

# The WNBA and Athletic Performance Based on Sexual Orientation

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**Abstract:** There is more sexuality diversity in women's sports than in men's sports. This makes the Women's National Basketball Association (WNBA)one of the only sports where a comparison of athletic performance based on sexuality is possible. Sex differences in athletic performance emerge during puberty, due in part to increases in circulating testosterone in men. Research has also found that lesbians and bisexual women have more testosterone than straight women. Thus, it is possible that there are differences in women's athletic performance based on sexual orientation. In this study, we used publicly available information to determine the sexual orientation of current WNBA players and compared performance statistics based on sexuality. Results showed that lesbian guards are more accurate shooters with a significantly higher field goal percentage than straight guards, and, regardless of position, lesbian players averaged more assists per game. Aside from these findings, overall performance was similar regardless of athletes' sexual orientation. We argue that no athlete should be discounted based on sexual orientation, whether straight athletes in women's sports.

Keywords: WNBA, sexual orientation, lesbian, sports, sex differences, testosterone

**Abbreviations:** Women's National Basketball Association (WNBA), Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ), National Basketball Association (NBA), Most Valuable Player (MVP), Greatest of All Time (GOAT), National Collegiate Athletic Association (NCAA)

"I can't say how many players are gay, but it would be easier to count the straight ones." – Retired WNBA Player Sue Wicks (Village Voice, 2000)

## **1. INTRODUCTION**

The Women's National Basketball Association (WNBA) uniquely captures the dreams of Title IX in showcasing the prowess/potential of female athletes, as well as the goals of the Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ) movement in embracing the inclusion of non-heterosexual athletes. In fact, the WNBA is the first professional sports league to publicly market itself to the LGBTQ community (Bonesteel, 2014). The WNBA's inclusion of known non-heterosexual female athletes (heretofore referred to as lesbian) compared to known non-lesbian athletes (heretofore referred to as straight) allows for a comparison that is currently improbable to do in any other professional sport: performance differences based on sexual orientation.<sup>1</sup>

The difference in the sexual orientation ratios between the WNBA and the National Basketball Association (NBA) highlights a profound sex difference in sports. There is no comparable pattern in men's collegiate or professional sports. There has never been a gay most valuable player (MVP) in the history of the NBA. Half of the NBA's MVPs & Final Four MVPs have not been gay men. Most of the Olympic Men's Team are not gay men. And currently, "there is not an active openly gay player in the NBA or any of the other American major male professional leagues: the National Football League, Major League Baseball, and National Hockey League" (Reimer, 2014). In fact, so far there

<sup>&</sup>lt;sup>1</sup> The shorthand terminology of *lesbian* and *straight* is due to the acknowledgment that we are only able to determine if an athlete is not-straight or not-lesbian, but we are unable to determine if an athlete is bisexual, pansexual, etc.

have only been two NBA players who have openly come out as gay. This includes John Amaechi in 2007 (Zeigler, 2007) and Jason Collins in 2013 (Reimer, 2014). Since Collins in 2013, there has been no NBA player who has openly come out (Reimer, 2014).

The acclaimed greatest of all time (GOAT) of men's basketball, Michael Jordan, is not gay, but the GOAT in women's basketball, Diana Taurasi, is lesbian (Cash, 2020; Hogan, 2017; Outsports, 2021).<sup>2</sup> In fact, her former teammate and wife, Penny Taylor (bisexual), and her former teammate, Cappie Pondexter, were a dominant lesbian trio in the sport for several years, starting a dynasty that gave Taurasi 3 rings. Moreover, the NBA, a sport that has been known for having *Big Three* dynasties (Boston Celtics 2007-2012, Miami Heat 2010-2014, Golden State Warriors 2014-2019, San Antonio Spurs 2000-2016) in recent years, has never had a publicly known gay male trio in the entirety of its history.<sup>3</sup>

Consider the following set of comparisons between lesbians and straight women in the National Collegiate Athletic Association (NCAA) Division-1 College Basketball, the WNBA, and the Olympics. There have been a total of 22 dunks in the history of the WNBA, and straight females account for less than half of them (Mitzel, 2020). In 2016, the United States Women's Basketball Team won an Olympic Gold Medal with a team consisting of mostly lesbians. In fact, 8 out of the 12 women that were in this team have since confirmed their sexuality as a lesbian to the press and public. This includes Elena Delle Donne, Brittney Griner, Seimone Augustus, Angel McCoughtry, Sue Bird, Diana Taurasi, Elena Delle Donne, and Breanna Stewart.<sup>4</sup> And this is subject to change as some of the team members might not feel comfortable coming out as of yet or there may be changes in their sexuality as time passes. In the 2010s, 6 of the Women's College Basketball Most Outstanding Player awards were given to lesbian athletes, 1 player was straight, and 2 players had unknown identities (March Madness was canceled in 2020 due to the COVID-19 Pandemic, so only 9 years are reported between 2011 and 2020) (Wikipedia, 2021). Among all the teams that won the WNBA Finals within this same time period, four straight women, four lesbian women, and one woman whose sexual orientation is unknown, have won Finals MVP (WNBA, 2022). The player with the most championship rings in WNBA history, Rebekkah Brunson with 5, had a daughter with her wife in 2018.

It is noteworthy that this sex difference in the proportion of non-heterosexual athletes has been found in other athletic arenas. For instance, there were 40 publicly out lesbian and bisexual women participating in the 2019 Soccer World Cup (Villarreal, 2019). In line with the aforementioned patterns in the WNBA, the two soccer teams with the most lesbian and bisexual women (United States of America 5 players; Netherlands 5 players) ended up making it to the championship game (Villarreal, 2019). The team that won gold, the USA, also has a lesbian head coach. There is a similar coaching story in the WNBA. Coach Cheryl Reeve of the Minnesota Lynx has been with her wife Carley since 2011, and she spent the 2010s becoming the most successful coach in the history of women's professional basketball. Suffice it to say, women's sports have more publicly presented sexual orientation diversity than men's sports.

Previous research has reported differences in women's testosterone as a function of sexuality (Gartrell et al., 1977; Juster et al., 2016). For instance, Gartrell et al. (1977) found that the average concentration of testosterone was 38% higher in lesbians than straight women. Juster et al. (2016) found that "lesbian/bisexual women had higher overall testosterone and progesterone concentrations than heterosexual women." Sexuality aside, heterosexual women with higher testosterone outperform heterosexual women with lower testosterone in skiing (Manning et al., 2002), fencing (Voracek et al., 2010), college tennis (Hsu et al., 2015), rowing (Hull et al., 2015), and Olympic bench press (Eklund

<sup>&</sup>lt;sup>2</sup> Some people may argue that Sue Byrd or Elena Delle Donne should be considered the Michael Jordan of women's basketball, but that does not matter because they are both non-heterosexual too. In fact, Diana Taurasi was honored as the Greatest Women's Basketball Player of All Time at the start of the 2021 WNBA Finals (Moriello, 2021).

<sup>&</sup>lt;sup>3</sup> Please see the following online report regarding publicly out gay male pro athletes: Reimer, A. (2020, February 24). Jason Collins: There's still 'fear' Among closeted NBA players about coming out. Retrieved February 07, 2021, from https://www.outsports.com/2020/2/24/21150859/jason-collins-interview-openly-gay-players-nba

<sup>&</sup>lt;sup>4</sup> Please see supplemental materials.

et al., 2020). Taken together, these studies provide evidence that testosterone levels are higher in lesbian than in straight women.

Given the performance differences associated with testosterone, and the consistent finding that lesbian and bisexual women have higher testosterone than straight women, we investigated the performance of straight and lesbian WNBA athletes during the 2019 regular season to determine if there were any performance differences based on sexual orientation. These differences in testosterone levels and concentrations may potentially lead to some on-the-court differences in their professional athletic performance based on sexual orientation. In the following review, we discuss research highlighting performative differences based on sex and sexual orientation.

# 2. LITERATURE REVIEW

## 2.1. WNBA and NBA Fans Are Not the Same

Women's sports have been considered places for the formation of lesbian communities on par with traditional LGBTQ safe spaces (Dolance, 2005; Ravel & Rail, 2007). Unfortunately, this has fed into stereotypes suggesting that most of the fans at WNBA games are lesbian, as well as most of the sport's players and coaches (Muller, 2007). Though it is true that there is a higher proportion of LGBTQ who participate in women's sporting events (whether as fans or athletes) than in almost any other sphere of public consumption, it is far from being a majority. In fact, the WNBA "commissioned a study in 2012 that found that 25% of lesbians watch the league's games on TV while 21% have attended a game" (Associated Press, 2014). Of the 12 coaches in the WNBA, only 4 of them are women (a sex difference between the NBA and WNBA worthy of its own investigation). In regard to players, the present study found that ~38% of WNBA players are lesbian.

While we hope that these breakdowns dissuade overgeneralizations of the WNBA as a majority lesbian league, the proportion of LGBTQ supporters and participants highlights the unique inclusivity of women's professional sports. From the standpoint of intersectionality, lesbians are at risk for double discrimination in the general public sphere (as women and as non-heterosexuals) (Lenskyj, 1991). However, in the unique sphere of professional sports, the playing field seems effectively leveled for lesbians relative to straight women.

# 2.2. Sex Diversity

Some may argue that female basketball players are more likely to identify as lesbian because they are around women most of the time. Aside from the tired, harmful, and otherwise unscientific cognitions behind that notion, is the fact that women practice with men on a regular basis. In fact, "*starting back in the 1970s*", the late Coach Patricia Summitt "*was evidently the first coach of a high-powered women's team to have guys practice against her first string*" (Nyad, 2007). As Diana Nyad (2007) explains in the article, female tennis players "*have male hitting partners*" to practice against as "*any women they would choose to practice with would not be as good as they are.*" Moreover, women are far more likely to have head coaches of the opposite sex than men (there are no female head coaches in the NBA or men's Division-1 NCAA Basketball). If anything, men are in a mono-sex environment as they primarily have men as coaches and during practice (women practice against men but men do not practice against women) (Nyad, 2007). Thus, if the lack of exposure to the opposite-sex had *any* influence on someone's sexual orientation, then we should see countless men coming out as non-heterosexual in the NBA.

# 2.3. Performance Differences Based on Sex and Sexuality

Decades of research have assessed physical differences and performance differences between biological men (XY) and women (XX). For example, on average, men tend to be taller than women (NCD Risk Factor Collaboration, 2016), weigh more than women (Loomba-Albrect & Styne, 2009), have greater upper body strength (Lassek & Gaulin, 2009), display more accuracy when throwing (Jardine & Martin, 1983), and testosterone is 10-15 times higher in men than women following puberty (Handelsman & Sikaris, 2016). In fact, "even when [female] testosterone is pathologically raised in polycystic ovarian syndrome the values are still a fraction (~1/20th) of that observed in males" (Nelson et al., 2020, p. 2). This puberty-specific onset of testosterone asymmetry is particularly consequential for men's and women's increasing difference in sports performance during adolescence; a difference that is maintained through adulthood (Handelsman, 2017).

Given that lesbians and bisexual women have higher testosterone than straight women, it is worth considering potential performance differences between lesbians and straight women (Gartrell et al., 1977; Juster et al., 2016). A few lines of research have already documented performance differences based on sexuality. For instance, lesbians and bisexual women outperform straight women on mental rotation tasks (Zheng et al., 2018). Lesbians have wider hands than straight women, on average (Martin & Nguyen, 2004); a difference that may be consequential for a game like basketball. Thus, we proposed the following hypotheses:

#### Hypothesis 1: Regular Season Statistics

We predicted that there would be differences between lesbians and straight females in multiple regular seasons statistics. Next, we considered if any of the differences between lesbians and straight women may be consequential to their performance as professional athletes.

## 2.4. Weight

In the general population, lesbians and bisexual women have greater relative body weight than heterosexual women, and men weigh more than women (Diamond, 2007; Sabia et al., 2017; Singh et al., 1999). Men lose weight faster than women (Millward et al., 2014) because testosterone promotes weight loss (De Maddalena et al., 2011; Xu et al., 2005) and estrogen promotes weight preservation (O'Sullivan et al., 2001). Lesbians have higher circulating testosterone than straight women, and testosterone promotes more abdominal fat deposits (Björntorp, 1991b; Blair & Hoskin, 2015, 2016; Lehavot et al., 2012; Lovejoy et al., 2009; Singh et al., 1999). In contrast, estrogen inhibits abdominal fat deposits and promotes gluteofemoral fat deposition, which creates the waist-hip ratio in straight women. Thus, it may be the case that lesbian athletes weigh less than straight female athletes. Thus, we proposed the following hypothesis:

#### Hypothesis 2: Player Profiles

We predicted that lesbians would weigh less than straight women. We do not expect there to be a significant difference in age or height. Given that lesbians have higher testosterone than straight women and testosterone promotes weight loss, lesbians should have a lower overall body weight.

#### 2.5. Testosterone

The androgen response to victory is a *context- dependent social experience*, making it more potent following a victory in a familiar (home) environment where social encounters with amicable individuals are more likely (Fuxjager et al., 2010). Previous studies have found a similar effect, where having home-court advantage confers a testosterone boost for the home team players (Neave & Wolfson, 2003). Considering the diversity of sexual orientation within the WNBA, the effect of home court advantage may produce a differential androgen response between straight and lesbian players. To the degree that lesbians have more testosterone than straight women, it may be the case that lesbians' athletic performance is affected more by home court advantage. Thus, we proposed the following hypothesis:

## Hypothesis 3: Home vs. Away Games

Consistent with Jamieson (2010), we predicted that players would be more victorious in home games than in away games, and that lesbians' performance would differ the most based on location.

In summary, while this study is largely exploratory in nature, it is reasonable to consider whether differences in testosterone, hand size, weight, and other factors lead to differences in the athletic performance of WNBA players as a function of sexual orientation.

## **3. METHOD**

Archival data of the 2019 WNBA regular season were obtained from the WNBA's website (wnba.com/stats/player-stats/), which provides various team and player statistics. In instances where a player was injured for most or all of the 2019 season, their 2018 season statistics were used instead. The data extracted reflect all of the core statistics in basketball, such as: points per game, rebounds (including offensive and defensive), assists, turnovers, blocks, steals, personal fouls, field goal percentage, three-point percentage, free-throw percentage, minutes per game, and what position(s) the athlete plays. Athletes' biometric information was extracted for their age, weight, and height. Advanced analytics were collected for athletes' plus/minus ratio (overall efficiency).

Data pertaining to players' sexuality was obtained from published news articles, ESPN broadcasts (specifically in instances where a commentator discussed how happy they were for an athlete and her wife), and social media sites (Twitter, Instagram, Tumblr, Weibo, and Facebook). Sexuality was operationalized by investigating previous/current relationships. Overall, we were able to code 111 players (63 lesbian and 48 straight) who participated in the 2019 WNBA regular season based on sexual orientation.<sup>5</sup> Athletes whose sexuality was unknown were not coded and were not included in the analyses. All data were analyzed with SPSS. The criterion for significance was .05 for all analyses.

#### 4. **RESULTS**

#### **4.1. Player Profile Statistics**

A univariate analysis of variance found a main effect of sexuality for weight, F(1, 106) = 8.14, p = .005 (Mean Square Error = 536.07). Weight was significantly higher among straight females (M = 177.15) than among lesbians (M = 164.33). Only a marginal effect was found for height, F(1, 107) = 3.45, p = .066 (Mean Square Error = 12.28). Straight women (M = 72.81 inches) were marginally taller than lesbians (M = 71.56). The descriptive statistics based on sexual orientation are presented in Table 1.

Table1. 2019	<b>WNBA</b>	player	profiles	by Sexuality
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	Straight	Lesbian
	Mean	Mean
Weight (lbs)	177.09	165.16
Height (in)	72.75	71.59
Age	27.45	29.89

#### 4.2. Performance Statistics

To test the exploratory hypothesis that there may be performance differences between nonheterosexual and straight women, we conducted a set of univariate ANOVAs for each regular season statistic. The descriptive statistics based on sexual orientation and position are presented in Table 2.

Table2. 2019	WNBA regular	r season statistics	by Sexu	ality and Role
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		Guard	Forward	Center
		Mean	Mean	Mean
MIN	Straight	18.21	20.83	22.98
	Lesbian	21.73	23.37	20.12
PTS	Straight	6.48	8.41	10.14
	Lesbian	8.59	10.77	9.08
FG%	Straight	36.21	46.09	46.76
	Lesbian	40.03	43.42	47.58
3-Point %	Straight	32.1	28.97	24.54
	Lesbian	33.02	25.92	26.66
FT%	Straight	75.85	80.52	72.03
	Lesbian	81.51	74.18	79.04
AST	Straight	2.16	1.42	1.55
	Lesbian	2.86	1.82	1.28
REB	Straight	2.49	4.67	5.80
	Lesbian	2.38	5.47	4.8
OREB	Straight	0.46	1.36	1.71
	Lesbian	0.44	1.48	1.28
DREB	Straight	1.85	3.34	4.10
	Lesbian	2.02	3.98	3.52
TOV	Straight	1.28	1.30	1.56
	Lesbian	1.53	1.46	1.48
STL	Straight	.72	.73	0.61
	Lesbian	.8	.99	0.54

<sup>&</sup>lt;sup>5</sup> According to our dataset, there were five players out due to injury.

#### The WNBA and Athletic Performance Based on Sexual Orientation

BLK	Straight	.24	0.61	.81
	Lesbian	.21	0.79	1.06
PF	Straight	1.81	2.08	2.18
	Lesbian	1.52	1.87	2.60
Plus-Minus	Straight	-1.15	1.12	36
	Lesbian	.3	1.69	-1.84

A univariate ANOVA found a main effect of sexuality on assists per game, F(1, 107) = 4.70, p = .032 (Mean Square Error = 2.50). Lesbians (M = 2.44) averaged more assists per game than straight women (M = 1.78). There was also a marginal effect for personal fouls per game, F(1, 107) = 3.60, p = .061 (Mean Square Error = .54). Lesbians (M = 1.70) committed marginally fewer personal fouls per game than straight women (M = 1.97). It is noteworthy that far more technical fouls were committed by lesbians (38) than by straight women (20) in the 2019 season (see Figure 1).

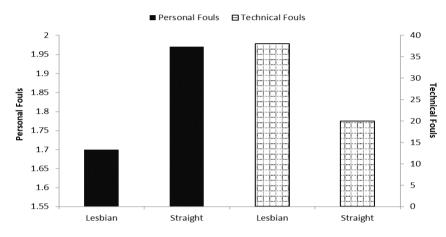


Figure1. Personal Fouls and Technical Fouls Based on Sexuality

#### 4.3. Position Statistics

Players were coded based on their specific position designations (e.g., guards, forwards, centers) to assess whether or not there were any sexuality-based differences in performance as a function of position.

For guards (point guards and shooting guards), a univariate ANOVA found a main effect for weight, F(1, 58) = 7.53, p = .008 (mean square error = 164.57). Consistent with the pattern for the league as a whole, weight was significantly higher among straight females (M = 160.48) than among lesbians (M = 150.95). Only a marginal effect was found for personal fouls per game, F(1, 56) = 3.25, p = .077. Lesbians (M = 1.49) committed fewer personal fouls per game than straight women (M = 1.85). In addition, there was a main effect of sexuality on field goal percentage, F(1, 58) = 5.98, p = .017 (mean square error = 33.93). Lesbians were slightly more accurate from the floor (M = 40.03%) than straight women (M = 36.21%) at the guard position (see Figure 2). No other differences were found among guards.

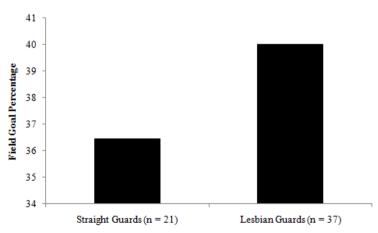


Figure2. Field Goal Percentage for WNBA Guards Based on Sexuality

For forwards (small forwards and power forwards), a univariate ANOVA found a main effect for weight, F(1, 33) = 4.65, p = .038 (mean square error = 123.05). Consistent with the pattern for the league as a whole, weight was significantly higher among straight females (M = 185.50) than among lesbians (M = 177.41) at the forward position. No other differences were found among forwards.

For centers, a univariate ANOVA found a main effect for weight, F(1, 11) = 4.97, p = .048 (mean square error = 301.79). In contrast to the pattern for guards, forwards, and the league as a whole, weight was significantly higher among lesbians (M = 224.20) than among straight women (M = 202.13) at the center position. No other differences were found among centers.

#### 4.4. Starters and Role Players

We coded players based on if they were starters or bench players. More than five starters were coded for a few teams who had regular starters injured during parts of the 2019 season. In those instances the sixth and seventh players in the regular rotation would fill in as starters.

A univariate ANOVA found a main effect for weight for bench players, F(1, 51) = 5.62, p = .022 (mean square error = 432.12). Consistent with the pattern for the league as a whole, weight was significantly higher among straight females (M = 176.40) than among lesbians (M = 164.40) coming off the bench. A subsequent univariate ANOVA found a main effect for assists for bench players, F(1, 52) = 9.20, p = .004 (mean square error = .51). Consistent with the aforementioned pattern, Lesbians (M = 1.44) recorded more assists per game than straight women (M = .84). A univariate ANOVA found a main effect of sexuality on playing time (measured in minutes per game) for starters, F(1, 53) = 4.42, p = .04 (mean square error = 11.05). Lesbians (M = 28.77) had more minutes on the court than straight females (M = 26.88). An analysis for bench players found a similar pattern, F(1, 52) = 4.08, p = .048 (mean square error = 30.13). Lesbians (M = 15.55) had more minutes on the court than straight females (M = 12.50).

#### 4.5. Home vs. Away Statistics

A dataset with the 2018 home and away statistics were compiled and coded based on athletes' sexual orientation. The year 2018 was used because some teams (at the time of this writing) did not have their full 2019 statistics available. There were 53 lesbian and 37 heterosexual women coded within this dataset.

A repeated measures analysis of variance was conducted with wins and losses at home and away games as the four within-subjects factors. As has been found in decades of sports research (Jamieson, 2010), there was a main effect indicating a home court advantage, F(3, 450) = 6.89, p < .001, (mean square error = 10.16). Bonferroni post-hoc comparisons revealed that players were more victorious in home games (M = 7.44) than in away games (M = 6.26; p < .001), and had fewer losses while playing at home (M = 6.15) than on the road (M = 7.30; p < .001).

We then conducted a mixed-model analysis of variance with sexuality as the between subjects factor and plus-minus (a measure of athletes' contribution to their team's success) for home games and away games as the within subjects factors. The analysis revealed a significant main effect for plus-minus ratings, F(1, 88) = 22.51, p < .001, (mean square error = 6.22), a significant main effect of sexuality, F(1, 88) = 4.80, p = .031, (mean square error = 26.82), and a marginal interaction effect, F(1, 88) =3.34, p = .071, (mean square error = 6.22). Post-hoc comparisons revealed that lesbians' performance in road games (M = .52) was significantly better than straight women's performance in road games (M = .1.89, p = .008), though performance was better at home for both straight women (M = .59, p < .001) and lesbians (M = 1.62, p = .025). (see Figure 3). The WNBA and Athletic Performance Based on Sexual Orientation

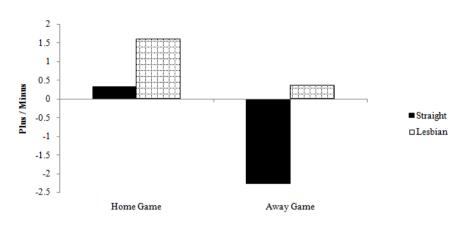


Figure3. Mean Differences in Plus/Minus for Home and Away Games Based on Sexuality

## 4.6. Supplemental Analysis: Ethnoracial Diversity

Though ethnoracial data was not the focus of our investigation, the WNBA is an ethnoracially diverse league, with 28 White players (n = 21 coded for sexuality; 15 lesbian), 110 Black players (n = 78 coded for sexuality; 43 lesbian), 9 multiracial players (n = 8 coded for sexuality; 2 lesbian), and a few players from Hispanic and East Asian backgrounds. Indeed, most White women in the WNBA are not heterosexual. Moreover, we find that the WNBA's White starters were more likely to be lesbian than Black starters in the 2019–2020 regular season,  $\chi 2$  (1, N = 50) = 3.84, p = .050.

# 5. DISCUSSION

The difference in sexual orientation diversity between the WNBA and any of the four major American men's sports leagues (Major League Baseball, National Basketball Association, National Football League, and National Hockey League) appears to be a significant sex difference. The proportion of non-heterosexual star players in women's sports relative to men's sports is a phenomenon worthy of additional investigation. In this archival study, we endeavored to discern the differences in performance between lesbians and straight women during the WNBA regular season.

Our findings on the effect of sexuality on weight do not match previous literature on weight differences between lesbians and straight women, which consistently finds that lesbians, on average, have greater relative body weight than straight females (Diamond, 2007; Sabia et al., 2017; Singh et al., 1999). This finding is plausible if we consider a few reliable patterns in the extant literature regarding sex, testosterone, sexuality, and weight loss. If men lose weight faster than women as a result of testosterone, and lesbians have more testosterone than straight women, it logically follows that lesbians may lose weight faster than straight women. Consistent with research regarding height and sexuality, we found no differences in height based on athletes' sexual orientation.

There have been growing concerns regarding the testing of testosterone as a prerequisite for individuals who wish to compete in women's sports. While such policies and procedures have largely focused on the transgender population, such invasive tests may impact sexual minorities as well. In the absence of any systematic superiority in performance among lesbians that was prohibitive of hopeful straight female athletes, such tests should never have a basis for determining the eligibility of athletes on the basis of their sexual orientation.

Indeed, across a majority of statistical categories we found that there were no differences in on-thecourt performance on the basis of sexual orientation. The only difference that emerged significantly for the league as a whole was that lesbians commit fewer personal fouls. Other findings were position specific. For instance, lesbian forwards record marginally more assists and steals per game. Additionally, lesbian guards are more accurate shooters in overall field goal percentage than straight women. Thus, while there were a few position specific differences, we saw nothing to suggest that lesbians have an advantage on the court over straight women. Thus, while it may be the case that roughly half of the WNBA's star players are non-heterosexual women, it is also the case that the other half of its stars are straight women.

## 6. LIMITATIONS

While gathering data we were only able to code two thirds of the league for sexual orientation, since not every single player's information was readily available for public access. Similarly, some women

were injured in 2019, the year we mainly looked at, so we substituted their statistics with ones from the previous 2018 season. In addition, we have no information regarding which athletes may have been on birth control, or which athletes had children, and what influence (if any) that may have on performance across sexual orientation.

Further, we were unable to discern whether or not someone is bisexual based on the information available to us via social media. All we were able to say for sure was that particular athletes either were not heterosexual or were not lesbian. This is relevant given that lesbians have a more masculine personal identity relative to straight women (Reiger et al., 2016), whereas bisexual women fall between lesbians and straight women (Lippa, 2007). Moreover, even among the women coded as lesbian, we were not able (nor did we feign an attempt) to categorize them as butch or femme. Recent research has documented that butch lesbians outperform femme lesbians on some tasks, and this may add a relevant comparative element to the current study (Zheng et al., 2011; Zheng et al., 2018). However, given that more lesbians identify as femme than butch, such an analysis between lesbians and bisexual women in the WNBA may not deviate much from the current findings (Bailey et al., 1997; Henrichs-Beck & Szymanski, 2017).

#### 7. CONCLUSION

To our knowledge, this is the first study to assess professional athletic performance differences between athletes based on sexual orientation. As the present research reveals, the performance of female athletes is relatively similar across sexual orientation. As for the finding that lesbians have garnered more accolades and have been part of more dynastic teams, it may be the case that there is more variability among lesbians than straight women; as is the case between chromosomal men and women in regards to variability in intelligence (Deary et al., 2003). Thus, just as there are more lesbians recognized as being among the greatest players in the WNBA, some of the worst performing players may also be lesbian. Overall, any regular season, game-by-game, performance differences based on sexual orientation (and the associations that sexual orientation may have with testosterone levels and hand size) are marginal to non-existent. Given that research has consistently found testosterone differences between lesbians and straight women to be greater than those between gay and straight men, the general ubiquity in performance found in this study should give pause to any commentators, scouts, coaches, general managers, and fans who question the potential of an athlete based on her or his sexual orientation.

#### 8. ACKNOWLEDGEMENTS

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