Comparing the Impact of Screen Time Modes on Body Image for Men and Women

Natalie Zhou

Abstract

People spend more time today online than ever before. However, spending more time online may be linked to decreased self-esteem and increased body dissatisfaction, eating disorders, and body dysmorphic disorders. This paper examines how screen time affects the body image of men and women. A literature review was conducted comparing popular modes of screen time such as social media, television viewing, and gaming with their effects on the body image of men and women. We found that for both men and women, there was generally a negative correlation between screen time on social media and body image, while there was no significant correlation for screen time playing video games and body image. Television viewing appeared to negatively affect the body image of women only and not men. To better understand how screen time affects the body image, self image, and mental health of men and women, more extensive research can be done including more diverse demographics and modes of online platforms.

Introduction

Average screen usage in our modern world has increased considerably from the early last decade, with people now averaging 6 hours and 58 minutes of screen time a day, a 13% increase since 2013 (1). Following the COVID-19 pandemic, the stay-at-home measures and online learning protocols throughout the US were correlated with a drastic swelling of over an hour of daily screen time for children, a spurt which persisted even after these social restrictions were lifted (2). Although the COVID-19 pandemic was only temporary, the increase in usage of screen time it has caused appears to be long-lasting.

With this upsurge of screen time comes both benefits and drawbacks. On one hand, increased screen usage allows for people to connect with people from all over the globe, establishing connections that would never have been able to exist otherwise (3). A study in China concluded that increased screen usage can also improve connectedness with family members and friends, decreasing feelings of loneliness as a result (4). Social media platforms can also keep people informed about news and current events or crises such as natural disasters in real-time, increasing safety in the face of danger (5).

On the other hand, rising screen usage has also placed an increased emphasis on beauty standards. Users of social media may consume hundreds of pictures each day, including those of fitness models, celebrities, and other public figures. Many people who post on social media only post their best photos, which leads to unrealistic photos that men and women may be comparing themselves to (6). As an example, after celebrity Kim Kardashian was rumored to have buttocks injections in 2014, online searches for ‘butt implants’ rose by 100% (7). Additionally, following Kylie Jenner’s announcement of having undergone lip augmentation procedures, Google searches for ‘lip fillers’ rose by 3233% (7). The culture of comparison fueled

by social media and its resulting inadequate feelings among individuals often results in excessive use of cosmetic procedures and surgeries in attempts to achieve the beauty standard (8). The surge of social media usage worldwide has also brought about an increase in mental health issues such as depression and anxiety (9, 10).

The rise in social media consumption has also led to worsening body image issues, or exacerbated dissatisfaction with one's body shape and weight, with a 2019 Mental Health Foundation report finding that 31% of teenagers and 35% of adults feel ashamed about their body image (11). For example, studies of teens in Australia and Belgium found that Facebook users experienced heightened body image concerns (12, 13). Correlations between screen time and poor body image are not due to social media alone, with other sources of media contributing to negative impacts on body image such as gaming (14), handheld viewing (15) and online viewing (15). From the results of self-reported studies, women's negative body satisfaction seemed to be positively correlated with more screen time.

Interestingly enough, different modes of screen time seem to have different strengths of association with developing negative body image. A study conducted in Iceland in 2022 on a cohort of 152 girls and boys studied at 15 and 17 years old showcased that excessive screen time, particularly gaming, was associated with lower body image scores in girls, but not boys (14). This growing trend in body image issues has also manifested itself in many different impacts and disorders. For example, a larger-scale study in 2022 involving 7,300 women found associations between handheld and online viewing and body dissatisfaction, as well as downloaded viewing and overeating behaviors (15). The study also found that recorded, online, and downloaded viewing were associated with disordered weight control behaviors (DWCB) among women (15). A 2022 study amongst female and male 16-18 year olds concluded that there is a concerning rise in body dysmorphia, or obsessions with flaws in one's own appearance, amongst adolescents (16). A 2023 study among 2538 Canadians 16-30 years old found that among women, video chatting was most strongly associated with symptoms of muscle dysmorphia (MD), a body dysmorphic disorder in which people are obsessively concerned with their muscularity and leanness (17, 18). With women, associations between specific viewing modes and poorer body image in addition to disordered weight control behaviors are apparent.

Of course, women alone are not the only ones whose body image may be affected by the rise in screen time. In the same 2023 Canadian study, no associations were found between any viewing mode and DWCB in men, but associations between viewing mode and body dissatisfaction signs were still apparent (15). The study examined 3,466 men to find that more online viewing exhibited greater body dissatisfaction, while more downloaded viewing led to increased odds of developing overeating habits (15). In addition, a 2023 study among 2,538 English-speaking Canadians aged 16-30 highlighted a positive relationship between screen time and symptoms of muscle dysmorphia in men. Social media specifically appeared to exhibit a stronger association with MD symptoms than other modes of screen viewing (17).

As screen time and digital device usage increases, it's important to understand the impact of different screen viewing modes on body image. Common screen viewing modes such as social media, TV or broadcast viewing, and gaming may have significant impacts on body image for both men and women, but can be mitigated when better recognized and understood. This paper sought to figure out whether a rise in different types of screen time consumption modes correlate with a rise in body image issues for men compared to women.

Methods

The PubMed database was reviewed from December 2023 to June 2024 for recent reviews and systematic reviews published from January 2013 to December 2023. The search included terms such as body image, body weight, eating disorder, video games, social media, screen time, and consumption of TV. The search focused on reviews that measured the amount of screen time exposure across multiple modes (social media, TV or broadcast, video gaming) and its effects on body image through measures of disordered weight control behavior, symptoms of muscle dysmorphia, or self-reported body dissatisfaction. The reviews were mostly cross-sectional but had some longitudinal studies. The demographic was adolescent girls and boys ages 12-18 years old and men and women 18 years old and older. International studies were also included. The search reviewed only freely available studies and were examined for content related to body image and screen time. All examined studies were available in English.

Data from these studies was mostly collected through online surveys and sometimes advertised with raffle incentives at targeted high schools or Instagram and Snapchat advertisements. Any survey participants who had missing information were excluded from these studies. For the Eisenberg et al. study, surveys were used to find the 25 favorite TV shows among 2793 Minnesota adolescents to analyze weight-related teasing incidents on these TV shows (19). Surveys asked participants to share the average time they spent on screen viewing modes as well as indicate on a point-scale how much statements relating to body image satisfaction applied to them (19).

Body image was measured based on preexisting scales for each study. The Hrafnkelsdottir et al. study used five questions of the Body and Self-Image subscale of the Offer Self-Image Questionnaire in which each answer to the five questions were given a point value from 1 to 4 and totaled after the survey. The Ganson et al. study used a similar survey and point-distribution method to measure the Muscle Dysmorphic Disorder Inventory, while the Vuong et al. study used the Body-Esteem Scale for Adolescents and Adults (BESAA) body dissatisfaction subscale's score to measure individuals' body dissatisfaction (17, 19). All studies had scales that were internally consistent, with analyses performed separately for men and women.

To examine associations between each mode of screen viewing and body dissatisfaction outcomes, multiple linear regression models were run for many studies (6, 17, 19), and chi-square tests were also used in the Ganson et al. and Vuong et al. studies to test for non-normality. Stata 15.1 (21), Stata 17 (17), SPSS 26 (19), and Mplus 8.0 (19) were used to

conduct data analyses. All studies considered data statistically significant if it had a p value lower than 0.05.

Results

Table 1. Associations between different modes of screen viewing and worse body image for men and women

Modes of viewing	**Men** (12+ years of age)	**Women** (12+ years of age)
Social Media	More than 5 hours daily of social media use correlated with an increase in self-reported body weight dissatisfaction: **p<0.01** (21) Frequency on Snapchat and Instagram correlated with a higher body dissatisfaction index (BESAA subscale scores): **p<0.05** (19) Hours of daily social media use correlated with a higher Muscle Dysmorphic Disorder Inventory score: **p<0.001** (17)	More than 5 hours daily of social media use correlated with an increase in self-reported body weight dissatisfaction: **p<0.01** (21) Frequency on Snapchat and Instagram correlated with a higher body dissatisfaction index (BESAA subscale scores): **p<0.01** (19) Hours of daily social media use correlated with a higher Muscle Dysmorphic Disorder Inventory score: p=0.087 (17)

Television Broadcast	Number of exposures to weight-related teasing from favorite three TV shows correlated with a lower self-reported body satisfaction score: p=0.336 (19) Hours of daily TV watched correlated with a higher Muscle Dysmorphic Disorder Inventory score: p=0.880 (17) Hours of daily TV/DVD/internet material watched correlated with a lower self-reported body image score: p<0.47 (14)	Number of exposures to weight-related teasing from favorite three TV shows correlated with a lower self-reported body satisfaction score: **p=0.008** (19) Hours of daily TV watched correlated with a higher Muscle Dysmorphic Disorder Inventory score: **p=0.040** (17) hours of daily TV/DVD/internet material watched correlated with a lower self-reported body image score: **p<0.03** (14)
Gaming	Hours of daily game playing correlated with a lower self-reported body image score: p<0.99 (14) Hours of daily game playing correlated with a higher Muscle Dysmorphic Disorder Inventory score: p=-0.196 (17)	Hours of daily game playing correlated with a lower self-reported body image score: **p<0.03** (14) Hours of daily game playing correlated with a higher Muscle Dysmorphic Disorder Inventory score: p=0.444 (17)

Table 1: The table above contains the p values of correlations collected from multiple studies to depict the relationship between a form of screen viewing consumption (social media, television, or gaming) and worse body image for men and women. Statistically significant associations with a p value of less than 0.05 are bolded.

Social Media Impact

In several studies, social media was shown to have a strong impact on body image regardless of sex (6, 19). For men, greater social media use was also correlated with a greater likelihood of developing muscle dysmorphia, but for women, there was no significant relationship between greater social media use and the likelihood of developing muscle dysmorphia (17).

Television Broadcast Impact

Among men, TV and broadcast viewing showed no significant correlation with body dissatisfaction (14, 17, 19). However, among women, these same reviews highlighted a significant relationship between consuming TV content and body dissatisfaction. Among women, more exposure to weight-related teasing in their favorite TV shows was correlated with lower body dissatisfaction (19). This data was collected through analyzing participants' favorite 25 tv shows and their own body satisfaction.

For men, there was a correlation with social media and worse body image, but not a statistically significant correlation with TV. For women, there was a statistically significant correlation with both social media and TV.

Gaming Impact

For both men and women, there is not much statistically significant data supporting that more time spent gaming negatively impacts body image. The exception was a single study that found that more time spent gaming was correlated with worse body image for women but not men (14). For women, this is unlike social media and TV, which had data to support a correlation between gaming and worse body image.

Discussion

For women, most articles highlighted a correlation between more screen time hours and worse body image. However, for men, much of the data did not support a significant correlation between more screen time hours and worse body image, with an exception in the social media category which did have data to support a significant correlation (17, 20, 21).

Social Media

The correlation of developing muscle dysmorphia from viewing social media for men but not women could be explained by the tendency of men to consume content with more emphasis on muscularity, while women might consume content with less emphasis on muscularity and more emphasis on thinness. These data also may not have seen a correlation due to a lessened tendency for women to develop muscle dysmorphia. For example, a 2020 article that explored the emphasis of men and women with body dysmorphia found that women tended to focus on legs, while men emphasized muscularity more than women (22).

A possible explanation for social media impacting body image for both men and women is the setting that social media sites create which emphasizes body aesthetics and comparison.

Many people only post their best photos on social media, which could lead to unrealistic photos that men and women may be comparing themselves to, causing worse body image (6).

Television Broadcast

A possible explanation for TV and broadcast viewing only showing a significant correlation with body dissatisfaction for women but not men is that there are more inclusive body types for men vs women on TV shows. For example, popular TV shows such as Family Guy, The Simpsons, and Modern Family feature more male characters who are not the ideal body type, while female characters across these shows are not plus size. This could lead women who don't see their body type represented on TV to feel self-conscious while watching, thus lowering their body image.

Gaming

A possible explanation for gaming not having as much statistically significant data for men or women is that people might consume it with the expectation that it is a form of entertainment and not a reflection of reality, which leads to them being less conscious of body types displayed on the screen.

Although TV impacts men and women differently, for gaming there might not be much impact on the body images of men or women because of the different portrayal of bodies in the video games men or women choose to consume. For example, women may choose not to play video games where the women are portrayed with unrealistic or sexualized bodies, while men tend to consume games catering towards the male gaze (23). This allows both men and women to not have their body image negatively impacted by the video games they choose to play.

Limitations

This review does have a few limitations, as it does not describe the effects of screen time on body image for the elderly as there was no information found for adults aged 65 years and older. Additionally, some data was collected through a sampling method with incentives, which may have increased selection bias for participants. As the data collected was self-reported in all of the studies examined, biases may have been present leading to reduced validity of data. The study by Ganson et al. on Muscle Dysmorphia was only measured for subjects 16 years to 30 years old (17). There are some differences in social media consumption across ages. 71% of adults aged 18-29 say they have used Instagram before, while only 29% of adults aged 50-64 say they have used Instagram before (24). Since Instagram is widely considered a more photo-based media platform than others, this may mean younger adults' body image are affected by social media consumption disproportionately compared to older adults.

Conclusion

In today's age, there has been a substantial increase in screen time. The increase in screen time in this decade is also correlated with a prevalence of body image issues. Indeed, for

both men and women, evidence supports a significant correlation between time spent on social media and worse body image, with men also showing a higher likelihood of developing muscle dysmorphia. With TV consumption, there was data to support an association between consuming TV content and worse body image for women but not men. For both men and women, there was little statistically significant data supporting that gaming had any impact on body image.

In the future, more extensive research needs to be done on people under 18 for the gaming mode of screen time, as they are among its most popular consumers. Furthermore, future studies can review the effects of image-based platforms such as Instagram compared with video-based platforms such as TikTok or Instagram reels on body image for girls, boys, men, and women.

On a societal level, declining body image for adolescents can be solved by limiting their screen time with more accessible parental controls. Parental controls should be the default setting for adolescents' devices. It is also worth limiting ads on the internet about diet-promoting goods or services to diverge from diet culture-promoting disordered weight control behaviors.

References

1. Howarth, Josh. “Alarming Average Screen Time Statistics (2024).” *Exploding Topics*, Exploding Topics, 24 June 2024, explodingtopics.com/blog/screen-time-stats.
2. Sidharthan, Dr. Chinta. “In the Wake of COVID Restrictions Being Lifted, Kids’ Screen Time Has Remained High.” *News*, 17 Feb. 2023, www.news-medical.net/news/20230216/In-the-wake-of-COVID-restrictions-being-lifted-kids-screen-time-has-remained-high.aspx.
3. Pandya, Apurvakumar, and Pragya Lodha. “Social connectedness, excessive screen time during COVID-19 and mental health: A review of current evidence.” *Frontiers in Human Dynamics*, vol. 3, 22 July 2021, https://doi.org/10.3389/fhumd.2021.684137.
4. Li, Chao, et al. “Does the internet bring people closer together or further apart? the impact of internet usage on interpersonal communications.” *Behavioral Sciences*, vol. 12, no. 11, 31 Oct. 2022, https://doi.org/10.3390/bs12110425.
5. Bazarova, Natalie. “Staying Connected via Social Media in the Age of Covid-19.” *Psychology Today*, Sussex Publishers, 2020, www.psychologytoday.com/us/blog/social-media-stories/202003/staying-connected-social-media-in-the-age-covid-19.
6. Oakes, Kelly. “The Complicated Truth about Social Media and Body Image.” *BBC News*, BBC, 24 Feb. 2022, www.bbc.com/future/article/20190311-how-social-media-affects-body-image.
7. Tijerina, Jonathan D., et al. “Celebrity influence affecting public interest in plastic surgery procedures: Google Trends analysis.” *Aesthetic Plastic Surgery*, vol. 43, no. 6, 7 Aug. 2019, pp. 1669–1680, https://doi.org/10.1007/s00266-019-01466-7.
8. Laughter, Melissa R., et al. “Psychology of aesthetics: Beauty, social media, and body dysmorphic disorder.” *Clinics in Dermatology*, vol. 41, no. 1, Jan. 2023, pp. 28–32, https://doi.org/10.1016/j.clindermatol.2023.03.002.
9. Devi, Khumukcham A., and Sudhakar K. Singh. “The hazards of excessive screen time: Impacts on physical health, mental health, and overall well-being.” *Journal of Education and Health Promotion*, vol. 12, no. 1, Nov. 2023, https://doi.org/10.4103/jehp.jehp_447_23.
10. Aubrey, Allison. “How to Help Young People Limit Screen Time - and Feel Better about How They Look.” *NPR*, NPR, 26 Feb. 2023, www.npr.org/sections/health-shots/2023/02/26/1159099629/teens-social-media-body-image.
11. Health and Social Care Committee. “The Impact of Body Image on Mental and Physical Health.” *UK Parliament*, 2022, publications.parliament.uk/pa/cm5803/cmselect/cmhealth/114/report.html.

12. Tiggemann, Marika, and Amy Slater. “NetGirls: The internet, Facebook, and body image concern in adolescent girls.” *International Journal of Eating Disorders*, vol. 46, no. 6, 25 May 2013, pp. 630–633, https://doi.org/10.1002/eat.22141.
13. Rousseau, Ann, et al. “The reciprocal and indirect relationships between passive Facebook use, comparison on Facebook, and adolescents’ body dissatisfaction.” *Computers in Human Behavior*, vol. 73, Aug. 2017, pp. 336–344, https://doi.org/10.1016/j.chb.2017.03.056.
14. Hrafnkelsdottir, Soffia M., et al. “Screen time and body image in Icelandic adolescents: Sex-specific cross-sectional and longitudinal associations.” *International Journal of Environmental Research and Public Health*, vol. 19, no. 3, 24 Jan. 2022, p. 1308, https://doi.org/10.3390/ijerph19031308.
15. Tang, Lisa, et al. “Self-reported total screen time and viewing modes are associated with body dissatisfaction, disordered eating, and cosmetic surgery intentions among young adults.” *Nutrients*, vol. 14, no. 10, 12 May 2022, p. 2027, https://doi.org/10.3390/nu14102027.
16. Singla, Gaurav, et al. “Rising dysmorphia among adolescents : A cause for concern.” *Journal of Family Medicine and Primary Care*, vol. 9, no. 2, 2020, p. 567, https://doi.org/10.4103/jfmpc.jfmpc_738_19.
17. Ganson, Kyle T., et al. “Contemporary screen use and symptoms of muscle dysmorphia among a national sample of Canadian adolescents and young adults.” *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity*, vol. 28, no. 1, 15 Feb. 2023, https://doi.org/10.1007/s40519-023-01550-7.
18. Anderson, Alyssa. “Recognize the Symptoms and Learn the Treatment for Muscle Dysphoria.” *WebMD*, WebMD, 2024, www.webmd.com/mental-health/what-is-muscle-dysmorphia.
19. Eisenberg, Marla E., et al. “Exposure to teasing on popular television shows and associations with Adolescent Body Satisfaction.” *Journal of Psychosomatic Research*, vol. 103, Dec. 2017, pp. 15–21, https://doi.org/10.1016/j.jpsychores.2017.09.014.
20. Vuong, An T., et al. “Social media use and body dissatisfaction in adolescents: The moderating role of thin- and muscular-ideal internalisation.” *International Journal of Environmental Research and Public Health*, vol. 18, no. 24, 15 Dec. 2021, p. 13222, https://doi.org/10.3390/ijerph182413222.
21. Kelly, Yvonne, et al. “Social Media Use and Adolescent Mental Health: Findings from the UK millennium cohort study.” *EClinicalMedicine*, vol. 6, Dec. 2018, pp. 59–68, https://doi.org/10.1016/j.eclinm.2018.12.005.
22. Malcolm, Amy, et al. “An update on gender differences in major symptom phenomenology among adults with body dysmorphic disorder.” *Psychiatry Research*, vol. 295, Jan. 2021, p. 113619, https://doi.org/10.1016/j.psychres.2020.113619.
23. Strum, Lora. “Study Tracks 31-Year History of Female Sexualization in Video Games.” *PBS*, Public Broadcasting Service, 8 July 2016,

www.pbs.org/newshour/science/study-tracks-31-year-history-of-female-sexualization-in-video-games.

24. Auxier, Brooke. “Social Media Use in 2021.” *Pew Research Center*, Pew Research Center, 7 Apr. 2021, www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/.