

Virtual Mirrors and Distorted Reflections: Investigating Social Media's Influence on Body Image and Eating Behaviour of Young Adults in Mumbai

Ashwathi Anilkumar 

KET's V. G. Vaze College (Autonomous), Mumbai, India

Abstract. In the vortex of virtual mirrors, young adults find themselves at the epicentre of body ideals and dietary trends. This study examines the relationship between social media, body image and eating behaviours of urban young adults in Mumbai. It explores usage patterns, analyses the impact of body-centric content on perceptions and behaviours, and assesses the youth's awareness of social media's potential influence on eating disorders and mental health. The primary empirical data were collected through an online survey, utilizing a semi-structured questionnaire from 360 respondents in Mumbai who were selected based on specific criteria, i.e. aged 15 – 29 years and regularly use social media. This study found that social media has become the foreground of body image ideals, weight loss endeavours, and dieting trends which are not necessarily fact-based. The practice of photo editing, dietary changes, and the act of comparing oneself to others on social media are prevalent among respondents. These findings provide insights into the complex role of social media in young adults' lives, underscoring the need for targeted interventions and fostering responsible online behaviours through media literacy

Keywords: Body image; dietary trends; eating disorder; mental health; social media.

Article History

Submitted:
September 23, 2023

Accepted:
July 9, 2024

Published:
July 30, 2024

1. Introduction

As the Industrial Revolution unfolded, a wave of consumerism swept across the world, reshaping societies from one based on necessity to one rooted in desire. Happiness, desirability, and self-esteem became intrinsically linked to the possessions individuals acquired. Within this context, industries of fashion, cosmetics, fitness and their allies forged an imperative for their products by crafting a mould for the perfect body. This paradigm shift was significantly facilitated by the media, employing compelling advertisements and impactful entertainment narratives.

The transitional period of early adulthood marks a stage of self-reflection and potential, characterized by the pursuit of enduring relationships and the support they receive from their environment and society (Munsey, 2006). Notably, the media assumes a crucial

role in shaping the self-perceptions of emerging adults, influencing their beliefs about physical attributes, and subsequently impacting behavioural outcomes (Kaur, *et al.*, 2022). In the context of India, the Westernization of Indian culture has played a pivotal role in transforming body preferences. Mumbai as the Indian media capital (Curtin, 2010) is home to numerous media production houses, advertising agencies, and digital content creators; exerts a unique influence over societal attitudes reflected in media content and impacts body image. Studies indicate a growing emphasis on health consciousness in India, with a shifting emphasis towards slimmer bodies, aligning with the evolving global narratives. This transition is particularly noteworthy as traditional South Asian ideals of curvy, full-bodied figures, once symbols of beauty and prosperity (Bhattacharya, 2018), now give way to a preference for slim female bodies and chiselled physiques for males (Hoodbhoy, Zahid, & Iqbal, 2015).

Pioneers like Jean Kilbourne, Naomi Wolf, Susie Orbach and Margo Maine, among others, have shed light on the connection between media representations, body image and eating disorders. While much of the research in this domain has historically focused on women due to the disproportionate impact of societal beauty ideals on women's self-perception, scholarship by Roberto Olivardia, Michael Levine, and Harrison Pope has contributed to understanding men's experiences with body dissatisfaction and muscle dysmorphia. Today, scholars are also exploring how societal expectations of appearance affect individuals beyond the binary understanding of gender. While the pioneering research has sparked social awareness, body positivity movements, and responsible branding initiatives in Western contexts, there is an increasing need for a gender-inclusive approach to study the association between body image and eating behaviour, particularly concerning the evolving media preferences in India.

In today's landscape, social media stands as an unparalleled platform, distinct from traditional media outlets. Offering heightened personalisation and interactivity, it facilitates a sense of validation through virtual social capital. It also fosters fluid dissemination of misinformation, body image ideals, peer comparisons, criticism, and unhealthy coping mechanisms (Ye, 2023). By comprehensively examining the impact of social media on young adults' body image and eating behaviours in the urban nucleus of Mumbai, this research seeks to shed light on the complexities of media's influence on individual psychology and behaviours in the contemporary digital age. Mumbai as the Indian media capital (Curtin, 2010) is home to numerous media production houses, advertising agencies, and digital content creators; exerts a unique influence over societal attitudes reflected in media content and impacts body image. This knowledge can inform targeted interventions, public health campaigns, and media literacy programs that strive to promote healthier body image perceptions and foster positive eating behaviours among the youth.

The principal objective of this research was to explore the intricate relationship between social media usage, eating disorders, body image, and overall mental health among urban young adults in Mumbai. The study aimed to investigate the patterns of social media usage, examining how exposure to body-centric content on these platforms influenced their perceptions of body image and eating behaviour. Additionally, the impact of social media on mental health indicators such as feelings of guilt, anxiety, and inadequacy was explored. The research also examined the level of awareness concerning the potential influence of social media on eating disorders and mental health.

2. Literature review

2.1. Eating disorders and mental health

Eating disorders are defined as behavioural conditions characterized by a persistent disturbance of eating or eating-related behaviour that results in the altered consumption or absorption of food and that significantly impairs physical health or psychosocial functioning (DSM-5, 2013). According to the National Institute of Mental Health, there exists a widespread misconception that regards eating disorders as mere lifestyle choices. Noteworthy types of eating disorders are anorexia nervosa, bulimia nervosa, and binge-eating disorder. Seeking prompt treatment for eating disorders holds utmost importance. Individuals struggling with eating disorders face heightened risks of both suicidal tendencies and medical complications (DSM-5, 2013). Additionally, it's common for those with eating disorders to concurrently experience other mental health disorders, such as depression or anxiety, and contend with substance use issues (American Psychiatric Association, 2023).

Anorexia nervosa is characterised by pervasive, pathological weight and shape concerns leading to restricted oral intake and consequent low weight (Neale & Hudson, 2020). Those with anorexia often view themselves as overweight, despite being underweight. This perception fuels strict dieting, excessive exercise, and severe calorie restriction, leading to malnutrition and physical complications (National Institute of Mental Health, 2015). Bulimia is characterised by recurrent episodes of unusually large amounts of food and feeling a lack of control over their eating, followed by behaviours to compensate for the consumed calories, such as self-induced vomiting, fasting, or excessive exercise (DSM-5, 2013). Individuals with bulimia may have a normal body weight, but the cycle of bingeing and purging can have serious physical and psychological consequences. Binge-eating disorder is characterized by recurrent episodes of consuming large amounts of food in a short period, accompanied by a feeling of loss of control (American Psychiatric Association, 2023). Unlike bulimia, individuals with binge-eating disorder do not engage in regular compensatory behaviours (DSM-5, 2013). This can lead to obesity, health problems, and emotional distress.

Treatment for eating disorders involves a comprehensive approach that encompasses medical, psychological, and nutritional components (Mehendale-Bhosale, 2023). The process is tailored to the specific type and severity of the disorder, as well as individual needs. It typically includes medical stabilization to address severe physical complications, psychotherapy like cognitive-behavioural therapy to challenge distorted thoughts, nutritional counselling for balanced eating, and support groups for community connection. Medication may be considered for co-occurring conditions, while body image work and relapse prevention strategies aid in fostering a healthier mindset. Holistic practices and family involvement can also play a role in promoting recovery (Mehendale-Bhosale, 2023). This multifaceted approach ensures early intervention, personalized care, and a collaborative effort among healthcare professionals, individuals, and their support networks to achieve sustained healing and well-being.

2.2. Social media, body image and dietary trends

The rapid rise of social media has brought about a fundamental shift in the dynamics of communication, collaboration, consumption, and content creation (Aral, Dellarocas, & Godes, 2013). Based on social media statistics of 2023, India has a noteworthy presence with 398.0 million users aged 18 years and above. This demographic segment represents approximately 40.2% of the entire population of the country (Forbes Advisor, 2023).

Projections suggest that between 2023 and 2028, social media penetration in India will steadily rise, eventually encompassing 83.16% of the total population (Statista Market Insights, 2023). As of January 2023, India stands as a substantial audience on Instagram with 516.92 million users and on Facebook with 448.1 million users spanning all age groups. In addition, platforms like Twitter/X (with 42.90% penetration), LinkedIn (with 35.7% penetration), the locally originated short video community Moj (with 29.50% penetration), and Pinterest (with 29% penetration) have garnered substantial popularity within India's social networking landscape (Forbes Advisor, 2023).

Amidst this digital landscape, social media's influence extends beyond communication, particularly in health discourse. Social media outshines traditional media in the rapid dissemination of information, offering a diverse array of self-glorifying beautiful faces and influential figures with just one click (Sidhu, 2018). Eysenbach suggests that the shift in health information-seeking behaviour reflects a transition from intermediation to apomediation (Eysenbach, 2008). In contrast to intermediation, where traditional experts and authorities serve as gatekeepers between the public and information, apomediation entails the public receiving guidance from the crowd, peers, and others, employing networked collaborative filtering processes, and without the same constraints on access to information. Central to this environment are social media influencers, exercising considerable influence in shaping perspectives on health, body image, and overall well-being. While social media influencers can propagate positive messages, they can also perpetuate unrealistic beauty ideals and disseminate misinformation.

According to Lynn *et al.*, the health discourse on social media is primarily steered by non-health professionals who may be poorly qualified to provide nutritional or dietary guidance, and the advice dispensed may lack established scientific evidence countering public health policies (Lynn, Rosati, Santos, & Endo, 2020). Netizens are bombarded with conflicting information given by physicians, dietitians, and self-proclaimed experts, spanning from diet trends to workout regimens, often accompanied by images that uphold idealized body standards (Derenne & Beresin, 2017). This digital influx contributes significantly to negative outcomes such as feelings of inadequacy, social comparison, and even the development of eating disorders.

The integration of artificial intelligence (AI) and filters has further moulded the social media experience (Harriger, Evans, Thompson, & Tylka, 2022). AI algorithms curate content tailored to individual preferences, potentially reinforcing existing viewpoints and attitudes. Concurrently, filters enable users to enhance their appearances, blurring the distinction between reality and digitally altered images. This phenomenon contributes to the proliferation of aspirational images that may not align with reality, thereby influencing users' self-perceptions and body image. The dissemination of misinformation and sponsored content on social media adds an additional layer of complexity. This misinformation, transcending geographical boundaries, can lead to misguided practices and detrimentally affect both mental and physical well-being. Sponsored content, on the other hand, can often blur the line between genuine recommendations and promotional material. Cases from around the world serve as stark reminders of the potential consequences. For instance, American teen Emma Warford's engagement with social media's viral *28-Day Fitness Challenge* which involved replacing meals with energy drinks led to severe anxiety, compulsive calorie-cutting, and eventual hospitalization (Bedayn, 2023). Addressing this issue, legislators in the US are addressing the eating disorder crisis with proposals such as restricting harmful content promotion on social media, banning weight loss pill sales to

minors, and integrating eating disorder prevention into middle and high school curriculums. Similarly, Canadian TikToker Michelle Fairburn was hospitalized due to water poisoning after participating in the *75 Hard Challenge*, drinking excessive amounts of water every day (The Times of India, 2023). Meanwhile, the untimely passing of Russian vegan raw food influencer Zhanna Samsonova was attributed to her prolonged struggle with starvation and exhaustion, stemming from her advocacy of an exclusive exotic fruit diet on her social media platforms (Hindustan Times, 2023).

A study conducted by Australian researchers involved the development and application of an evidence-based audit tool to screen content on Instagram's *Fitspiration* accounts. *Fitspiration* is a social media trend aimed at motivating individuals to adopt healthier lifestyles. Around two-thirds of the leading fitspiration accounts audited lacked credibility or contained potentially harmful or unhealthy content (Curtis, Prichard, Gosse, Stankevicius, & Maher, 2023). Moreover, the impact of social media trends extends to phenomena like *Mukbang*, where individuals consume large quantities of food on camera, often accompanied by commentary. While this South Korean trend has gained popularity across the globe, research conducted in Turkey revealed that *Mukbang* watching was positively associated with both disordered eating and internet addiction (Kircaburun, Yurdagül, Kuss, Emirtekin, & Griffiths, 2020).

The book *The Contemporary Reader of Gender and Fat Studies* highlights how scholars of feminist have begun to explore *pro-ana* and *pro-mia* sites as spaces of both resistance and subjugation for those with eating disorders. These online spaces are being explored as domains where individuals with eating disorders find both forms of resistance and submission. *Pro-ana* (abbreviation of pro-anorexia) and *pro-mia* (abbreviation of pro-bulimia) sites represent social media platforms where individuals, primarily young females, who grapple with anorexia and bulimia come together to share their experiences and provide mutual support. Notably, these spaces are not designed for treatment purposes; instead, they harbour the belief that anorexia and bulimia are lifestyle choices, advocating for the autonomy of individuals to continue their engagement in such behaviours if they so desire (Harrop, 2023).

The propagation of misleading and harmful content on social media is often facilitated through the use of popular hashtags such as #Fitness, #FitnessChallenge, #BodyBuilding, #BodyTransformation, #Vegan, #BodyGoals, #WhatIEatInADay, #CleanEating, #Diet, #LowCarb, #JuiceCleanse, among many more. These hashtags, which account for millions of posts, not only amplify harmful diet trends but also underscore the need for critical evaluation of content encountered on social media platforms. As social media intertwines with everyday life, it becomes imperative to approach content consumption with discernment, mindfulness, and a nuanced understanding of its potential implications.

2.3. Measures taken by social media platforms to address harmful content

Pro-eating disorder online communities have had a dominant presence dating back to the early 2000s. In 2001, Yahoo took measures to remove 113 pro-anorexia websites from its servers. After Huffington Post's expose on *thinspiration* blogs on Tumblr, led the platform to address a cluster of pro-eating disorder blogs. Despite the passage of decades since the initial emergence of this issue, contemporary social media platforms struggle to tackle the problem. Platforms including YouTube, Instagram, and TikTok have been criticised for failing to address pro-eating disorder content and associated search terms. A spectrum of

communities centred around eating disorder enthusiasts has also surfaced across diverse platforms such as Twitter, Discord, and Snapchat. Major social media networks explicitly state in their terms and conditions that users should not promote self-harm behaviours, including glorifying eating disorders (Lai, 2022). Furthermore, policies concerning advertising content on platforms like Pinterest, Instagram, Snapchat, and TikTok have either banned or imposed restrictions on weight loss advertisements. A consistent strategy prevailing across these platforms involves rendering search terms and hashtags on eating disorders, including #anorexia, #bulimia, #proana, #promia, and #thinspiration, unsearchable. Consequently, users seeking content associated with these terms are redirected to a designated *need-help* page that offers resources like the National Eating Disorder Association (NEDA) volunteer hotline, reflecting a proactive approach to promoting awareness and support.

Garth Graham, Director and Head of YouTube Health, stated that while videos about eating disorder recovery can be helpful for some, they might trigger others (The Times of India, 2023). To address concerns about harmful content related to eating disorders, YouTube is updating its guidelines to prohibit content featuring behaviours that could be imitated, such as purging or extreme calorie restriction. Some videos will be restricted for viewers under 18 or when embedded on other websites. YouTube's crisis resource panels are currently available at the top of search results related to eating disorders in the US, UK, India, Canada, Japan, Korea, Mexico, France and Germany. These crisis resources panels are placed underneath videos related to eating disorders to facilitate easy access to mental health resources.

2.4. Social media use and eating pathology across cultures

Rodgers proposed an integrated theoretical framework to explore the relationships between the Internet, social media use, body image concerns, and eating pathology (Rodgers, 2016). This framework asserted that the Internet and social media were poised to become pivotal sociocultural influences on body image concerns and eating pathology in the coming decades. Understanding how engaging with the online world could be both beneficial and detrimental remains crucial.

The investigation undertaken by Derenne and Beresin in the United States provides noteworthy insights into the pervasive influence of social media, particularly in the context of nutrition and physical activity, and the pivotal role played by influencers within this paradigm (Derenne & Beresin, 2017). Social media platforms have popularised the trend of avoiding sugar, gluten, dairy, legumes, nightshades, and other potentially inflammatory dietary constituents. The rise of the #CleanEating movement has promoted the adoption of stringent dietary regimens by vulnerable individuals, leading to malnourishment and necessitating intervention, despite the absence of conventional concerns regarding body image and the pursuit of thinness typically associated with anorexia nervosa. The trends observable in exercise patterns are similarly dubious, with enthusiasts advocating for the efficacy of novel cardio, resistance training, and mind-body workout modalities. While the significance of prioritizing sound nutrition and exercise practices cannot be understated, it is concerning that a growing number of people are gravitating towards behavioural extremes, either sedentary behaviours combined with overeating or excessive exercise coupled with insufficient dietary intake. Social media platforms teem with self-professed fitness experts who advocate the latest weight loss and exercise trends, even though these endorsements may not necessarily be substantiated by scientific evidence.

The research concerning the users of social media, including dating apps, in Australia and New Zealand has asserted associations between muscularity dissatisfaction, eating disorder symptoms, and thoughts about using anabolic steroids were significantly higher for image-centric than nonimage-centric social media platforms (Griffiths, Murray, Krug, & McLean, 2018). Their findings indicated greater body dissatisfaction and eating disorder symptoms are associated with higher social media usage, particularly on image-centric platforms, among sexual minority men. Another study highlighted the clinically significant connection between feelings of inadequate muscle size, depression, and eating disorder-related aspects (Olivardia, Pope, Borowiecki, & Cohane, 2004).

In the United States, prevailing gender stereotypes suggested that men have a lower risk of eating disorders due to less cultural pressure (Pater, Reining, Miller, Toscos, & Mynat, 2019). This research underscores the role of traditional gender roles in shaping how eating disorders are manifested. While women also struggle with this eating disorder, their findings indicate that males are often the primary demographic affected by bigorexia, focused on using protein supplements and other methods to build muscle mass. Additionally, they also resort to diet drinks and cigarettes to curb their appetite. In terms of bulimia, men are less inclined to engage in practices like purging and abusing laxatives but are more likely to adopt extreme dietary restrictions and excessive exercise. Social media serves as a platform for documenting their body-building journey, where individuals share images focused on specific body parts deemed as muscle ideals. Additionally, according to the research conducted in France, the level of education was proven to be a confounding factor (Jiotsa, Naccache, Duval, Rocher, & Grall-Bronnec, 2021). The relationship between comparing one's appearance to that of social media peers and desire for thinness and body dissatisfaction was found to be influenced by education level, particularly from Bachelor's degree level onwards (>12 + 3 years).

Eating disorders were initially classified as culture-specific disorders, mainly observed in Western cultures, with limited information available for non-Western countries (Keel & Klump, 2003). However, eating disorders are not culture-bound or culture-specific, but rather culture-reactive (Pike & Dunne, 2015). Taking into account the historical influence of Western culture and the contemporary effects of Asian industrialization and urbanization, allow researchers to recognize substantial distinctions among diverse Asian cultures contributes to our global understanding of the development and expression of eating disorders. Within this geographical context, a significant portion of research exploring the influence of social media on body image and eating behaviour is focused on the examination of the Asian diaspora. This inclination is notable in Western studies on eating disorders, where the appellation of Asian is frequently employed to designate individuals with a non-Western heritage spanning regions between India and Japan. In a study across Indonesia, Malaysia, Myanmar, Thailand, and Vietnam, young adults with a mean age of 20.5 years were classified at risk for eating disorders, ranging from below 10% in Indonesia, Thailand, and Vietnam, to 13.8% in Malaysia and 20.6% in Myanmar. Pathological internet use was identified as a factor associated with eating disorder risk (Pengpid & Peltzer, 2018). Another study explored the impact of social media, traditional media, and various body image influencers on disordered eating and cosmetic procedures in Malaysia, Singapore, Thailand, and Hong Kong (Chua, Craddock, Rodtanaporn, & Austin, 2023). This study underscored the prevalence of disordered weight control behaviours and cosmetic procedures across multiple Asian countries, with notable occurrences observed in Malaysia and Thailand.

While eating disorders in India continue to be an under-researched and underreported area due to sporadic original research in the last decade (Vaidyanathan, Kuppli, & Menon, 2019). However, with the increasing impact of Westernization on society, eating disorders merit renewed focus. The correlation between social media and body image has been investigated by researchers from NIMHANS, the apex centre for mental health and neuroscience education in India. According to their findings, individuals with pre-existing psychological conditions like anxiety and eating disorders appear to be more susceptible to the influence of social media platforms. The practice of sharing selfies or brief videos serves multifaceted purposes. When an individual captures a selfie or records oneself, it primarily stems from internal motives, encompassing self-assessment and comparisons with others. Conversely, when such content is intended for public consumption, external incentives such as seeking attention, seeking gratification, and validation often drive the user's behaviour. (Siddegowda, Sharma, Satyanarayan, & Thakur, 2022).

Investigation of the relationship between social media, body image, and eating behaviours across different global contexts has given significant insights. However, contextualizing these findings within India is crucial, especially considering its rapid socio-cultural changes driven by globalization and urbanisation. This context provides a unique opportunity to understand how social media impacts the body image and eating behaviours of young adults in India. India's diverse cultural norms, beauty ideals, and traditional gender roles influence young adults' perceptions of their bodies, adding complexity to the issue. Given the scarcity of comprehensive research in this area within the Indian context, there is a need for focused inquiry to uncover the specific factors that amplify or mitigate social media's influence. Mumbai, as the vibrant hub of India's media and cultural landscape, serves as an apt focal point for this study, offering a microcosm of the larger societal dynamics at play.

3. Conceptual framework

The conceptual framework of this research integrates three prominent communication theories, i.e. social comparison theory (Festinger, 1954), cultivation theory (Gerbner & Gross, 1976), and uses and gratifications theory (Blumler & Katz, 1974). It posits that users engaging consistently with social media are immersed in continuous exposure to body-centric content, contributing to the formulation of body ideals. These ideals, often divergent from healthy and realistically attainable standards, can instigate social comparison tendencies and self-esteem issues among users.

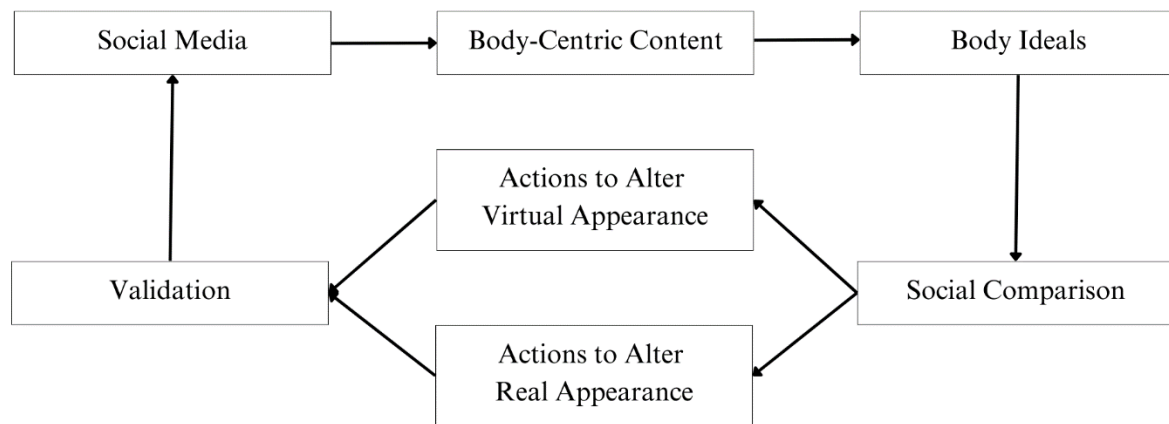


Fig. 1. Conceptual Framework

According to social comparison theory (Festinger, 1954), individuals naturally engage in social evaluation, and continuous exposure to curated body images on social media intensifies this comparative process. Cultivation theory (Gerbner & Gross, 1976) asserts that prolonged exposure to media content shapes individuals' perceptions of reality. In this context, persistent exposure to body-centric content on social media contributes to the cultivation of specific body ideals, influencing users' notions of beauty and desirability. The uses and gratifications theory (Blumler & Katz, 1974) accentuates the active role of users in selecting media content that aligns with their needs and goals. In this conceptual framework, users actively seek out and engage with body-centric content on social media to fulfil certain gratifications, such as entertainment, social connection, or self-expression. This theory underscores the agency of users in shaping their media consumption patterns. Notably, according to the uses and gratifications theory (Blumler & Katz, 1974), social media users are not passive; they actively seek out information. In the context of this study, social media users actively seek out body-centric information, emphasizing their proactive role in shaping the content they consume.

The formation of these body ideals, although not necessarily promoting health or realistic body standards, becomes a pivotal point where social comparison and esteem issues manifest. Users, driven by the desire to conform to these ideals, may undertake efforts to alter their virtual and/or real appearances. This alteration can take the form of modified eating behaviours and digital enhancements. The conceptual framework recognizes the potential consequences of altered eating behaviours, acknowledging the risk of developing or exacerbating eating disorders. Importantly, this framework proposes a cyclic process (presented in Figure 1), wherein users who have altered their appearances seek validation on social media platforms. This perpetual loop underscores the interactive and dynamic nature of the relationship between users, social media, body ideals, and the subsequent impact on mental health. The integration of these communication theories, along with the active role of users emphasized by the uses and gratifications theory (Blumler & Katz, 1974), offers a holistic framework to understand how social media impacts the complex interplay between body image and eating behaviours among young adults.

4. Research method

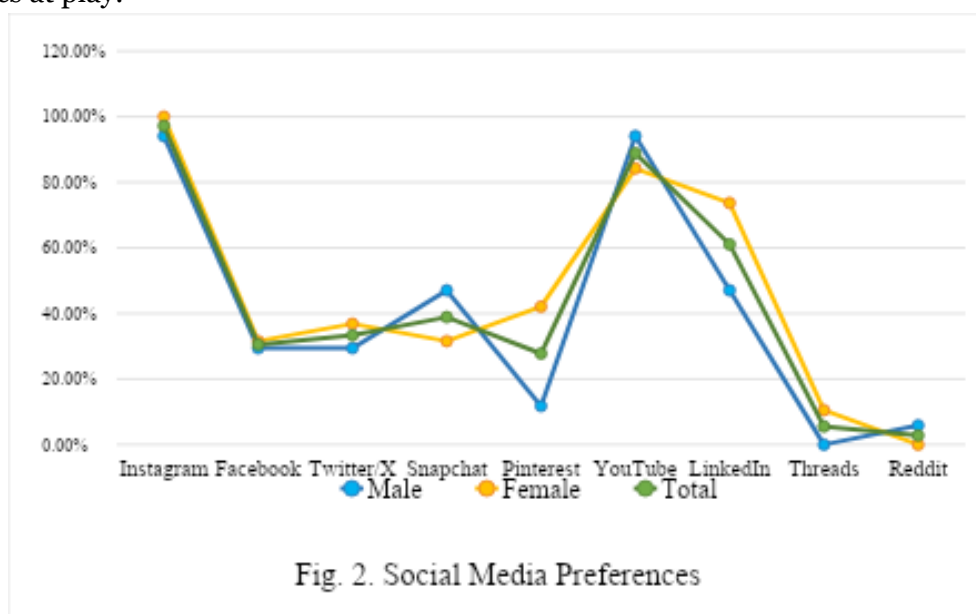
This cross-sectional research, conducted from June 2023 to August 2023, aimed to explore the interplay between social media, body image, and dietary behaviour among urban young adults in Mumbai. Primary data were collected through an online survey, utilizing a semi-structured questionnaire from 360 respondents in Mumbai who met specific criteria, i.e. young adults aged 15 to 29 years who regularly use social media. The age group aligns with the 2014 National Youth Policy of the Government of India. Gender serves as a moderating variable, intending to explore potential variations due to the prevalence of gender-specific body ideals (Hoodbhoy, Zahid, & Iqbal, 2015).

The geographic and demographic focus on Mumbai provides insights into urban youth dynamics in India. Survey questions, framed by the author and validated by counselling psychologist Radhika Mehendale-Bhosale, aimed to add depth and focus to the research inquiry. To enhance participant engagement, medical terms such as anorexia nervosa, bulimia nervosa, and binge-eating disorder were omitted from the questionnaire. This approach sought organic responses and ensured comprehensibility and relatability by articulating descriptions of eating disorder behaviours in the simplest terms.

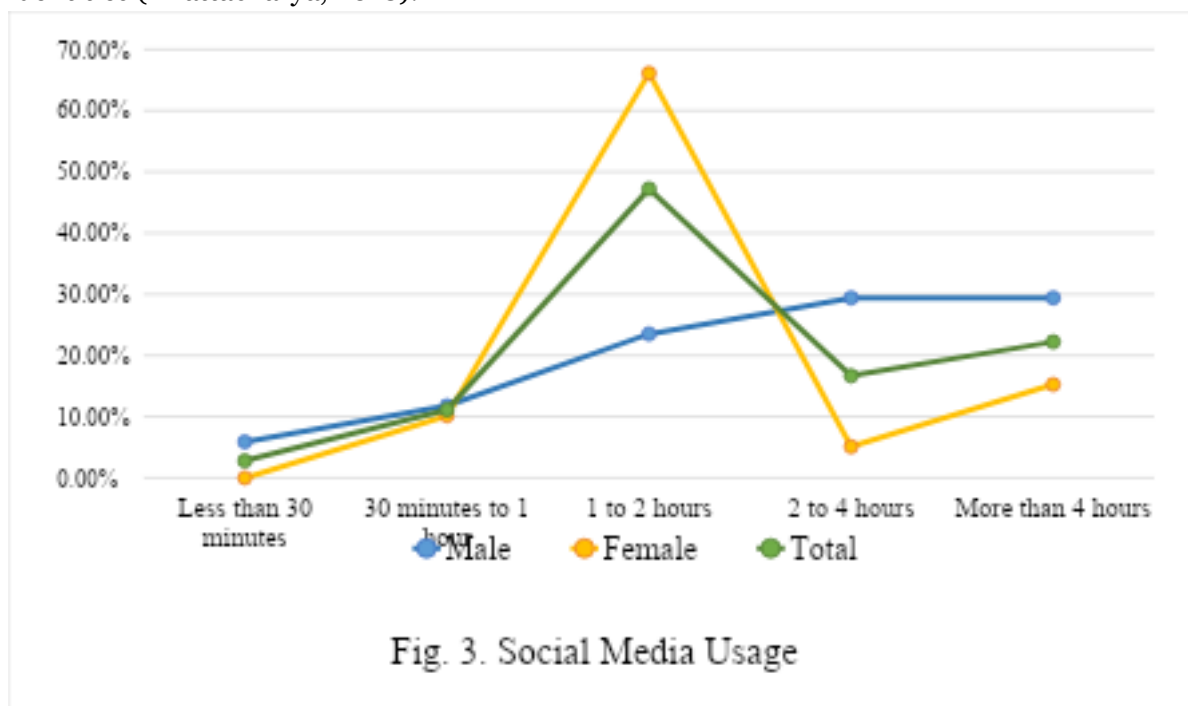
All collected data were anonymized for analysis. To visually present quantitative data effectively, radar charts were employed for their ability to illustrate patterns and gender-specific variations across multiple variables simultaneously. In addition to primary data, the study drew upon secondary data from publications of the National Institute of Mental Health and Neurosciences (NIMHANS), the National Institute of Mental Health (NIMH), the American Psychiatric Association (APA), and the World Health Organization (WHO). Relevant books and published research papers were also consulted to address the study's objectives.

5. Results and discussions

The empirical findings from the online survey align with the conceptual framework derived from social comparison theory (Festinger, 1954), cultivation theory (Gerbner & Gross, 1976), and uses and gratifications theory (Blumler & Katz, 1974) shedding light on the multifaceted dynamics at play.



Out of the total participants, 170 were male and 190 were female. The analysis of social media preferences within the chosen age group (presented in Figure 2) revealed that Instagram, YouTube, and LinkedIn were the dominant platforms. A substantial 97.2% of participants reported using Instagram, followed by 88.9% on YouTube, 61.1% on LinkedIn, and progressively lower percentages on platforms like Snapchat (38.9%), Twitter/X (33.3%), Facebook (30.6%), Pinterest (27.8%), Threads (5.6%), and Reddit (2.8%). It's noteworthy that while Instagram, YouTube, Snapchat, and Pinterest primarily feature visual-based content, Threads, Facebook, LinkedIn, and Twitter encompass both visual and text-based posts. Snapchat's key feature ensures its content has a limited shelf life, while platforms like Instagram, YouTube, and Pinterest can categorize content using hashtags, particularly in cases where the content revolves around promoting body ideals. Social media, endowed with virtually limitless storage capacity, thus enables the public display of personal or physical identities (Bhattacharya, 2018).

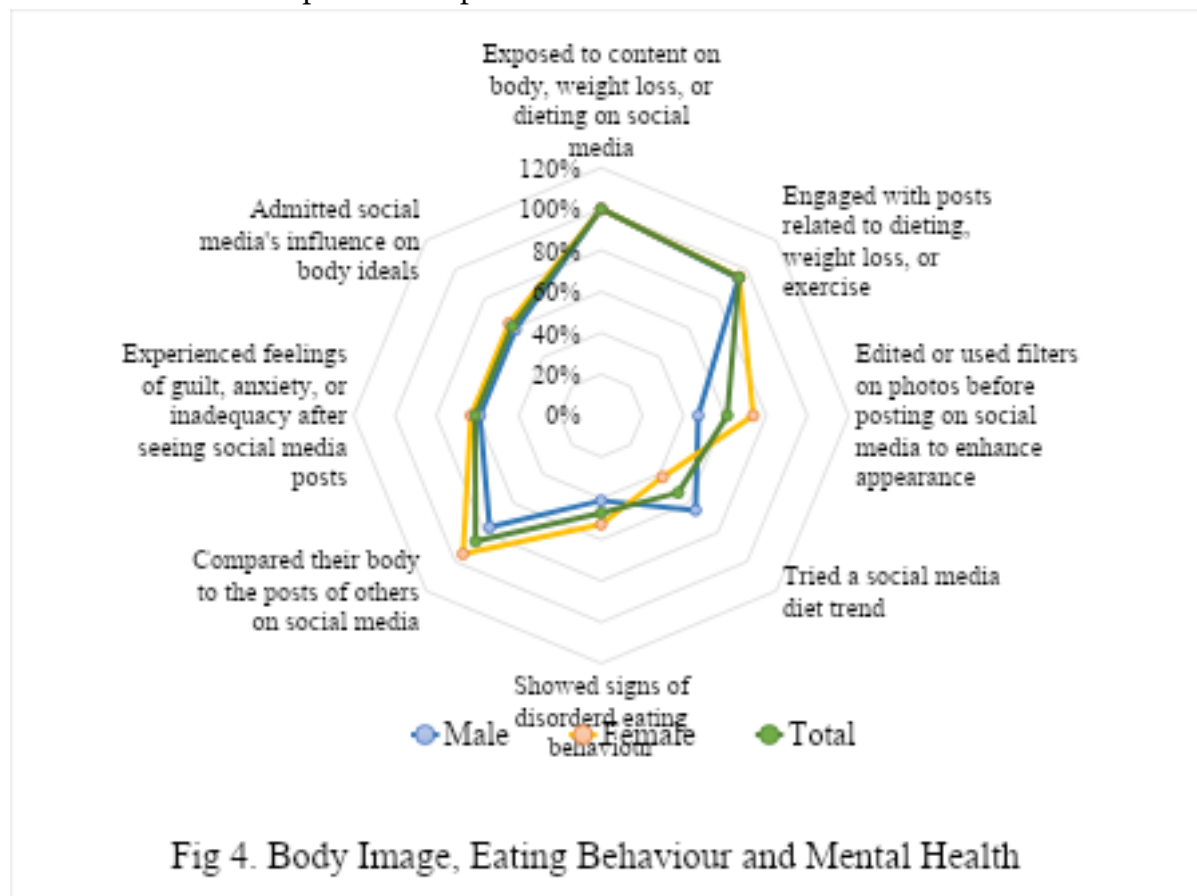


The findings presented in Figure 3 delineate the extent of social media usage among urban young adults. Notably, 47.2% reported utilizing social media for a duration of one to two hours, while 22.2% engaged for more than four hours. Moreover, 16.7% used social media for two to four hours, 11.1% for 30 minutes to one hour, and a mere 2.8% for less than thirty minutes. On average, participants devoted around 2.22 hours daily to social media platforms, aligning with the social media statistics reported by Forbes Advisor in 2023. This underscores the substantial role these platforms play in the lives of young users.

Cultivation theory (Gerbner & Gross, 1976) asserts that prolonged exposure to media content influences individuals' perceptions of reality. In the context of this study, the considerable time spent on social media reaffirms the cultivation of particular body image ideals and alters self-perceptions (Kaur, *et al.*, 2022). Additionally, the distribution of social media usage durations indicates diverse engagement patterns, further emphasizing the need to explore how extended exposure might contribute to cultivating specific social norms and mental health implications. The significant percentage of participants spending more than four hours on social media raises concerns about potential negative impacts on mental

health, necessitating a deeper examination of the content and its influence on perceptions and behaviours.

A gender-based distinction in social media usage is evident, with 58% of male respondents using it for more than two hours, compared to only 20% of females. In addition, 29.41% of males using social media for more than four hours, compared to 15% of females. These gender-specific variations add a layer to the discussion, indicating that the impact of prolonged social media use may differ based on gender, urging a closer examination of associated factors and potential implications.



The survey results presented in Figure 4 revealed all participants encountering content related to body image, weight loss, and dieting on social media feeds at least once, reiterating the surge of health information on social media (Sidhu, 2018). Specifically, 55.6% of respondents noted frequent exposure to such content, whereas the remaining respondents acknowledged seeing it on an occasional basis. In addition, 94.4% of the respondents engaged with such content through likes, comments and shares, consolidating social capital for the content creators (Pater, Reining, Miller, Toscos, & Mynat, 2019). A considerable portion of participants stated that they edit their photos or apply filters before sharing them on social media. In this practice, 61.1% of respondents acknowledged this practice, demonstrating a prevalent desire to enhance their appearance in the digital space. Over half of the respondents, comprising 52.8%, disclosed that they had experimented with diets or altered their eating habits due to content encountered on social media platforms. Around 47.2% of respondents described instances of restricting food intake to lose weight, followed by periods of eating large amounts of food, or eating a large amount of food in a short period, and feeling a lack of control over eating.

Furthermore, a significant 86.1% of participants disclosed that they have, at least once, compared their bodies to images or posts of others on social media platforms aligning with the key tenets of the social comparison theory (Festinger, 1954). In this sense, 61.1% of respondents admitted that their idea of an ideal physical appearance had been influenced by social media content. This influence, however, was not without its consequences, as feelings of guilt, anxiety, and inadequacy frequently followed exposure to social media posts emphasizing physical appearance, as reported by the same percentage of participants. Bhattacharya asserts that a body shaped by the processes of care, digital manipulation and restraint necessitates evaluation by peers (Bhattacharya, 2018). The argument posits that compulsive and amplified visibility in social media serves as a prerequisite for securing social recognition and gauging one's self-worth. Ongoing self-promotion is not only indispensable for the restless self to amass more likes and comments, validating its significance, but visibility also operates as a social currency, where invisibility equates to obsolescence.

Additionally, the survey findings reveal gender-specific variation in engagement and responses. A higher percentage of female respondents engage in photo editing or filtering (72%) compared to male respondents (47%). Similarly, a higher percentage of female respondents (95%) compared their bodies to social media imagery than male respondents (76%). Conversely, a higher percentage of male respondents (65%) tried social media trends to alter their real appearance compared to female respondents (42%).

These findings outline that social media has become the foreground of body image ideals, weight loss endeavours, and dieting trends which are not necessarily fact-based. Frequent exposure to such content raises questions about its potential contribution to the development or aggravation of eating disorders and its broader implications for mental health (Mehendale-Bhosale, 2023). The practice of photo editing, dietary changes and the act of comparing oneself to others on social media is prevalent among respondents. As young adults compare themselves to idealized images on social media, the drive for upward social comparison is evident, potentially impacting their self-esteem and body image perceptions.

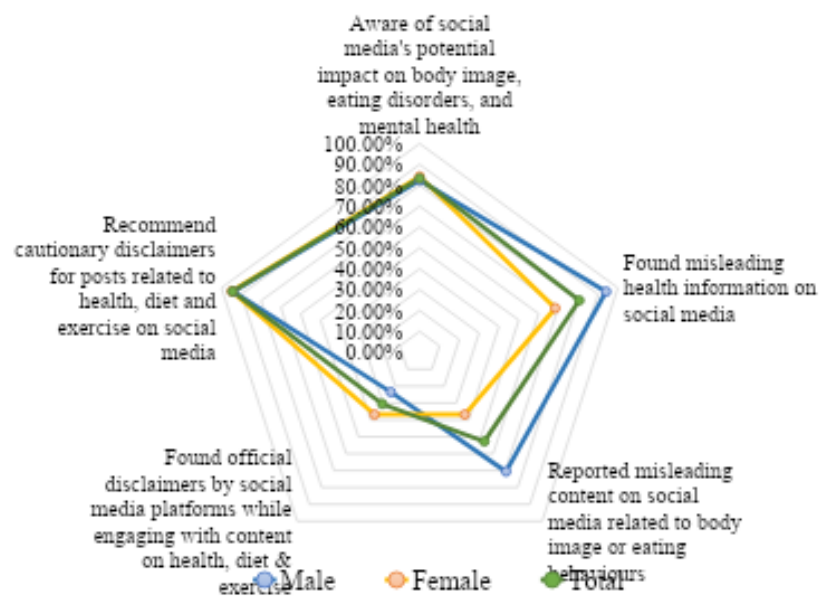


Fig. 5. Health Communication and Awareness

The findings presented in Figure 5 further indicate the prevalence of misleading content on social media, actions taken by the users, and disclaimers found on the platforms. A majority of respondents, comprising 83.3%, exhibited an awareness of the potential ramifications of social media on aspects such as body image, eating disorders, and overall mental health. This heightened awareness outlines the growing recognition of the influential role that digital platforms can play in shaping attitudes and behaviours. Additionally, 80.6% of respondents have encountered misleading health-related information on social media, raising concerns about the quality and accuracy of information disseminated within digital spaces, and highlighting the need for vigilance when navigating online content. A significant proportion of respondents (52.8%), aligning with the active user postulation of the uses and gratifications theory (Blumler & Katz, 1974), reported or flagged content on social media that they deemed misleading or potentially detrimental to body image or eating behaviours. This collective responsibility indicates a growing societal consciousness regarding the potential negative impact of certain content.

Despite being cognizant of these influences and even actively reporting or flagging misleading content, a significant portion of participants still demonstrate a desire to enhance their appearance, experiment with diets, and engage in social comparison. This indicates a complex interplay between awareness and the actual behaviours influenced by the pervasive nature of social media, suggesting that the impact goes beyond mere awareness to the actual manifestation of altered behaviours and perceptions. Further exploration is warranted to understand the underlying factors contributing to this dichotomy and its implications for individual well-being.

There is noticeable gender-based differences in these responses. A higher percentage of male respondents (94.1%) encountered misleading health information on social media compared to female respondents (68.4%). Similarly, a larger proportion of male respondents (70.5%) reported or flagged content on social media, while a smaller percentage of female respondents (36.8%) engaged in this behaviour. A notable observation was the absence of official disclaimers provided by social media platforms. Nearly 69.4% of participants reported not encountering any official cautionary notifications while engaging with content related to health, diet, exercise, and similar themes. This finding highlights a potential gap in the way social media platforms address and mitigate potentially harmful content. At this point, 94.4% of the respondents recommended that social media platforms should provide cautionary notifications for posts on health, diet, exercise, and body image to safeguard user well-being and foster responsible content consumption.

6. Conclusion

While social media platforms have taken steps to address the explicit promotion of eating disorders, such as rendering related terms unsearchable and embedding mental health resources, it's evident that these actions provide only a partial solution to the broader concern of unverified health information's prevalence, perpetuated by trends. The rise of trend culture and hashtags has intensified body image challenges, with conditions like bigorexia and orthorexia, gaining prominence as aspirational body ideals. Importantly, the influence of social media extends beyond online spaces and can contribute to body dysmorphia.

Therefore, addressing these issues should not be confined to online measures alone. To comprehensively tackle the implications of social media on body image and mental health, platforms must invest in robust fact-checking mechanisms and engage with mental health professionals for content oversight. Embedding WHO's global principles for verifying credible health information on social media platforms is essential. Furthermore, it's crucial to recognize that media can serve as a pivotal tool for health promotion and prevention strategies (Morris & Katzman, 2003). Hence, the cultivation of a responsible digital landscape not only encompasses the dissemination of verified health information but also extends beyond the online realm. This includes monitoring the promotion and sale of dietary supplements for weight gain or loss.

Given the diverse population in India, there is a pressing need for more extensive research covering various cities of the country to understand the unique dynamics of social media's impact on body image and eating behaviours within the cultural context of India. Moreover, recognizing the complex interplay between heightened awareness and the actual behaviours influenced by social media, further research should delve into the underlying factors contributing to this dichotomy. Additionally, there is a critical gap in understanding the effectiveness of media literacy programs in preventing eating disorders, and further research in this area is imperative. Such multifaceted efforts are necessary to foster positive body image perceptions and promote healthy eating behaviours in today's digitally driven world.

Notes on contributors

Ashwathi Anilkumar has been an Assistant Professor in the Department of Mass Media of Vaze College, Mumbai since 2019. Her domain encompasses mass media, health communication, entertainment marketing, and tourism promotion. She has participated in national and international conferences and co-authored a book on Media and Electoral Process. Email: ashwathianilkumar@outlook.com

References

- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders*. Retrieved from [https://repository.poltekkes-kaltim.ac.id/657/1/Diagnostic%20and%20statistical%20manual%20of%20mental%20disorders%20_%20DSM-5%20\(%20PDFDrive.com%20\).pdf](https://repository.poltekkes-kaltim.ac.id/657/1/Diagnostic%20and%20statistical%20manual%20of%20mental%20disorders%20_%20DSM-5%20(%20PDFDrive.com%20).pdf)
- American Psychiatric Association. (2023). *What are Eating Disorders?* Retrieved from https://www.psychiatry.org/patients-families/eating-disorders/what-are-eating-disorders#section_1
- Aral, S., Dellarocas, C., & Godes, D. (2013). Introduction to the Special Issue: Social Media and Business Transformation: A Framework for Research. *Information Systems Research*, 3-13. doi:10.1287/isre.1120.0470
- Bedayn, J. (2023, March 23). New state laws aim to tackle surge in eating disorders. Denver: Public Broadcasting Service (PBS). Retrieved from www.pbs.org/newshour/health/new-state-laws-aim-to-tackle-surge-in-eating-disorders
- Bhattacharya, S. (2018). Peer-reviewed Images: Image Consuming Selves as Visual Commodities. *Society and Culture in South Asia*, 5(1). doi:<https://doi.org/10.1177/2393861718787873>
- Blumler, J. G., & Katz, E. (1974). *The uses of mass communications: Current perspectives on gratifications research*. Beverly Hills: Sage.
- Chua, S. N., Craddock, N., Rodtanaporn, W., & Austin, S. B. (2023). Social media, traditional media, and other body image influences and disordered eating and cosmetic procedures in Malaysia, Singapore, Thailand, and Hong Kong. *Body Image*, 45, 265-272. doi:10.1016/j.bodyim.2023.03.010
- Curtin, M. (2010). Comparing media capitals: Hong Kong and Mumbai. *Global Media and Communication*, 6(3), 263-270. doi:10.1177/1742766510384963
- Curtis, R. G., Prichard, I., Gosse, G., Stankevicius, A., & Maher, C. A. (2023, March 2). Hashtag fitspiration: credibility screening and content analysis of Instagram fitness accounts. *BMC Public Health*, 1-7. doi:10.1186/s12889-023-15232-7
- Derenne, J., & Beresin, E. (2017, October 18). Body Image, Media, and Eating Disorders-a 10-Year Update. *Academic Psychiatry*, 42(1), 129-134. doi:10.1007/s40596-017-0832-z
- Eysenbach, G. (2008). Medicine 2.0: Social Networking, Collaboration, Participation, Apomediation, and Openness. *Journal of Medical Internet Research*, 10(3). doi:10.2196%2Fjmir.1030
- Festinger, L. (1954). A theory of social comparison processes. *Human Relations*, 7(2), 117-140. doi:10.1177/001872675400700202

- Forbes Advisor. (2023, August 4). Top Social Media Statistics And Trends Of 2023. India. Retrieved from https://www.forbes.com/advisor/in/business/social-media-statistics/#social_media_and_mental_health_statistics
- Gerbner, G., & Gross, L. (1976). Living With Television: The Violence Profile. *Journal of Communication*, 26(2), 173-99. doi:10.1111/j.1460-2466.1976.tb01397.x
- Griffiths, S., Murray, S. B., Krug, I., & McLean, S. A. (2018, January 24). The Contribution of Social Media to Body Dissatisfaction, Eating Disorder Symptoms, and Anabolic Steroid Use Among Sexual Minority Men. *Cyberpsychology, Behavior, and Social Networking*, 21(3), 149-156. doi:10.1089/cyber.2017.0375
- Harriger, J. A., Evans, J. A., Thompson, J. K., & Tylka, T. L. (2022). The dangers of the rabbit hole: Reflections on social media as a portal into a distorted world of edited bodies and eating disorder risk and the role of algorithms. *Body Image*, 41, 292-297. doi:10.1016/j.bodyim.2022.03.007
- Harrop, E. N. (2023). Eating Disorders, Gender, and Fat: Theorizing the Fat Body in Feminist Theories of Eating Disorders. In A. E. Farrell, *The Contemporary Reader of Gender and Fat Studies* (1st ed., pp. 167-186). London: Routledge. doi:10.4324/9781003140665-19
- Hindustan Times. (2023, August 1). Vegan raw food influencer Zhanna D'Art 'starves to death', had restricted herself to exotic fruit diet. Mumbai, Maharashtra, India: HT Media. Retrieved from <https://www.hindustantimes.com/world-news/vegan-raw-food-influencer-zhanna-d-art-starves-to-death-had-restricted-herself-to-exotic-fruit-diet-101690869992282.html>
- Hoodbhoy, Z., Zahid, N., & Iqbal, R. (2015). Eating disorders in South Asia: Should we be concerned? *Nutrition Bulletin*, 40, 331-334. doi:10.1111/nbu.12177
- Jiotsa, B., Naccache, B., Duval, M., Rocher, B., & Grall-Bronnec, M. (2021, March 11). Social Media Use and Body Image Disorders: Association between Frequency of Comparing One's Own Physical Appearance to That of People Being Followed on Social Media and Body Dissatisfaction and Drive for Thinness. *International Journal of Environmental Research and Public Health*, 18(6). doi:10.3390%2Fijerph18062880
- Kaur, N., Sulaiman, S. S., Hamid, H. A., Sani, N. G., Radzi, A. H., & Abdullah, Y. S. (2022). The Extent of Media Influence on the Body Image of Malaysian Emerging Adults. *International Journal of Asian Social Science*, 12(1), 43-54. doi:<https://doi.org/10.18488/5007.v12i1.4408>
- Keel, P. K., & Klump, K. L. (2003). Are eating disorders culture-bound syndromes? Implications for conceptualizing their etiology. *Psychological Bulletin*, 129(5), 747-769. doi:10.1037/0033-2909.129.5.747

- Kircaburun, K., Yurdağül, C., Kuss, D., Emirtekin, E., & Griffiths, M. D. (2020, May 21). Problematic Mukbang Watching and Its Relationship to Disordered Eating and Internet Addiction: A Pilot Study Among Emerging Adult Mukbang Watchers. *International Journal of Mental Health and Addiction*, 19(6), 2161-2169. doi:10.1007/s11469-020-00309-w
- Lai, S. (2022, February 24). How do we solve social media's eating disorder problem? Washington, D.C.: The Brookings Institution. Retrieved from <https://www.brookings.edu/articles/how-do-we-solve-social-medias-eating-disorder-problem/#:~:text=Communities%20of%20eating%20disorder%20enthusiasts,the%20glorification%20of%20eating%20disorders.>
- Lynn, T., Rosati, P., Santos, G. L., & Endo, P. T. (2020). Sorting the Healthy Diet Signal from the Social Media Expert Noise: Preliminary Evidence from the Healthy Diet Discourse on Twitter. *International Journal of Environmental Research and Public Health*, 17(22). doi:10.3390%2Fijerph17228557
- Mehendale-Bhosale, R. (2023, August 09). Social Media's Influence on Young Adults' Body Image and Eating Behaviour.
- Morris, A. M., & Katzman, D. K. (2003). The impact of the media on eating disorders in children and adolescents. *Paediatrics & Child Health (PCH)*, 287-289. doi:10.1093%2Fpch%2F8.5.287
- Munsey, C. (2006). *Emerging adults: The in-between age*. Retrieved from American Psychological Association: <https://www.apa.org/monitor/jun06/emerging>
- National Institute of Mental Health. (2015, May 23). *Eating Disorders*. Retrieved from National Institute of Mental Health: <https://www.nimh.nih.gov/health/topics/eating-disorders>
- Neale, J., & Hudson, L. D. (2020). Anorexia nervosa in adolescents. *British Journal of Hospital Medicine*, 81(6), 1-6. doi:10.12968/hmed.2020.0099
- Olivardia, R., Pope, H. G., Borowiecki, J. J., & Cohane, G. H. (2004, July). Biceps and Body Image: The Relationship Between Muscularity and Self-Esteem, Depression, and Eating Disorder Symptoms. *Psychology of Men & Masculinity*, 5(2), 112–120. doi:10.1037/1524-9220.5.2.112
- Pater, J., Reining, L., Miller, A. D., Toscos, T., & Mynat, E. D. (2019). "Notjustgirls": Exploring Male-related Eating Disordered Content across Social Media Platforms. *CHI '19: CHI Conference on Human Factors in Computing Systems* (pp. 1–13). Glasgow: Association for Computing Machinery. doi:10.1145/3290605.3300881
- Pengpid, S., & Peltzer, K. (2018). Risk of disordered eating attitudes and its relation to mental health among university students in ASEAN. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity*, 23, 349–355. doi:10.1007/s40519-018-0507-0

- Pike, K. M., & Dunne, P. E. (2015). The rise of eating disorders in Asia: a review. *Journal of Eating Disorders*. doi:10.1186/s40337-015-0070-2
- Rodgers, R. F. (2016, October 7). The Relationship Between Body Image Concerns, Eating Disorders and Internet Use, Part II: An Integrated Theoretical Model. *Adolescent Research Review*, 1(2), 121–137. doi:10.1007/s40894-015-0017-5
- Siddegowda, S., Sharma, M. K., Satyanarayan, V. H., & Thakur, P. C. (2022). Making the body public: Implications of the new standards of body-image. *International Journal of Social Psychiatry*, 799-802. doi:10.1177/00207640221109163
- Sidhu, S. (2018). Social Media, Dietetic Practice and Misinformation: A triangulation research . *Journal of Content, Community & Communication*, 8, 29-34. doi:10.31620/JCCC.12.18/06
- Statista Market Insights. (2023, July 31). Social network user penetration in India from 2018 to 2020, with estimates until 2028. India. Retrieved from <https://www.statista.com/statistics/240960/share-of-indian-population-using-social-networks/>
- The Times of India. (2023, April 21). YouTube introduces strict rules for videos promoting eating disorders. Mumbai, Maharashtra, India: Bennett, Coleman & Co. Ltd. Retrieved from <https://timesofindia.indiatimes.com/gadgets-news/youtube-introduces-strict-rules-for-videos-promoting-eating-disorders/articleshow/99667227.cms>
- The Times of India. (2023, August 2). Canadian woman hospitalized after drinking too much water for '75 Hard' challenge; had severe sodium deficiency. Mumbai, Maharashtra, India: Bennett, Coleman & Co. Ltd. Retrieved from <https://timesofindia.indiatimes.com/life-style/health-fitness/health-news/canadian-woman-hospitalized-after-drinking-too-much-water-for-75-hard-challenge-had-severe-sodium-deficiency/articleshow/102344833.cms?from=mdr>
- Vaidyanathan, S., Kuppili, P. P., & Menon, V. (2019). Eating Disorders: An Overview of Indian Research. *Indian Journal of Psychological Medicine*, 311-217. doi:10.4103%2FIJPSYM.IJPSYM_461_18
- Ye, C. (2023). The Influences of Social Media on Eating Disorder Risk. *Journal of Education, Humanities and Social Sciences*, 22, 710-715. doi:10.54097/ehss.v22i.13340

