

An evaluation of participation levels and media representation of girls and women in sport and physical activity in Scotland

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EXECUTIVE SUMMARY

Regular sport and physical activity are important for long-term physical and mental health. However, girls and women are consistently identified as less active than boys and men.

This research aimed to synthesise and summarise evidence on the participation levels of girls and women in sport and physical activity in Scotland. Specific aims were to understand:

- How women and girls are represented in sport and physical activity in online news media
- How women and girls are represented in sport and physical activity in social media

We conducted a rapid evidence review and content analysis of online news media and social media (Instagram and Twitter). This included a search of five online news outlets on two separate dates (BBC News, the Telegraph, the Daily Mail, the Sun, and the Mirror). We also used key sport and physical activity terms to search Instagram and Twitter, searched content posted by the most followed women on Twitter and Instagram, searched content posted by popular fitness and sportswomen on Twitter and Instagram, and searched content posted by 10 sport and physical activity brands on Twitter and Instagram. We analysed the content of the media searches using content analysis.

We identified a total of 1095 articles on the sport homepages of the five media outlets, of which 11% (119 out of 1095) were related to women. The articles were grouped into four types of articles, including: perceived sexualised content (27 articles), broken bones, viral videos and scandals (6 articles), performance sport (79 articles), and articles aimed at inspiring people to do more sport and physical activity (7 articles).

On Twitter, 39% of the posts by brands on Twitter and 45% on Instagram were about women (excluding gender neutral content).

The sport and physical activity key search terms identified a total of 860 posts, including images, texts and videos, of which 51% on Instagram and 43% on Twitter were primarily related to women (excluding gender neutral content). The content of these posts was analysed, and three themes were identified including 1) demonstrating knowledge and/or expertise, 2) femininity, and 3) brand identify. These themes related to how women represented themselves or how women were represented in sport and physical activity in social media.

It is plausible that the media representation of women and girls in sport and physical activity influences the activity levels of women and girls in Scotland, however the design of the current study did not enable identification of any potential relationships. Longitudinal research is needed to identify associations between media representation and sport and physical activity levels of women and girls.

Identifying potential mechanisms for improving the representation of women and girls in both news media and social media is important and could contribute to increasing sport and physical activity levels of women and girls in Scotland.

Background

Regular physical activity is beneficial for long-term physical and mental health¹. To achieve the benefits associated with regular physical activity, the UK Chief Medical Officers recommend that children achieve at least 60 minutes of moderate to vigorous physical activity daily. Adults are recommended to achieve at least 150 minutes of physical activity at a moderate intensity each week². This could involve participating in activities like walking, gardening, sports, and active travel.

Despite this, 35% of adults and 67% of children are not sufficiently active to achieve the health benefits associated with meeting the physical activity guidelines. Women and girls are disproportionately less active than men and boys with 40% of women compared with 29% of men, and 71% of girls compared with 65% of boys not achieving the recommended physical activity guidelines³.

The Active Scotland Outcomes Framework outlines Scotland's ambitions for a more active Scotland⁴. The framework includes six outcomes underpinned by a commitment to equality, aimed at enabling all people in Scotland to be physically active. Gender is one of seven protected characteristics for equality (in addition to age, disability, ethnicity, sexual orientation and gender reassignment, religion and belief, and socioeconomic status). Thus, gender inequalities represent an important consideration for sport and physical activity promotion in Scotland.

Aims and objectives

This project aimed to synthesise and summarise evidence on the participation levels of girls and women in sport and physical activity in Scotland. The specific objectives are:

- 1) To summarise evidence from different published sources on the sport and physical activity levels of girls and women in Scotland, presenting trends in sport and physical activity across the life course
- 2) To understand how girls and women are represented in sport and physical activity in new and traditional forms of media
- 3) To outline potential links between how women and girls are represented in sport and physical activity in the media and sport and physical activity levels

Method

Design

Rapid evidence review and content analysis of new and traditional media outlets.

¹ Lee IM, Shiroma EJ, Lobelo F, Puska P, Blair SN, Katzmarzyk PT. (2012). Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *Lancet*. 2012; 380: 219-229

² Department of Health. (2011). Start Active Stay Active: a report on physical activity for health from the four home countries' Chief Medical Officers. London, UK.

³ McLean, J., Christie, S., Hinchliffe, S. and Gray, L. (2018). Scottish Health Survey 2017: Volume 1: Main Report. The Scottish Government Health Directorate: Edinburgh, UK.

⁴ The Scottish Government. Active Scotland Outcomes Framework:

<https://www2.gov.scot/About/Performance/scotPerforms/partnerstories/Outcomes-Framework>

Data sources

Key search terms were used to search academic databases (PsychINFO, MEDLINE, and EMBASE). We also searched websites (e.g. Sport Scotland, Scottish Government) for population level sport and physical activity data. No exclusions to study design were made. Papers published from 2009 to 2019 were eligible for inclusion. Key terms were used to search traditional and non-traditional media outlets, including online news articles, Instagram, and Twitter. Images, text and videos were identified from these media sources and were coded to establish the ways in which women and girls are represented in sport and physical activity in the media in Scotland.

Traditional media searches

The sport homepages of five popular UK online news websites were searched on two search dates (17/04/2019 and 10/06/2019). These included BBC News, the Daily Mail, the Sun, the Telegraph, and the Mirror. The total number of articles and the number of articles relating to males, females, or both/neutral was recorded. Articles and images about females were subsequently downloaded for analysis.

Social media searches

Social media searches were conducted on one search date (17/04/2019). We searched the top 20 posts in Twitter and Instagram using the following hashtags: #walking, #swimming, #fitness, #fitspo, #girlswholift, #running, #cycling, #dancing, #football, #golf, #rugby, #athletics and #yoga. We also searched Twitter and Instagram for the 10 most recent posts for 10 sport and/or physical activity brands relevant to the UK, including: Adidas, Lululemon, Vans, Nike, Pure Gym, My Protein, Anytime Fitness, Gymshark, Under Armour, and Red Bull. The total number of posts about males, females, or both/neutral was recorded. Posts (including videos, images and text) about females were subsequently downloaded for analysis.

We also searched the 10 most recent posts for the top 10 female influencers (defined as females with the highest number of followers on the platform) on Twitter and Instagram (see Table 1). We also searched the 10 most recent posts for 10 female sport and/or physical activity influencers (defined as females with >1 million subscribers who promote or engage in sport/physical activity as part of their occupation) (see Table 2). As above, these posts were downloaded for analysis.

Table 1. Top female accounts on Instagram and Twitter (accurate at time of search)

Instagram	Twitter
Ariana Grande	Ariana Grande
Beyonce	Britney Spears
Jennifer Lopez	Katy Perry
Kendall Jenner	Kim Kardashian West
Kim Kardashian West	Lady Gaga
Kylie Jenner	Rihanna
Miley Cyrus	Selena Gomez
Nicki Minaj	Shakira
Selena Gomez	Taylor Swift
Taylor Swift	The Ellen Show

Table 2. Female fitness influencers (>1,000,000 followers) (accurate at time of search)

Instagram	Twitter
Anllela Sagra	Cassey Ho
Jen Selter	Caroline Wozniacki
Julia Gilas	Dame Jessica Ennis Hill
Kayla Itsines	Jillian Michaels
Lauren Drain	Kayla Itsines
Maria Sharapova	Lindsey Vonn
Michelle Lewin	Maria Sharapova
Paige Hathaway	Paige Hathaway
Sandra Prikker	Serena Williams
Serena Williams	Tone It Up

Analysis

Population level physical activity data is presented in graphs, tables and text, and trends in activity levels were identified. Where possible, we also identified activity levels by type of physical activity (e.g. organised sport, walking). Images, text and video identified from the media searches were coded and analysed using content analysis. Similar codes were grouped together to form themes that explain how women and girls are represented in sport and physical activity in new and traditional forms of media.

Results

Trends in sport and physical activity in Scotland

Sport and physical activity data were synthesised from three primary sources of data: the Scottish Health Survey, the Scottish Household Survey, and the Health Behaviour in School Aged Children Survey.

Children

UK guidelines recommend that children up to 16 years old should be active for a minimum of 60 minutes per day at a moderate-to-vigorous intensity to achieve the health benefits associated with physical activity. This should include activities that strengthen muscles and bones at least three times per week⁵. The Scottish Health Survey and the Health Behaviour in School Aged Children Survey both provide population level physical activity data for children and young people in Scotland. The Scottish Health Survey reports that an average of 36% of boys and 31% of girls aged 5 to 15 years achieved the aerobic physical activity guidelines, with boys more active than girls from aged 8-10, 11-12, and 13-15 years old⁶ (see Figure 1). Gender differences in the percentage of young people achieving the physical activity guidelines are also evident in the Health Behaviour in School Aged Children Survey, with 30% of boys and 21% of girls at age 11, 19% of boys and 13% of girls at age 13, and 15% of boys and 11% of girls at age 15 years reaching the physical activity guidelines⁷.

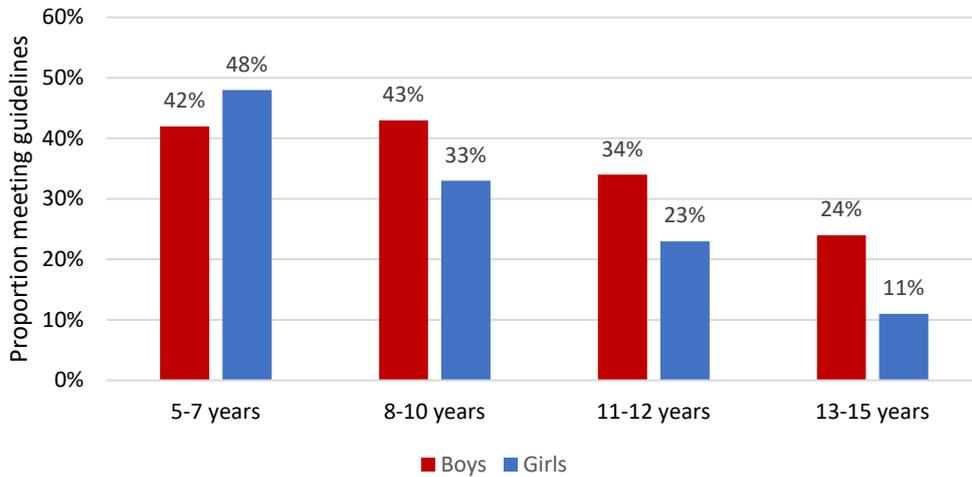
⁵ Department of Health. (2011). Start Active Stay Active: a report on physical activity for health from the four home countries' Chief Medical Officers. London, UK.

⁶ McLean, J., Christie, S., Hinchliffe, S. and Gray, L. (2018). Scottish Health Survey 2017: Volume 1: Main Report. The Scottish Government Health Directorate: Edinburgh, UK.

⁷ Currie, C., Van der Sluijs, W., Whitehead, R., Currie, D., Rhodes, G., Neville, F., et al. (2015). *Health Behaviour in School-Aged Children (HBSC) 2014 Survey in Scotland National Report*. Child and Adolescent Health Research Unit (CAHRU): University of St Andrews.

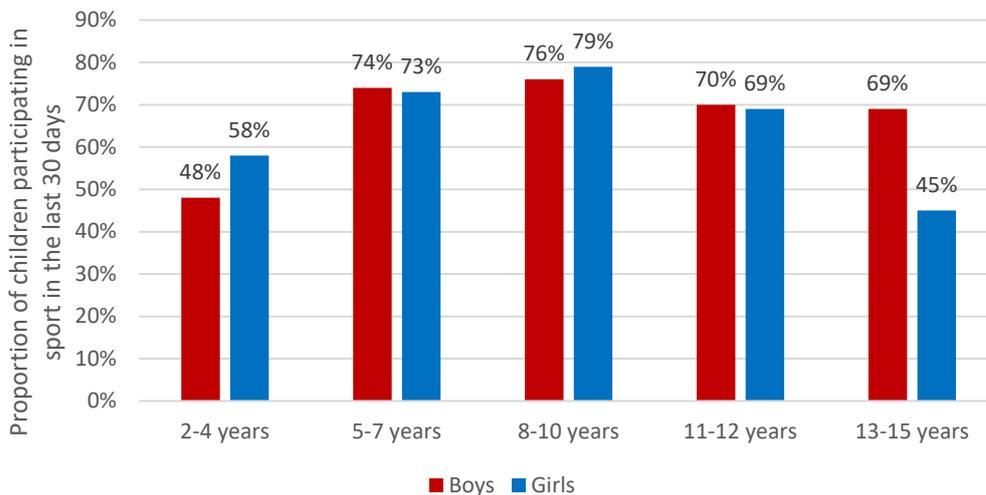
Differences in the total percentage of young people achieving the guidelines between the two surveys reflect differences in the measurement tool (e.g. the different surveys used).

Figure 1. Proportion of children aged 5-15 years meeting physical activity guidelines⁸



The Scottish Health Survey also reports levels of sport participation for young people. An average of 67% of boys and 66% of girls participated in sport in the past 30 days, with similar levels between boys and girls between the ages of 2 to 12 years. There was a notable difference in sport levels at aged 13-15 years where 69% of boys and just 45% of girls participated in sport in the last 30 days (see Figure 2).

Figure 2. Proportion of children aged 2-15 years participating in sport in the last 30 days⁹



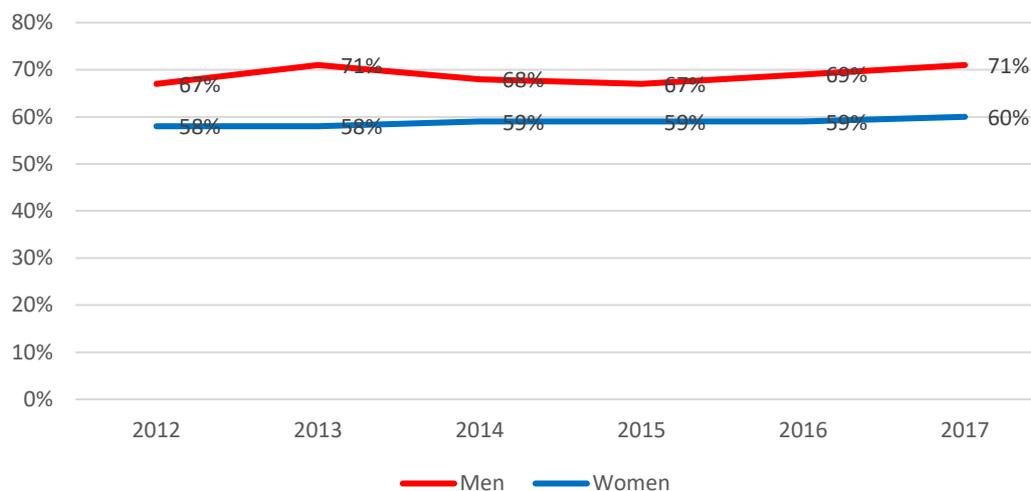
⁸ McLean, J., Christie, S., Hinchliffe, S. and Gray, L. (2018). Scottish Health Survey 2017: Volume 1: Main Report. The Scottish Government Health Directorate: Edinburgh, UK.

⁹ McLean, J., Christie, S., Hinchliffe, S. and Gray, L. (2018). Scottish Health Survey 2017: Volume 1: Main Report. The Scottish Government Health Directorate: Edinburgh, UK.

Adults (aged 16 years +)

The UK physical activity guidelines recommend that adults aged 16 years and over should participate in a minimum of 150 minutes of moderate-to-vigorous physical activity per week and do activities to strengthen muscles and bones two times per week to achieve the health benefits associated with physical activity¹⁰. The percentage of adults in Scotland reaching physical activity guidelines was 71% for men and 60% for women in 2017¹¹. These levels remain similar to previous years, as can be seen in Figure 3.

Figure 3. Proportion of adults in Scotland aged 16 years+ meeting physical activity guidelines



For specific types of physical activity in adults, walking was the most common form of activity with similar levels for both men and women (69% and 71% respectively). Men participated more than women in sports (58% and 49% respectively) apart from swimming (16% and 19%), dancing (3% and 10%) and aerobics (11% and 19% respectively)¹².

A separate analysis of the Scottish Health Survey showed that of those reaching or failing to reach aerobic physical activity guidelines, team sport and non-team sports made up a very small component of daily physical activity, particularly for women aged 25 years and over. Domestic activity and walking made up most daily activity, followed by exercise and fitness, for both males and females¹³.

¹⁰ Department of Health. (2011). Start Active Stay Active: a report on physical activity for health from the four home countries' Chief Medical Officers. London, UK.

¹¹ McLean, J., Christie, S., Hinchliffe, S. and Gray, L. (2018). Scottish Health Survey 2017: Volume 1: Main Report. The Scottish Government Health Directorate: Edinburgh, UK.

¹² The Scottish Government. (2018) Scotland's People Annual Report 2017: Scottish Household Survey

¹³ Strain, T., Fitzsimons, C., Foster, C. E., Mutrie, N., Townsend, N., & Kelly, P. (2016). Age-related comparisons by sex in the domains of aerobic physical activity for adults in Scotland. *Preventive Medicine*, 3, 90-97.

DOI: [10.1016/j.pmedr.2015.12.013](https://doi.org/10.1016/j.pmedr.2015.12.013)

Traditional media: coverage and content of media coverage of women in sport and physical activity

Out of 1095 articles on the combined sport homepages of five media outlets on two search dates, 119 (11%) of articles were related to women (see Table 3). These articles were analysed and grouped into four types of articles, including: perceived sexualised content (27 articles), broken bones, viral videos and scandals (6 articles), performance sport (79 articles), and articles aimed at inspiring people to do more sport and physical activity (7 articles).

Table 3. Coverage of women in online sports news

Media outlet	Total articles on sport homepage	Women's coverage (number)	Women's coverage (%)
The Sun	284	28	10% (range 8-13%)
The Mirror	180	10	6% (range 5-7%)
BBC Sport	128	38	30% (range 11-44%)
The Telegraph	180	25	14%* (range 0-29%)
Daily Mail	323	18	6% (range 0.6-11%)
Total	1095	119	11%

*This outlet had a dedicated "Women's Sport" page, but only the sport homepages were searched. The range provided in the final column shows the difference in coverage between the two dates searched (the first date was randomly selected, and the second search date was during the Women's World Cup football tournament).

Perceived Sexualised content

A total of 27 out of the 121 articles (22%) relating to women included content which perceived to sexualise women. These were predominantly from a series of articles reported on the sport homepage of the Sun on one of the search dates called "Sport in Briefs" and included articles about women with a limited connection to sport. For example, several articles related to wives and girlfriends of male footballers, and images showed these women in perceived sexualised poses with minimal clothing. Some content also emphasised the sexuality of women, through identifying them as mothers, wives or girlfriends. For example, one article announced the pregnancy of a World Wrestling Entertainment (WWE) wrestler.

Broken bones, viral videos and scandals

Six articles related to broken bones, viral videos or scandals relating to sport and physical activity. These included images and an article about a female weightlifter who broke her arm during a lift, a video that went viral about a young gymnast who broke a bone, two articles about an athlete's house burglary, one article relating to domestic abuse, and one article describing a dispute between two tennis players during a tournament (one male, one female).

Performance sport

A total of 79 out of the 121 articles about women (65%) were related to women's performance sport across the two search dates. This included only two articles (reported in BBC Sport and the Daily Mail) connected to performance sport from the first search date. The second search date, which was specifically selected to follow major women's sporting events (including the French Open Tennis finals and the Women's Football World Cup), reported considerably more women's performance sport content (77 articles). These articles were primarily about the Women's Football World Cup, but also included articles relating to the French Open tennis, triathlon, athletics, amongst others. Across the two searches, BBC Sport and the Telegraph had the highest coverage of women's performance sport (31 and 25 articles respectively), followed by the Daily Mail (14 articles), the Sun (6 articles), and the Mirror (3 articles).

Articles aimed at inspiring people to do more sport and physical activity

Seven articles were reported on the BBC Sport homepage in a series called 'Get Inspired', which aims to encourage people to try sports and physical activities.

Social media: coverage of women in sport and physical activity

Brands

Out of 100 posts by brands on Twitter, 21 were about women, 32 were about men, and the remainder were gender neutral/or featured both males and females. Out of the posts on Twitter that focused mainly on either women or men, 39% (21 out of 53) were about women. Out of 100 posts on Instagram, 34 were about women, 40 were about men, and 26 were gender neutral/or featured both males and females equally. Out of the posts on Instagram that focused mainly on either women or men, 45% (34 out of 74) were about women. Some brands represented women more than others. Under Armour, Vans, Redbull and Gymshark posted predominantly about men; whilst Adidas and Nike posted mainly about women. The remaining brands featured women and men similarly. In total, 43% (55 out of 127) of posts featured women (excluding neutral content). These searches conducted following International Women's Day, which may have influenced the gender balance in the brands' postings.

Most followed accounts on Instagram and Twitter

A total of 6 out of the 10 most popular account holders on both Twitter and Instagram were women (excluding neutral accounts).

Sport and physical activity terms and searches

Out of the sport and physical activity terms searched on Twitter and Instagram, 51% and 43% were related primarily to women on Instagram and Twitter respectively (excluding #girlswholift and gender neutral/content featuring both sexes equally). This varied by the type of activity with posts about football, rugby and golf predominantly featuring men and posts about dancing and yoga largely featuring women. Other activities including swimming, walking, fitness, cycling, athletics, running, and #fitspo had more even representation of women and men.

Social media: content of posts about women in sport and physical activity

A total of 860 posts, including images, texts and videos, were identified and analysed. The images were predominantly of white women, approximately between the ages of 18-35 years. Few posts represented ethnic minority women, women with disabilities, or LGBTQ+ women. The content of the images was grouped into three themes including 1) demonstrating knowledge and/or expertise, 2) femininity, and 3) brand identity.

Demonstrating knowledge and/or expertise

This included posts by, about, and for women, for the purpose of showing the account holder's perceived expertise in sport and physical activity. Women and brands often demonstrated their expertise using their or women's bodies, in a sense verifying their knowledge and athleticism. The accompanying text typically included quotes, anecdotes or advice on various aspects of daily life, including (but not limited to) sport or physical activity. This was often from personal experience. For women who used their platforms to sell their fitness brand, this also involved posting transformation pictures of women who had successfully lost weight or changed their bodies using their program/product(s).

Femininity

The majority of the images displayed women outside of physical activity or sport. Images often emphasised feminine traits, for example wearing make-up, feminine hairstyles, and wearing minimal clothing to highlight aspects of their bodies. Few images highlighted women's athleticism or skills through performance of physical activities or sports.

Some women demonstrated their heterosexuality through their posts, rather than (or in addition to) their athleticism. For example, through posting images or text about or with their male partners. This has been suggested by some to demonstrate 'apologetic behaviour' and to perpetuate gender stereotypes.

Brand identity

Women with hundreds of thousands or millions of followers can be self-promoters, curating their own content and creating their own brand and identify. Some women created their brand around travel and luxury, others around being a mother, and others still around sexuality and highlighting an athletic body.

Out of the ten sport and physical activity brands evaluated, some portrayed women in empowering ways, highlighting their skill and athleticism, and showcased ethnic minority women and women with a range of body types. Some of these brands also used their platform to challenge gender norms and discrimination in sport and physical activity. Other brands perpetuated gender norms through their posts.

Possible links between women's media coverage and sport and physical activity levels

It is plausible that the media representation of women and girls in sport and physical activity has a role in influencing activity levels of women and girls in Scotland. Previous research has found that women and girls feel negatively about themselves and women's status in society when looking at perceived sexualised images of women¹⁴, that men and boys think negatively about women displayed in perceived sexualised images¹⁵, and that women and girls are more likely to objectify themselves after viewing images of perceived sexualised women compared with images of women in performance sports¹⁶. How women and girls are represented in sport and physical activity in new and traditional forms of media may create a narrative for women and girls that sport and physical activity is for women and girls who fit a particular ideal, serving to isolate some women and girls from participating, and contributing to self-objectification.

¹⁴ Daniels, E. A. (2012). Sexy versus strong: What girls and women think of female athletes. *Journal of Applied Developmental Psychology*, 33(2), 79-90.

¹⁵ Daniels and Wartena (2011). Daniels, E. A., & Wartena, H. (2011). Athlete or sex symbol: What boys think of media representations of female athletes. *Sex Roles: A Journal of Research*, 65(7-8), 566-579. <http://dx.doi.org/10.1007/s11199-011-9959-7>

¹⁶ Daniels, E. A. (2009). Sex Objects, Athletes, and Sexy Athletes: How Media Representations of Women Athletes Can Impact Adolescent Girls and College Women. *Journal of Adolescent Research*, 24(4), 399–422. <https://doi.org/10.1177/0743558409336748>

It is important to emphasise that due to the nature of the study design this research is not able to demonstrate an association between media representation and sport and physical activity levels of women and girls. Longitudinal research is necessary to establish any relationship between media representation and sport and physical activity levels of women and girls in Scotland.

Conclusion and implications

Physical activity levels and sport participation are consistently lower for women and girls compared with men and boys. An analysis of online news outlets found that women and girls are underrepresented in sport news coverage, even following major women's sporting events (including the Women's World Cup football and the French Open tennis finals). It is cause for concern that 22% of the content of online news articles relating to women were perceived sexualised articles or images. This perceived sexualised content could serve to trivialise women's contributions to sport and society. Working with online news outlets towards improving the representation and reporting of women and girls in sport is needed. Some media outlets have already made commitments towards this important issue¹⁷, however the same media outlet featured 0% of women in the sport homepage on the first search date, suggesting that further work to improve equality of sports media representation is needed.

Women had greater representation in sport and physical activity in social media, but amongst fitness and sports women with a high number of followers (>1 million) many women posted perceived sexualised images of themselves. Some reporting of women by brands using social media challenged gender norms which is encouraging, whilst other brands perpetuated gender norms. Campaigns such as 'This Girl Can' could contribute to setting a positive narrative on women and girls in sport and physical activity, with Sport England noting an increase in the number of women and girls being physically active since the introduction of the campaign¹⁸. Co-ordinated efforts across multiple sectors (e.g. health, entertainment, education) may be required to address the representation of women and girls in sport and physical activity in new and traditional forms of media.

¹⁷ Telegraph Women's Sport manifesto <https://www.telegraph.co.uk/womens-sport/2019/03/19/landscape-womens-sport-changing-will-capture/>

¹⁸ Sport England (2017) Active People Survey <https://www.sportengland.org/research/about-our-research/active-people-survey/>