

Original Research

The social media framing of gender pay gap debate in American women's sport: A linguistic analysis of emotive language

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Coverage of the United States women's national soccer team (USWNT) winning the FIFA Women's World Cup flooded social media in the summer of 2019. Their immense achievement led many members of the team to take the opportunity to highlight gender inequality in sport, particularly the wage discrepancy between male and female athletes. Social media coverage of the issue stirred a discussion between supporters and opponents of equal pay for female athletes. A call for change is evident in the speeches and interviews of members of the football team. This was followed by a social media call for gender equality in sport. This study investigates the emotive language used to advocate for equal pay for US women soccer players in social media. The data were collected for one month following the USWNT's winning the Women's World Cup in 2019 and comprise a corpus of more than ten thousand tweets. The corpus has more than one million words. The distribution and the valence of emotive language were quantified. The data was subjected to both computational and qualitative analyses of emotive language. The findings of quantitative analysis included positive and negative language as the emotional valence was reported. In the qualitative analysis, it is found that positive language is used to express pride in the achievement and to show support of the team members' endeavour to end the gender pay gap. However, negative language included disappointment in the official organisations thought to be responsible for the gender pay gap. Thus, the emotive language indicates the specific situational context and the role of athletes as cultural artefacts in calls for change. At the same time, emotive language is prevalent in social media, and it has an important role in narratives of gender inequality in the US.

KEYWORDS: *Twitter, emotive language, gender pay gap, sport, gender, equality, computer-mediated communication, corpus analysis, discourse analysis*



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1. INTRODUCTION

Many recent events in American women's soccer have raised the issue of a gender pay gap and a more general gender discrimination in women's sport. In 2016, five

team members in the American women's soccer team instigated a campaign for 'equal play, equal work', requesting that the USWST close the gender pay gap (Archer & Prange, 2019). Their campaign was supported by all 28 members of the USWST

in 2019, who filed a complaint in federal court against the US Soccer Federation (USSF) for institutionalised gender discrimination (Archer & Prange, 2019; Murray, 2019). Support for closing the gender pay gap in American sport has been expressed on social media, in particular on Twitter, where key members in the USWNT have conducted their activism. Social media has been found to have an impact on reconfirming, negotiating and challenging normative gender roles and responsibilities in women's sport (Lebel et al., 2019). Using social media to draw attention to gender issues is a common practice in America. For female athletes, social media offers an opportunity to share and discuss personal experiences with discrimination in sport. Yet, there is limited information regarding how social media are used by the American public to frame pay gender issues in the American sport.

The methods used to analyse the data from social media for the present study are available due to advancements in natural language processing applications. Analyses which rely on methods from corpus linguistics cannot solely account for major trends in data from social media as these data are generally unstructured and must be processed thoroughly before linguistic analysis is put in place. Data from social media analysed using computational methods may indicate the political preferences of citizens and may be used to predict the results of elections. Natural language processing (NLP) tools such as Natural Language Toolkit (NLTK), for example, provide a more advanced way of analysing texts than the manual linguistic coding, automating the classification of sentiment in any given text for purposes including opinion mining, prediction and feedback (Hussein, 2018; Denis et al., 2013).

This paper analyses social media framing of the gender pay gap in American women's sport. By doing so, this study focuses on how emotive language is used in advocating for equal pay in male-dominated fields such as sport in social media. This study adopts a computational method with particular focus on sentiment analysis to unravel standpoints prominent in the discourse of women's equality in sport. An increasing body of

research on language and gender examines professional discourse from a variety of perspectives. For instance, one line of research examined the linguistic representation of professional women's titles and the ways in which grammar can reflect practices that impede and/or empower women in gender-specific languages (Alkhamash & Al-Nofaie, 2020). Other research investigated the representation of women in male-dominated professions (Alkhamash, 2019) for women in STEM, or for the representation of women in minority contexts (Alkhamash, 2020a), or for a more general media representation of the EU in British media (Alkhamash, 2020b). To give a specific context, Alkhamash (2019) illustrates the importance of language use and how it is related to the experiences of women in male-dominated fields and analyses language in social media to describe women working in STEM fields in which the study found that language used tends to be positive. Also, women used language to challenge stereotypes about their jobs. This study takes a similar approach in that it situates a women's experience of inequality in sport and calls for challenging it in social media by analysing emotive language. A literature review of discourse studies of women's sports in media is followed by a discussion of the sentiment analysis and the method of analysis used. Finally, the results of this study are presented and discussed.

2. THEORETICAL BACKGROUND

2.1. Media representation of women in sport

Many discourse studies investigate representations of female athletes in social media as sport has been famously known to be male dominated. One of the earliest studies that has explored the under-representation of female athletes in traditional media is a study by George et al. (2001) in which they analysed the reporting of participation of female athletes in sport by both newspapers and television channels in the UK. It is found that male athletes are favoured in their coverage, especially their achievements, compared to female athletes. In American print media, McGannon and Spence (2012) employed a critical discourse analysis ap-

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proach to investigate stories about women's exercise in US newspapers from the Midwest. They found that two major discourses emerged from the data regarding women's exercise; one is about appearance discourse and the other is about a discourse of consumerism. In New Zealand, French (2013) has looked at the representation of female athletes in the press news. She revealed there seemed to be cultural resistance to representing female athletes evident by the small percentage of coverage in a year than their male counterparts. She also discovered that the length of the articles about female athletes is comparatively shorter than the length for articles about male athletes.

Similarly, social media is not much different than traditional media when it comes to lack of representation of women in sport. Toffoletti et al. (2019) investigate the representation on Instagram of women athletes during the 2015 FIFA Women's World Cup. Specifically, they examine how users used certain hashtags related to the Women's World Cup to express their views regarding gender stereotypes on Instagram. The content analysis of photos posted by fans shows that women athletes are constructed as competent and participating in preparing for an athletic activity. The results of the study show that digital culture has an impact on the negotiation of gender roles and responsibilities, evidenced by photos focusing on women's physical competence. The study also shows how female sport fans use social media to negotiate gender as an expression of their fandom.

Other discourse studies have critically examined the official social media accounts of the governing bodies of soccer in the US such as the USSF. The USSF is accused of discriminatory practices in their social media account, especially regarding the lack of comprehensive coverage of the women's team during the Women's World Cup in 2011. Thus, Choche (2016) finds major differences in the quantity and quality of coverage between men's and women's soccer. The USSF has two Twitter accounts: one is general, and the other is specific to the women's team. Most of the coverage of the women's team is found in their dedicated account, whereas the general account is dedicated to coverage of the men's team. USSF's tweets also contain more pictures, web pages and live tweets about the men's soccer team. This was true even when the USSF was expected to cover the 2011 Women's World Cup as it occurred live. Furthermore, members of the women's soccer team are addressed differently in USSF's tweets than their male counterparts: the USSF refers to women by their first names or nicknames, whereas men are referred to by their last names (Coche, 2016).

Another body of research focuses on how women athletes negotiate gender in their professional sport careers. Kristiansen et al. (2014) interviewed American women athletes to learn how the USA's professional soccer programmes perceive gender. The study finds that women athletes conceptualise gender in a complex and contradictory way. For example, they view themselves as role models in steering away from gender binarism in a male-dominated field, yet they use stereotypes of femininity, particularly regarding women coaches' lack of leadership and skills as compared to male coaches (Kristiansen et al., 2014).

2.2. Sentiment analysis of social media discourse

Social media provides naturally occurring data. Researchers may now retrieve data from social media sites, build databases of information relating to certain topics or hashtags and analyse the sentiment almost instantly. There has been a re-

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cent increase in studies which analyse language in social media, for example to determine voters' attitudes towards certain political candidates (Ceron et al., 2014), students' daily activities (Abdelrazeq et al., 2016) or consumers' sentiments towards a product for marketing purposes (Neri et al., 2012).

Sentiment analysis proves to be a viable method of extracting subjectivity and polarity from a large amount of unstructured data (Taboada et al., 2011). Sentiments may be analysed using linguistic and semantic approaches (Neri et al., 2012). Linguistic sentiment analysis includes two main approaches, one of which focuses on automatically mining the polarity of words or phrases in the document (Turney, 2002). Such automatic mining relies on building a classifier from previously labelled data. This follows the tradition of supervised classification in computational linguistics. Many studies in this tradition extract adjectives from the analysed text and assign to each adjective a sentiment orientation score which indicates whether the sentiment is positive, negative or neutral. The sentiment orientation scores are added up to provide an overall sentiment orientation score for the document (Taboada et al., 2006; Thelwall & Buckley, 2013). In addition, Ceron et al. (2014) conducted a supervised sentiment analysis investigating whether there are differences in people's stated preference in political leaders in Italy and France. The findings indicate that sentiment expressed on social media corresponds directly with the results of surveys conducted at the

same time. The second approach to sentiment analysis is the unsupervised learning tradition, which uses machine learning in mining unstructured data. In unsupervised learning, some algorithmic formulas are applied to unlabelled data to cluster the data into sets according to certain characteristics (Turney, 2002).

3. MATERIAL AND METHODS

3.1. Data

The data in the present study is a specialised corpus compiled from Twitter. It represents the activist movement of the USWNT and its supporters to utilise the event of the USWNT's winning the Women's World Cup to promote the social justice issue of gender equality. The specific cause of the movement is to address a gender pay gap between women and men soccer players. The collected data comprise 10,263 tweets collected over a period of one month beginning 13th July 2019 and ending 10th August 2019. Twitter Archiver was used to retrieve only those tweets with relevant hashtags occurring within the tweets. The inclusion criteria were as follows: either use of both #USWNT and #EqualPay hashtags in a tweet or use of the #EqualPay hashtag in a tweet mentioning @USWNT and/or @USWNTPlayers Twitter accounts. The Twitter accounts which most contributed to the corpus were: @EarthCam with 30 tweets, @Radio_Misfits with 26 tweets, @cump_s_lana with 17 tweets, @ShePlaysCentral with 15 tweets, @Emily with 13 tweets, @Elizabeth with 13 tweets, @USMNT with 13 tweets, and @MeganLipp with 12 tweets. The highest-ranking of the most-liked tweets was the announcement by @SecretDeodorant of a donation of \$529 total to all the USWNT players as a step towards rectifying the gender pay gap (Figure 1).

In terms of operating systems, 66.14% of the tweets were sent via Twitter for iPhone, 19.45% – via Twitter for Android, and the remaining – via Twitter on other platforms. Table 1 shows the frequency of hashtags in the dataset. The most frequent hashtags mentioned the gender pay gap and referred to either sport associations or the World Cup contest.



Figure 1. @SecretDeodorant Twitter post (Secret Deodorant, 2019)

Table 1
 Frequency of hashtags observed in the corpus

HASHTAGS IN THE CORPUS	FREQUENCY
#USWNT	1493
#EqualPay	390
#EqualPrizeMoney	52
#EqualInvestment	50
#WorldCup	47
#FIFAWWC	41

3.2. Procedure

This research paper investigates the social media framing of the gender pay gap in American women’s sport by analysing the emotive language in the data. To identify the emotive language, many Python applications were used to perform the sentiment analysis. Before the analysis, the

data corpus was cleaned by removing hashtags and URLs. The computational method focused on using TextBlob – a Python package for textual data analysis that was designed to measure sentiments in texts. It has an Application Programming Interface, also known as an API, for conducting natural language processing operations such as classifica-

tion and sentiment analysis. It is based on the Natural Language Toolkit, henceforth NLTK, framework. It reports polarity and subjectivity scores. The polarity score is a floating number ranging from -1.0 to 1.0, where a negative score indicates a negative sentiment, and a positive score indicates a positive sentiment. The subjectivity score is a floating number ranging from 0.0 to 1.0, where 0.0 indicates a very objective sentiment and 1.0 indicates a very subjective sentiment. The data was subjected to quantitative analysis to determine the polarity and subjectivity of each tweet in the corpus. To validate the reliability of the sentiment analysis, a sample of positive and negative sentiments in tweets was investigated manually. This procedure serves to limit generalisations about the topic at hand without supporting evidence. After reporting the distribution of sentiments in the cor-

pus, data was tabulated with polarity scores and top 10 positive and negative emotive language tokens were analysed qualitatively.

4. STUDY RESULTS

Most of the tweets analysed express very strong sentiments, as the scores range between -0.50 and 0.67. Around 3,500 tweets express negative sentiments, but the sentiment score of most of the negative tweets is -0.25, which indicates that these tweets are mild in their negativity. Positive tweets vary in their intensity, ranging between 0.00 and 0.75, with 3,000 tweets expressing mildly positive sentiments. Strong positive sentiments are expressed in 600 tweets ranging between 0.75 and 1.00 in sentiment. Overall, the sentiments expressed in the corpus tend to be positive (Figure 2).

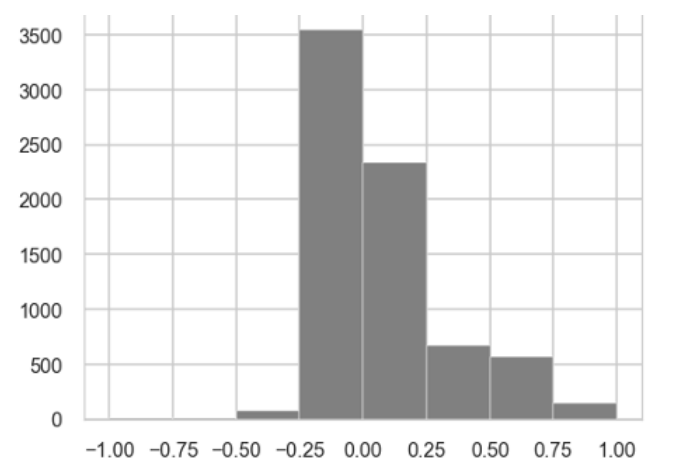


Figure 2. Distribution of sentiment in the corpus

In Table 2 below, the first top-ranked tweet is about praising the professionalism of the American women's soccer team and its players with positive words such as *a level above*, *step up*, *a couch dream* and *young talent*. All these words contributed to indicate the positive sentiments about the talent of the team and how they are appreciated. The next-ranked positive sentiment is from a tweet urging the fair payment of the USWNT and praising their achievement in winning the Women's World Cup. The tweet uses the imperative *pay them* in a call for immediate action to end the gender pay gap. The tweet also has described

the team with the positive evaluative adjective *best*. The next highest-ranking positive sentiment is from a tweet supporting equal pay by praising an initiative of a company aiming to close the pay gap by donating money to the players of the US women's soccer team. The tweet has positive words such as *absolutely superb*.

The next top-ranked positive tweet is celebrating the world cup using the emoji and a positive word that is *love*. The next top-ranked tweet is showing pride of the achievements of the team using positive words such as *impressed*, *tenacity* as well as the hashtag #getit which shows the en-

couragement given to the team. The next high ranked positive tweet used positive words such as *happy* and *best* to praise the attributes of the US women's team as well as their achievement winning the World Cup. Similarly, the next tweet used positive words such as *happy*, the words *happy* and *let's go ladies* are capitalised in the tweet. The use of non-standard orthography such as capitalisation in social media demonstrates that the text

exhibits higher emotionality (Vendemia, 2017; Ozyumenko & Larina, 2021). The next positive tweet used the word *best* to describe the effect of the collective achievement of the American football team on inspiring individuals to achieve more in life. In the last positive tweet, the use of capitalisation in the words *thank you* coupled with a heart emoji in the last positive tweet indicates the USWNT's appreciation of the team's coach.

Table 2

Top positive sentiments observed

TWEET	POSITIVE POLARITY SCORE
Got to say the @USWNT continuously remain a level above. Believe me, the US won't drop down, it's how others are able to step up. Able to take off @roselavelle and bring on @sammymewy is a coaches dream! Two of the best young talents in women's football IMO #FIFAWWC (Lee Billiard, 2019).	1.0
The #USWNT is the best soccer team in the world, male or female. Pay them. If they were men they would have been awarded \$90k per for this World Cup. Stop cheating women. #USWNT #FIFAWWC (Victoria Brownworth, 2019).	1.0
Absolutely superb to see @SecretDeodorant using their brand & their money to close a gender pay gap. Like it or not, companies are a reflection of our society and what they do matters. This is more than #WeSeeEqual – this is making equal happen!! #uswnt @mPinoe @USWNT (Suzy Levy, 2019).	1.0
@GW_Lacrosse alum Emily Fortunato served as an athletic trainer for the @USWNT World Cup Run! #RaiseHigh https://t.co/7M0NgzFev2?amp=1 (GW Sports, 2019).	1.0
Continuously impressed by the tenacity of the women of the @USWNT and their fight for equality. #equalpay #USWNT #worldcup #getit @Forbes https://t.co/v6dOdIfiuu?amp=1 (Jennifer Risi, 2019).	1.0
The US women's soccer team are the world champions! I'm so happy. These women are the best of what our country represents. You're welcome on my show any time. My World Cup runneth over. @USWNT #USA #FIFAWWC (Ellen DeGeneres, 2019).	1.0
HAPPY @FIFAWWC Final LETS GO LADIES!!! @USWNT #USAUSAUSA (Chip Dutchik, 2019).	1.0
To say I am inspired by the @USWNT would be the understatement of the century. This team has me listening to the rocky soundtrack while running sprints on a quiet street in Chile and meditating on how I can be fully me/the best version of myself possible (Mary Ann Santucci, 2019).	1.0
For everything she has done and everything she has meant to this program we say, THANK YOU Jill Ellis will step down as #USWNT head coach in October. #ThankYouJill: http://ussoc.cr/je (U.S. Soccer WNT, 2019).	1.0

The study also sampled a number of popular tweets for a closer analysis of the discourse of American soccer on Twitter. Screenshots of these tweets are presented below alongside a qualitative analysis of their sentiments. The tweet presented in

Figure 3 went 'viral' with 8.4k retweets and 36.6k favourites. The tweet expresses a deep appreciation for Jill Ellis's service to the USWNT ('*Thank you, Jill!*') and features a video of the American coach.



Figure 3. @USWNT Twitter post (U.S. Soccer WNT, 2019)

Table 3 shows the top-ranking tweets in terms of negative sentiment. The first tweet is about gender discrimination in women's sport and the 'excruciating example' set by the USWNT of females, encouraged from a young age to strive for their goals, who are discouraged as women in the form of unequal pay. The second tweet is a response to an interview in which USWNT player Megan Rapinoe was asked if she has plans for running for office and she replied that she will keep fighting for equal pay. The negative tweet ('*Not in THIS country!*') attempts to invalidate Rapinoe's social activism and her prospective chance for being elected to office in the US. The third and fourth tweets negatively portray the US soccer federation with descriptors such as *failing* and *dysfunctional* to show that the pay gap is a real issue that needs to be solved.

In the fifth negative tweet, we have a negative word *excruciating* expressing the negative experience of American athlete women. In their view, their reward does not match up their achievement. In the next negative tweet, negativity in the tweets

is expressed in three ways: swearing, the imperative expression *pay the women* and the hashtag #PayThemNow. The next top ranked negative tweet used the negative word *outrageous* and the hashtag #TimesUp to show frustration of the pay gap. The next negative tweet expresses a potential solution to the gender pay gap issue by using the adverb *seriously*. The next negative tweet employs swearing and capitalisation to show the overall negative tone of the tweet by stating the achievement of the women's team in capital letters. The final negative tweet uses dollar signs to reveal the gender pay gap and the imperative #PayThem in the hashtag.

Figure 4 shows a tweet illustrating the importance of the Women's World Cup win and highlighting the gender politics of women in sport. Meyer (2014) explains the detrimental effect of using the expression '*Boys will be boys*' in an educational environment, as it tends to reinforce stereotypical gender norms. The spin on this expression, '*Girls will be girls*', is used in the tweet to challenge those gender norms in an empowering way.

Table 3
 Top negative sentiments observed

TWEET	NEGATIVE POLARITY SCORE
The United States women’s soccer team has become an excruciating example of a scenario we’ve seen play out for decades: Little girls are told to follow their dreams, and to excel, until they become women and expect be paid for it. Read this https://t.co/LdZbRUCdol?amp=1 (Jenny Benkert, 2019).	-0.187500
Not in THIS country! #GoAwayRapinoe #MeganRapinoe @USWNT #WomensSoccer #uswnt #USWomensSoccerTeam (Jon Burrows, 2019).	-0.166667
We should be asking more questions like this. The US Soccer Federation is so dysfunctional that no part should be exempt from scrutiny or examination (Daniel Workman, 2018).	-0.166667
This gets under my skin so bad!! The #USWNT should get equal pay! The US Soccer Federation is failing all women everywhere!!! (Heather Steele, 2019).	-0.155556
@ussoccer seriously wtf – just pay the women. #PayThemNow @USWNT is US Soccer, not some side show act. #EqualPay (Jacob Singletary, 2019).	-0.189000
This is outrageous @USWNT @ussoccer rather spend thousands if not actually millions2keep fighting the #USWNT 4what they rightfully deserve, instead of paying them? I sure hope they lose big&have2 pay them huge when they finally win, because they will! #TimesUp #PayUpNow #EqualPay (SpanishEyes, 2019).	-0.500000
Seriously @USWNT? If you were paying these athletes equally you wouldn’t need lobbyists. Here’s a thought: put your lobbying budget into their pay to help close the gap. #EqualPay (Pam Wickham, 2019).	-0.166667
Why are people still asking ‘thoughts?’ about equal pay?? especially about our national soccer teams???? are you fucking kidding me? there’s literally no reason that makes sense. the argument, that when they play the same quality, they should... THEYVE WON THE WORLD CUP 4 TIMES (Assbag McGee, 2019).	-0.190000
Well, well, well. Guess @ussoccer would rather squandered \$\$\$ on lobbyists than spent on #equalpay for @USWNT Another poor decision by @CACsoccer #equalpaynow https://t.co/HvkZPH0Ggs?amp=1 (R Hohman, 2019).	-0.100000



Figure 4. @Cerati9 Twitter post (Xavier G. Campos, 2019)

5. DISCUSSION

As discussed in the abstract, emotional experiences manifest in the language found in popular culture, in its many forms (Palmer & Occhi, 1999; Gabrielova & Maksimenko, 2021). Language is one of the main vehicles whereby emotive experiences come to existence. Sentiments are experienced daily and expressed in a variety of ways in linguistic analysis. For example, Occhi (1999) analysed the Japanese culture and how emotions are lexicalised through sound-symbolic words. The word *doki-doki* is found to be signifying a pounding heart. The analysis conducted in this study found, through quantifying the distribution and the valence of sentiments expressed in the data, that the language expressed strong sentiments. This result is expected in a discourse on social media calling for cultural and policy changes. The USSF's refusal to pay the American women's soccer team the same amount as the men's team even after winning the World Cup was also predictably provocative. This finding of negative sentiments expressed in social media is in line with a study by Etter et al. (2016) which found that people in social media treat organisations' social media accounts critically. The findings of this study also highlight that the USSF still holds gender stereotypes about women's sport. Likewise, Coche (2016) indicated that critical views of USSF are documented in coverage of women and men's sport suggesting that social media accounts held essentialised assumptions that reference to names are different between female athletes and male athletes.

The findings of the computational analysis contribute to the understanding of sentiment distribution and its valence. In addition, the qualitative analysis provides a better understanding of the situational context of particular events (Hegtvedt & Johnson, 2018). Both analyses contribute original research to the knowledge of how emotive language is used in major social media calls for gender equality in women's sport. The analysis of emotive language in a discourse on the pay gap in American soccer provides insight into the gender politics of women's sport in the US. The findings

of this study support the view that athletes are 'cultural architects', defined by Danielsen et al. (2019, p. 2) as athletes who possess leadership qualities and '*have the attitudes and the ability to change the mind-sets of their teammates, and the potential to enhance the culture of the team*'. USWNT Captain Megan Rapinoe has taken the role of cultural architect in leading the call to close the gender pay gap. The qualitative analysis of selected tweets demonstrates the situational context of the debate on the gender pay gap.

This research shows how social media challenges stereotypes found in more traditional media channels. In analysing sport news aired on TV the amount of coverage between men and women's sport was qualitatively lower for women, thus societal changes in favour of women's sport did not reflect a change in how media represent women's sport (Cooky et al., 2015). Moreover, this coherent difference between traditional media and social media regarding how women's sports are reported and represented were found to be attributed to variables associated with the nature of how sport now works. Sports newsrooms lack representation of women, newsrooms make more gendered assumptions about their intended audience, and newsrooms follow repetitive formulas for reporting sport news (Sherwood et al., 2016). However, different social media platforms provide user-generated content that challenge the gender pay gap which was evident in this study through the qualitative sentiment analysis of negative tweets. For example, the use of swearing, capitalisation and other high-pitched linguistic cues shed a light on a gender pay gap issue in American women's sports.

The finding of this study should be factored in with its limitations. The computational sentiment analysis alone would not have rendered results with a very high degree of accuracy. To mitigate this limitation, qualitative analysis of examples was implemented to ensure a more valid result. The context is explained in the qualitative phase. Although computational sentiment analysis adds value to discourse analysis studies, some issues with reliability persist especially for Twitter data (Jussila et al., 2017), computational sentiment

analysis of English data is advanced compared to other languages making the use of this method for discourse studies an effective method of analysis to measure public attitudes and views regarding gender pay gap in American women's sport.

6. CONCLUSION

The issue's social media coverage triggered a national debate between proponents and opponents of equal wages for female athletes in the US. This study examines the emotive language used in social media to campaign for equal pay for female soccer players in the United States. The data was gathered for one month following the USWNT's victory at the 2019 Women's World Cup and includes a corpus of over 10,000 tweets. The corpus contains almost a million words. We quantified

the distribution and valence of emotive language. The data were analysed both computationally and qualitatively for emotive language. The computational analysis revealed both positive and negative words in terms of emotional valence. The qualitative study reveals that positive language is employed to demonstrate pride in the accomplishment and to show support for the team members' efforts to close the gender pay gap. However, negative language was used to express discontent with the official organisations blamed for the gender wage discrepancy. Thus, the emotive language conveys information about the situational environment and the athletes' function as cultural artifacts in calls for change. Simultaneously, emotive language is pervasive on social media and plays a major role in narratives about gender disparity.

References

- Abdelrazeq, A., Janßen, D., Tummel, C., Jeschke, S., & Richert, A. (2016). Sentiment analysis of social media for evaluating universities. In S. Jeschke, I. Isenhardt, F. Hees, & K. Henning (Eds.), *Automation, communication and cybernetics in science and engineering* (pp. 233-251). Springer International. https://dx.doi.org/10.1007/978-3-319-42620-4_19
- Alkhamash, R. (2019). 'It is time to operate like a woman': A corpus-based study of representation of women in STEM fields in social media. *International Journal of English Linguistics*, 9(5), 217-226. <http://doi.org/10.5539/ijel.v9n5p217>
- Alkhamash, R. (2020a). Islamophobia in the UK print media: An intersectional critical discourse analysis. *International Journal of English Language and Linguistics Research*, 8(2), 91-103.
- Alkhamash, R. (2020b). Discursive representation of the EU in Brexit-related British media. *GEMA Online*, 20(1), 77-91. <https://doi.org/10.17576/gema-2020-2001-05>
- Alkhamash, R., & Al-Nofaie, H. (2020). Do Saudi academic women use more feminised speech to describe their professional titles? An evidence from corpus. *Training, Language and Culture*, 4(3), 9-20. <https://doi.org/10.22363/2521-442X-2020-4-3-9-20>
- Archer, A., & Prange, M. (2019). Equal play, equal pay: Moral grounds for equal pay in football. *Journal of the Philosophy of Sport*, 46(3), 416-436.
- Assbag McGee [@grace_leeanne12]. (2019, August 19). *Why are people still asking 'thoughts?' about equal pay?* [Tweet]. Twitter. https://twitter.com/grace_leeanne12/status/1163327073655459840?s=20
- Ceron, A., Curini, L., Iacus, S. M., & Porro, G. (2014). Every tweet counts? How sentiment analysis of social media can improve our knowledge of citizens' political preferences with an application to Italy and France. *New Media & Society*, 16(2), 340-358. <https://doi.org/10.1177/146144813480466>
- Chip Dutchik [@Chipster_D]. (2019, July 7). *HAPPY @FIFAWWC Final LET'S GO LADIES!* [Tweet]. Twitter. https://twitter.com/Chipster_D/status/1147871334166347776?s=20
- Coche, R. (2016). Promoting women's soccer through social media: How the US federation used Twitter for the 2011 World Cup. *Soccer & Society*, 17(1), 90-108.
- Cooky, C., Messner, M. A., & Musto, M. (2015). 'It's dude time!': A quarter century of excluding women's sports in televised news and highlight shows. *Communication & Sport*, 3(3), 261-287.

- Danielsen, L., Giske, R., Peters, D. M., & Høigaard, R. (2019). Athletes as 'cultural architects': A qualitative analysis of elite coaches' perceptions of highly influential soccer players. *Sport Psychologist*, 33(4), 313-322. <https://doi.org/10.1123/tsp.2018-0166>
- Daniel Workman [@danielworkman]. (2018, September 3). *We should be asking more questions like this* [Tweet]. Twitter. <https://twitter.com/danielworkman/status/1036374425241878529?s=20>
- Denis, A., Cruz-Lara, S., & Bellalem, N. (2013). General purpose textual sentiment analysis and emotion detection tools. *ArXiv*, Article 1309.2853v1. <https://arxiv.org/abs/1309.2853v1>
- Ellen DeGeneres [@TheEllenShow]. (2019, July 7). *The US women's soccer team are the world champions!* [Tweet]. Twitter. <https://twitter.com/TheEllenShow/status/1147912087911329792?s=20>
- Etter, M., Colleoni, E., Illia, L., Meggiorin, K., & D'Eugenio, A. (2016). Measuring organizational legitimacy in social media: Assessing citizens' judgments with sentiment analysis. *Business & Society*, 57(1), 60-97. <https://dx.doi.org/10.1177/0007650316683926>
- French, S. (2013). Still not there: The continued invisibility of female athletes and sports in the New Zealand print media. *Media International Australia*, 148(1), 39-50. <https://doi.org/10.1177/1329878X1314800105>
- Gabrielova, E. V., & Maksimenko, O. I. (2021). Implicit vs explicit evaluation: How English-speaking Twitter users discuss migration problems. *Russian Journal of Linguistics*, 25(1), 105-124. <https://doi.org/10.22363/2687-0088-2021-25-1-105-124>
- George, C., Hartley, A., & Paris, J. (2001). The representation of female athletes in textual and visual media. *Corporate Communications: An International Journal*, 6(2), 94-101.
- GW Sports [@GWsports]. (2019, July 18). *@GW_Lacrosse alum Emily Fortunato served as an athletic trainer for the @USWNT World Cup Run* [Tweet]. Twitter. <https://twitter.com/GWsports/status/1151854132375851008?s=20>
- Heather Steele [@Equality1975]. (2019, July 15). *This gets under my skin so bad!* [Tweet]. Twitter. <https://twitter.com/Equality1975/status/1162000837100658699?s=20>
- Hegtvædt, K., & Johnson, C. (2018). *Social psychology: Individuals, interaction, and inequality*. SAGE.
- Hussein, D. M. E. D. M. (2018). A survey on sentiment analysis challenges. *Journal of King Saud University – Engineering Sciences*, 30(4), 330-338. <https://doi.org/10.1016/j.jksues.2016.04.002>
- Jacob Singletary [@BUWolverine]. (2019, August 8). *@ussoccer seriously wtf – just pay the women* [Tweet]. Twitter. <https://twitter.com/BUWolverine/status/1159565911554179077?s=20>
- Jennifer Risi [@JenRisi]. (2019, August 7). *Continuously impressed by the tenacity of the women of the @USWNT and their fight for equality* [Tweet]. Twitter. <https://twitter.com/JenRisi/status/1159139206557589504?s=20>
- Jenny Benkert [@jenny_scherer22]. (2019, July 14). *The United States women's soccer team has become an excruciating example of a scenario we've seen play out for decades* [Tweet]. Twitter. https://twitter.com/jenny_scherer22/status/1150342963303714818?s=20
- Jon Burrows [@Jon]Burrows]. (2019, July 15). *Not in THIS country!* [Tweet]. Twitter. [https://twitter.com/Jon\]Burrows/status/1150573029661040640?s=20](https://twitter.com/Jon]Burrows/status/1150573029661040640?s=20)
- Jussila, J., Vuori, V., Okkonen, J., & Helander, N. (2017). Reliability and perceived value of sentiment analysis for Twitter data. In A. Kavoura, D. P. Sakas, & P. Tomaras (Eds.), *Strategic innovative marketing* (pp. 43-48). Springer.
- Kristiansen, E., Broch, T. B., & Pedersen, P. M. (2014). Negotiating gender in professional soccer: An analysis of female footballers in the United States. *Choregia*, 10, 5-27.
- Lebel, K., Pegoraro, A., & Harman, A. (2019). The impact of digital culture on women in sport. In D. Parry, C. Johnson, & S. Fullagar (Eds.), *Digital dilemmas* (pp. 163-182). Springer. https://doi.org/10.1007/978-3-319-95300-7_8
- Lee Billiard [@LeeBilliard]. (2019, July 3). *Got to say the @USWNT continuously remain a level above* [Tweet]. Twitter. <https://twitter.com/Lee-Billiard/status/1146162812760338432?s=20>
- Mary Ann Santucci [@maryannsantucc]. (2019, July 5). *To say I am inspired by the @USWNT would be the understatement of the century* [Tweet]. Twitter. <https://twitter.com/maryannsantucc/status/1147152819839016961?s=20>

- McGannon, K. R., & Spence, J. C. (2012). Exploring news media representations of women's exercise and subjectivity through critical discourse analysis. *Qualitative Research in Sport, Exercise and Health*, 4(1), 32-50. <https://doi.org/10.1080/2159676x.2011.653503>
- Meyer, E. J. (2014). New solutions for bullying and harassment: A post-structural, feminist approach. In R. M. Schott & D. M. Søndergaard (Eds.), *School bullying: New theories in context* (pp. 209-240). Cambridge University Press. <https://dx.doi.org/10.1017/CBO9781139226707.013>
- Murray, C. (2019, March 9). Will the US women's soccer team win their battle for equal pay? *The Guardian*. <https://www.theguardian.com/football/2019/mar/09/will-the-us-womens-soccer-team-win-their-battle-for-equal-pay>
- Neri, F., Aliprandi, C., Capeci, F., Cuadros, M., & By, T. (2012, August 26-29). Sentiment analysis on social media. In *Proceedings of the 2012 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining* (pp. 919-926). IEEE. <https://doi.org/10.1109/ASONAM.2012.164>
- Occhi, D. (1999). Sounds of the heart and mind: Mimetics of emotional states in Japanese. In G. B. Palmer & D. J. Occhi (Eds.), *Language of sentiment: Cultural constructions of emotional substrates* (pp. 151-170). John Benjamins. <https://doi.org/10.1075/aicr.18.09occ>
- Ozyumenko, V. I., & Larina, T. V. (2021). Threat and fear: Pragmatic purposes of emotionalisation in media discourse. *Russian Journal of Linguistics*, 25(3), 746-766. <https://dx.doi.org/10.22363/2687-0088-2021-25-3-746-766>
- Palmer, G. B., & Occhi, D. J. (1999). Introduction: Linguistic anthropology and emotional experience. In G. B. Palmer & D. J. Occhi (Eds.), *Language of sentiment: Cultural constructions of emotional substrates* (pp. 1-22). John Benjamins. <https://doi.org/10.1075/aicr.18.01pal>
- Pam Wickham [@PamWickham1]. (2019, August 8). *Seriously @USWNT?* [Tweet]. Twitter. <https://twitter.com/PamWickham1/status/1159536824018247693?s=20>
- R Hohman [@RosAwithanA]. (2019, August 9). *Well, well, well* [Tweet]. Twitter. <https://twitter.com/RosAwithanA/status/1159600890975703040?s=20>
- Secret Deodorant [@Secret_Deodorant]. (2019, July 14). *We're taking action to help close the @USWNT gender pay gap by giving \$529K (\$23k x 23 players) to the @USWNTPlayers* [Tweet]. Twitter. <https://twitter.com/Secret-Deodorant/status/1150335540354584576>
- Sherwood, M., Osborne, A., Nicholson, M., & Sherry, E. (2016). Newswork, news values, and audience considerations. *Communication & Sport*, 5(6), 647-668.
- SpanishEyes [@Spanish_Eyes1]. (2019, August 9). *This is outrageous* [Tweet]. Twitter. https://twitter.com/Spanish_Eyes1/status/1159639005773873158?s=20
- Suzy Levy [@SusannahLevy]. (2019, July 15). *Absolutely superb to see @SecretDeodorant using their brand & their money to close a gender pay gap* [Tweet]. Twitter. <https://twitter.com/Susannah-Levy/status/1150688145110896640?s=20>
- Taboada, M., Anthony, C., & Voll, K. D. (2006). Methods for creating semantic orientation dictionaries. In *Proceedings of the 5th International Conference on Language Resources and Evaluation (LREC)* (pp. 427-432). ACL.
- Taboada, M., Brooke, J., Tofiloski, M., Voll, K., & Stede, M. (2011). Lexicon-based methods for sentiment analysis. *Computational Linguistics*, 37(2), 267-307.
- Thelwall, M., & Buckley, K. (2013). Topic-based sentiment analysis for the social web: The role of mood and issue-related words. *Journal of the American Society for Information Science and Technology*, 64(8), 1608-1617. <https://doi.org/10.1002/asi.22872>
- Toffoletti, K., Pegoraro, A., & Comeau, G. S. (2019). Self-representations of women's sport fandom on Instagram at the 2015 FIFA Women's World Cup. *Communication & Sport*. <https://doi.org/10.1177/2167479519893332>
- Turney, P. D. (2002). Thumbs up or thumbs down? Semantic orientation applied to unsupervised classification of reviews. *ArXiv*, Article 0212032. <https://dx.doi.org/10.3115/1073083.1073153>
- U.S. Soccer WNT [@USWNT]. (2019, July 30). *For everything she has done and everything she has meant to this program we say, THANK YOU* [Tweet]. Twitter. <https://twitter.com/USWNT/status/1156268313489657857?s=20>

- Vendemia, M. A. (2017). (Re)Viewing reviews: Effects of emotionality and valence on credibility perceptions in online consumer reviews. *Communication Research Reports*, 34(3), 230-238. <https://dx.doi.org/10.1080/08824096.2017.1286470>
- Victoria Brownworth [@VABVOX]. (2019, July 7). *The #USWNT is the best soccer team in the world, male or female* [Tweet]. Twitter. <https://twitter.com/VABVOX/status/1147970507809198082?s=20>
- Xavier G. Campos [@cerati9]. (2019, July 15). *7/7/2019. Girls will be girls.* @USWNT @FIFAWWC @FIFAWorldCup #WorldChampions #TourDeFour #USWNT #USSoccer #OneNationOneTeam #FIFAWWC #France2019 #Francia2019 #WomensWorldCup #CopaMundialFemenina #DareToShine #soccer #football @Groupama Stadium <http://instagram.com/p/BzornbzhWqB/> [Tweet]. Twitter. <https://twitter.com/cerati9/status/1150648684658483203?s=20>

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