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A Social Media Analysis of the Gendered Representations of Athletes #GC2018

Photo from Griffith Sports College

Background



Gender equality in sport has received increasing attention with initiatives promoting equality in opportunity, recognition and pay

International Olympic Committee: achieve 50% female participation in the Olympic Games by 2020
GC2018 Commonwealth Games: equal number of medal events for men and women



Existing studies suggest that contemporary sports culture remains male-dominated (Dunn, 2018; Hardin & Greer, 2009)

Girl participation: dropout rates of girls are 2 times higher by the age of 14 (Women's Sports Foundation, 2016)
Issue with media representation

Background: Media Representation



Female athletes receive less coverage in traditional media (print and TV)

Constrained by space and prime time

Choices have to be made to celebrate some athletes (mostly men) while marginalising others (mostly women)



Sports media have typically engaged in gender marking and persistent gender stereotyping when reporting on women athletes

Women's event vs the event

Female athletes often asked questions related to their appearance and personal life



Social media has no limitation on the amount of posts, which implies a great opportunity to neutralise the masculine sports culture

Especially among the younger generation (99% internet users)

Research Aims



Investigate the gendered representations of athletes on social media at GC2018



Assess how female and male athletes are portrayed on Twitter



Provide recommendations to promote an inclusive sports culture

Literature: Media Representation of Athletes



Women account for 40% of sports participation but only receive 5% to 8% media coverage

(Adams & Tuggle, 2004; Cooky et al., 2013)



Language and imagery used to represent women athletes are predominately gendered, sexualized, infantilized, and hyper-feminized

(Godoy-Pressland, 2014; Litchfield, 2015)



Longitudinal studies demonstrate little improvement to TV coverage

(Billings, 2008; Fink, 2015)

Literature: Media Representation of Athletes



Coverage increases during mega sporting events due to increased medal opportunities

(Billings et al., 2014; Eagleman et al., 2014)



Slowly changing in Australia as women athletes are beginning to receive more coverage in newspapers

(Sherwood et al., 2017)

Literature: Representation of Athletes on Social Media

Internet provides sports media an opportunity for more accurate depiction of mega-events and equitable coverage (Eagleman et al., 2014).

Social media provides a platform for athletes to promote themselves (ability to change stereotypes)

Existing studies on social media and athletes focus on the reasons why they use social media, branding and fan interaction (Filo et al., 2015)

Minimal research on athlete representations on social media

Literature: Effects on General Public

Social Learning Theory (Bandura, 1986): Media reporting shapes public opinion

- E.g. Serena Williams became victim of social media “gender questioning” as she was seen too muscular for the women’s game (Litchfield et al., 2018)

Athletes need to be conscious of how they portray themselves as it could create certain public expectations

- Female athletes are more likely to post sexually suggestive photos - perpetuating gender stereotypes (Geurin-Eagleman & Burch, 2016)
- Men are more likely to follow a female athlete on Twitter for her physical attractiveness (Clavio & Kian, 2010)

Social media presents an avenue for athletes to change the narrative around women’s sport but can also lead to unregulated sexual and physical abuse threats (Litchfield et al., 2018)

Data Collection



Data collection took place during the Games (4-15 April 2018)



Any publicly available posts on Twitter with #GC2018



716,914 tweets harvested using Netlytic, a social networks analyser



After removing duplicates and non-English tweets, 133,338 were included in the analysis

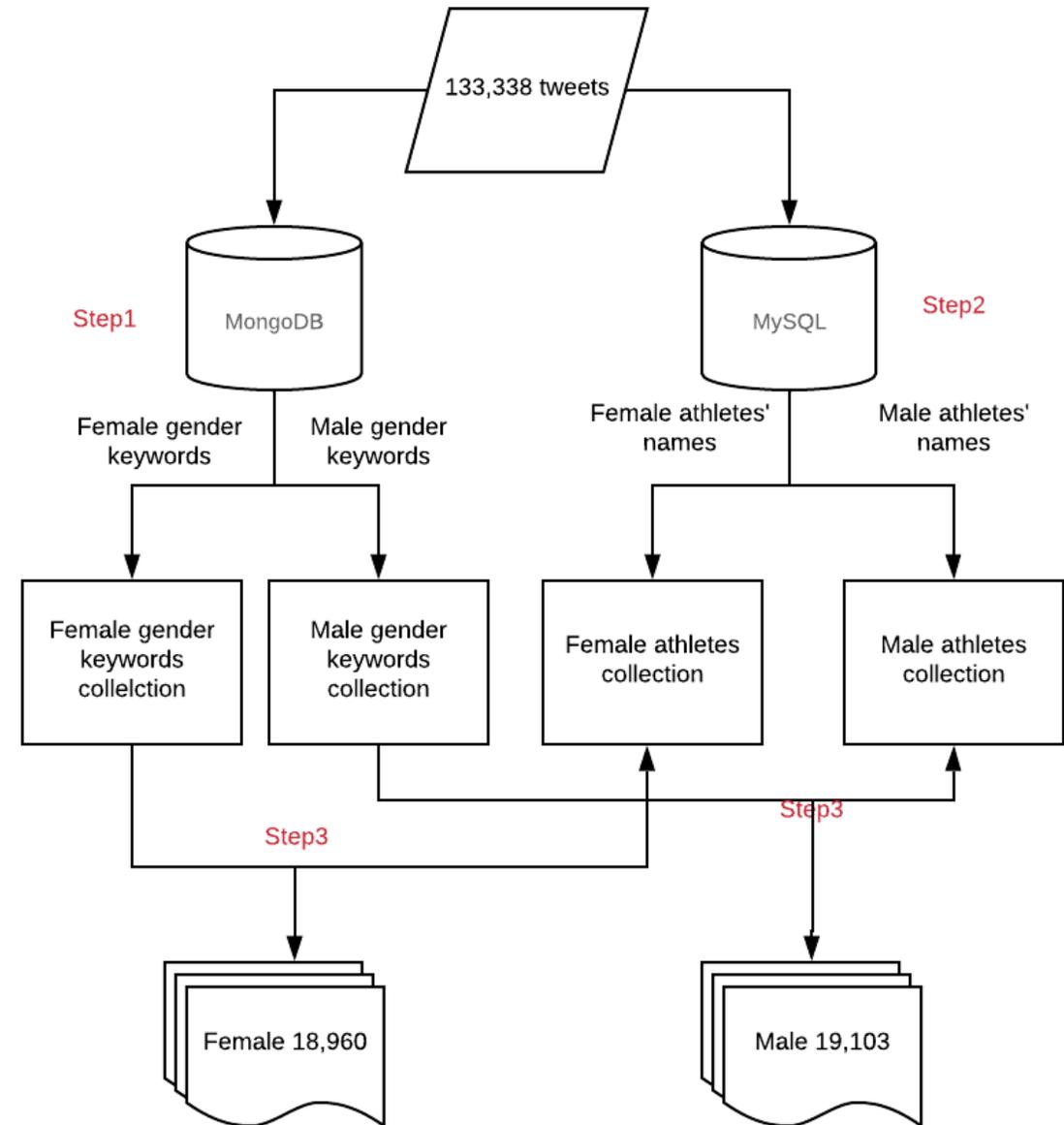
Data Cleaning Structure

Step 1: Gender keywords:

woman, women, female, girl, girls, she, her
man, men, male, boy, boys, he, his

Step 2: Athlete's names

Step 3: Cross Database checking



Sentiment Analysis

- Valence Aware Dictionary for Sentiment Reasoning (VADER)
- More than 10,000 words annotated with a score
- However no significant difference between female and male

GOLD Congratulations @MatthewGlaetzer
Australia is proud of you! #GC2018
#GC2018Cycling 0.807

Congratulations to all the NSW girls who
played with skill and pride throughout the
Games A silver medal is nothing to scoff at!
#GC2018 #gc2018hockey 0.902

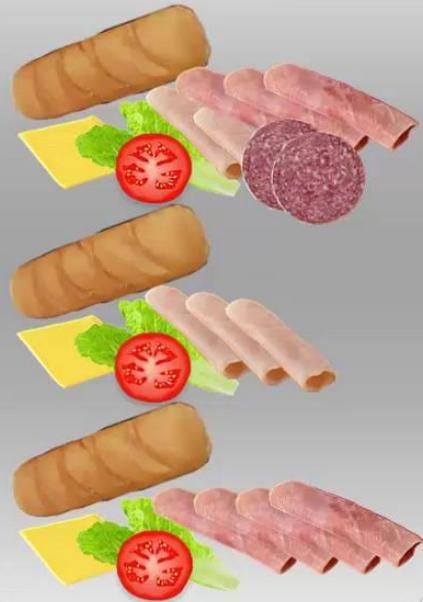


Word Frequency Analysis

MapReduce applied



Map



Reduce



Apply on Twitter

- Jess Trengove has claimed the BRONZE medal in this morning Commonwealth Games Marathon after having a gutsy crack at winning gold.
- Team mate Lisa Weightman claimed the SILVER - amazing running by our marathon girls! #GC2018
- Safe to say we are pretty excited for the games to begin

MALE COLLECTION	WEIGHT	FEMALE COLLECTION	WEIGHT
#gc2018	18392	#gc2018	18978
men	10451	women	10938
gold	6780	gold	8224
medal	5142	india	4688
india	4167	medal	4533
final	3394	congratulations	3033
bronze	2667	silver	2741
#cwg2018	2608	final	2740
congratulations	2377	#cwg2018	2472
wins	2342	games	2433
games	2331	wins	2426
mens	2297	event	2425
live	1999	team	2293
event	1932	womens	2269
commonwealth	1857	#commonwealthgames2018	2026
#commonwealthgames2018	1824	winning	1974
silver	1809	commonwealth	1921
kg	1777	bronze	1826

Example of Frequent Words in Female and Male Dataset

Word Frequency Analysis: Pre-identified Words

44 words were identified from existing literature and coding on 200 randomly selected Tweets:

attractive, awesome, beauty/beautiful, boy, bronze, calm, champ/champion, classy, convincingly, cool, cute, dedication, family, fantastic, father, feminine, girl/girls, glamour/glamorous, great, hard work, hero, kaput, lady, luck, man/male/men, mercy/merciful, mother, pretty, prodigy, proud, settle, sex/sexy, simply, sneak, strong, success, talent, unsuccessful, win, woman/women/female, and young



Tweets mentioning any of the 44 words were extracted and analysed manually to consider the context where the words were used and the gendered connotations

Gender Difference is Marginal but Persists



Coverage: Female (18,960 tweets) and male (19,103 tweets) athletes received a similar amount of attention on social media



Sentiment analysis: No significant difference



Gender difference was observed in the narratives and representations of athletes using pre-identified words but on a relatively marginal scale

Female Athletes as Beautiful & Sexy Girls

Female athletes were 2.84 times more likely to be referred to as girls than male athletes as boys

Gendered adjectives such as beauty/beautiful (1.87 times) and sex/sexy (2 times) appeared more frequently in tweets citing female athletes

Female athletes were 2.71 times more likely to be referred to as mothers than males as fathers

Family was mentioned more frequently in female athlete tweets compared to male tweets

Male Athletes as Young Heroes

Female Athletes as Hardworking & Dedicated

Male athletes were 1.72 times more likely to be described as young and 1.21 times as heroes

Female athletes were about twice as likely to be described as hardworking and 5.5 times as dedicated

Male athletes were 1.56 times more likely to be described as talented compared to female athletes

Both female and male athletes were equally portrayed as strong, great and successful

Aligns with existing literature regarding the gendered representation of female athletes but on a marginal scale

Seemingly neutral words such as talent, hard work and dedication could be essentially gendered

Predisposes the notion that men are natural athletes



- Female athletes develop imposter syndrome and take on unnecessary stress
- Discourage young girls' sports participation

Discussion

The brief nature of social media posting has made the content more focused and hence, neutralised the representation of female and male athletes at mega sporting events

Is this an actual progress in the gendered representation of athletes?

- A large volume of data was harvested using a generic hashtag for the event (#gc2018)
- Twitter is about getting information out first and quicker thus the narrative is less emphasised (Sanderson & Hambrick, 2012)
- Such effect may change as Twitter has extended from 140 to 280 characters

Discussion

Discussion



The lack of gendered insights from machine-generated analyses implies the possible gender bias inherent in existing programming



Future research: build a specialised dictionary similar to that of sentiment analysis for big data analysis but with a gender score

Implications for Practice



Education & Development

Work with key stakeholders to remove gender marking and promote use of positive imagery and language to capture athletic characteristics not bound by gender.

Conduct development work among athletes and player's associations around athlete brand awareness and personal identity



Leadership & Transparency

Use transparent dialogue among sport/event organisations and media groups during partnership negotiation processes around the promotion and communication of athletes in sporting events to advance gender representation



Transformational Research

Further research to deconstruct athlete representation in 3 dimensions:

- Text
- Discursive Practice
- Social Norms



Changing the representation of athletes in the (social) media may have more meaningful social impacts than merely increasing women's participation rates.