	Lesbian	5	4.70 $\pm$ 0.61 (2–5)	4.08 $\pm$ 1.06 <sup>c,d</sup> (1–5)	4.45 $\pm$ 0.90 <sup>d,e</sup> (1–5)
	Gay	5	4.63 $\pm$ 0.77 (2–5)	4.01 $\pm$ 1.94 <sup>c,d</sup> (1–5)	4.37 $\pm$ 1.00 <sup>d,e</sup> (1–5)
	Bisexual	5	4.69 $\pm$ 0.61 (2–5)	4.03 $\pm$ 1.10 <sup>c,d</sup> (1–5)	4.39 $\pm$ 0.94 <sup>d,e</sup> (1–5)
	Transgender	5	4.25 $\pm$ 1.14 (1–5)	3.62 $\pm$ 1.32 <sup>c,d</sup> (1–5)	4.17 $\pm$ 1.18 <sup>d</sup> (1–5)
	Queer	5	4.50 $\pm$ 0.88 (1–5)	3.81 $\pm$ 1.24 <sup>c,d</sup> (1–5)	4.29 $\pm$ 1.05 <sup>d,e</sup> (1–5)
How comfortable would you feel seeking health care from an AT who identifies as _____? <sup>f</sup>	Lesbian	5	4.60 $\pm$ 0.81 (1–5)	3.98 $\pm$ 1.11 <sup>c</sup> (1–5)	4.42 $\pm$ 0.91 <sup>e</sup> (1–5)
	Gay	5	4.53 $\pm$ 0.97 (1–5)	3.90 $\pm$ 1.29 <sup>c</sup> (1–5)	4.30 $\pm$ 1.11 <sup>e</sup> (1–5)
	Bisexual	5	4.53 $\pm$ 0.90 (1–5)	3.88 $\pm$ 1.19 <sup>c</sup> (1–5)	4.34 $\pm$ 1.02 <sup>e</sup> (1–5)
	Transgender	5	4.15 $\pm$ 1.21 (1–5)	3.46 $\pm$ 1.43 <sup>c</sup> (1–5)	4.03 $\pm$ 1.29 <sup>e</sup> (1–5)
	Queer	5	4.39 $\pm$ 1.00 (1–5)	3.69 $\pm$ 1.31 <sup>c</sup> (1–5)	4.19 $\pm$ 1.15 <sup>e</sup> (1–5)
Rate your level of agreement with the statement: The <b>quality of health care</b> differs between an AT who identifies as _____ and a heterosexual AT. <sup>g</sup>	Lesbian	1	1.22 $\pm$ 0.67 (1–5)	1.63 $\pm$ 0.99 <sup>c,d</sup> (1–5)	1.37 $\pm$ 0.86 <sup>d</sup> (1–5)
	Gay	1	1.23 $\pm$ 0.67 (1–5)	1.63 $\pm$ 1.00 <sup>c,d</sup> (1–5)	1.38 $\pm$ 0.90 <sup>d</sup> (1–5)
	Bisexual	1	1.22 $\pm$ 0.67 (1–5)	1.65 $\pm$ 1.01 <sup>c,d</sup> (1–5)	1.37 $\pm$ 0.88 <sup>d</sup> (1–5)
	Transgender	1	1.31 $\pm$ 0.81 (1–5)	1.71 $\pm$ 1.07 <sup>c,d</sup> (1–5)	1.40 $\pm$ 0.95 <sup>d</sup> (1–5)
	Queer	1	1.25 $\pm$ 0.67 (1–4)	1.67 $\pm$ 1.03 <sup>c,d</sup> (1–5)	1.40 $\pm$ 0.94 <sup>d</sup> (1–5)
Rate your level of agreement with the statement: It is appropriate for an AT who identifies as _____ to provide health care to a <b>male</b> sport. <sup>g</sup>	Lesbian	5	4.42 $\pm$ 1.07 (1–5)	4.14 $\pm$ 1.11 <sup>c,d</sup> (1–5)	4.46 $\pm$ 1.05 <sup>d</sup> (1–5)
	Gay	5	4.30 $\pm$ 1.20 (1–5)	3.82 $\pm$ 1.34 <sup>c</sup> (1–5)	4.33 $\pm$ 1.20 <sup>d</sup> (1–5)
	Bisexual	5	4.34 $\pm$ 1.12 (1–5)	3.91 $\pm$ 1.28 <sup>c,d</sup> (1–5)	4.36 $\pm$ 1.16 <sup>d</sup> (1–5)
	Transgender	5	4.35 $\pm$ 1.10 (1–5)	3.78 $\pm$ 1.33 <sup>c,d</sup> (1–5)	4.30 $\pm$ 1.21 <sup>d</sup> (1–5)
	Queer	5	4.42 $\pm$ 1.02 (1–5)	3.87 $\pm$ 1.30 <sup>c,d</sup> (1–5)	4.33 $\pm$ 1.16 <sup>d</sup> (1–5)
Rate your level of agreement with the statement: It is appropriate for an AT who identifies as _____ to provide health care to a <b>female</b> sport. <sup>g</sup>	Lesbian	5	4.36 $\pm$ 1.10 (1–5)	3.88 $\pm$ 1.33 <sup>c,d</sup> (1–5)	4.38 $\pm$ 1.14 <sup>d</sup> (1–5)
	Gay	5	4.48 $\pm$ 1.00 (1–5)	4.17 $\pm$ 1.08 <sup>c,d</sup> (1–5)	4.50 $\pm$ 1.00 <sup>d</sup> (1–5)
	Bisexual	5	4.41 $\pm$ 1.05 (1–5)	3.97 $\pm$ 1.26 <sup>c,d</sup> (1–5)	4.39 $\pm$ 1.13 <sup>d</sup> (1–5)
	Transgender	5	4.40 $\pm$ 1.05 (1–5)	3.82 $\pm$ 1.35 <sup>c,d</sup> (1–5)	4.34 $\pm$ 1.18 <sup>d</sup> (1–5)
	Queer	5	4.47 $\pm$ 0.96 (1–5)	3.91 $\pm$ 1.30 <sup>c,d</sup> (1–5)	4.37 $\pm$ 1.15 (1–5)

Abbreviations: AT, athletic trainer; LGBTQ, lesbian, gay, bisexual, transgender, or queer.

<sup>a</sup> Instrument is reproduced in its original format.

<sup>b</sup> Scale: 1 = *definitely not*, 2 = *probably not*, 3 = *might or might not*, 4 = *probably yes*, 5 = *definitely yes*.

<sup>c</sup> Pairwise statistical difference between those with previous interaction and those without.

<sup>d</sup> Pairwise statistical difference between those without previous interaction and those who were unsure.

<sup>e</sup> Pairwise statistical difference between those with previous interaction and those who were unsure.

<sup>f</sup> Scale: 1 = *extremely uncomfortable*, 2 = *somewhat uncomfortable*, 3 = *neither comfortable nor uncomfortable*, 4 = *somewhat comfortable*, 5 = *extremely comfortable*.

<sup>g</sup> Scale: 1 = *strongly disagree*, 2 = *somewhat disagree*, 3 = *neither agree nor disagree*, 4 = *somewhat agree*, 5 = *strongly agree*.

interaction or who were unsure whether they had a previous interaction (Table 5).

Participants who identified as non-Christian or not practicing were less likely than participants who identified as Christian to agree that health care differed between heterosexual ATs and ATs who identified as gay ( $\chi^2_2 = 6.730$ ,  $P = .035$ ), bisexual ( $\chi^2_2 = 6.653$ ,  $P = .036$ ), or transgender ( $\chi^2_2 = 6.229$ ,  $P = .044$ ; Table 6), but no statistical differences existed between religious groups regarding ATs who identified as lesbian ( $\chi^2_2 = 5.938$ ,  $P = .051$ ) or queer ( $\chi^2_2 = 5.579$ ,  $P = .061$ ; Table 6).

## Comfort

Overall, participants indicated that they would seek out health care from an AT who identified as lesbian (4.4  $\pm$  0.9), gay (4.3  $\pm$  1.1), bisexual (4.0  $\pm$  1.3), transgender (4.0  $\pm$  1.3), or queer (4.2  $\pm$  1.1). Participants agreed that they would feel comfortable approaching an AT who identified as lesbian (4.3  $\pm$  1.0), gay (4.2  $\pm$  1.2), bisexual (4.2  $\pm$  1.1), transgender (3.8  $\pm$  1.4), or queer (4.0  $\pm$  1.2).

Participants who identified as LGBTQIAP were more likely to seek out health care from an AT who identified as lesbian (Mann-Whitney  $U = 16\,847.5$ ,  $Z = -4.848$ ,  $P < .001$ ), gay (Mann-Whitney  $U = 17\,597.0$ ,  $Z = -4.267$ ,  $P < .001$ ), bisexual (Mann-Whitney  $U = 17\,059.0$ ,  $Z = -4.703$ ,

$P < .001$ ), transgender (Mann-Whitney  $U = 15\,676.0$ ,  $Z = -5.461$ ,  $P < .001$ ), or queer (Mann-Whitney  $U = 16\,355.0$ ,  $Z = -5.080$ ,  $P < .001$ ) as compared with heterosexual participants. Furthermore, participants who identified as LGBTQIAP felt more comfortable approaching an AT who identified as lesbian (Mann-Whitney  $U = 14\,561.5$ ,  $Z = -6.526$ ,  $P < .001$ ), gay (Mann-Whitney  $U = 14\,835.0$ ,  $Z = -6.156$ ,  $P < .001$ ), bisexual (Mann-Whitney  $U = 13\,881.5$ ,  $Z = -6.949$ ,  $P < .001$ ), transgender (Mann-Whitney  $U = 13\,766.5$ ,  $Z = -6.701$ ,  $P < .001$ ), or queer (Mann-Whitney  $U = 13\,835.0$ ,  $Z = -6.813$ ,  $P < .001$ ) as compared with heterosexual participants (Table 3).

Participants who had previous interaction with an LGBTQ friend or family member were more likely to seek out health care from an AT who identified as lesbian ( $\chi^2_2 = 50.412$ ,  $P < .001$ ), gay ( $\chi^2_2 = 59.812$ ,  $P < .001$ ), bisexual ( $\chi^2_2 = 61.050$ ,  $P < .001$ ), transgender ( $\chi^2_2 = 62.595$ ,  $P < .001$ ), or queer ( $\chi^2_2 = 67.009$ ,  $P < .001$ ). The same participants also felt more comfortable approaching an AT who identified as lesbian ( $\chi^2_2 = 74.467$ ,  $P < .001$ ), gay ( $\chi^2_2 = 82.394$ ,  $P < .001$ ), bisexual ( $\chi^2_2 = 82.414$ ,  $P < .001$ ), transgender ( $\chi^2_2 = 73.847$ ,  $P < .001$ ), or queer ( $\chi^2_2 = 84.566$ ,  $P < .001$ ) than participants who had no previous interaction or who were unsure (Table 4).

**Table 6. Differences Between Religious Affiliation for Appropriateness of, Quality of Care From, and Level of Comfort With Receiving Health Care From an LGBTQ AT**

Statement	Population	Mode	Mean $\pm$ SD (Range)		
			Christianity (n = 346)	Non-Christian (n = 17)	Not Practicing (n = 137) <sup>b</sup>
Would you seek out health care from an AT who identifies as _____? <sup>c</sup>	Lesbian	5	4.26 $\pm$ 0.99 (1–5)	4.65 $\pm$ 0.70 (3–5)	4.65 $\pm$ 0.75 (1–5)
	Gay	5	4.20 $\pm$ 1.11 (1–5)	4.65 $\pm$ 0.70 (3–5)	4.58 $\pm$ 0.85 (1–5)
	Bisexual	5	4.23 $\pm$ 1.04 (1–5)	4.65 $\pm$ 0.70 (3–5)	4.60 $\pm$ 0.75 (2–5)
	Transgender	5	3.87 $\pm$ 1.28 (1–5)	4.47 $\pm$ 0.80 (2–5)	4.34 $\pm$ 1.13 (1–5)
	Queer	5	4.08 $\pm$ 1.13 (1–5)	4.53 $\pm$ 0.80 (3–5)	4.41 $\pm$ 1.06 (1–5)
How comfortable would you feel seeking health care from an AT who identifies as _____? <sup>d</sup>	Lesbian	5	4.14 $\pm$ 1.05 (1–5)	4.82 $\pm$ 0.53 <sup>e</sup> (3–5)	4.65 $\pm$ 0.71 (1–5)
	Gay	5	4.06 $\pm$ 1.23 (1–5)	4.76 $\pm$ 0.56 <sup>e</sup> (3–5)	4.56 $\pm$ 0.91 (1–5)
	Bisexual	5	4.08 $\pm$ 1.13 (1–5)	4.82 $\pm$ 0.53 <sup>e</sup> (3–5)	4.55 $\pm$ 0.84 (1–5)
	Transgender	5	3.67 $\pm$ 1.36 (1–5)	4.59 $\pm$ 0.80 <sup>e</sup> (3–5)	4.24 $\pm$ 1.23 (1–5)
	Queer	5	3.92 $\pm$ 1.21 (1–5)	4.71 $\pm$ 0.69 <sup>e</sup> (3–5)	4.34 $\pm$ 1.13 (1–5)
Rate your level of agreement with the statement: The <b>quality of health care</b> differs between an AT who identifies as _____ and a heterosexual AT. <sup>f</sup>	Lesbian	1	1.43 $\pm$ 0.85 (1–5)	1.47 $\pm$ 1.13 (1–5)	1.29 $\pm$ 0.79 (1–5)
	Gay	1	1.43 $\pm$ 0.85 (1–5)	1.47 $\pm$ 1.13 (1–5)	1.30 $\pm$ 0.83 (1–5)
	Bisexual	1	1.44 $\pm$ 0.87 (1–5)	1.47 $\pm$ 1.13 (1–5)	1.29 $\pm$ 0.77 (1–5)
	Transgender	1	1.48 $\pm$ 0.92 (1–5)	1.71 $\pm$ 1.40 (1–5)	1.34 $\pm$ 0.87 (1–5)
	Queer	1	1.46 $\pm$ 0.90 (1–5)	1.47 $\pm$ 1.13 (1–5)	1.33 $\pm$ 0.85 (1–5)
Rate your level of agreement with the statement: It is appropriate for an AT who identifies as _____ to provide health care to a <b>male</b> sport. <sup>f</sup>	Lesbian	5	4.35 $\pm$ 1.00 (1–5)	4.47 $\pm$ 0.87 (3–5)	4.46 $\pm$ 1.12 (1–5)
	Gay	5	4.04 $\pm$ 1.29 (1–5)	4.47 $\pm$ 0.87 (3–5)	4.50 $\pm$ 1.07 (1–5)
	Bisexual	5	4.14 $\pm$ 1.20 (1–5)	4.47 $\pm$ 0.87 (3–5)	4.46 $\pm$ 1.09 (1–5)
	Transgender	5	4.03 $\pm$ 1.26 (1–5)	4.47 $\pm$ 0.87 (3–5)	4.45 $\pm$ 1.11 (1–5)
	Queer	5	4.11 $\pm$ 1.20 (1–5)	4.47 $\pm$ 0.87 (3–5)	4.47 $\pm$ 1.11 (1–5)
Rate your level of agreement with the statement: It is appropriate for an AT who identifies as _____ to provide health care to a <b>female</b> sport. <sup>f</sup>	Lesbian	5	4.09 $\pm$ 1.26 (1–5)	4.47 $\pm$ 0.87 (1–5)	4.55 $\pm$ 0.97 (1–5)
	Gay	5	4.37 $\pm$ 0.99 (1–5)	4.47 $\pm$ 0.87 (1–5)	4.55 $\pm$ 0.99 (1–5)
	Bisexual	5	4.16 $\pm$ 1.19 (1–5)	4.47 $\pm$ 0.87 (1–5)	4.55 $\pm$ 0.99 (1–5)
	Transgender	5	4.05 $\pm$ 1.27 (1–5)	4.47 $\pm$ 0.87 (2–5)	4.53 $\pm$ 0.99 (1–5)
	Queer	5	4.13 $\pm$ 1.21 (1–5)	4.47 $\pm$ 0.87 (1–5)	4.55 $\pm$ 0.99 (1–5)

Abbreviations: AT, athletic trainer; LGBTQ, lesbian, gay, bisexual, transgender, or queer.

<sup>a</sup> Instrument is reproduced in its original format.

<sup>b</sup> Pairwise statistical difference between those who were Christian and those who were not practicing.

<sup>c</sup> Scale: 1 = *definitely not*, 2 = *probably not*, 3 = *might or might not*, 4 = *probably yes*, 5 = *definitely yes*.

<sup>d</sup> Scale: 1 = *extremely uncomfortable*, 2 = *somewhat uncomfortable*, 3 = *neither comfortable nor uncomfortable*, 4 = *somewhat comfortable*, 5 = *extremely comfortable*.

<sup>e</sup> Pairwise statistical difference between those who were Christian and those who were non-Christian.

<sup>f</sup> Scale: 1 = *strongly disagree*, 2 = *somewhat disagree*, 3 = *neither agree nor disagree*, 4 = *somewhat agree*, 5 = *strongly agree*.

Similarly, participants who had previous interaction with an LGBTQ AT were more likely to seek out health care from an AT who identified as lesbian ( $\chi^2_2 = 43.580$ ,  $P < .001$ ), gay ( $\chi^2_2 = 33.247$ ,  $P < .001$ ), bisexual ( $\chi^2_2 = 42.413$ ,  $P < .001$ ), transgender ( $\chi^2_2 = 38.046$ ,  $P < .001$ ), or queer ( $\chi^2_2 = 41.422$ ,  $P < .001$ ). The same participants also felt more comfortable approaching an AT who identified as lesbian ( $\chi^2_2 = 44.443$ ,  $P < .001$ ), gay ( $\chi^2_2 = 31.231$ ,  $P < .001$ ), bisexual ( $\chi^2_2 = 42.330$ ,  $P < .001$ ), transgender ( $\chi^2_2 = 33.466$ ,  $P < .001$ ), or queer ( $\chi^2_2 = 33.898$ ,  $P < .001$ ) than participants who had not had a previous interaction or were unsure (Table 5).

Religion affected whether student-athletes would be willing to seek care from an AT who identified as lesbian ( $\chi^2_2 = 25.527$ ,  $P < .001$ ), gay ( $\chi^2_2 = 16.790$ ,  $P < .001$ ), bisexual ( $\chi^2_2 = 17.882$ ,  $P < .001$ ), transgender ( $\chi^2_2 = 20.515$ ,  $P < .001$ ), or queer ( $\chi^2_2 = 15.233$ ,  $P < .001$ ; Table 6). In addition, religion affected their perception of comfort with seeking care from an AT who identified as lesbian ( $\chi^2_2 = 38.871$ ,  $P < .001$ ), gay ( $\chi^2_2 = 26.694$ ,  $P < .001$ ), bisexual ( $\chi^2_2 = 30.541$ ,  $P < .001$ ), transgender ( $\chi^2_2 = 30.844$ ,  $P < .001$ ), or queer ( $\chi^2_2 = 25.718$ ,  $P < .001$ ; Table 6). Participants who identified as not practicing were more likely to seek health care from an LGBTQ AT than their religious counterparts, and Christians were less comfortable

than non-Christians and nonpracticing participants seeking care from an LGBTQ AT (Table 6).

## QUALITATIVE RESULTS

The feedback from the open-ended questions provided significant insight into student-athletes' perceptions of ATs who identified as LGBTQ. Four major themes emerged: professionalism, upbringing, situational concerns, and concerns about specific populations.

### Professionalism

The first major theme supported the overall positive responses to the matrix questions. Student-athletes recognized that ATs are health care providers and have high standards of professionalism. Participants were more interested in working with the most qualified AT who could provide them with the highest quality of care, regardless of sexual orientation. They recognized that education, experience, and knowledge were more influential in an AT's skill set than sexual orientation or identity. One individual stated, "They [LGBTQ ATs] are no different than a heterosexual AT. They went through the same exact degree program and training; their sexuality has nothing to do with how well they perform as an AT."



## Upbringing

The second major theme was the student-athletes' upbringing, which can be divided into 2 subthemes. The first subtheme was the factors of the student-athletes' upbringing that contributed to more inclusive and accepting responses regarding ATs who identified as LGBTQ: growing up in a diverse city or community, personally identifying as LGBTQ or having a close friend or family member identify as LGBTQ, and growing up in an accepting environment that limited the judgment of others. A participant demonstrated this theme by saying, "I was raised to understand that I am to love and appreciate people as human, not for their sexual orientation or preference. If I need medical assistance, or help from a [athletic] trainer, how they present themselves does not alter my opinion of them, nor does it cause me to not pursue treatment and or medical assistance. Be kind to one another!"

Conversely, the second subtheme included factors of the student-athletes' upbringing that led to more exclusive views of the LGBTQ community: the morals and values with which the student-athlete was raised that may or may not have been directly linked to religion. Another participant demonstrated similar beliefs in commenting, "There's 2 genders and there's 1 sexuality. This world was started on heterosexuality and it is completely [expletive] backwards to be homosexual. It goes against all morals and values that our previous generations had." In addition, a lack of personal interaction with the LGBTQ community during the student-athlete's upbringing led to less inclusive views. For example, a participant demonstrated this idea specifically regarding transgender individuals by noting, "I would be comfortable around LGBQ people, but transgender people are still so unfamiliar to me. I do not think they would have any difference in skill compared to anybody else, but rather it would just make me personally uncomfortable to be around them."

## Situational Concerns

Student-athletes indicated there could be specific injuries, examinations, or situations in which they might feel uncomfortable with an AT who identified as LGBTQ. These concerns extended to injuries involving the genitalia or sensitive areas such as groin injuries. A participant stated, "For issues that are near female genitalia (ex[ample], groin), I would be most comfortable seeking assistance/help from an AT who would not be sexually attracted to me (so in this case, it would be a straight female for me). But it is nothing against the LGBTQ community; I am totally comfortable with them and for other issues. I do not care who would give me the health care I need." Many of the student-athletes felt similarly about a heterosexual AT of the opposite sex. The general idea was that the student-athletes would prefer someone who was not sexually attracted to them when treating injuries in sensitive areas.

## Specific Populations

In general, student-athletes had positive views of ATs who identified as LGBTQ; however, there was uncertainty regarding individuals who identified as transgender and gay men. Student-athletes felt that there was no difference in

skill for ATs who identified as transgender as compared with anything else, but they were unsure of how comfortable they would feel. Most of the student-athletes attributed the uncomfortable feeling to a lack of previous interaction with individuals who identified as transgender. For example, a participant indicated, "Sexual orientation does not bother me, but I have not been around many transgender people and I am not sure how I would react." Finally, student-athletes were somewhat uncertain in regard to gay men as well. A male participant was hesitant to work with a gay (male) AT by saying, "I feel as though as a male it would make me feel uncomfortable if I received treatment from a male who is attracted to males. If I received treatment from a woman attracted to another women it would not affect me because I would not feel as though they might be attracted to me. However, if I received treatment from a male who is attracted to a male I would be hesitant to let them perform treatment on some areas of my body."

## DISCUSSION

The acceptance of individuals who identify as LGBTQ has increased in recent years.<sup>7,20</sup> On June 26, 2015, the US Supreme Court legalized same-sex marriage throughout the country, which constituted a landmark achievement for the LGBTQ community.<sup>7,20</sup> Although recent events have increased the recognition, protection, and legal rights of the various LGBTQ populations, discrimination and disparities still exist.<sup>8</sup> Specifically, the athletic realm is a complex and heterosexist culture,<sup>9,10</sup> and little research is available regarding student-athletes' perceptions of LGBTQ ATs.

## Comfort

We explored the perceptions of student-athletes regarding receiving health care from ATs who identified as LGBTQ. Our study was unique in that student-athletes were asked to rate the appropriateness of, quality of care from, and level of comfort with health care from an AT who identified as LGBTQ. Previous authors<sup>7</sup> have examined the perceptions of ATs providing care to student-athletes who identified as lesbian, bisexual, or gay; however, no researchers have determined student-athletes' perception of LGBTQ ATs. Our aim was to close this gap in the literature. In general, student-athletes were accepting of receiving health care from LGBTQ ATs. Our quantitative results were consistent with those of earlier investigators,<sup>7</sup> who found that sexual orientation, religion, and personal connection each played a role in comfort. Our qualitative feedback was also consistent with previous findings<sup>21–23</sup> that a person's upbringing and preferences had an effect on his perception of LGBTQ individuals.

## Previous Interactions and Relationships

Our findings are also consistent with previous research<sup>6,7,20,22</sup> showing that individuals with a personal connection to someone who identified as LGBTQ had more positive attitudes than those individuals without a personal connection. In addition, an individual with a previously negative or indifferent view of gays and lesbians can change to a more positive view through positive interac-



tion.<sup>22</sup> Personal connection is a better predictor of attitudes toward LGBTQ individuals than any other demographic or social psychological variable.<sup>24</sup> Individuals with positive attitudes tend to be more inclusive.<sup>25</sup>

The exact mechanism for increases in positive attitudes and inclusivity toward LGBTQ individuals remains uncertain; however, increased familiarity seems to have an influence.<sup>25</sup> One study<sup>22</sup> indicated that being close to someone who was gay or lesbian encouraged the heterosexual individual to become more involved with gay rights concerns. In addition, attention to LGBTQ individuals has risen in recent years, including increased legislation to protect LGBTQ individuals,<sup>7,20</sup> the presence of LGBTQ individuals in media,<sup>25</sup> Pride parades,<sup>22</sup> gay rights movements,<sup>22</sup> and television shows portraying gay and lesbian individuals as likable and relatable characters.<sup>22</sup> All of these factors may affect LGBTQ individuals “coming out” and attitude changes in heterosexual individuals due to familiarity.<sup>25</sup>

## Upbringing

The qualitative feedback revealed information that was consistent with previous research<sup>23</sup> involving characteristics of the student-athlete’s upbringing that affect his perception of LGBTQ individuals. Geographic location has an effect on an individual’s perceptions.<sup>23</sup> In the South and Midwest, LGBTQ individuals tend to be more marginalized, and individuals from rural communities who are not closely connected to a nearby metropolitan area experience higher levels of intolerance and stigmatization.<sup>23</sup> These negative views have been attributed to a general lack of diversity, greater concentrations of individuals with conservative values regarding sexuality and gender roles, and religious beliefs that condemn and stigmatize homosexuality and gender nonconformity.<sup>23</sup>

In addition, young adults or college-aged individuals often have similar beliefs as their parents or guardians. Education and religion influence how a person feels about homosexuality.<sup>22</sup> Higher levels of education were associated with favoring of minority rights, whereas individuals who regularly attended religious services more than once a week were typically opposed to homosexuality.<sup>22</sup> Our results support those of another researcher<sup>6</sup> who found a correlation between perceptions of LGBTQ individuals and religion. Individuals who believed in Christianity had less favorable perceptions of individuals who identified as LGBTQ. Individuals who were raised in certain geographic locations or in accordance with traditional Christian beliefs likely carry those ideals throughout their lives and may be less willing to seek health care from an LGBTQ AT.

## Selection of Health Care Providers

Another qualitative theme from our results revealed concepts that were similar to those from previous research<sup>13</sup> regarding Division I football players’ perceptions of female ATs in the athletic training clinic. Both studies showed that student-athletes recognized ATs had the same level of education and background and, in general, did not have a preference on ATs for the majority of injuries.<sup>13</sup> However, in both studies, the student-athletes had a preference for treatment in regard to sex-related or gender-specific injuries.<sup>13</sup> This preference was not related to perceptions

of lack of experience or competence but rather personal preference and comfort.<sup>13</sup>

Unlike other health care settings, athletes often perceive they have little choice in their health care provider. In traditional athletic training models, an AT is assigned to a sport and the athletes who participate in that sport are expected to report to that AT. Oftentimes, a patient does not perceive that he can choose to obtain medical care from another AT. This is dissimilar to the circumstances with other health care providers or facilities. Typically, when a patient is not satisfied or does not feel comfortable with a health care provider, he can access another provider in a different organization. Athletic training clinics should provide student-athletes with the knowledge of inclusivity—they are free and welcome to access any health care provider within the athletic training clinic—to not only empower them to be active players in their own health but also ensure they feel as comfortable as possible with their health care experiences.

Although statistically significant differences occurred between our groups for interpersonal connection, religion, and sexual orientation, these are likely not meaningful differences. The differences in the mean values for each group, with the exception of interpersonal connection with a family member or friends, were less than 1 Likert point. A meaningful difference was evident between those who had a previous interaction with LGBTQ family or friends for appropriateness, quality of care, and level of comfort regarding health care from an LGBTQ AT. However, the participants held inclusive views of ATs who identified as LGBTQ.

## Limitations

Present in this study were a number of limitations that were a product of restricted access to the target population. Given the lack of access, determining an accurate response rate was difficult; the survey was first sent to an intermediary at each NCAA institution before potentially reaching the participants. It is also difficult to assess whether the sample size was truly random given the perceived importance of the topic by either the survey recipient or the intermediary at each NCAA institution. Self-selection is an inherent limitation of survey research.

By using *transgender* as an umbrella term, we neglected to address the participants’ perceptions for male-to-female and female-to-male transgender ATs for each of our outcome variables. Participants may have had different perceptions regarding male-to-female transgender individuals and female-to-male transgender individuals. This may be particularly apparent in the question regarding the appropriateness of an LGBTQ AT providing care to male and female sports.

Although we analyzed the role of religion in our study, we did not ask participants to describe the strength of their relationship with that religion, often termed *religiosity*.

## CONCLUSIONS

In general, these NCAA student-athletes had positive perceptions of ATs who identified as LGBTQ. The student-athletes perceived that it was appropriate for LGBTQ ATs to provide health care to athletes regardless of the gender of the sport. In addition, student-athletes indicated that they

would seek health care and felt comfortable approaching ATs who identified as LGBTQ. Finally, student-athletes did not expect a difference in the quality of health care between a heterosexual AT and an AT who identified as LGBTQ.

Several factors affected the student-athletes' perceptions. In general, student-athletes who were heterosexual or religious or did not have a close family member or friend who identified as LGBTQ had different perceptions compared with nonreligious student-athletes who were LGBTQIAP had a personal connection to a LGBTQ person. These differences were statistically significant but not meaningful. Our results support the recent increase in acceptance of LGBTQ individuals that has been demonstrated by other investigators.<sup>7,20</sup> However, we still have concerns about the rates of acceptance regarding gay men and individuals who identified as transgender. The NCAA's commitment to diversity and inclusion in conjunction with recent legislation appear to be improving perceptions of ATs who identify as LGBTQ.

Future authors on this topic should seek to better understand how negative perceptions of LGBTQ ATs might alter the patient's perceived access to quality care as well as the LGBTQ AT's ability to treat a patient who holds negative perceptions. Furthermore, we also need research that continues to explore the intersection between sports and athletic health care.

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