
Impact of Social Media Usage on Self-esteem and Body Image among Female Young Adults in Sri Lanka

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Abstract

Social media has become an integral part of modern communication, with millions of users worldwide. While it facilitates connectivity and information sharing, its psychological effects, particularly on self-esteem and body image, have raised significant concerns. This study investigates the impact of social media use on self-esteem and body image among female young adults in Sri Lanka. Using convenience sampling, the study included 251 females with ages ranging from 18 to 26. A Google form that included a demographic questionnaire, the Social Media Use Scale, the Body Image Questionnaire, and the Rosenberg Self-Esteem Scale was shared through social media platforms to collect data. A one-way multivariate analysis of variance (MANOVA) confirmed a statistically significant multivariate effect of social media use on both body image and self-esteem, with social media use explaining 8.5% of the variance in the combined dependent variables. Follow-up analysis of variance (ANOVA) indicated a significant effect of social media use on body image and self-esteem separately, with small to moderate effect sizes. Further analysis using Welch's t-test showed that individuals with Low social media use had significant and higher self-esteem ($d = 0.459$) and more positive body image ($d = 0.580$) compared to those with High social media use. Findings highlight that social media use has a significant effect on both self-esteem and body image, with higher social media use associated with lower self-esteem and poor body image. Future research should examine usage patterns and cultural influences.

Keywords: Social media use, body image, self-esteem, Sri Lankan female young adults

Introduction

As of 2024, more than half of the world's population, 63.9% to be exact, uses social media, with approximately 34.2% of Sri Lanka's population being active users (Chaffey, 2024). While social media enhances connectivity and communication (Davis, 2016), it also raises concerns regarding privacy, misinformation, digital addiction, and mental health (Malik et al., 2024). Research has linked social media use (SMU) to various psychological issues, including poor self-esteem and negative body image (Mabulay & Mangulabnan, 2023).

Social comparison theory (Festinger, 1954) provides a framework to explain these outcomes, showing how individuals, particularly on social media, tend to compare themselves to idealized portrayals of others, known as upward comparisons, leading to adverse psychological outcomes such as lowered self-esteem and body dissatisfaction (Midgley et al., 2020). These comparisons are especially harmful in societies like Sri Lanka, where “thinness” is widely promoted as the ideal body type, shaping cultural expectations of beauty (Lokumannage, 2017).

Although findings on SMU and self-esteem are mixed, a consistent small negative association has been identified (Huang, 2017; Liu & Baumeister, 2016; Saiphoo et al., 2020). Similar results have been found regarding body image, with frequent exposure to idealized images linked to dissatisfaction (Midgley et al., 2020; Vincente-Benito & Ramírez-Durán, 2023). However, some studies suggest that engagement with body-positive content can improve self-perception (Cohen et al., 2019; Nelson et al., 2022). The type of social media engagement, passive or active, also moderates these effects, with passive use linked to worse outcomes (Godard & Haltzman, 2024).

Young adult women are particularly vulnerable, as they engage more in upward comparisons and are more affected by social pressures related to appearance (Twenge & Martin, 2020). This is especially concerning in Sri Lanka, where youth make up 78.7% of internet users, and 55.6% use social media (Institute for Participatory Interaction in Development [IPID], 2021). Evidence suggests that Sri Lankan young women face significant struggles with body dissatisfaction and self-esteem, which can contribute to long term mental health challenges. Such challenges can persist into adulthood and even impact future social and familial relationships, extending the impact across generations (Chandradasa & Rathnayake, 2019).

Despite these concerns, limited research in Sri Lanka and South Asia has explored the relationship between SMU, self-esteem, and body image among young adult females. Most existing studies focus on adolescents, highlighting a gap in knowledge, especially in establishing causality (Baminiwatta et al., 2021). Therefore, this study seeks to address these gaps by examining the psychological impact of SMU on self-esteem and body image among Sri Lankan female young adults, guided by social comparison theory.

Materials and methods

This study employed a quantitative research approach with a cross-sectional survey design to investigate the effect of SMU on self-esteem and body image among female young adults in Sri Lanka. SMU served as the independent variable, categorized into Low SMU and High SMU based on the mean score. This method, commonly used in psychological research, facilitated meaningful group distinctions and clearer comparisons (Iacobucci et al., 2015). The dependent variables were self-esteem and body image.

Hypotheses

H₁: Social media use has a statistically significant effect on body image and self-esteem among female young adults.

H₂: Social media use has a statistically significant effect on body image among female young adults.

H₃: Social media use has a statistically significant effect on self-esteem among female young adults.

Participants and sampling

A convenience sampling method was used to recruit female participants aged 18-26, via social media platforms. This aligned with the study’s focus on social media users and followed similar recruitment strategies from previous research (Akurugodagama et al., 2024; Bilal et al., 2021; Jiotsa et al., 2021;

Khodabakhsh & Leng, 2020). The survey was conducted over two months (December to February) and ended after reaching the required sample size. A sample size of 251 was determined through G*Power 3.1.9.7 (Faul et al., 2013), ensuring sufficient statistical power with an effect size of 0.0625, a power of 0.95, and an alpha error of 0.05.

Inclusion criteria

Participants were required to be female young adults born between 1998 and 2006, aligning with the typical age range most impacted by the adverse effects of SMU, as supported by existing literature (Mabulay & Mangulabnan, 2023). They were also required to use at least one social media platform, which was verified through a demographic questionnaire that asked participants to indicate their most used platform. Additionally, all participants had to be Sri Lankan nationals.

Exclusion criteria

Participants were excluded if they were school-attending young adults, as school environments differ significantly from those in university or work settings. Individuals who used only private messaging platforms were also excluded, as these do not represent broader social media engagement. Individuals with trauma related to the research topic, difficulty communicating in English, and non-Sri Lankan nationalities were also excluded.

Measures

Independent variable

Social Media Use: This was measured by the Social Media Use Scale (SMUS) (Tuck & Thompson, 2023). This is a self-report questionnaire designed to measure an individual's SMU. It is a 17-item instrument containing 4 sub-scales, which are image-based, comparison-based, belief-based, and consumption-based. Statements are scored on a scale of 1 to 9 and the total score is calculated after averaging the score for each item. This instrument has evidence supporting convergent validity and good internal consistency (Tuck & Thompson, 2023).

Dependent variable

Body Image: This was measured by the Body Image Questionnaire (BIQ). It is a self-report questionnaire to measure an individual's general body image. It is a 19-item instrument with items of opposite meanings to be scored from 1 to 5. The total score varies from 19 to 95. Validation studies for the BIQ reported an average of 0.67 test-retest reliability coefficients for the 19 items (Koleck et al., 2002).

Self-Esteem: This was measured by the Rosenberg Self-Esteem Scale (RSES). It is a self-report questionnaire to measure an individual's self-esteem. It is a 10-item uni-dimensional instrument that scores statements on a 4-point Likert scale ranging from "Strongly agree" to "Strongly disagree". The score ranges from 0 to 30 and is calculated by totalling the individual item scores after reverse-scoring the negatively worded statements. The RSES shows a Guttman scale coefficient of reproducibility of 0.92, indicating excellent internal consistency (Rosenberg, 1979). The RSES also reports high test-retest reliability score of 0.88 and a low social desirability score of 0.22, which indicates genuine reporting in the sample (Robins et al., 2001).

Google Forms was used to collect the data for the survey. Jamovi (Version 2.6) (The Jamovi project, 2024) was used to analyse all the collected data. G*Power (3.1.9.7) (Faul et al., 2013) was used to calculate the sample size and run a power analysis.

Procedure

The study plan involved gathering data through an online survey, which took approximately 10-15 minutes to complete. These were distributed through social media and allowed only one response per Google account to prevent duplicate responses. The Google form contained a Participant Information form, a Debriefing form, and a Participant Consent form. Participants were required to provide explicit consent by clicking on a checkbox. Only those who provided consent proceeded to the survey. Participants were then directed to the scales, the SMUS, BIQ, and RSES. After completion, the Debrief form was made available to them. Finally, data was exported and analysed using Jamovi.

Analysis

Jamovi Version 2.6 software was used to carry out the analysis (The Jamovi project, 2024). Descriptive analysis was conducted on all the variables and statistics were calculated to summarize the data. An inferential technique was also used. The 2 dependent variables are continuous, and the independent variable is categorical with 2 independent groups. Next, tests were conducted to make sure the assumptions for a MANOVA were met. Once all the assumptions were met, a MANOVA analysis was conducted to examine how both body image and self-esteem were affected by SMU when considered together. Further, an Independent Samples t-test was conducted to explore the differential impacts of different levels of SMU on body image and self-esteem.

Ethical issues

The participants had the right to withdraw at any point and participation was voluntary. Steps were taken to ensure that participants remained anonymous and that all data collected would remain confidential. The participants received a Debriefing Sheet after completing the survey. Collected data will be kept safe for 12 months and then destroyed. Access to free mental health services was provided to them to contact in case of any psychological discomfort during or after the research. Contact information of both the researcher and supervisor was provided in case of any concerns. An application for ethical approval was submitted to the Sri Lanka Institute of Information Technology Pro-tem Psychology Ethics Review Committee on behalf of Liverpool John Moores University, and the study was conducted after approval was granted.

Results

Demographic characteristics of participants

The study involved 251 ($N = 251$) female Sri Lankan young adults. The mean age was 21.77 ($SD = 1.785$), with ages ranging from 18 to 26 years and the majority of them being 23 years. Among the participants, 131 ($n = 131$) were Low social media users, while 120 ($n = 120$) were High social media users. Among the social media platforms, the majority spent their time on Instagram daily, while the minority used Twitter. Among the participants, more than 80% use social media for entertainment, while only 7.6% use it to maintain contact with family and friends.

Preliminary assumption testing

Normality was evaluated using skewness, kurtosis, and Q-Q plots, instead of the Shapiro-Wilk test, due to the large sample size (Mishra et al., 2019). Results showed minimal skewness (0.128, $SE = 0.154$) and kurtosis (0.203, $SE = 0.306$) for self-esteem, while body image scores reflected a skewness of -0.810 ($SE = 0.154$) and kurtosis of 0.941 ($SE = 0.306$), indicating an approximately normal distribution. Visual inspection through Q-Q plots supported this, and the central limit theorem provided additional justification for normality in large samples (Harlow, 2014).

Multivariate outliers were checked using Mahalanobis distance and none were identified. Linearity was confirmed via scatter plot. Although Box's M test was significant ($\chi^2 = 64.0$, $df = 3$, $p < .001$), indicating a violation of homogeneity, Pillai's Trace was used as a robust alternative.

The effect of social media use on self-esteem and body image

A one-way MANOVA revealed a statistically significant effect of SMU on the combined dependent variables of self-esteem and body image, Pillai's Trace = 0.0848, $F(2, 248) = 11.50$, $p < .001$, with SMU accounting for approximately 8.5% of the variance. This supports Hypothesis 1.

Subsequent univariate ANOVAs showed significant effects of SMU on both self-esteem, $F(1, 249) = 13.30$, $p < .001$, and body image, $F(1, 249) = 21.50$, $p < .001$, confirming Hypotheses 2 and 3. Partial eta squared (η^2) values were manually calculated to determine effect sizes.

To further examine how different levels of SMU influence these variables, an Independent Samples t-test was conducted despite no formal hypothesis for this comparison. Participants were divided into Low and High SMU groups based on the mean score ($M = 2.87$, $SD = 0.88$). Due to significant Levene's test results ($p < .05$), Welch's t-test was applied.

Findings indicated that participants with Low SMU had significantly higher self-esteem ($M = 18.4$, $SD = 4.32$) than those with High SMU ($M = 16.1$, $SD = 5.56$), Welch's $t(224) = 3.61$, $p < .001$, with a small-to-moderate effect size ($d = 0.459$) (Cohen, 2013). Similarly, participants with Low SMU reported significantly more positive body image scores ($M = 63.5$, $SD = 7.12$) compared to the High SMU group ($M = 57.6$, $SD = 12.47$), Welch's $t(186) = 4.54$, $p < .001$, $d = 0.580$, indicating a moderate effect size (Cohen, 2013). These results suggest that higher SMU is associated with lower self-esteem and more negative body image perceptions, which can translate into increased preoccupation with appearance or unhealthy dieting behaviours. Given that young adulthood is a formative stage for identity development, these findings imply that frequent social media use may not just have statistical significance but also tangible impacts on psychological well-being and lifestyle choices in Sri Lanka.

A post-hoc power analysis conducted using G*Power (Faul et al., 2013), based on Pillai's Trace = 0.0848 and an effect size of $f^2 = 0.093$, showed high statistical power ($1 - \beta = 0.9937$), indicating reliable findings. Finally, no major multicollinearity concerns were observed, as correlation coefficients among dependent variables remained below 0.9.

Discussion

Findings supported all three hypotheses: SMU significantly impacts both self-esteem and body image. These results align with prior research suggesting that frequent exposure to idealized social media content can lead to negative self-comparisons and increased body dissatisfaction (Ahbabi et al., 2024; Jiotsa et al., 2021). However, global findings remain mixed, emphasizing the need for context-specific research, particularly in Asian settings (Abdoli et al., 2024).

The study confirmed that higher SMU correlates with more negative body image and lower self-esteem, supporting Social Comparison Theory (Tiggemann & Slater, 2014). The comparison-based subscale of the SMUS further reinforced these results, though it contained only three relevant items. Content type also likely influenced outcomes where exposure to body-positive versus thin-ideal images may affect body perceptions (Nelson et al., 2022), but this was beyond the study's scope. While SMU explained a moderate portion of variance in body image (7.9%) and a small portion in self-esteem (5.1%), other factors likely contributed more to these outcomes (Richardson, 2011).

Further analysis showed that participants with high SMU had significantly lower self-esteem and more negative body image compared to those with low SMU, consistent with previous findings (Alfonso-Fuertes et al., 2023; Midgley et al., 2020). However, the effect sizes were small to moderate, and these findings were exploratory rather than part of the main hypotheses.

Strengths

This study is one of the first in Sri Lanka to use a MANOVA to examine SMU's effect on self-esteem and body image. It adds valuable insight into the local context and is grounded in Festinger's (1954) Social Comparison Theory, enriching cross-cultural understanding of SMU's psychological effects.

Limitations

While methodological rigor was maintained, some assumptions were not fully met, and outliers, though retained, may have influenced results (Osborne & Overbay, 2004). Self-report measures raise the risk of social desirability bias (Latkin et al., 2017), and the cross-sectional design limits causal interpretation. Confounding variables such as the type of content and engagement style were not directly examined. Convenience sampling via social media may have introduced selection bias, and the focus solely on young adult females limits generalizability to other demographics.

Implications and recommendations

The study highlights the need for culturally specific research in non-Western societies. Mental health professionals and policymakers should design targeted awareness programs to educate young women on social comparisons, media literacy, and mindful social media engagement. Programs might include promoting body-positive content and recognizing unrealistic beauty standards. Future research should explore the impact of different engagement styles (active vs. passive) and use longitudinal designs to clarify causal relationships between SMU and psychological well-being.

Conclusion

This study examined the impact of SMU on self-esteem and body image among young adult females in Sri Lanka, confirming all three hypotheses and showing significant differences between high and low social media users. The results reinforce the idea that SMU affects mental health, aligning the findings with Social Comparison Theory and highlighting the complex relationship between these variables and the importance of culturally specific research.

In Sri Lanka, where slimness is culturally promoted as the beauty ideal, the pressure of such comparisons appears to be particularly detrimental for young women. Theoretically, the study underscores the continued relevance of Social Comparison Theory, however, it also highlights the need to refine this

framework for collectivist societies like Sri Lanka, where community and cultural norms strongly reinforce appearance-related pressures.

Limitations such as reliance on self-reports and a cross-sectional design suggest the need for future longitudinal studies that incorporate variables like engagement type and cultural context. Practically, the findings call for mental health interventions focused on media literacy and promoting body-positive content, especially in schools and universities equipping young women with strategies to critically evaluate online content. Overall, the study adds valuable insight into how SMU influences self-esteem and body image.

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References

- Abdoli, M., Scotto Rosato, M., Desousa, A., & Cotrufo, P. (2024). Cultural Differences in Body Image: A Systematic Review. *Social Sciences, 13*, 305. <https://doi.org/10.3390/socsci13060305>
- Akurugodagama, M. S., Munasinghe, H. C., Silvapulle, W. S., Hansika, H. M. S., Siddeek, N. F., Amarasinghe, M. D. I. W., & Seneviwickrama, K. L. M. D. (2024). Perception on body image and its associated factors among undergraduates in selected faculties of a state university in Sri Lanka. *Sri Lanka Journal of Psychiatry, 15*(1), 38-43. <https://doi.org/10.4038/sljpsyc.v15i1.8458>
- Al Ahbabi, A., Al Teneiji, A., Al Shaer, A., Al Jaber, G., & ElSayary, A. (2024). *The Effects of Social Media on Self-Esteem*. 185–192. <https://doi.org/10.54808/WMSCI2024.01.185>
- Alfonso-Fuertes, I., Alvarez-Mon, M. A., Sanchez del Hoyo, R., Ortega, M. A., Alvarez-Mon, M., & Molina-Ruiz, R. M. (2023). Time Spent on Instagram and Body Image, Self-esteem, and Physical Comparison Among Young Adults in Spain: Observational Study. *JMIR Formative Research, 7*, e42207. <https://doi.org/10.2196/42207>
- Baminiwatta, A., Herath, N. C., & Chandradasa, M. (2021). Cross-Sectional Study on the Association Between Social Media Use and Body Image Dissatisfaction Among Adolescents. *Indian Journal of Pediatrics, 88*(5), 499–500. <https://doi.org/10.1007/s12098-021-03662-3>
- Bilal, A., Wazir, S., & Farooq, B. (2021). Relationship between Body Image Dissatisfaction and Social Media Usage in Young Women. *Pakistan Journal of Humanities and Social Sciences, 9*(3). <https://doi.org/10.52131/pjhss.2021.0903.0151>
- Chaffey, D. (2025, February 14). *Global social media statistics research summary*. Smart Insights. <https://www.smartinsights.com/social-media-marketing/social-media-strategy/new-global-social-media-research/>
- Chandradasa, M., & Rathnayake, L. C. (2019). Gender disparity as a threat to the mental well-being of young Sri Lankan women. *BJPsych international, 16*(4), 90–92. <https://doi.org/10.1192/bji.2018.29>

- Cohen, R., Fardouly, J., Newton-John, T., & Slater, A. (2019). #BoPo on Instagram: An experimental investigation of the effects of viewing body positive content on young women's mood and body image. *New Media & Society*, 21(7), 1546–1564. <https://doi.org/10.1177/1461444819826530>
- Davis, J. (2016). *Social Media*. <https://doi.org/10.1002/9781118541555.wbiepc004>
- Friedrich, S., & Pauly, M. (2017). *MATS: Inference for potentially Singular and Heteroscedastic MANOVA* (No. arXiv:1704.03731). arXiv. <https://doi.org/10.48550/arXiv.1704.03731>
- Godard, R., & Holtzman, S. (2024). Are active and passive social media use related to mental health, wellbeing, and social support outcomes? A meta-analysis of 141 studies. *Journal of Computer-Mediated Communication*, 29(1), zmad055. <https://doi.org/10.1093/jcmc/zmad055>
- Harlow, L. L. (2014). *The Essence of Multivariate Thinking: Basic Themes and Methods*. Routledge.
- Huang, C. (2017). Time Spent on Social Network Sites and Psychological Well-Being: A MetaAnalysis. *Cyberpsychology, Behavior and Social Networking*, 20, 346–354. <https://doi.org/10.1089/cyber.2016.0758>
- Jiotsa, B., Naccache, B., Duval, M., Rocher, B., & Grall-Bronnec, M. (2021). 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), 2880. <https://doi.org/10.3390/ijerph18062880>
- Latkin, C. A., Edwards, C., Davey-Rothwell, M. A., & Tobin, K. E. (2017). The relationship between social desirability bias and self-reports of health, substance use, and social network factors among urban substance users in Baltimore, Maryland. *Addictive Behaviors*, 73, 133–136. <https://doi.org/10.1016/j.addbeh.2017.05.005>
- Liu, D., & Baumeister, R. F. (2016). Social networking online and personality of self-worth: A meta-analysis. *Journal of Research in Personality*, 64, 79–89. <https://doi.org/10.1016/j.jrp.2016.06.024>
- Lokumannage, A., (2020). Social media and its impact on adolescents' sense of body image in Sri Lanka. *International Journal of Multidisciplinary Studies*, 7(2), 116-125.
- Mabulay, E. P. & Mangulabnan, P. M. (2023). The Impact of Social Media on Self-Esteem and Body Image explored within the framework of online comparison and social validation. https://www.researchgate.net/publication/376681320_The_Impact_of_Social_Media_on_Self-Esteem_and_Body_Image_explored_within_the_framework_of_online_comparison_and_social_validation_A_Journal_Analysis_presented_as_a_final_requirement_for_Social_Psychol
- Malik, A. S., Acharya, S., & Humane, S. (2024). Exploring the Impact of Security Technologies on Mental Health: A Comprehensive Review. *Cureus*, 16(2), e53664. <https://doi.org/10.7759/cureus.53664>
- Midgley, C., Thai, S., Lockwood, P., Kovacheff, C., & Page-Gould, E. (2020). *When Every Day is a High School Reunion: Social Media Comparisons and Self-Esteem*. <https://doi.org/10.31234/osf.io/a24sv>
- Nelson, S. L., Harriger, J. A., Miller-Perrin, C., & Rouse, S. V. (2022). The effects of body-positive Instagram posts on body image in adult women. *Body Image*, 42, 338–346. <https://doi.org/10.1016/j.bodyim.2022.07.013>
- Osborne, J., & Overbay, A. (2004). The Power of Outliers (and Why Researchers Should Always Check for Them). *Pract. Assess. Res. Eval.*, 9.
- Richardson, J. (2011). Eta squared and partial eta squared as measures of effect size in educational research. *Educational Research Review*, 6, 135–147. <https://doi.org/10.1016/j.edurev.2010.12.001>
- Saiphoo, A. N., Dahoah Halevi, L., & Vahedi, Z. (2020). Social networking site use and self-esteem: A meta-analytic review. *Personality and Individual Differences*, 153, 109639. <https://doi.org/10.1016/j.paid.2019.109639>
- Tiggemann, M., & Slater, A. (2014). NetGirls: The Internet, Facebook, and body image concern in adolescent girls. *International Journal of Eating Disorders*, 47(6), 630-643.

Vincente-Benito, I., & Ramírez-Durán, M. del V. (2023). Influence of Social Media Use on Body Image and Well-Being Among Adolescents and Young Adults: A Systematic Review. *Journal of Psychosocial Nursing & Mental Health Services*, 1–8. <https://doi.org/10.3928/02793695-20230524-02>