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Connected but Affected: The Unintended Outcomes of Online Engagement

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Abstract

The present study attempted to understand the relationship between social media use and its impact on self-esteem, sleep quality and body image of undergraduate students (N=117; M=56, F=61; Mean age=19 years). Data was collected using convenience sampling. The Rosenberg Self-esteem Scale, the Short Pittsburgh Sleep Quality Index (PSQI), the Socia Media Use scale, the Body Image scale was used. Descriptive statistics, correlation and linear regression was computed using SPSS (version 22). Significant relationship was found between social media use and its impact on body image.

Keywords: Social media use, self-esteem, body image, sleep quality

Internet-based media (e.g. Facebook, Instagram, LinkedIn, Snapchat, WhatsApp, X - formerly known as Twitter, Telegram, etc.) differ from traditional media platforms (e.g. newspapers, radio, magazines, etc.) as they allow interactions between and glimpses into the lives of people around the world. It features the users themselves as opposed to celebrities or dignitaries alone. Further, people often present a version of themselves on social media which many-a-times are different from their reality. Many tend to share on the platform only the most attractive images which have been photographically edited and enhanced.

Although social media contains images of a range of different types of people (e.g., friends, family, strangers, celebrities), it is widely used to interact with one's peers (Fardouly and Vartanian, 2016). Social media provides a simple and fast way to connect with others as it is available on smartphones and other devices. And, connecting is just a few keys away.

In today's world everyone is engrossed to their screens for several hours everyday, especially school and college students. Therefore, it is of relevance to understand how social media touches our lives. Drahošová and Balco (2017) studied the kind of social media people use, for what purpose it is used, and, how they perceive the negative and positive aspects of using social media through a survey on the general public in the European Union. They found that Facebook, Google+ and Instagram are the most used social media platforms and that they are used to obtain information, contact friends, monitor messages, acquire and search for new friends, market products online, and sell products too. The study reported that the biggest advantage of using social media is for exchange of information and communication, followed by sharing of data, education, teamwork and working from home, services, sharing hardware and peripherals, and others. Whereas, the main disadvantages of using social media was internet addiction, followed by lack of security, information overload, loss of social contact, and others. Various studies have also shown positive and negative impacts of social media use on individuals ranging from: mental health, well-being, sleep, body image, self-esteem, anxiety, depression (Robinson & Smith, 2025).

Social Media Use and Self-esteem

Although social media can build friendships and help reduce feelings of loneliness, research indicates that overuse can harm self-esteem and overall life satisfaction of the user. Self-esteem, considered a core psychological concept, refers to an individual's personal sense of worth and self-respect; it represents how much people appreciate and value themselves (Donnellan et al., 2011, as cited in Miljeteig and Soest, 2022). Self-esteem can influence life in many ways, from academic and professional success to relationships and mental health. However, successes or setbacks, both personal and professional, can lead to fluctuations of self-worth (Psychology Today, 2024). Social media has been found to have a negative relationship with self-esteem and increased social media use is associated with reduced levels of self-esteem especially in teenage girls. Further, when one spends a lot of time on their phone, they have less time for activities that can build confidence, a sense of achievement and connectedness (Australian Christian College, 2024). Hence, depending on how users utilize social media, these networks can significantly harm one's sense of self. People need to be made aware of the possible risks and learn how to utilize social media in an informed, deliberate and healthy way because having poor self-esteem can be detrimental to a person's life.

Social Media Use and Body Image

Body image refers to the image and feeling one has about one's body. This image is formed in comparison to others' and also is influenced by social standards. Positive body image relates to body satisfaction, while negative body image has been associated with dissatisfaction. Many people have concerns about their body image. The focus is often on body weight, skin, hair, or the shape or size of a certain part of the body. The way a person feels about their body can be influenced by many different factors. According to the National Eating Disorder Association (NEDA), a range of beliefs, experiences, and generalizations have an impact on the body image. Throughout history, people have valued the beauty of the human body and formed a sort of "perfect body type" idea over the years. Social media often has an

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perceive their own bodies (Medical News today, 2024).

Social media exposes users to hundreds or even thousands of images and photos every day, including those of celebrities and fashion or fitness models, which leads to an idolizing of beauty ideals that are unattainable for almost everyone, resulting in increased dissatisfaction with one's own body weight and shape. Goldfield and his colleagues (Thai et al., 2023, as cited in APA, 2023) in their study with undergraduate students who were regular social media users (at least two hours per day on their smartphones) attempted to understand whether more social media use influenced body image perception. They found that participants who restricted their social media use over the span of three weeks had a significant improvement in how they regarded both their overall appearance and body weight (APA, 2023). However, research has also shown that using social media can also positively influence the body image. Social media allows one to connect with others and get support if needed. It also allows almost anyone to be a content creator. This makes it easier for people to follow different groups online - people of all sizes, races, abilities, genders, and backgrounds, not just those who fit the predominant beauty standards. A study by Manning and Mulgrew (2021), also found that viewing body-positive content improved body image in women. Therefore, one of the factors that influence body image in today's world is how much and for what purpose social media is used by the person (Healthline, 2024).

Social Media Use and Sleep Quality

Sleep is non-negotiable for good health. Sleep quality is defined as an individual's satisfaction with all aspects of the sleep experience. Sleep quality has five attributes - sleep efficiency (the ratio of time asleep to time lying on bed), sleep latency (how long it takes you to fall asleep), sleep duration (number of hours you sleep), awakenings (the number of awakenings you have during the night) daytime dysfunction, and wake after sleep onset (the amount of time you are awake after first falling asleep) (National Sleep Foundation, 2024). Good sleep quality has positive effects like feeling rested, normal reflexes, and positive relationships. Poor sleep quality has been found to increase fatigue, irritability, daytime dysfunction, slowed responses, and increased caffeine/alcohol intake (Nelson et al., 2021).

Checking social media, sending emails, or, watching the news before sleeping can keep one awake longer, as nighttime use of electronics can impact sleep negatively through the stimulating-effects of light from digital screens. Blue light has been found to stimulate parts of the brain that makes us feel alert, leaving us energized at bedtime when we should be winding down (Sleep Foundation, 2023). The impacts of blue light exposure may be worse for those who wake up to check their phone after falling asleep. The may be difficult to resist, for many. A poll of hospital employees and university students found that a nearly 70% of people report using social media after getting into bed, with almost 15% spending an hour or more doing so each night. Research found that the more time adolescents spent on screen-based activities (like social media, web surfing, watching TV and gaming), the greater was the difficulty falling asleep and the less sleep they got during the night (Sleep Foundation, 2023).

The impact of social media on individuals' self-esteem, body image, and sleep quality was found to get prominence in articles and research. Hence, the present study aims to understand how much of an impact social media has on these variables, whether they are negatively or positively correlated, and what the larger future implications of the continued use of social media are on these factors.

Social Media Use and Self-esteem

Research on social media use and its impact on self-esteem has shown a variety of results. A study conducted by Arun et al. (2021), with 126 Bangalore college students aged 18 to 22 years found that participants who were more exposed to social media, had lower self-esteem. Body image and self-esteem also had a positive correlation (lower body image equaled lower self-esteem). A study by Mohammed Ali et al. (2024), on college students in Iraq also found that social media use at a moderate level of 1-3 hours per day led to lower self-esteem. They also concluded that students' age had an impact on their self-esteem. Moreover, research conducted by Thai et al. (2023), found that reducing social media use led to improvements in both appearance and weight esteem.

However, some longitudinal studies have found that liking and commenting on social media led to higher self-esteem (Valkenburg et al., 2017, as cited in Miljeteig and Soest, 2022). Similarly, Gonzales (2014) (as cited in Miljeteig and Soest, 2022) found a prospective relationship between online text-based communication and increased self-esteem, and the relationship was found to be stronger in text-based communication than real-life communication. However, the problem with this finding is that social media use does not consist of much communication and active use but rather of more passive consumption of content (Verduyn et al., 2015, as cited in Miljeteig and Soest, 2022) (Wise et al., 2010, as cited in Miljeteig and Soest, 2022). Wise et al.,(2010) who surveyed Facebook found that less than 9% of Facebook time was spent communicating.

An experience sampling study conducted by Miljeteig and Soest (2022), with 200 participants aged 16 to 59 years, found that high levels of self-esteem instability and lower age predicted more social media use. They also found that initial self-esteem and social media use was significantly stronger in women than in men. Their results showed distinct gender differences: For women, low initial self-esteem predicted more

frequent social media use, whereas initial low self-esteem among men was related to less social media use. Furthermore, they found that recent social media use predicted lower current self-esteem for women, while the association was not significant for men. Another study conducted by Bissell and Chou (2023), on women (college students and adults, N=560) found that increased social media usage predicted media FOMO, social comparison, and appearance anxiety.

In a study done by Steinsbekk et al. (2020) on 2003-04 born children from Norway, it was reported that Instagram and Snapchat were the most frequently used sites. More than 40% of the participants used these sites at the age of ten, a number that roughly doubled by the age of fourteen. The results showed that increased other-oriented (i.e. how often they commented on others' stories updates and photographs and how often they "like" others' stories) social media use predicted lower appearance self-esteem from age 10-12 years and from age 12-14 years, whereas self-oriented (i.e. no of times they post something on their own social media sites) social media use had no effects.

Results also revealed important gender differences: the impact of other-oriented social media use on appearance self-esteem was strong in girls but absent in boys. Appearance self-esteem did not prospectively predict social media use; thus, no reciprocal relation was detected. Overall, they reported decreases in self-esteem when social media is used for comparison (other-oriented use) in the transition from childhood to adolescence. However, there was no increase in self-esteem when there was self-oriented social media use. Self-oriented social media use also did not buffer against the negative impact of other-oriented use and no interaction effects between the two social media behaviours were observed.

Another study done by Jan, Soomro, and Ahmad (2017), on 18-25-year-old students found that 88% of them engaged in social comparisons on Facebook and 98% of them were upward social comparisons. It had been observed that upward social comparisons made people feel inferior and had negative evaluations of themselves. The findings showed that there was a strong negative relationship between social media use and self-esteem. They also found that an increase in the time spent on Facebook would result in the decrease of the self-esteem of an individual.

Diefenbach and Anders (2021) studied Instagram users to analyse the relationships between subject feedback relevance (through likes) and usage behaviour and the correlations between these measures and self-esteem and subjective social status. They found that social networks are relevant for individuals' self-worth, with the subjective relevance of social media feedback higher for people with lower self-esteem. People with high self-esteem, on the other hand, pay less attention to gratification from others. The research also confirmed that users with a low social status may consider others' feedback more relevant and receive more psychological gratification from getting likes on Instagram than users with a higher social status.

Overall, existing research highlights a complex relationship between social media use and self-esteem, with findings varying based on factors such as gender, age, type of social media engagement, and individual self-perceptions. While excessive social media use and upward social comparisons are consistently linked to lower self-esteem, particularly in women and younger users, some studies suggest that active engagement, such as commenting and messaging, can boost self-esteem. Gender differences also play a key role, with women generally experiencing more negative effects from social media use. Ultimately, these findings suggest that the impact of social media on self-esteem depends on how it is used, with passive consumption and comparison leading to negative effects, while active engagement may offer some benefits.

Social Media Use and Body Image

Research has shown a variety of results for the impact of social media on body image. Mohammed Ali et al. (2024), found that social media use had a positive impact on body image of college students in Iraq who used social media at a moderate overall level (1-3 hours per day) and that age plays a role in this relationship. Contradictory to the previous study, other studies have found that appearance-focused use of social media was consistently associated with more negative body image even after controlling for age, gender, communication-focused use, and number of platforms used. They also found that communication-focused use was also significantly related to more negative body image. Women are more likely than men to engage with social media as a communication tool, view appearance-focused content, and report higher body dissatisfaction. Women have higher levels of body shame and lower body esteem. The findings also suggest that the younger the person, the greater their vulnerability to potential adverse correlates of social media but it depends on the users' type of engagement (Markey et al.,2024). Research conducted by Arun et al. (2021), on 126 Bangalore college students aged 18 to 22 years found that participants who were more exposed to social media had lower body image. Another study by Kathleen E. Bazile (2024), found that social media had a negative impact on the body image of midlife and older women, highlighting that societal beauty standards affect women across the lifespan including those navigating the bodily changes of midlife and beyond. However, we do not know if the same holds for men as well.

An experimental study conducted by Byrne et al. (2024), where participants were put in one of four conditions (liking of photos and narrative; liking of only photos but not narrative; liking of only narrative but not photos; and not liking either photos or narrative) found that participants aged 18 to 20 years reported decreased body dissatisfaction over time

regardless of the condition. There were also no significant changes in negative affect over time, despite the fact that body dissatisfaction decreased. Results of this study contradict previous findings related to appearance-related content on social media.

Research by Fardouly and Vartanian (2015) analysed different studies on body image and social media that used correlational, longitudinal, and experimental research. Some correlational studies which focused on overall social media usage showed that pre-teenage girls, female high school students, and female undergraduate students who were Facebook and/or Myspace users and spent more time on the app reported more drive for thinness, internalisation of the thin-ideal, body surveillance, self-objectification, and appearance comparisons than non-users (Tiggemann and Slater, 2010, Vandenbosch and Eggermont, 2012, Tiggemann and Slater, 2013, Tiggemann and Slater, 2014, Meier and Gray, 2014, Mabe et al., 2014, Cohen and Blaszczynski, 2015, Fardouly et al., 2015, Fardouly and Vartanian, 2015, as cited in Fardouly and Vartanian, 2015). A similar pattern was also found among men, with one study showing a positive correlation between overall social media usage (combination of Facebook, Twitter, Instagram, Tumblr, and Pinterest usage) and self-objectification (Fox and Rooney, 2015, as cited in Fardouly and Vartanian, 2015).

Some research suggested that specific types of activities on social media are particularly problematic such as elevated appearance exposure and online social grooming behaviours being associated with drive for thinness among both male and female undergraduate students. The importance of Facebook for one's social life was associated with objectified body consciousness and body shame among male and female undergraduate students (Meier and Gray, 2014, Kim and Chock, 2015, Manago et al., 2015, as cited in Fardouly and Vartanian, 2015). Research also showed that regular comparison of one's appearance to others (especially those who are seen as more attractive) can lead to negative body image (Myers and Crowther, 2009, as cited in Fardouly and Vartanian, 2015). Appearance comparisons have appeared to play an important role in the relationship between social media use and body image concerns (Kim and Chock, 2015, as cited in Fardouly and Vartanian, 2015). Although these studies provided initial evidence linking social media use (predominantly Facebook) with young people's body image concerns, these studies are unable to determine whether people who spend more time on social media are more concerned about their appearance, or whether people who are more concerned about their appearance spend more time on social media. Therefore, the need for longitudinal and experimental studies arose (Fardouly and Vartanian, 2015).

Longitudinal studies showed that greater social media usage predicted greater body-dissatisfaction and increased appearance related discussions with peers 18 months later in both male and female high school students (De Vries et al., 2015, as cited in Fardouly and Vartanian, 2015). Research also showed that social media negatively impacts people's body image rather than social media being sought out by those high in body dissatisfaction. Another study of female university students showed that maladaptive Facebook usage (seeking negative social evaluations from others and making general social comparisons) was associated with increased body dissatisfaction after 4 weeks (Smith et al., 2013, as cited in Fardouly and Vartanian, 2015). In contrast to both studies, another study found that not all social media platforms impact people's body image concerns and that researchers need to consider the impact of each social media platform separately (Ferguson et al., 2014, as cited in Fardouly and Vartanian, 2015).

Experimental research showed that both male and female undergraduate students who were exposed to images of attractive same-sex strangers in mock social media profiles reported poorer body image and a less positive mood than did participants who were exposed to unattractive same-sex strangers (Haferkamp and Krämer, 2011, as cited in Fardouly and Vartanian, 2015). Similarly, exposure to "fitspiration" images taken from Instagram led to a more negative mood and body dissatisfaction among female undergraduate students than did exposure to appearance-neutral control images (Tiggemann and Zaccardo, 2015, as cited in Fardouly and Vartanian, 2015). Other studies used a more ecologically valid approach by studying participants' social media usage on their own accounts to investigate the impact that has on their body image. The results showed that exposure to Facebook or appearance-neutral websites (about 10-20 mins) found no increase in preoccupation with weight and shape (Mabe et al., 2014, as cited in Fardouly and Vartanian, 2015). In fact, both factors decreased with exposure to both websites but the decrease was greater after exposure to the control website than to Facebook. However, it was noted that these studies only had brief exposure times which is much less than the amount of time that people typically spend on social media apps each day (around 2 hours) (Tiggemann and Slater, 2013, Fardouly and Vartanian, 2015, as cited in Fardouly and Vartanian, 2015). Additionally, individual differences, such as a high tendency for appearance comparison, may make some women more susceptible to the negative effects of social media usage (Fardouly et al., 2015, as cited in Fardouly and Vartanian, 2015). The variability in content that participants were exposed to (e.g., pictures, status updates) also differs from controlled experimental studies, potentially reducing the consistency of findings. While these studies offer more ecologically valid insights, the variability in exposure may obscure potential negative effects of social media on body image (Fardouly and Vartanian, 2015).

Research on social media's impact on body image reveals mixed findings as mentioned above, and are influenced by factors such as age, gender, type of engagement, and platform used. While some studies suggest moderate social media use can have a positive effect, appearance-focused content, social comparisons, and online social grooming behaviours are consistently linked to greater body dissatisfaction. Women, particularly younger individuals, tend to be more vulnerable to these negative effects, though men are also affected. Longitudinal and experimental studies indicated that social media often exacerbates body image concerns rather than merely attracting those already dissatisfied with their appearance. However, individual differences and the specific nature of social media engagement play a crucial role in determining its overall impact.

Social Media Use and Sleep Quality

A longitudinal study conducted by Gareth, Liu, and Young (2016) on undergraduate students' usage of Twitter in the first quarter of their freshman year for 10 weeks showed that students who tweeted more frequently on weekday late nights (2 am - 6am) reported a significantly lower quality of sleep, yet if they tweeted more frequently on weekend late nights there was no significant relationships. Also, tweeting more during weekday evenings was associated with better sleep. The results showed that engagement with Twitter was reflective of student schedules (i.e., during weekdays, many students have classes in the morning and tweeting late at night indicates that they are not sleeping).

A secondary analysis showed that freshmen who wrote late-night, short length tweets reported lower sleep quality whereas those who wrote long tweets on weekday evenings reported a higher quality of sleep. Importantly, there were no significant relationships between tweet length and the time of day on weekdays. One possible explanation for this finding is that better student sleepers participate in more social and conversational tweeting at night, while another is that better sleepers have positive habits that reinforce their sleeping schedule. Finally, the study also showed that there is a link between student sleep quality and mood/emotions as the tweets reflect the students emotional state.

Yu et al. (2024) highlighted mixed findings on the impact of social media use on sleep. Several studies indicated negative effects, particularly on sleep quality and duration. Nagata et al. (2024) found that bedtime screen usage among U.S. adolescents was associated with sleep disturbances and daytime sleepiness. Similarly, Kortesoja et al. (2023) reported that late-night social media use in Finnish adolescents and young adults led to poorer sleep quality and shorter duration, especially for evening chronotypes. Eijnden et al. (2023) found that problematic social media use among Dutch adolescents delayed bedtimes, leading to insufficient sleep. In Sweden, Beeres et al. (2023) who studies adolescents in Sweden, observed that higher social media use correlated with more sleep problems, though without long-term effects. Chao et al. (2023) found that short-video platform use, such as Instagram Reels, was associated with lower sleep quality among Chinese adolescents.

However, other studies suggest that social media use does not necessarily harm sleep or may even have neutral effects. Maksniemi et al. (2023) found that while active social media use in Finnish adolescents was linked to emotional exhaustion, it did not significantly alter bedtimes. Charmaraman et al. (2023) reported no significant negative impact of social media use on sleep among U.S. adolescents. Richardson et al. (2023) found that parental regulation of social media use among children aged 10 to 12 contributed to healthy sleep habits, with no direct negative effects. Similarly, Friebel et al. (2023) observed that young adults in the UK who used social media at bedtime did not report worsened sleep quality.

These mixed findings across various studies highlight the need for further research to better understand the relationship between social media use and sleep patterns.Many studies linked late-night social media use to poorer sleep quality, shorter sleep duration, and increased sleep disturbances, especially among adolescents and evening chronotypes. However, some studies suggest neutral or even context-dependent effects, with factors such as social media activity type, timing, and parental regulation playing a role. While excessive nighttime use is generally associated with negative outcomes, further research is needed to clarify the nuances of this relationship and identify strategies to mitigate potential sleep disruptions.

Therefore, based on the existing literature, it is evident that social media use has complex and multifaceted effects on self-esteem, body image, and sleep. While numerous studies have explored these relationships in different cultural contexts, there remains a gap in research focusing on Indian adolescents and young adults aged 18-23 years. Given the growing prevalence of social media use in India and its potential psychological and behavioural consequences, it is crucial to examine these effects in an Indian context. The present study aims to address this gap by investigating the impact of social media use on self-esteem, body image, and sleep among Indian young adults, providing valuable insights that can contribute to a more nuanced understanding of these issues within the Indian socio-cultural landscape.

Hypotheses

H1: There will be a negative relationship between social media use and self-esteem

H2: There will be a negative relationship between social media use and body image overall appearance evaluation, body image health fitness evaluation.

H3: There will be a positive relationship between social media use and body image health fitness influence, body image investment in ideals, body image social dependence, body image height

dissatisfaction, body image fatness evaluation, body image negative affect, body image attention to grooming

H4: There will be a negative relationship between social media use and sleep quality

Design

The following research used a correlation design. Independent Variables (IV): Social Media Use (SMU) Dependent Variables (DV's): Self-esteem, Sleep Quality, and Body Image (Overall Appearance Evaluation; Health Fitness Influence; Investment in Ideals; Health Fitness Evaluation; Social Dependence; Height Dissatisfaction; Fatness Evaluation; Negative Affect; Attention to Grooming)

Method

Sample

The sampling technique used is snowball and convenience sampling. The inclusion criteria for the study was age (18-23 years) and undergraduate students. The sample size was N = 117 (M=56, F=61) (one response has been dropped due to misinformation). Mean age of the participants was 19.81 and Standard deviation was 1.21.

Tools

The tools being used to study the variables of interest are as follows:

Social Media Use Scale (SMUS): To measure the use of social media. Contains sub scales that are: Image-based (5 items), Comparison-Based (3 items), Belief-Based (4 items), and Consumption-Based (5 items).

Rosenberg Self-esteem Scale (RSE): To measure self-esteem. Uses a 10-item Guttman scale to assess the overall attitude one holds about oneself, ranging from negative to positive.

Short Pittsburgh Sleep Quality Index (PSQI): To measure sleep quality. The shortened version of the Pittsburgh Sleep Quality Index which examines Sleep Quality through 5 components: Sleep latency, Sleep duration, Sleep efficiency, Sleep disturbances, and Daytime dysfunction.

BSIQ-SF Body Image Scale: To measure body image. Includes the following subscales: Overall Appearance Evaluation (OAE), Health Fitness Influence (HFI), Investment in Ideals (II), Health Fitness Evaluation (HFE), Social Dependence (SD), Height Dissatisfaction (HD), Fatness Evaluation (FE), Negative Affect (NA), Attention to Grooming (AG). Uses a 1-5 point scale for scoring of items with each subscale score ranging from a minimum of 3 to a maximum of 15. A total BSIQ-SF score might range from 27 to 135 points.

Procedure

The survey was conducted online. Participants were requested to provide consent at the beginning of the google form, followed by demographic details in terms of name, age, gender, university of study, course being pursued, and social media platforms they are active on. The data obtained was scored and

Results

Table 1: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
SMU total	117	1.00	5.88	2.6219	.93559
SE	117	11.00	35.00	22.2735	5.10514
SQ	117	.00	13.00	5.8632	2.81592
BI OAE	117	3.00	15.00	10.7179	2.92388
BI HFI	117	4.00	15.00	11.0085	2.79623
BI II	117	3.00	15.00	9.9915	3.15544
BI HFE	117	3.00	15.00	8.8632	3.13739
BI SD	117	3.00	15.00	7.1709	3.05775
BI HD	117	3.00	15.00	7.1111	3.56414
BI FE	117	3.00	15.00	6.1795	3.71533
BI NA	117	3.00	15.00	5.5556	3.23889
BI AG	117	4.00	15.00	9.1197	2.74855

Note: SMU = Social Media Use; SE = Self-Esteem; SQ = Sleep Quality; BI-OAE = Body image Overall Appearance Evaluation; BI-HFI = Body image Health Fitness Influence; BI-II = Body image Investment in Ideals; BI-HFE = Body image Health Fitness Evaluation; BI-SD = Body image Social Dependence; BI-HD = Body image Height Dissatisfaction; BI-FE = Body image Fatness Evaluation; BI-NA = Body image Negative Affect; BI-AG = Body image

Attention to Grooming

Table 2 reveals social media use (SMU) had a

Table 2: Coefficients of Correlation

	SMU Total	SE	SQ	BI OAE	BI HFI	BI II	BI HFE	BI SD	BI HD	BI FE	BI NA	BI AG
SMU Total	1											
SE	.139	1										
SQ	.136	.242**	1									
BI OAE	-.225*	-.654**	-.215*	1								
BI HFI	.133	-.138	-.163	.017	1							
BI II	.246**	-.018	-.076	-.005	.478**	1						
BI HFE	-.203*	-.464**	-.283**	.608**	.289**	.297**	1					
BI SD	.331**	.573**	.157	-.548**	.105	.353**	-.345**	1				
BI HD	.132	.071	.058	-.051	.138	.262**	.098	.179	1			
BI FE	.189*	.268**	.089	-.467**	.130	.135	-.382**	.389**	-.018	1		
BI NA	.302**	.572**	.194*	-.704**	.108	.259**	-.437**	.699**	.073	.646**	1	
BI AG	.410**	-.074	.097	.102	.295**	.486**	.092	.306**	.201*	.103	.309**	1

***. Correlation is significant at the 0.05 level (2-tailed).**

****. Correlation is significant at the 0.01 level (2-tailed).**

significant positive relationship with body image investment in ideals (II) ($r = 0.246$; $p \leq 0.01$); body image social dependence (SD) ($r = 0.331$; $p \leq 0.01$); body image fatness evaluation (FE) ($r = 0.189$; $p \leq 0.05$); body image negative affect (NA) ($r = 0.302$; $p \leq 0.01$); body image attention to grooming (AG) ($r = 0.410$; $p \leq 0.01$).

Social media use (SMU) was found to have a significant negative relationship with body image overall appearance evaluation (OAE) ($r = -0.225$; $p \leq 0.05$); body image health fitness evaluation (HFE) ($r = -0.203$; $p \leq 0.05$).

Table 3: Predicting Body Image Overall Appearance Evaluation (BIOAE) from Social Media Use (SMU)

Independent variable	DV	B	SE	Beta	t-value	Adjusted R^2	F	Sig.
SMU	BIOAE	-0.704	0.28	-0.22	-2.48**	0.04	6.14	0.01

$p \leq 0.01$ **

From the above table it was found that every one unit increase in social media use led to a 0.7 unit decrease in overall appearance evaluation.

Table 4: Predicting Body Image Investment in Ideal (BIII) from Social Media Use (SMU)

Independent variable	Dependent variable	B	SE	Beta	t-value	Adjusted R^2	F	Sig.
SMU	BIII	0.83	0.30	0.24	2.72**	0.05	7.41	0.00

$p \leq 0.01$ **

The above table explained that every one unit increase in social media use led to a 0.83 unit increase in investment in ideal of the participants.

The objective of the present work was to study the relationship between social media use and self-esteem, sleep quality, and body image. From the analyses, it was found that hypothesis two was accepted. A negative relationship between social media use and body image overall appearance evaluation. This finding was parallel to the results of Singhal and Bhargava, 2024; Fardouly et al., 2015; Arun et al., 2021; APA, 2023; Manning and Mulgrew, 2021. This indicates that when participants spend more time on social media their overall appearance evaluation tends to be lowered. This means that the more time that they spend on social media the less attractive they feel, the less they think they look good in clothes and the less they think their body looks good.

Table 5: Predicting Body Image Health Fitness Evaluation from Social Media Use

Independent variable	Dependent variable	B	SE	Beta	t-value	Adjusted R^2	F	Sig.
SMU	BIHFE	-0.68	0.30	-0.20	-2.22	0.03	4.93	0.00

The above table explained that every 1 unit increase in social media use led to a 0.68 unit decrease in health fitness evaluation.

Table 6: Predicting Body Image Social Dependance from Social Media Use

Independent variable	Dependent variable	B	SE	Beta	t-value	Adjusted R^2	F	Sig.
SMU	BISD	1.08	0.28	0.33	3.75	0.10	14.10	0.00

The above table explained that every 1 unit increase in social media use led to a 1.08 unit increase in social dependance.

Table 7: Predicting Body Image Fatness Evaluation from Social Media Use

Independent variable	Dependent variable	B	SE	Beta	t-value	Adjusted R^2	F	Sig.
SMU	BIFE	0.75	0.36	0.19	2.06	0.03	4.28	0.04

The above table explained that every 1 unit increase in social media use led to a 0.75 unit increase in fatness evaluation.

Table 8: Predicting Body Image Negative Affect from Social Media Use

Independent variable	Dependent variable	B	SE	Beta	t-value	Adjusted R^2	F	Sig.
SMU	BINA	1.04	0.30	0.30	3.43	0.08	11.55	0.00

The above table explained that every 1 unit increase in social media use led to a 1.04 unit increase in negative affect.

Table 9: Predicting Body Image Attention to Grooming from Social Media Use

Independent variable	Dependent variable	B	SE	Beta	t-value	Adjusted R^2	F	Sig.
SMU	BIAG	1.20	0.25	0.41	4.82	0.16	23.26	0.00

The above table explained that every 1 unit increase in social media use led to a 1.20 unit increase in attention to grooming.

A negative relationship was also found between social media use and body image health fitness evaluation Singhal and Bhargava, 2024; Fardouly et al., 2015;

Arun et al., 2021. This indicates that when participants spend more time on social media their health fitness evaluation that is how they think their fitness levels are, how in shape and how healthy they feel or think tends to be lowered.

From the results it was also found that hypothesis three was partially accepted. A significant positive relationship was found between social media use and body image investment in ideals; body image social dependence; body image fatness evaluation; body image negative affect; and body image attention to grooming. Although body image health fitness influence and body image height dissatisfaction had a positive relationship with social media use, it was not significant. These findings indicate that higher social media use resulted in people investing more time in having the "ideal" body that they saw on social media, the more they cared about how they looked and presented themselves, the fatter they felt, the worse they felt about their body, and the more they compared their body to others.

Furthermore, based on the analyses it was also found that hypotheses one and four were not accepted. This may be because undergraduate students use social media as a means to relax and unwind after university hours which makes them feel better about themselves and may help them sleep better. Also, increased self-esteem could be due to higher social media use in terms of online text-based communication i.e. active engagement (Valkenburg et al., 2017, Gonzales, 2014, as cited in Miljeteig and Soest, 2022). Further research is needed to analyse the reasons for these findings.

Limitations and Future work

In the present study, the limitations were that gender comparison could not be computed due to time constraints. The sample was also limited to undergraduate students aged eighteen to twenty-three years. The findings for social media use and self-esteem, sleep quality was not found to be significant so future research could be done to determine the reasons behind this result as previous studies have shown significant negative relationships between social media use and self-esteem, sleep quality (Yu et al., 2024,)

Future research might also focus on expanding the present work by considering cross-sectional data. Gender comparisons can be done and respondents could be school students, masters students, and working professionals. Furthermore, this research could be replicated in different regions of the world to see if the same results would hold.

Conclusion

In conclusion, the present study focused on the relationship between social media use and self-esteem, sleep quality, and body image. It was found that social media use had a significant effect on body image in Indian undergraduate students. Social media use was also found to have a significant negative relationship with body image overall appearance and health fitness evaluation. Social media use was also found to have a significant positive relationship with body image investment in ideals, social dependence, fatness evaluation, negative affect, and attention to grooming. From this study we conclude that social media use has a positive and negative correlation with body image subscales and no significant relationship between social media use and self-esteem, sleep quality. Therefore, this study has larger implications on the effects of social media on people which could be translated into the educational context or in redefining our society's perception of ideals emphasizing the importance of cultivating positive online habits and nurturing a healthy body image in today's digital age.

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