Representation of Male and Female NCAA Division 1 Athletes on Instagram

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Abstract

The climate of collegiate athletics has changed drastically over the last three years due to the new NCAA Name, Image, and Likeness Policy passed in July 2021. The debate on whether Title IX truly mandates an equal balance of men's and women's sports coverage is still highly polarized in the last decade. This study examines the representation of male and female collegiate athletes represented in the photographs of the NCAA Power Five Conferences' Instagram accounts. Findings in this study indicate that although male and female collegiate athletes' have similar promotional efforts through the Power Five Conferences' Instagram accounts, male athletes are highly overrepresented, suggesting there are inequalities by gender.

Introduction

The NCAA is a multimillion-dollar company that generated around 940 million dollars alone in 2022 from television and marketing rights.[1] College athletics are increasingly popular due to high media coverage on local television, newspapers, sports media platforms, national and digital sports sites, and social media. However, sports media tends to lean towards promoting male sports rather than female sports, especially within the sports broadcasting world.[2] This is a rising issue, specifically within collegiate sports, as the NCAA has received consistent negative attention for promoting more male collegiate sports than female collegiate sports; however, the issue is complex as the NCAA is a private actor not held to state regulations and Title IX laws.[3]

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[1] Christina Gough, "NCAA Revenue by Segment 2022," Statista, March 23, 2023, https://www.statista.com/statistics/219605/ncaa-revenue-breakdown/#:~:text=In%20the%202022%20financial%20year,from%20championships%20and%20NIT%20tournaments.

[2] Hans C. Schmidt (2018) Forgotten Athletes and Token Reporters: Analyzing the Gender Bias in Sports Journalism, Atlantic Journal of Communication, 26:1, 59-74, DOI: 10.1080/15456870.2018.1398014

[3] Kelley L. Flint, More Money, Fewer Problems: A Post-Alston v. NCAA Approach to Reducing Gender Inequities in Sports, 25 RICH. PUB. INT. L. REV. 153 (2022).

The NCAA is divided into conferences based on the regional location of schools, as well as the school's budget and size.[4] The Power Five Conferences generate the highest amount of revenue compared to other Non-Power Five Conferences and have the most significant impact on representing their athletes through social media.[5] The

Power Five

Conferences consist

of the Big Ten

(BIG10), Big Twelve

(BIG12), Atlantic

Coast Conference

(ACC),

Southeastern

Conference (SEC),
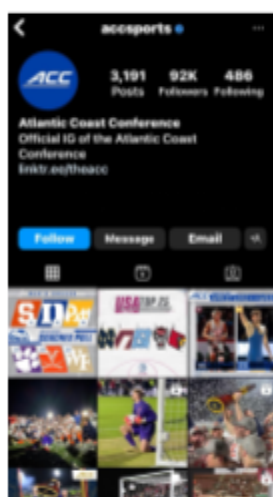
and Pacific 12

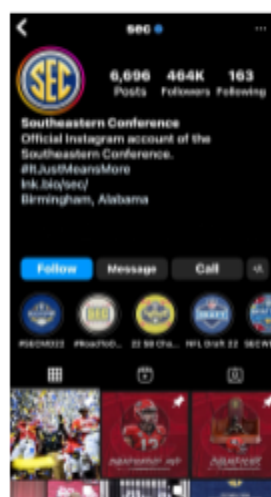Conference

(PAC-12). The

Power Five

Conferences' SMP(

Figure 1: Power Five Conference Instagram Accounts
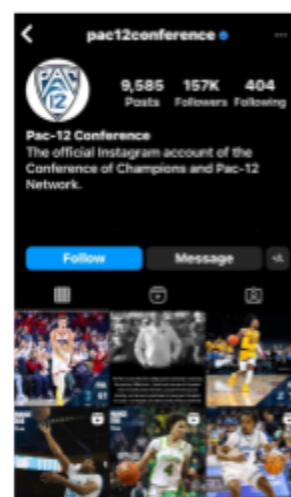
ACC Instagram Account

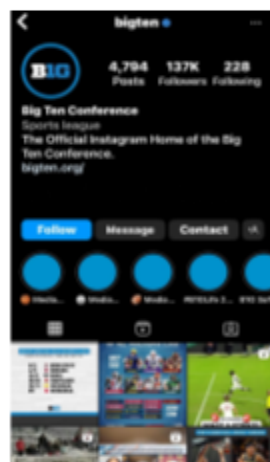Accsports.2022.Instagram, December 14th, 2022.

SEC Instagram Account

Pac12conference.2022.Instagram, December 14th, 2022.
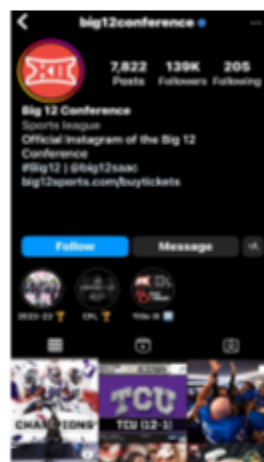
PAC-12 Instagram Account

Sec.2022.Instagram, December 14th, 2022.

BIG10 Instagram Account

Bigten.2022.Instagram, December 14th, 2022.

BIG12 Instagram Account

Big12conference.2022.Instagram, December 14th, 2022.

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[4]"The Different Levels of Collegiate Competition," StudentCaffe, accessed April 28, 2023, http://studentcaffe.com/enrich/collegiate-sports/levels-of-competition#:~:text=Each%20association%20has%20member%20colleges,conference%20compete%20against%20each%20other.

[5]Paula Lavigne, "Rich Get Richer in College Sports as Poorer Schools Struggle to Keep Up," ESPN (ESPN Internet Ventures, September 2, 2016), https://www.espn.com/espn/otl/story/_/id/17447429/power-5-conference-schools-made-6-billion-last-year-gap-haves-nots-grows.

social media platform) can reach thousands of fans, as seen in Figure 1, as the SEC Instagram alone has around 464 thousand followers. Therefore, with these Instagram accounts reaching thousands of followers, athletes, and sports posts receive increased media attention and increased possibilities to generate revenue. In July of 2021, the NCAA passed the Name, Image, and Likeness Policy, which allows collegiate athletes to compensate off on their name, and partner with brands to earn compensation.[6] The NIL is critical as collegiate athletes on social media can make money and earn brand deals.[7] Therefore, in this sports media landscape, not only is an athlete's presentation important on social media but also how their college athletic department represents them and conferences for athletes to gain media attention. Title IX has a continuing effect on how the NCAA conferences represent their athletes; because these conferences are made of private and public educational programs, media representation should be relatively equal.[8]

Guided by understanding the NCAA NIL Policy, Title IX, and the framing theory, this study examines the representation of male and female collegiate athletes on the Power Five Conferences' Instagram accounts. This study examines whether male and female college athletic Instagram posts have equitable promotional activities and are equally covered across the conference's Instagram.

<p style="text-align:center">Literature Review</p>

Title IX

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[6] NCAA.org. "NCAA Adopts Interim Name, Image and Likeness Policy." NCAA.org. NCAA.org, December 28, 2021. https://www.ncaa.org/news/2021/6/30/ncaa-adopts-interim-name-image-and-likeness-policy.aspx.
[7] Keith Bendes, "Council Post: Making Sense of College Influencers and the Nil Rule Changes," Forbes (Forbes Magazine, February 24, 2023), https://www.forbes.com/sites/forbescommunicationscouncil/2023/02/23/making-sense-of-college-influencers-and-the-nil-rule-changes/?sh=6bcceae66364.
[8] Flint, 3.

To understand the current climate of collegiate sports, it is essential to look at Title IX to help define "equality" within college sports. Equality within intercollegiate sports has significantly increased since 1972 with the passing of Title IX, which "prohibits any discrimination based on sex in education programs that receive federal money." [9] Since the passing of Title IX in 1972, the number of women in college sports has increased significantly. From 1968-2012 the number of women in college athletics jumped from 16,000 to 200,000.[10] According to the *Richmond Interest Public Law Review* in 2021, Title IX increased equality in college athletics; however, inequalities are still apparent. Even at the heavily competitive collegiate level, ¾ of women drop out of college sports, while only ½ of male athletes drop out.[11] Thus, looking at the representation of collegiate athletes on social media can be a good starting point for understanding if there is true equality within collegiate sports. Title IX Section 106.41 specifically mandates equal "publicity" between sexes within intercollegiate sports media. [12]

However, the relationship between NCAA and Title IX is highly complex. The NCAA is a private organization; thus, they are not legally bound to follow the regulations of Title IX.[13] Despite this, the NCAA prides itself on enforcing Title IX within its various college athletic departments and making sure there is no discrimination of sex.[14] The NCAA conferences must also mandate equality within athletic departments' representation of college athletes. Hence, it is essential to note whether the conferences comply with Title IX in promoting equal representation

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[9]Vivian R. Acosta, and Linda Jean Carpenter. "Woman in Intercollegiate Sport: A Longitudinal, National Study. Thirty-Seven Year Update, 1977-2014." *Acosta-Carpenter* (2014).

[10]Glenna G. Bower, and Mary A. Hums. "The impact of Title IX on career opportunities in intercollegiate athletic administration." *Journal of Intercollegiate Sport* 6, no. 2 (2013): 213-230.

[11] Flint, 17.

[12] "Title IX 1979 Policy Interpretation on Intercollegiate Athletics," Home (US Department of Education (ED), January 23, 2023), https://www2.ed.gov/about/offices/list/ocr/docs/t9interp.html.

[13] "Title IX Frequently Asked Questions," NCAA.org, accessed April 28, 2023, https://www.ncaa.org/sports/2014/1/27/title-ix-frequently-asked-questions.aspx#:~:text=Title%20IX%20applies%20to%20all,programs%20used%20by%20their%20students.

[14] "Title IX Frequently Asked Questions," NCAA.org.

within their SMPs. This study will help better understand whether the NCAA promotes compliance with Title IX to collegiate athletic departments and whether NCAA conferences represent their athletes equally.

Goffman's Framing Theory of Gender in Sports

Goffman's Framing theory is vital in understanding how female athletes may be misrepresented in the media. Paul D'Angelo at the College of New Jersey describes Goffman's Framing theory as studying how people refer to and interpret verbal and nonverbal communication. D'Angelo connected Goffman's theory of work to the importance of framing in journalism and how framing within the media can dictate how media presents situations or issues.[15] Therefore, current research on the representation of male athletes compared to female athletes examine the media framing as insight into the misrepresentation of female athletes. Within this study, the framing theory is applied to define the application of Instagram posts and how they are presented to viewers on Instagram.

Not only do female athletes receive a lack of media coverage, but their representation in the media is often framed to fit gender norms. In the media, female athletes are presented with "traditional female attributes," such as beauty, elegance, and grace.[16] Academic researcher Sarah Wolter from, *The Journal of Sports Media* states that ESPNW(ESPN for women's media coverage) is integral in better understanding female athletes' representation in the media. Wolter examines whether or not the purpose of ESPNW is positive or negative for female athlete representation. She argues that ESPNW was created to transfer the "coverage of female sports to

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[15]Paul D'Angelo,"Framing theory and journalism." *The international encyclopedia of journalism studies* 2002 (2019): 1-10.

[16]Amy Godoy-Pressland and Gerald Griggs. "The photographic representation of female athletes in the British print media during the London 2012 Olympic Games." *Sport in Society* 17, no. 6 (2014): 808-823.

a lesser site affiliated with ESPN. "[17] Research explores the framing of female athletes within the media and possible stereotypes hidden within the network's messaging.

Authors Smith, Sanderson, and Reichart in the, *The Journal of Broadcasting and Electronic Media* adds to Wolter's idea. The authors conclude that female athletes had more suggestive photos than male athletes. This study defines suggestive photos as those which display traditional gender norms.[18] Similarly, this concept of self-presentation is further researched among other professionals to determine how social media, specifically Instagram, has played a huge role today in male and female athletic representation. The Professional *Journal of Interactive Advertising* analyzes athletes' self-presentation; however, this article examines elite female athletes. This article describes female athletes who are underrepresented in the media and the impact of athletic branding. It also explores the connection between self-presentation and self-branding when interacting with supporters to gain attention on social media.[19] Unlike Smith, Sanderson, and Reichart's report, this article analyzes only female elite athletes to explain their shift towards using Instagram due to a lack of regular media coverage. Both articles help explain the significance of athletes' self-presentation on social media and how they develop their images. The above studies further the understanding of the framing of females in the media and the importance of how athletes present themselves.

Scholars argue that most female athlete underrepresentation stems from the effects of gender stereotyping. An article from *The Journal of Broadcasting and Electronic Media* analyzes the representation of Olympic athletes and compares how the U.S. and China represent athletes.

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[17] Sarah, Wolter. "" It Just Makes Good Business Sense": A Media Political Economy Analysis of espnW." *Journal of Sports Media* 9, no. 2 (2014): 73-96.

[18] Reichart Lauren Smith, and Jimmy Sanderson. "I'm going to Instagram it! An analysis of athlete self-presentation on Instagram." *Journal of Broadcasting & Electronic Media* 59, no. 2 (2015): 342-358.

[19] Li, Bo, Olan KM Scott, Michael L. Naraine, and Brody J. Ruihley. "Tell me a story: Exploring elite female athletes' self-presentation via an analysis of Instagram Stories." *Journal of Interactive Advertising* 21, no. 2 (2021): 108-120.

The article describes that gender norms have highly impacted the representation of male and female athletes in the media, as specifically, females are perceived in ways of "traditional roles." [20] On the same note, the article "Sexualized and Athletic: Viewers' Attitudes toward Sexualized Performance Images of Female Athletes" asserts that female athletes within sports media are often sexualized, hurting the representation of female athletes overall. [21] The study above furthers the idea that females in the media people's views need to change for female athletes to feel more comfortable promoting themselves in the media.

However, current research also provides encouraging news on some balance of media representation between males and females. Sarah Wolter's article from the *International Journal of Communication and Sport* analyzes the media presented in ESPNW. This source explores how the platform offers media benefits to female athletes. This article concluded that ESPNW could help female athletes receive a lot more media coverage and be more positively portrayed in the media overall.[22] Similarly, Toni Bruce's article from the University of Auckland, New Zealand, analyzes the representation of female athletes in the media through their presentation and discusses the solutions to helping women increase representation within the media.[23] Therefore, progress is being made in the equality of men and women athletes within the media. However, more needs to be researched to understand this complex issue better.

Current scholarly works discuss the misrepresentation of female athletes due to a lack of media coverage and damaging media framing and promotion. Additionally, current research

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[20] Qingru Xu, and Cory L. Armstrong. "# SELFIES at the 2016 Rio Olympics: Comparing self-representations of male and female athletes from the US and China." *Journal of Broadcasting & Electronic Media* 63, no. 2 (2019): 322-338.

[21] Elizabeth A. Daniels, Amanda Hood, Nicole M. LaVoi, and Cheryl Cooky. "Sexualized and athletic: Viewers' attitudes toward sexualized performance images of female athletes." *Sex Roles* 84, no. 1 (2021): 112-124.

[22] Sarah, Wolter.. "A quantitative analysis of photographs and articles on espnW: Positive progress for female athletes." *Communication & Sport* 3, no. 2 (2015): 168-195.

[23] Bruce, Toni. "Sportswomen in the Media An Analysis of International Trends in Olympic and Everyday Coverage." *Journal of Sport and Gender Studies* 15 (2017): 24-39.

discusses the differences between the presentation of athletes in the media versus the representation of athletes in the media and how both display misrepresentations of female athletes. Overall, there still needs to be a better understanding of this misrepresentation of collegiate female athletes within the media; therefore, this study will discuss the current media representation of collegiate female athletes on Instagram.

The Gap in Understanding

Because only a minimal amount of research has been done to study the representation of collegiate athletes on Instagram, more effort must be made to understand how NCAA conferences represent college athletes on Instagram. Are male and female collegiate athletes' represented differently? Furthermore, no specific research has been done on the differences between male and female collegiate athletes' representation, specifically the Power Five Conference Instagram accounts. An article by primary authors Johnson and Romney from the academic journal, *The International Journal of Communications and Sport* analyzes the media representation of NCAA Division 1 athletes, specifically from athletic departments' Instagram accounts. This source analyzed each Instagram post to determine whether male or female athletes were represented more.[24] The study above, however, examines NCAA schools rather than NCAA conferences; hence this study can look into the more significant impact NCAA conferences have on collegiate athlete representation.

Moreover, academic sources have examined more professional athletes, specifically the differences between athletes and their self-presentation on Instagram. Smith and Sanderson's article from the *Journal of Broadcasting and Electronic Media* analyzes the differences between athletes and how they represent themselves on social media. Specifically, this article looked into

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[24] Rich G. Johnson, Miles Romney, and Benjamin Burroughs. "# Gramming gender: The cognizance of equality on instagram accounts of prominent NCAA athletic departments." *Communication & Sport* 10, no. 4 (2022): 664-684.

the difference between males and females using Goffman's Theory of Work(how people present themselves).[25] Hence, the above scholarly works offer insight into athlete self-presentation on Instagram, but this study will examine no representation.

As well this study has a clear focus on NCAA Division 1 athletes. Other studies have shown the differences between male and female representation in the media, such as ESPN and ESPNW; however, college athletes have yet to look into Instagram. Wolter's article from *The International Journal of Communications and Sports* analyzes media from the ESPNW platform and how women are displayed. However, the above research does not compare to male athletes' representation, and the article only looks into ESPNW.[26] Another academic paper, "Changing the Game: A Critical Media Analysis of ESPN and ESPNW," from the academic journal database from the University of Windsor, analyzes and compares the media from ESPN and ESPNW. However, the gap in the above study holds the same as the media analysis does not look at collegiate athletics specifically, and the article needs to utilize Instagram as an SMP for data collection.[27] Overall, current research has not specifically focused on the power five conferences and how they represent their collegiate athletes, which is what this study looks to investigate.

Methodology

To examine the representation of male and female collegiate athletes on Instagram, the power five conferences' Instagram accounts, which include the SEC, ACC, BIG TEN, BIG12, and PAC12, will be assessed for specific content. The Power Five Conferences' Instagram accounts were selected because they are the most-watched NCAA Division 1 sports conferences and generate the most revenue. In 2021, the SEC generated $728.9 million; the ACC generated $496.7 million; Big12 generated $409.2 million, PAC12 $533.8 million; and BIG TEN $768.9

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[25] Smith et.al, 351
[26] Wolter, 82
[27] Amanda, Milanis. "Changing the Game: A Critical Media Analysis of ESPN and espnW." (2021).

million.[28] To account for confounding variables, all the Instagram Posts randomly generated were selected by a random number generator, which randomly selected 10% of Instagram posts from each conference's Instagram account population size(total amount of posts) during the last full athletic and academic year July 1st, 2021 through June 30th, 2022. The sample size was 10% of the number of each of the total Instagram posts for each conference during the time frame in order to be generalized to the population. To limit differences between the posts of the conferences, all posts containing videos and Instagram stories were avoided during the sampling process.

Additionally, the first photo displayed in every Instagram post will be coded, as it is displayed on the Conference Instagram home account and the image viewers see first. The above method for choosing the posts was obtained based on the source, "#Gramming Gender: The Cognizance of Equality on Instagram Accounts of Prominent NCAA Athletic Departments." The article above performed a similar study; more specifically, it looked into the athletic departments' representation of their college athletes on Instagram. However, this study looks broader into the Power Five Conferences' representation of collegiate athletes on Instagram.[29] Thus, the sampling process and guidelines for what posts should be analyzed are supported by academic research within the methodology of this study.

This study chose Instagram as the SMP for college sports media coverage analysis. Instagram has experienced extreme growth since its launch in 2010, and it is argued to be one of the best platforms for visual communication.[30] Instagram is also a growing platform for the critical consumption of sports and media. It continues to grow with the spread of information and

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[28]Zach Barnett, "Here's How Much Each Power 5 Conference Made Last Year," Footballscoop (Footballscoop, May 20, 2021), https://footballscoop.com/news/heres-how-much-each-power-5-conference-made-last-year.

[29] Johnson et al.,8

[30] Clare Lushey. "Leaver, T., Highfield, T., & Abidin, C.(2020). Instagram: Visual social media cultures. Cambridge: Polity Press. 264 pp." *Communications* 46, no. 4 (2021): 613-615.

has direct links to other platforms such as Facebook and Twitter.[31] Instagram, specifically, is used heavily by athletes to promote their self-presentation. Hence Instagram has become a platform to promote many athletes' images, making it extremely popular and reliable in current media trends.[32] For the Instagram posts' coding process, each post will be carefully coded for image and post content. The parameters for coding were established before the coding process. The coding requirements for each post can be seen in Figure 3. These coding requirements from Johnson's study from the *International Journal of Communication and Sports* were also selected to be used to co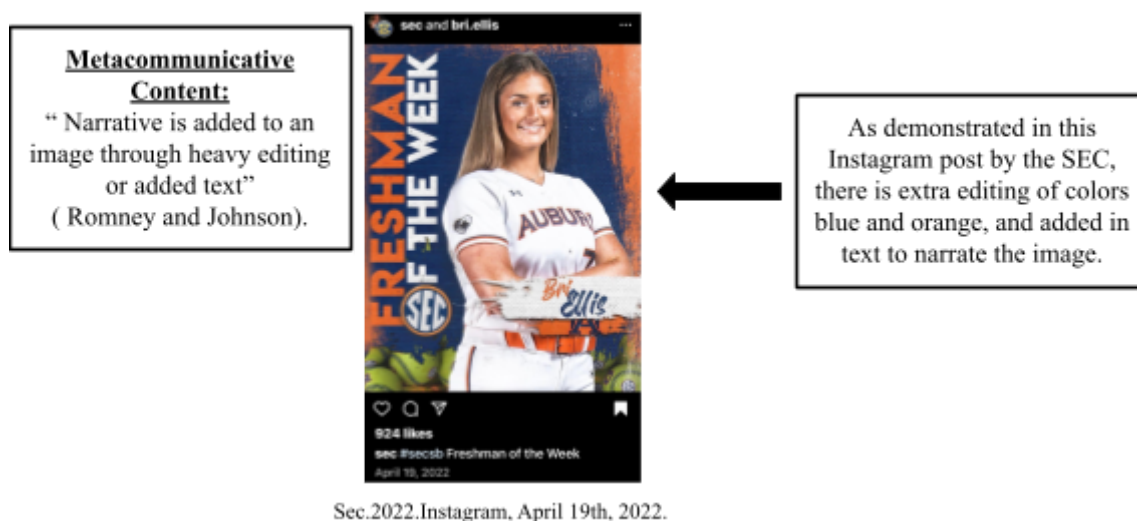de the content of the images within this study because it allows for the Instagram posts to be analyzed for the perceived purpose behind

Figure 3: Coding Requirements for Each Instagram Post

The affiliated college of the Instagram post
NCAA Sport the image of the post is promoting
Whether the image is promoting men's or women's sports
Gender of the photo subject
Whether the post displays a current athlete, alumni athlete, coach
If the photo of the post is taken during the field of play, Studio Shot, or Outside Photo
Whether the post is a call to action post
Whether the post contains an athlete, coach, or a graphic or logo
Whether the post uses metacommunicative content to enhance the image
Amount of likes of the given post
Amount of comments of the given post

Figure 4. Hypotheses

H1	Images of men's sports will be overrepresented in Instagram posts by the NCAA Division I Power Five Conferences Instagram accounts
H2	Female Collegiate athletes will be represented more in photo posts outside field of play
H3	Instagram photos which feature male athletes will be more likely to display current or alumni athletes
H4	Instagram posts that feature male athletics will tend to be more call to action posts
H5	Metacommunicative Content will be used more frequently for Instagram posts that feature men's athletics
H6	Instagram posts that contain male athletes or are affiliated with men's sports will receive higher interactivity on instagram through likes and comments.

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[31] Johnson et al.,8

[32] Kelsey, Gainor. "Self-Presentation of Male and Female Athletes on Instagram: A continuation of gender roles found in advertisements?." (2017).

the post, amount of coverage of athletes' on conferences' Instagram accounts, and whether or not

an Instagram post had enhanced editing to increase interactivity. [33] Additionally, the hypotheses

for this study, displayed in Figure 4, suggest that there will be less coverage of women's sports in

the Power Five Conferences' Instagram accounts and that fewer promotional efforts will be made

to promote female athletic affiliated Instagram posts. The "metacommunicative content" and

"call to action" coding requirements are defined, and examples of specific posts with these

coding requirements are displayed in Figures 5. and 6.

Figure 5. Metacommunicative Instagram Post example and definition

Metacommunicative Content:
" Narrative is added to an image through heavy editing or added text"
(Romney and Johnson).

As demonstrated in this Instagram post by the SEC, there is extra editing of colors blue and orange, and added in text to narrate the image.

Sec.2022.Instagram, April 19th, 2022.

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[33] Johnson et al.,10

Figure 6. Call to Action Instagram Post example and definition

> **Call to Action:** Instruct or inspire viewer/reader to take a desired action (Romney and Johnson)

> In the caption of this SEC instagram post, the narrative is "inspiring" their viewers to buy SEC 2022 baseball tournament tickets: " on sale now"

Sec.2022.Instagram, April 23rd,2022.

According to the *Information, Communication, and Society Journal,* posts with metacommunicative content, meaning narratives added to an image, such as added text or heavy editing, show extra efforts to promote that post.[34] Hence, posts will also be coded for metacommunication content, showing that the Conference Instagram account has put more effort into promoting that post. Finally, the likes and comments from each post will be recorded to show the amount of engagement each post receives, thus displaying if specific Instagram posts receive more viewer activity based on the content of the Instagram post. Google Forms were used during the coding process to organize the post content results; Figure 7 displays how an Instagram post was coded and how the coding process took place.

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[34] Johnson et al.,10

Figure 7. Example of Coding Process for Conference Instagram Post on Google Forms

pac-12conference.2022.Instagram, November, 13th, 2021.

To determine if there is inequality between male and female athletes represented in the Instagram posts, a sample proportion test and Chi-Square Test will be used to determine independence and statistical significance. This significance test is meant to test the relation between two categorical variables, determining whether they are independent. In Johnson's academic paper, a sample proportion test was used in order to estimate the proportion of the content coded for appears in the population.[35] As well, in the academic paper by Sarah Wolter, as she analyzes the differences between ESPNW and ESPN, she utilizes a Chi-Square Test in order to compare the specific results of the different media she analyzed and compare across the media analyzed.[36] Thus, in this research, a Sample Proportion Test and a Chi-Square Test will be used

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[35] Johnson et al.,13
[36] Wolter, 189

to determine whether they are independent differences in having uneven representation of sports or male and female athletes and whether the data gathered accepts or rejects the hypotheses of this study. Crammer's V will also be used to assess how vital the statistical significance is of the Chi-Square Test, giving a value between 0-1. If the value is closer to one, the relationship is more substantial. Additionally, when understanding whether or not likes and comments are influenced by the gender of the Instagram post, a linear regression model will be used to test the significance of whether or not there is a significant difference between gender and the number of likes or comments that the posts receive. Johnson and Romney's study also utilized a linear regression model to test the significance between gender and likes of athletic department Instagram posts. Hence this exact model will be adapted for this study due to similar content analyzed.[37]

Results

The sample consisted of 440 images shared by the five main power five conferences from July 1st, 2021, through June 30th, 2022. Of those images, 365 contained a human photo subject; the rest contained brands, logos, text, non-human photos, equipment, and stadiums. The SEC had the largest population of photos during this time period with 1,680 still image posts, sample size (n=168 coded photos). The next largest population of photos was the BIG12, with a total of 1,186 still image posts, sample size(n=119). PAC-12 had 558 still image posts with a sample size of (n=56). ACC had a total of 513 still images, thus a sample size of (n=52). Finally, the BIG10 had the least number of posts during that period, with 444 still image posts and a sample size of (n=45).

The first hypothesis stated that the Power Five Conferences Instagram accounts would overpost/represent male athletic posts rather than female athletics posts. A one-sample

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[37]Johnson et al., 12.

proportion test supported hypothesis 1, which can be referred back to in Figure 4. Out of the 440

Instagram posts, a clear majority of posts (n=255) displayed a representation of men's athletics.

In total, 58% of posts feature men's sports, while only 38.2% feature women's sports(Table 1.).

A one-sample proportion test was utilized to test the statistical significance, and the test showed

the results above to be statistically significant($\chi2$=418.84, df=1, p<.001).

Table 1. Images of Men's and Women's Sports in Power Five Conferences Instagram Accounts

	Men's Sports	Women's Sports	Both	Couldn't Tell	Neither
n	255	168	8	2	7
%	58%	38.2%	1.8%	0.5%	1.6%

Note. Before performing a one sample proportion test, images that specifically promoted men's and women's sports were separated out.
$\chi2$=418.84, df=1, p<.001, n=423, N=440.

The second hypothesis in Figure 4 stated that female athletes would be represented

through more passive images. Such as, female athletes would appear outside of sport context and

studio shots more often than displayed in field-of-play images. A Chi-Squared test was

performed to examine the independence of male and female photos and whether the images were

passive or active(field of play, studio shot, or outside of sport context). The test displayed no

statistical significance between the image representing male or female sports and the image

type($\chi2$=1.24, df=2, p<.537, n=422, Cramer's V= 0.05). Additionally, comparing the image

results between male and female sports images, they were more likely to be pictured in the field

of play(72.02%). Male photos were likelier to be studio-shot images(8.24%), as seen in Table 2.

Thus, hypothesis number two is not supported, and the null hypothesis is not rejected.

Table 2. Passive or Active Images by Male or Female Sport

Image Type	Men's Sports	Women's Sports	Both
Field of Play %	70.59%	72.02%	12.5%
Outside of Sport Context %	21.13%	22.02%	62.5%
Studio Shot %	8.24%	5.36%	25%

Note. Images that did not feature human subjects were removed from this sample. As well, images that contained both male and female subjects(Both) were also removed during the Chi-Squared Test.

$\chi 2 = 1.24$, df=2, p<.537, n=422, Cramer's V= 0.05

The third hypothesis stated that male sport image posts would be more likely to show current or alumni athletes as the post's subject. However, this hypothesis was not supported, as a Chi-Squared Test for independence was performed and displayed no statistical significance between the gender of the post and whether or not the athlete was a current athlete or alumni ($\chi 2 = 3.48$, df $= 2$, $p < .175$, n $= 338$ Cramer's V $= 0.1$). When examining the data in Table 3, one can see that overall; there is very little difference between the percentage of current and alum athlete images for men's sports rather than women's. Hypothesis three is not supported, and the null hypothesis is not rejected.

Table 3. Current or Alumni By Sport

Image Subject	Men's Sports	Women's Sports	Both
Current Athlete %	74.51%	73.81%	75%
Alumni Athlete %	7.06%	2.98%	0%
Coach %	2.35%	5.36%	0%
Non-Athlete %	15.69%	16.67%	25%
Current Athlete & Coach %	0.39%	0.6%	0%
Current Athlete & Alumni %	0%	0.6%	0%

Note. Images that did not contain a human subject were removed from this sample. Images that also contained coaches or both alumni and current athletes were removed before performing a Chi-Squared Test

$\chi2 = 3.48$, df = 2, $p < .175$, n = 338 Cramer's V = 0.1

The fourth hypothesis stated that Instagram post images containing men's athletics will be more likely to be call-to-action posts. However, during the coding process of Instagram posts, only seven of the Instagram posts coded were analyzed to be call-to-action posts. Therefore, due to the small sample of call-to-action posts in chi-square test could not be utilized to test statistical significance. Overall, hypothesis four is not supported; the null hypothesis is not rejected.

The fifth hypothesis stated that Instagram posts featuring men's sports would more likely receive metacommunicative content processing to enhance image quality. A Chi-Squared Test was performed to test the statistical significance and independence between men's and women's sports images and whether the Instagram post contains metacommunicative content. The Chi-Squared test displayed that there is no statistical significance between the gender sport of the image and whether the post contained metacommunicative call-to-action($\chi2 = 0.48$, df = 1, $p <$ .49, n = 423, Cramer's V = .03). When examining the data specifically it can also be seen that women's sports images' had metacommunicative content 64.88% of the time while men's sports

images only had metacommunicative content 61.57% of the time. However, metacommunicative content was used most by the conference's Instagram accounts when representing men's and women's sports in the same image(62.5%), as seen in Table 4. Thus, hypothesis five is not supported, and the null hypothesis can not be rejected.

Table 4. Metacommunicative Content Usage for Sports

Metacommunicative Content	Men's Sports	Women's Sports	Both	Couldn't Tell	Neither
Yes	61.57%	64.88%	62.5%	50%	57.14%
No	38.43%	35.13%	37.5%	50%	42.86%

Note. During the Chi-Squared Test, images that contained no relation to men's and women's sports and images that contained both men and women sports were removed before calculating independence.

$\chi2 = 0.48$, df $= 1$, $p < .49$, n $= 423$, Cramer's V $= .03$

The final hypothesis stated that Instagram posts displaying or affiliated with men's sports would receive higher interactivity from Instagram viewers than female sports Instagram posts. This was analyzed by collecting and evaluating the mean number of likes for men's and women's sports posts. A linear regression model shown in Table 5 for the amount of likes a post received, whether supporting men's or women's sports images, displays increased likes for men's sports posts; thus, the data is statistically significant. Figure 8 displays a bar chart for the mean amount of likes depending on the gender of the post. Additionally, a regression model for the number of comments on an Instagram post depending on whether it represents men's or women's sports, seen in Table 6, displays increased comments for men's sports images. Hence, the data is statistically significant. Figure 9 displays a bar chart for the mean amount of comments for men's

and women's sports posts. Therefore, hypothesis five is accepted, and the null hypothesis is rejected.

Table 5. Linear Regression Model Between likes by Sport Gender

Model	B	Beta	Standard error	t	p
(Constant)	1603.88		197.7	8.11	<.001
Men	1568.68	0.29	2627.87	0.6	.551
Women	-461.87	-0.08	2630.17	-0.18	.861

Note. Only images that contained distinct men or women images were used in the regression model. Above is a reduced version of the full regression model.
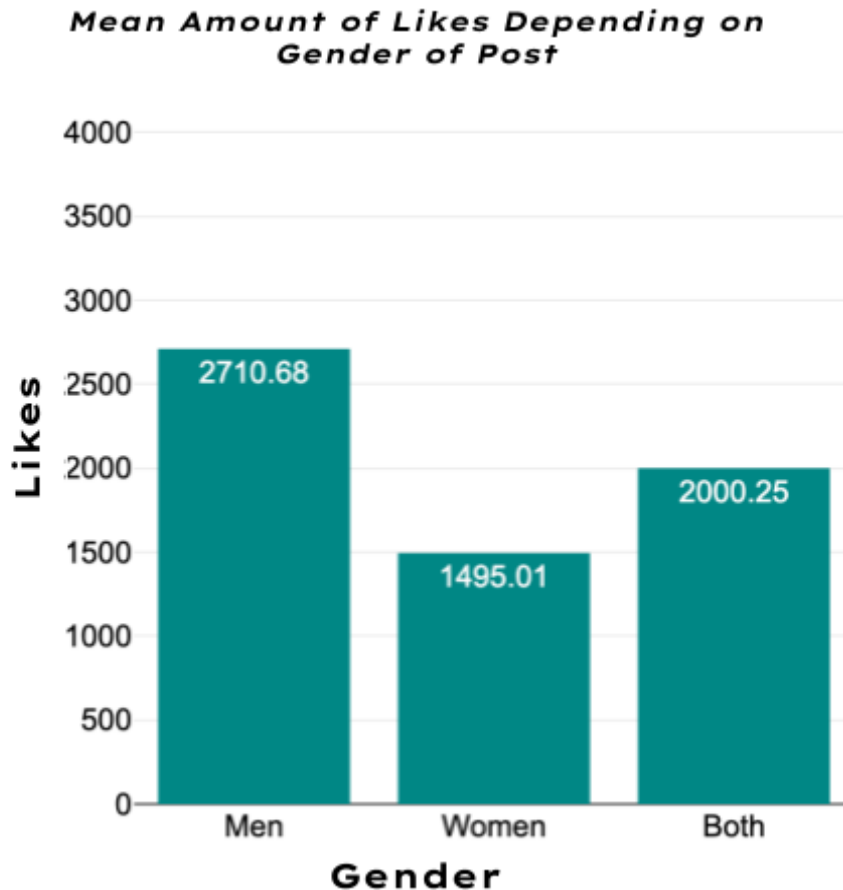
$p<.001$

Figure 8. Likes by sport

Mean Amount of Likes Depending on Gender of Post

Table 6. Linear Regression Model Between Comments by Sport Gender

Model	B	Beta	Standard error	t	p
(Constant)	9.9		3.45	2.87	.004
Men	13.02	0.14	45.88	0.28	.777
Women	9.1	0.1	45.92	0.2	.843

Note. Only images that contained distinct men or women images were used in the regression model. Above is a reduced version of the full regression model.
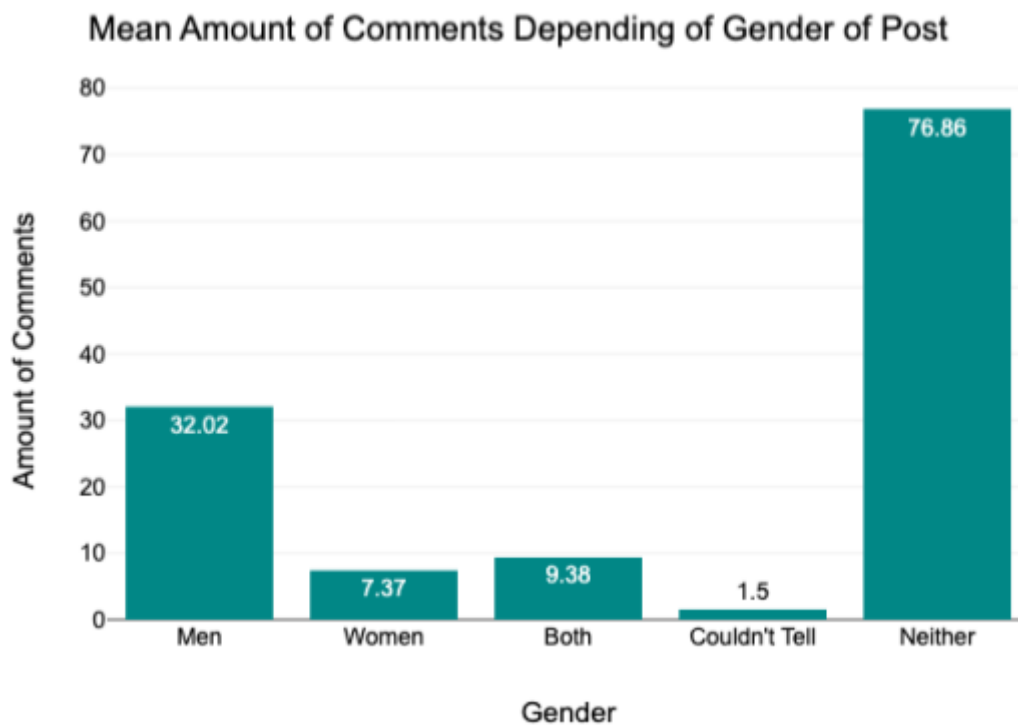
$p < .001$

Figure 9. Comments by Sport

Mean Amount of Comments Depending of Gender of Post

Discussion

The examination of NCAA Power Five Conferences' Instagram accounts displays that women's collegiate sports and athletes receive less overall coverage on Instagram than men's collegiate sports and athletes. However, the results show that although coverage is unequal, the promotional efforts of the Power Five Conferences' Instagram accounts are similar for male and female-affiliated Instagram posts. The Chi-Squared test displayed no statistical significance between passive or active images and gender, athlete type, and gender, call to action posts and gender, and finally, metacommunicative content and gender. Hence, the results of this study display that the NCAA Power Five Conferences promote men's and women's sports equitably through Instagram. However, the total volume of content posted on the Instagram accounts is much less for women's sports rather than for men's sports. This possibly leads to less overall interactivity for women's sports images, as seen within the mean amount of likes and comments differences between men's and women's sports posts. As seen, men's sports posts receive more likes and comments than women's sports posts. However, the interactivity is not only due to the Power Five Conferences' representation of posts but could also be due to the viewer's likes and preferences.

Limitations

Before concluding my research, it is crucial to analyze and look at this study's possible limitations, which could have skewed the results. First, the main limitation of this study is the disclusion of videos and live photos within the coding process. Due to time constraints and the complications of coding videos and live photos, many Instagram posts were thus excluded from the coding process. This is a primary limitation because this excludes many Instagram posts that can represent athletes and different sports. For example, the PAC-12 Instagram account had the

least amount of still image posts from July 1st, 2021, through June 30th, 2022. However, the PAC-12 had represented many of its athletes through live photos and videos. Thus, this study's results can only be generalized to how athletes are represented through still image posts due to the number of posts entirely excluded as they were videos and live photos. Hence, in future studies, if this study is replicated, although it may take a larger quantity of time, in order to understand the complete representation of collegiate athletes' on the power five conferences Instagram accounts, all posts, including videos and live photos, must be analyzed. However, although videos, stories, and live photos eliminate a lot of the ability to analyze the accurate representation of college athletes on Instagram, still images and videos are two significantly different types of media and can be looked at as two separate social media platforms argued by Jen Galas at the University of Georgia.[38]

Another limitation within this study is possible bias within the coding process. Although the coding parameters were clearly stated and defined, two of the main aspects of the coding process: "metacommunicative content" and " call to action" posts, are up to interpretation depending on the person viewing the post. Therefore, although the motivations of the post can be drawn and analyzed, they cannot be confirmed entirely, as the true motivations of the Instagram posts can only be known through the individual posting the photos. However, overall, the overrepresentation of male athletes within this study suggests an overall awareness of decisions made by the conferences' Instagram accounts when posting Instagram posts. In the study conducted by Johnson and Romney, multiple coders coded Instagram posts to eliminate bias and establish coder reliability. However, this study had one coder. Thus, bias could be present by coding call-to-action posts and metacommunicative content; hence, those results should be considered cautiously. Underlying bias, although possibly present and natural, was limited.

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[38]Brown, T. M. "Experts' roundtable: Evolution of Instagram." *Athletic Director U*.

throughout the study through constructing content coding guidelines and scholarly-based research to minimize bias within the coding process.

Finally, the random sample of Instagram posts was not stratified to the specific time period of athletic seasons. Thus each sport might have had a different equal chance of being represented in the sample. Due to the time constraints of this study and only one coder coding the Instagram posts, the sample stratification would have been highly time-consuming and unable to be done effectively and thoroughly. However, because this study did not examine specific sports and looked at the overall coverage of all sports and collegiate athletes on the Power Five Conferences' Instagram accounts, a simple random sample still effectively reaches the overall coverage of both men's and women's sports equally.

Conclusion

The research question "How does the representation of NCAA D1 athletes differ between females and males represented on the Power 5 Conferences Instagram accounts?" can be answered through the five critical contents of the Instagram posts analyzed. This research found that while overall, there were not many differences between the main content of the Instagram posts, whether male or female, there still was an overrepresentation of male athletes within the power five conferences Instagram accounts.

In conclusion, my research adds to the scholarly conversation by providing research on the current climate of collegiate athletics. The last study on athletes' representation on Instagram was conducted in April of 2021, before the passing of the NCAA NIL Policy. Additionally, understanding how NCAA conferences on Instagram expressly represent athletes had yet to be researched before my study was conducted, thus furthering any academic research currently in the field and allowing future researchers to build off my study. My research is significant

because it helps to display how vital college athletes' representation on social media truly is; as with the current time of college athletes compensating off of their name, social media recognition is essential. Thus, my research helps to show that all male and female athletes deserve equal representation to profit from their hard work and talent. College athletics are extremely popular, and already the NCAA generates billions of dollars; thus, it is time that college athletes earn money off of their fame and their representation on the highly growing social media platforms.

Moreover, future research is needed to understand further the representation in total by the Power Five Conferences' Instagram accounts and all NCAA conferences better to understand the NCAA's representation of collegiate athletes. Additionally, further research needs to analyze videos, live photos, and stories on Instagram to truly understand the complete representation of collegiate athletes through all digital media platforms and use. Further research should also look into other growing social media platforms, such as Tiktok, to better understand the impact of short clips and videos and how athletes can be represented that way. Media communication driven by the usage of videos could have meaningful research in entirely unpacking this complex issue.

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