

A Comparative Study on effects of Social Media Addiction on Mental Health among Young and Middle-aged Adults

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Abstract— Social media addiction refers to behavioural addiction to excessive use of social media platforms like Instagram, Facebook, TikTok etc. which is driven by an uncontrollable urge to stay connected virtually. Mental health refers to a person's emotional, psychological and social well-being. The present study compared social media addiction and mental health among young adults and middle-aged adults. Sixty participants were divided equally into young adults aged 18–25 years ($n = 30$) and middle-aged adults aged 30–50 years ($n = 30$). Young adults obtained $M = 58.87$, $SD = 6.78$, while middle-aged adults obtained $M = 54.83$, $SD = 11.07$. An independent-samples t test showed that the observed difference was not statistically significant, $t(58) = 1.70$, $p = .094$, 95% CI $[-0.71, 8.78]$, $d = 0.44$. Thus, the t score of the data did not provide sufficient evidence of a difference between the two age groups, but the difference is shown in mean of the two groups.

Keywords: social media addiction, problematic social media use, mental health, young adults, middle-aged adults

I. INTRODUCTION

Social media has become an important part of everyday communication, information sharing, entertainment, and social connection. The dissertation reviewed in the present paper describes social media as a broad range of web- and mobile-based platforms through which people communicate, share information, and participate in online communities. Research has increasingly examined not only the amount of social media use but also the quality and pattern of use, including compulsive or problematic engagement.

The concept of problematic or addictive social media use is commonly discussed in terms of persistent and difficult-to-control engagement. The dissertation describes features such as preoccupation, mood modification, tolerance or craving, withdrawal-like distress, conflict or functional impairment, and loss of control. Kuss and Griffiths (2017) similarly emphasized that problematic social networking may involve compulsive use and features resembling behavioral addiction, while also noting conceptual and methodological problems in the literature.

The relationship between social media and mental health is multidimensional. Social media may facilitate social connection, peer support, self-expression, access to information, and participation in communities. At the same time, problematic use and certain online experiences have been associated with anxiety, depression, social comparison, cyberbullying, and other forms of psychological distress (Naslund et al., 2020; Nesi, 2020; Zsila & Reyes, 2023). A systematic review and meta-analysis by Shannon et al. (2022) found statistically significant associations between problematic social media use and symptoms of depression, anxiety, and stress among adolescents and young adults.

Age may be relevant because people at different developmental stages may use social media for different purposes and in different contexts. Young adults may use social media extensively for peer interaction, identity expression, entertainment, and social participation, whereas middle-aged adults may use it for family communication, information, professional networking, and other purposes. However, age-group differences cannot by themselves establish whether social media use causes differences in mental health.

Naslund et al. (2020) reviewed the benefits, risks, and research opportunities associated with social media and mental health. They noted that social media can support peer connection and access to information and services, while also presenting risks related to symptoms, hostile interactions, and consequences for daily life. Their review supports a balanced approach rather than treating social media use as uniformly beneficial or harmful.

Nesi (2020) discussed how social media has created both opportunities and challenges for youth mental health. Specific online experiences, rather than simple exposure alone, may be important in understanding psychological outcomes. This perspective is relevant to the present study because a total questionnaire score cannot capture all possible differences in how individuals use social media.

Shannon et al. (2022) conducted a systematic review and meta-analysis of problematic social media use among adolescents and young adults. Across 18 studies and 9,269 participants, the meta-analysis reported moderate statistically significant correlations with depression ($r = .273$), anxiety ($r = .348$), and stress ($r = .313$). These findings indicate an association in the reviewed literature but do not establish that problematic social media use causes mental-health symptoms.

Zsila and Reyes (2023) emphasized that social media may have both positive and negative implications for mental health. Potential benefits include connection, belonging, and peer support, whereas possible risks include stress, social comparison, sadness, and isolation. This dual-effect perspective is consistent with the dissertation's discussion of the complexity of social media experiences.

Srivastava et al. (2019) discussed social media-related mental-health challenges and emphasized the need to understand both harmful effects and opportunities for prevention and support. Kuss and Griffiths (2017) further highlighted the importance of conceptual clarity when studying social networking addiction. Taken together, the literature indicates that problematic use is a more informative construct than social media exposure alone and that outcomes may vary across individuals and contexts.

The present study therefore focuses on a direct and testable question supported by the available data: whether the questionnaire scores reported for young adults aged 18–25 years differ from those reported for middle-aged adults aged 30–50 years. The purpose was to examine scores related to social media and mental health and to compare young and middle-aged adults.

I.I. OBJECTIVE

To examine the differences in effect of social media addiction on mental health among young and middle-aged adults.

I.II. HYPOTHESIS

There would be no significant difference in effect of social media addiction on mental health among young and middle-aged adults.

II. METHOD

II.I. PARTICIPANTS

The sample consisted of 60 adults: 30 young adults with age range of 18–25 years and 30 middle-aged adults with age range of 30–50 years. Participants were selected randomly.

II.II. MEASURE

The scale used to determine the extent to which the person was addicted to social media was the Social Media Addiction Scale—Student Form (SMAS-SF). This scale was created by Cengiz Şahin in 2011. It was based on the ideas put forward in the theory of behavioral addiction. The SMAS-SF is made up of 29 statements grouped under four subscales:

Virtual Tolerance (5): refers to the growing concept of having to dedicate more time to social media to achieve satisfaction.

Virtual Communication (9 items): evaluates overuse of virtual communication and the tendency to prefer virtual social interactions.

Virtual Problems (9): The scale measures academic-related issues, interpersonal issues, and psychological issues generated from excessive online social interactions.

Virtual Information (6): examines compulsions of information seeking/repeated checking behaviors focused on social media websites.

All items are positively framed, with higher levels of addiction indicated by higher scores.

Concerning the psychometric characteristics of the SMAS-SF, the test proves to have high levels of internal consistency. The total scale is claimed to have a high alpha value for Cronbach's alpha coefficient; that is, the measure is reliable. The coefficients for the scales are within the acceptable to excellent levels. The construct validity was established using factor analysis techniques, which proved the proposed four-factor model of the scale. There is evidence for criterion-related validity based on significantly related correlations with problematic Internet use and indicators of behavior dependency. The scale was thoroughly employed in student-related studies, showing good content, convergent, and discriminant validity.

II.III. DESIGN AND PROCEDURE

A cross-sectional, between-groups comparative design was used. Rapport was established, the purpose and instructions were explained, and the questionnaire was administered and scores were collected and analyzed later.

II.IV. DATA ANALYSIS

Participants' score was analyzed. Means and Standard Deviations were calculated, followed by an independent-samples t test.

IV. RESULTS

The 30 young-adult scores sum to 1,766 and the 30 middle-aged scores sum to 1,645. Descriptive results are presented below.

Group	N	M	SD
Young adults	30	58.87	6.78
Middle-aged adults	30	54.83	11.07

Note. M = mean; SD = standard deviation.

The young-adult mean was 4.03 points higher than the middle-aged mean. However, the independent-samples t test was not statistically significant, $t(58) = 1.70$, $p = .094$, 95% CI $[-0.71, 8.78]$, $d = 0.44$. The null hypothesis was therefore retained for this comparison.

V. DISCUSSION

The present study compared scores related to social media and mental health between young adults aged 18–25 years and middle-aged adults aged 30–50 years. Based on the scores, young adults had a higher mean score ($M = 58.87$) than middle-

aged adults ($M = 54.83$), with a mean difference of 4.03 points. However, the independent-samples t test did not indicate a statistically significant difference between the groups, $t(58) = 1.70$, $p = 0.094$.

The finding is broadly consistent with the hypothesis that the two age groups did not differ significantly in effect of social media addiction on mental health, although the Mean scores were inconsistent with the hypothesis.

The result should not be interpreted as evidence that social media addiction has no effect on mental health. Rather, within this sample and with this measure, the observed scores did not differ significantly between the two age groups. A nonsignificant between-group test does not establish the absence of an association, and it does not establish equivalence between the groups.

The literature review suggests that social media experiences can have both positive and negative psychological correlates. Naslund et al. (2020), Nesi (2020), and Zsila and Reyes (2023) emphasize benefits such as social connection and peer support alongside potential risks such as social comparison, distress, and other negative experiences. Shannon et al. (2022) found statistically significant associations between problematic social media use and depression, anxiety, and stress among adolescents and young adults. Differences between those findings and the present nonsignificant age-group comparison may reflect differences in constructs, measures, populations, and study designs.

The present study also highlights the importance of distinguishing between problematic social media use and general social media exposure. Kuss and Griffiths (2017) noted that social networking and social media use are not identical constructs and that research on addiction requires conceptual and methodological precision. The available dissertation data do not include detailed information about frequency, duration, platform type, active versus passive use, or specific problematic-use symptoms. Consequently, age-group differences in a single total score cannot explain the broader relationship between social media behavior and mental health.

Finally, mental health is a multidimensional construct. A single questionnaire score may not capture depression, anxiety, stress, self-esteem, sleep, social support, coping, or other relevant domains separately. The present findings should therefore be interpreted as a limited comparison of observed questionnaire scores rather than as a comprehensive assessment of mental health.

VI. IMPLICATIONS

- Age-group comparisons should be supplemented with information about the pattern, purpose, and context of social media use.
- Researchers should use validated measures with clearly documented scoring procedures and psychometric properties.
- Educational and psychological programs may address digital self-regulation, sleep-related social media habits, social comparison, and healthy online–offline balance without assuming that all social media use is harmful.
- Future studies should distinguish problematic or compulsive use from ordinary social media participation and should examine specific mental-health outcomes separately.

VII. LIMITATIONS

- The total sample was small ($N = 60$), with 30 participants in each age group.
- The study was cross-sectional; therefore, temporal direction and causal relationships cannot be established.
- The study does not include potentially important covariates or moderators such as gender, socioeconomic status, personality, coping, sleep, social support, or specific patterns of social media use.

VIII. FUTURE RESEARCH

- Recruit larger and more diverse samples across educational, occupational, and socioeconomic settings.

- Use longitudinal designs to examine temporal relationships between problematic social media use and mental-health outcomes.
- Use validated, separately scored measures of problematic social media use, depression, anxiety, stress, self-esteem, sleep quality, and social support.
- Differentiate active engagement, passive scrolling, nighttime use, and compulsive use.
- Examine moderators and mediators such as personality, coping, self-esteem, social support, fear of missing out, and sleep.

IX. CONCLUSION

The present study compared scores related to social media and mental health among 60 adults divided equally into young and middle-aged groups. Reanalysis of the participant-level scores reported in the dissertation produced a mean of 58.87 (SD = 6.78) for young adults and 54.83 (SD = 11.07) for middle-aged adults. The difference of 4.03 points was not significant, $t(58) = 1.70$, $p = 0.094$, 95% CI [-0.71, 8.78].

The findings indicate that the two age groups did not differ significantly on the observed scores in this sample. They should not be interpreted as evidence that social media addiction does not affect mental health in general, because the study was cross-sectional and did not directly test causation.

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