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THE RELATIONSHIP BETWEEN SOCIAL MEDIA INTEGRATION AND SELF-ESTEEM AMONG SECONDARY SCHOOL STUDENTS IN KLANG VALLEY

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ABSTRACT

Social media is an important part of adolescents' daily lives and provides a context in which they evaluate themselves. This study examined the relationship between social media integration and self-esteem among secondary school students in Klang Valley, Malaysia. A quantitative, cross-sectional correlational design was used. The respondents were 150 students aged 13 to 17 years from one selected secondary school and were recruited through convenience sampling. Data were collected using a researcher-adapted social media integration questionnaire informed by the Social Media Use Integration Scale and the Rosenberg Self-Esteem Scale. Descriptive statistics, reliability analysis, and Pearson correlation analysis were conducted. The respondents obtained a mean social media integration score of 2.62 ($SD = 0.78$) and a mean self-esteem score of 2.92 ($SD = 0.50$). Social media integration had a significant negative relationship with self-esteem, $r(148) = -0.40$, $p < .001$. Respondents with higher social media integration scores tended to report lower self-esteem. Because the study involved one school and convenience sampling, the findings should be interpreted within the context of the present sample. The findings support further research on the psychological processes that may underlie this association among adolescents.

Keywords: Social media integration, self-esteem, adolescents, secondary school students, Malaysia.

INTRODUCTION

Social media has become an integral part of modern communication, particularly among adolescents. Platforms such as Instagram, TikTok, YouTube, Snapchat, and Facebook have changed how young people communicate, exchange information, maintain relationships, and express their identities. These platforms allow adolescents to sustain social connections, share personal experiences, and participate in

online communities. At the same time, social media creates continuous opportunities for adolescents to observe other people's appearance, achievements, lifestyles, popularity, and social activities. Social media use is therefore not only a digital behaviour but also an experience associated with adolescents' self-perception and psychological well-being (Best et al., 2014; Woods & Scott, 2016).

Adolescence is a critical developmental stage characterised by identity formation, emotional sensitivity, and increased reliance on peer relationships (Erikson, 1968; Steinberg, 2014). During this period, adolescents place increasing importance on peer acceptance, belonging, recognition, and esteem (Maslow, 1943; Steinberg, 2014). Social media is closely connected to these developmental processes because online interactions include visible forms of feedback such as likes, comments, shares, and follower counts. These forms of feedback are associated with adolescents' evaluation of social acceptance and personal worth. Adolescents use social media not only to communicate but also to compare themselves with others and assess how they are viewed by their peers. Visible indicators of online approval strengthen peer comparison and connect digital feedback with self-evaluation (Vogel et al., 2014).

In this study, the focal social media construct was operationalised as social media integration. Social media integration refers to emotional connection to social media and the extent to which social media becomes part of everyday routines (Jenkins-Guarnieri et al., 2013). This distinction is important because the number of hours spent online does not fully explain how adolescents experience social media. Two students can spend a similar amount of time online but differ in their need to remain connected, their reliance on online feedback, or the emotional value they attach to social media. Examining social media integration therefore provides additional information about the relationship between digital engagement and self-esteem.

Self-esteem refers to an individual's overall evaluation of personal worth, self-respect, and self-acceptance (Rosenberg, 1965). Healthy self-esteem supports confidence, emotional adjustment, and the ability to respond to challenges (Rosenberg, 1965; Steinberg, 2014). During adolescence, self-esteem develops in relation to peer acceptance, family relationships, academic experiences, physical appearance, and personal achievement (Rosenberg, 1965; Steinberg, 2014). Because social media makes peer feedback and comparison highly visible, it becomes an important environment in which adolescents evaluate themselves. When online approval is treated as evidence of personal worth, self-esteem becomes closely connected to likes, comments, followers, and other forms of digital feedback (Perloff, 2014; Vogel et al., 2014).

Adolescents' self-esteem is shaped by parental support, peer relationships, academic achievement, physical appearance, social acceptance, and personal accomplishments (Rosenberg, 1965; Steinberg, 2014). These influences are especially important during secondary school because students are still developing their identities and learning to interpret other people's opinions. Social media adds another layer to this process by making comparison and peer evaluation continuously visible. Positive interaction provides encouragement, whereas repeated exposure to idealised content or limited online attention can lead adolescents to question their appearance, popularity, or achievements (Perloff, 2014; Vogel et al., 2014). Examining self-esteem in relation to social media is therefore relevant to adolescent development and school counselling.

Recent Malaysian research has begun to examine social media and psychological outcomes among adolescents and young adults. Samantha and Zhooriyati (2022) explored social media use and mental health among Malaysian adolescents in Kuala Lumpur and Selangor, while Mohamed Johar and

Hasbullah (2024) examined Instagram intensity, social comparison, and self-esteem among public university students in Klang Valley. Nevertheless, evidence focusing specifically on secondary school students and social media integration, defined in terms of emotional connection to social media and its incorporation into everyday routines, remains comparatively limited. The present study therefore contributes context-specific evidence by examining the relationship between social media integration and self-esteem among secondary school students in Klang Valley. Accordingly, the study addressed the following research question: Is there a significant relationship between social media integration and self-esteem among secondary school students in Klang Valley?

LITERATURE REVIEW

Literature Review on Social Media Integration and Self-Esteem

Previous research has shown that social media use is associated with self-esteem among adolescents and young users. Vogel et al. (2014) found that social comparison on social networking sites was associated with lower self-esteem. Young users who engaged in greater online comparison evaluated themselves more negatively. Similarly, Perloff (2014) explained that visually oriented social media platforms expose users to idealised portrayals of appearance, lifestyle, popularity, achievement, and social success. Repeated exposure to such content is linked to comparisons between adolescents' everyday lives and carefully selected online portrayals.

Twenge and Campbell (2018) also reported that higher screen use was associated with lower psychological well-being among children and adolescents. This pattern is relevant to social media when adolescents attach strong emotional meaning to online feedback. Likes, comments, shares, and follower counts are often interpreted as signs of approval, popularity, or social acceptance. When adolescents depend heavily on these indicators, changes in online attention affect how they view themselves. Social media integration is therefore relevant because it measures emotional attachment and incorporation into daily routines rather than only time spent online.

However, social media does not affect every user in the same way. Online communication can support friendship, emotional support, self-expression, and a sense of belonging when it is used positively (Best et al., 2014). Outcomes differ according to the purpose of use and the meaning attached to online interaction. Supportive communication strengthens connection, whereas upward comparison, validation-seeking, and dependence on peer feedback are associated with poorer self-evaluation (Best et al., 2014; Vogel et al., 2014). This distinction supports examination of the psychological quality of social media engagement rather than the assumption that all use is harmful.

Taken together, the literature suggests that the relationship between social media and self-esteem cannot be understood solely through the amount of time spent online. The nature of social media engagement, exposure to opportunities for comparison, and the personal meaning attached to online interactions may shape adolescents' experiences. These psychological processes are relevant to the theoretical interpretation of the present study; however, they were not directly measured and are therefore considered possible explanations rather than empirical findings of this study.

More recent research indicates that the relationship between social media use and self-esteem is more complex than a uniformly negative association. Valkenburg et al. (2021), using intensive longitudinal data from adolescents, found considerable person-to-person variation in the relationship between social

media use and self-esteem, with most adolescents experiencing very small or no effects and smaller groups experiencing either positive or negative effects. Similarly, Cingel et al. (2022) concluded that associations between social media use and self-esteem are generally small and vary according to individual susceptibility and patterns of social media use. These findings suggest that the psychological significance and form of social media engagement may be more informative than treating all social media use as a single behaviour.

Recent empirical evidence also indicates that different forms and intensities of social media engagement may be associated differently with self-esteem. Steinsbekk et al. (2021) found that greater other-oriented social media engagement predicted reductions in appearance self-esteem among girls across childhood and adolescence, whereas self-oriented use did not show the same pattern. Sampasa-Kanyinga et al. (2023), in a large sample of middle and high school students, found that heavy daily social media use was associated with greater odds of lower self-esteem. In the Malaysian context, Mohamed Johar and Hasbullah (2024) reported a significant negative relationship between Instagram use intensity and self-esteem among public university students in Klang Valley. Collectively, these studies support examining not only time spent on social media but also the nature and psychological integration of social media engagement.

Theoretical Framework

Social Comparison Theory and Maslow's Hierarchy of Needs guided this study. Social Comparison Theory proposes that individuals evaluate aspects of themselves, including their abilities, achievements, appearance, and social position, by comparing themselves with others (Festinger, 1954). Social media provides numerous opportunities for such comparisons because adolescents are regularly exposed to selected information and portrayals shared by peers, influencers, celebrities, and other users. In the present study, Social Comparison Theory provides a possible framework for understanding why social media integration may be associated with self-esteem. However, social comparison itself was not directly measured.

Maslow's Hierarchy of Needs provides a complementary perspective. Maslow (1943) identified belongingness and esteem as important psychological needs. During adolescence, peer connection, recognition, acceptance, and personal worth can be particularly meaningful. Social media may provide opportunities for social connection and recognition through online interactions and feedback. Maslow's framework is therefore used to explain why belonging and esteem-related experiences may carry psychological significance in social media environments. Nevertheless, the present study did not directly measure respondents' dependence on likes, comments, followers, or other forms of online recognition.

The two theories therefore provide complementary rather than equivalent explanations. Social Comparison Theory explains how adolescents may evaluate themselves in relation to others, whereas Maslow's framework helps explain why belonging, recognition, and esteem-related experiences may be psychologically meaningful. These frameworks are used to interpret the observed association between social media integration and self-esteem without treating unmeasured processes such as social comparison, validation-seeking, or dependence on digital approval as findings of the present study.

METODOLOGY

Research Design

This study used a quantitative correlational research design to examine the relationship between social media integration and self-esteem among secondary school students in Klang Valley. Quantitative research is suitable for collecting numerical data and applying statistical procedures to examine relationships between variables (Creswell & Creswell, 2018). A correlational design is appropriate for determining the strength and direction of an association without manipulating the study environment or respondents' answers (Fraenkel et al., 2019). A cross-sectional survey method was used because data were collected from respondents at one point in time. This design allowed the relationship between social media integration and self-esteem to be examined within the available sample. As the study focused on statistical association, it did not establish a cause-and-effect relationship.

Participants and Sampling

The population consisted of secondary school students aged 13 to 17 years from one selected secondary school in Klang Valley. At the institutional level, the school was purposively selected based on accessibility and administrative approval. Within the selected school, eligible students were recruited using convenience sampling based on their accessibility, availability, willingness to participate, enrolment in secondary school, and age eligibility. Convenience sampling was appropriate for the available school access, although this sampling method limits the representativeness and generalisability of the findings (Etikan et al., 2016).

The study involved 150 secondary school students aged 13 to 17 years. Respondents were required to be enrolled in the selected secondary school, fall within the specified age range, and provide voluntary assent to participate. The achieved sample size was initially guided by Roscoe's rule of thumb, as cited in Sekaran and Bougie (2016), together with general quantitative sampling guidance provided by Hair et al. (2019). To strengthen the statistical justification during manuscript revision, a sensitivity analysis for a two-tailed Pearson correlation with $N = 150$, $\alpha = 0.05$, and statistical power of 0.80 indicated that the achieved sample was capable of detecting a correlation of approximately $|r| = 0.23$ or greater. This sensitivity assessment was conducted for the achieved sample and was not an a priori power analysis.

Measures

The bilingual online questionnaire contained demographic information and measures of social media integration and self-esteem. English and Bahasa Malaysia versions were provided to improve respondents' understanding. The Bahasa Malaysia version of the adapted social media integration questionnaire was prepared for this study and reviewed by the supervisor for clarity. The Rosenberg Self-Esteem Scale was administered using its original English version and a validated Bahasa Malaysia version for Malaysian adolescents (Lim et al., 2019).

Social media integration was measured using a researcher-adapted 10-item questionnaire informed by the Social Media Use Integration Scale (SMUIS) developed by Jenkins-Guarnieri et al. (2013). The wording was adapted to refer to social media generally rather than to a particular social networking platform. The items assessed emotional connection to social media and its integration into everyday routines. Example items included "My friends expect me to be available on social media" and "Social media is part of my everyday life." Responses were rated from 1 (strongly disagree) to 5 (strongly agree),

and mean item scores were calculated. Higher mean scores indicated greater social media integration. A Bahasa Malaysia version was translated for the present study and reviewed by the supervisor for clarity before the pilot study. Because the wording and response format differed from the original SMUIS, the questionnaire was treated as a researcher-adapted measure informed by the SMUIS rather than as the original standardised instrument. Formal back-translation, content validity indexing, and exploratory or confirmatory factor analysis were not conducted for the adapted questionnaire. Accordingly, supervisor review and internal consistency should not be interpreted as evidence of full psychometric validation, and measurement equivalence with the original SMUIS cannot be assumed.

Self-esteem was measured using the 10-item Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). Responses were rated from 1 (strongly disagree) to 4 (strongly agree). Negatively worded items were reverse-coded before the mean score was calculated so that higher scores consistently indicated higher self-esteem. The possible mean score ranged from 1.00 to 4.00. Self-esteem was treated as a continuous variable, and no categorical classification of low, moderate, or high self-esteem was applied.

The use of a global self-esteem measure was appropriate because the study focused on respondents' overall sense of self-worth rather than a single area such as academic confidence, physical appearance, or social competence. The RSES contains positively and negatively worded statements, allowing both favourable and unfavourable self-evaluations to be represented. The validated Bahasa Malaysia version was important for the local school context because respondents were able to answer in the language they understood more clearly (Lim et al., 2019). Scores were analysed continuously because the study aimed to examine variation in self-esteem and its relationship with social media integration, not to assign students to fixed low, moderate, or high categories.

Pilot Study and Reliability

Before the main data collection, a pilot study was conducted with 20 secondary school students who had characteristics similar to the target population. These students were excluded from the main study. The pilot study assessed the clarity, suitability, feasibility, and internal consistency of the research instruments. Based on the pilot findings and respondents' feedback, minor adjustments were made to improve the clarity of questionnaire instructions and wording before the main data collection. Cronbach's alpha was 0.87 for the adapted social media integration questionnaire and 0.71 for the RSES. In the main sample, the coefficients were 0.87 for social media integration and 0.82 for self-esteem. These values indicated acceptable internal consistency for the present study. However, internal consistency and supervisor review do not constitute full psychometric validation of an adapted measure.

Data Collection and Ethical Procedures

Before data collection, formal administrative permission was obtained from the selected secondary school. The online questionnaire was created using Google Forms and distributed to eligible students through teachers or authorised school personnel. Respondents were informed about the purpose of the study, voluntary participation, confidentiality, anonymity, and their right to withdraw at any time without penalty. Students were shown the participant information statement and were required to indicate their voluntary assent before proceeding. The study documentation records formal school administrative approval and students' voluntary assent; separate parental or guardian consent was not recorded in the study documentation. No personally identifying information was collected. The questionnaire took approximately 15 to 20 minutes to complete, and the data were securely stored and used only for academic purposes.

Data Analysis

The data were analysed using the Statistical Package for the Social Sciences (SPSS). Frequencies and percentages were used to summarise respondents' demographic characteristics and daily social media usage. Cronbach's alpha was used to examine the internal consistency of the instruments. Means, standard deviations, minimum scores, and maximum scores were used to describe social media integration and self-esteem.

Shapiro-Wilk tests indicated no statistically significant departure from normality for social media integration, $W = 0.987$, $p = 0.157$, or self-esteem, $W = 0.987$, $p = 0.178$. Pearson correlation analysis was therefore used to examine the strength and direction of the relationship between the two variables. Statistical significance was set at $p < .05$. The correlation was interpreted as an association and not as evidence that one variable caused the other. Separate formal diagnostics for linearity and influential outliers were not documented in the original analysis; this is acknowledged as a methodological limitation.

RESULT

Demographic Characteristics of Respondents

Table 1 presents the respondents' age, gender, academic level, and average duration of daily social media usage. The study involved 150 secondary school students aged 13 to 17 years from Forms 1 to 5.

Table 1

Demographic Characteristics of Respondents

Demographic variable	Category	<i>n</i>	%
Age	13 years	17	11.3
	14 years	14	9.3
	15 years	41	27.3
	16 years	13	8.7
	17 years	65	43.3
Gender	Male	61	40.7
	Female	89	59.3
Academic level	Form 1	17	11.3
	Form 2	13	8.7
	Form 3	42	28.0
	Form 4	11	7.3
	Form 5	67	44.7
Daily social media usage	Less than 1 hour	45	30.0
	1–3 hours	70	46.7
	4–6 hours	26	17.3
	7 hours or more	9	6.0

Notes. $N = 150$.

As shown in Table 1, the largest age group consisted of respondents aged 17 years, with 65 students representing 43.3% of the sample. This was followed by respondents aged 15 years, with 41 students representing 27.3%. Respondents aged 13 years accounted for 11.3%, respondents aged 14 years accounted for 9.3%, and respondents aged 16 years formed the smallest age group at 8.7%.

Female respondents formed the larger proportion of the sample, with 89 students representing 59.3%, while 61 male students represented 40.7%. Regarding academic level, Form 5 students formed the largest group, with 67 respondents representing 44.7%. This was followed by Form 3 students at 28.0%, Form 1 students at 11.3%, Form 2 students at 8.7%, and Form 4 students at 7.3%.

Regarding daily social media usage, 70 respondents representing 46.7% reported using social media for one to three hours per day. A total of 45 respondents representing 30.0% reported using social media for less than one hour per day. Meanwhile, 26 respondents representing 17.3% reported using social media for four to six hours per day, and nine respondents representing 6.0% reported using social media for seven hours or more per day. Therefore, the largest group of respondents used social media for one to three hours daily.

Descriptive Statistics and Correlation

The respondents obtained a mean social media integration score of 2.62 ($SD = 0.78$). The possible mean-item score ranged from 1.00 to 5.00, while the observed scores in the present sample ranged from 1.00 to 4.60. Higher scores indicated greater integration of social media into daily routines and stronger emotional connection to social media. The score was treated as a continuous measure, and no low, moderate, or high classification was applied.

Table 2

Descriptive Statistics, Internal Consistency, and Correlation between the Study Variables

Variable	Descriptive statistics	Correlation
Social media integration	$M = 2.62$, $SD = 0.78$, range = 1.00–4.60, $\alpha = 0.87$	$r = -0.40$, $p < 0.001$
Self-esteem	$M = 2.92$, $SD = 0.50$, range = 1.30–4.00, $\alpha = 0.82$	—

Notes. $N = 150$. Social media integration and self-esteem are mean item scores. The correlation is between social media integration and self-esteem.

Pearson correlation analysis showed a significant negative relationship between social media integration and self-esteem, $r(148) = -0.40$, $p < 0.001$. This indicates that respondents with higher social media integration scores tended to report lower self-esteem. The negative direction of the relationship shows that as social media integration increased, self-esteem scores tended to decrease. The result addressed the research objective by showing that social media integration, as measured through integration into daily routines and emotional connection, was significantly associated with self-esteem among the respondents.

DISCUSSION

Relationship between Social Media Integration and Self-Esteem

The Pearson correlation analysis showed a significant negative relationship between social media integration and self-esteem, $r(148) = -0.40, p < .001$. This finding indicates that respondents with higher social media integration scores tended to report lower self-esteem. The relationship was moderate, which means that social media integration was meaningfully associated with self-esteem but did not explain all differences in respondents' self-esteem. Personal, family, school, and social factors also contribute to differences in how adolescents evaluate themselves.

The moderate magnitude of the correlation suggests that social media integration represents only one factor associated with adolescent self-esteem. Other factors, including family support, peer relationships, resilience, academic experiences, body image, and offline social support, may also be relevant to differences in self-esteem. However, these variables were not examined in the present study and therefore cannot be assumed to explain the remaining variation in self-esteem.

The finding is consistent with previous studies that reported negative associations between aspects of social media use and self-esteem among adolescents and young users. Vogel et al. (2014) found that social comparison on social networking sites was associated with lower self-esteem. Similarly, Perloff (2014) explained that social media platforms, especially visually oriented platforms, expose adolescents to idealised images of appearance, lifestyle, popularity, achievement, and social success. Continuous exposure to such content is linked to negative self-evaluation when adolescents compare their everyday lives with selected online portrayals.

The finding is also consistent with Twenge and Campbell (2018), who reported that higher screen time and digital media use were associated with lower psychological well-being among children and adolescents. One possible theoretical explanation for the observed association involves social comparison and sensitivity to online feedback. Social Comparison Theory suggests that social media may provide increased opportunities for self-evaluation in relation to others. However, social comparison, validation-seeking, dependence on likes or comments, and reliance on online approval were not directly measured in the present study. These processes are therefore discussed only as plausible theoretical explanations drawn from previous literature and should not be interpreted as mechanisms demonstrated by the present data.

At the same time, the result should not be interpreted as evidence that social media directly causes lower self-esteem. The study used a cross-sectional correlational design and measured both variables at one point in time. The study established an association but did not determine direction. Higher social media integration was associated with lower self-esteem; the reverse direction, in which adolescents with lower self-esteem rely more strongly on online feedback or social approval, was not tested. Unmeasured experiences such as body image, peer relationships, family support, academic stress, cyberbullying, loneliness, and personality also contribute to both variables.

The descriptive findings should also be considered together with the correlation. The respondents recorded a mean self-esteem score of 2.92 ($SD = 0.50$), while their mean social media integration score was 2.62 ($SD = 0.78$). These averages describe the sample as a whole, but the significant negative correlation shows that differences between respondents were meaningful. Students with stronger emotional integration of social media tended to record lower self-esteem scores than students with

weaker integration. This pattern remains important even though the study did not classify the average self-esteem score as low or high. The result concerns how the two variables changed together across respondents rather than a categorical judgement about the entire sample.

The result should also be interpreted in relation to the way social media integration was measured. The adapted questionnaire assessed emotional connection and integration into daily routines rather than only frequency or duration. Therefore, the finding does not simply mean that spending more hours online is related to lower self-esteem. It indicates that respondents who experienced social media as a more important and emotionally connected part of daily life tended to report lower self-esteem. This distinction is relevant to counselling and education because duration alone may not capture the psychological meaning of social media engagement. Social comparison, validation-seeking, and dependence on online approval were not directly measured in this study and should be examined in future research.

Theoretical Interpretation

Social Comparison Theory provides one possible theoretical interpretation of the observed association. Festinger (1954) proposed that individuals evaluate aspects of themselves by comparing themselves with others. Social media provides frequent opportunities to encounter information and portrayals shared by peers, influencers, celebrities, and other users. Such exposure may create opportunities for self-evaluation in relation to others. Accordingly, social comparison may help explain the observed relationship between social media integration and self-esteem. However, social comparison was not directly measured in the present study and should therefore be regarded as a theoretical interpretation rather than an empirically demonstrated mechanism.

Maslow's Hierarchy of Needs provides a complementary perspective because belongingness and esteem are important psychological needs (Maslow, 1943). Social media may provide opportunities for connection, recognition, and social feedback, which could become psychologically meaningful during adolescence. Nevertheless, dependence on online recognition was not directly assessed in this study. Together, Social Comparison Theory and Maslow's framework provide possible explanations for the observed association while recognising that the mechanisms underlying the relationship require direct examination in future research.

IMPLICATIONS

Given that respondents were recruited through convenience sampling from one secondary school, the following implications should be interpreted as preliminary and contextual rather than generalised to all secondary school students in Klang Valley or Malaysia. The findings have implications for students, parents, teachers, school counsellors, and policymakers. For students, the result highlights the importance of responsible social media habits and awareness of online comparison. Students should be encouraged to recognise that social media often presents selected and idealised versions of other people's lives. They should also be guided to avoid defining their self-worth through likes, comments, followers, or online appearance.

Parents can support adolescents by encouraging balanced routines, open communication, and critical awareness of digital content. Discussion about online experiences helps parents understand whether their children feel pressured by comparison, peer approval, or validation-seeking. Guidance should not focus

only on screen time because two adolescents can spend a similar amount of time online while attaching very different emotional meaning to social media.

Teachers and schools can strengthen digital wellness education as part of student development. Digital literacy should include the psychological effects of idealised content, online comparison, and peer feedback. Teachers should also be attentive to changes in confidence, participation, self-image, or social withdrawal and refer students to appropriate support when necessary.

For school counsellors, the findings provide useful information for preventive and developmental programmes. Counsellors can focus on self-esteem enhancement, healthy social media use, emotional resilience, realistic self-evaluation, and coping strategies for online comparison. Activities help students identify personal strengths, question unrealistic online portrayals, and build self-worth that is not dependent on digital approval. At the policy level, the findings may inform the development of digital well-being initiatives; however, broader policy recommendations require evidence from larger and more representative samples.

Digital wellness activities can therefore include more than recommendations about reducing screen time. Students benefit from learning how online content is selected and edited, how comparison influences self-evaluation, and why digital popularity does not provide a reliable measure of personal worth. Counsellors can use individual or group sessions to help students identify comparison triggers, challenge unrealistic standards, recognise personal strengths, and build confidence through offline relationships and achievements. Parents and teachers can support this work by responding without judgement when adolescents discuss negative online experiences. A supportive response makes it easier for students to speak about rejection, comparison, or pressure before these experiences become closely linked to their self-worth.

LIMITATIONS AND FUTURE RESEARCH

Several limitations should be acknowledged. First, respondents were selected through convenience sampling from one secondary school in Klang Valley. The findings therefore do not represent all secondary school students in Klang Valley or Malaysia. Second, the sample was limited to 150 respondents and included more female than male students. Although the sample was adequate for correlation analysis, a larger and more diverse sample improves representativeness.

Third, the cross-sectional correlational design cannot establish cause-and-effect relationships. The significant negative correlation shows that social media integration and self-esteem were related within the sample, but it does not show which variable came first. Fourth, self-report questionnaires are subject to respondents' honesty, memory, understanding, personal perception, and social desirability.

Fifth, social media integration was measured using a researcher-adapted social media integration questionnaire. Although the instrument demonstrated acceptable internal consistency, supervisor review and Cronbach's alpha do not constitute full psychometric validation. Measurement equivalence with the original instrument cannot therefore be assumed. Finally, the study did not examine other factors associated with self-esteem, including body image, peer support, family support, cyberbullying, academic stress, loneliness, and platform-specific patterns of use.

Future research should involve larger samples from different schools, districts, and states in Malaysia. Probability sampling should be used to improve representativeness. Longitudinal studies should examine changes in social media integration and self-esteem over time, while qualitative interviews or focus groups should provide deeper information about adolescents' experiences of online comparison, validation-seeking, self-image, and peer approval. Future research should also examine specific social media platforms and conduct more comprehensive validation of adapted and translated measures. Intervention studies should evaluate programmes that promote healthy social media use, critical digital literacy, emotional resilience, and positive self-esteem.

Future studies with larger and more diverse samples could also examine whether gender, age, daily social media use, academic level, family support, or resilience moderate or help explain the relationship between social media integration and self-esteem. Future studies should also examine whether the relationship differs according to the purpose and pattern of social media use. Platform-specific research should distinguish between activities such as communicating with friends, viewing short-form videos, posting personal content, following influencers, and monitoring feedback. Qualitative interviews or focus groups should provide a deeper understanding of how students interpret likes, comments, appearance-related content, and peer comparison. Longitudinal research should examine whether changes in social media integration are followed by changes in self-esteem over time. These approaches extend the present findings while keeping the main focus on the relationship between social media integration and adolescent self-esteem. In addition, separate formal assessments of linearity and influential outliers were not documented in the original Pearson correlation analysis, and this should be considered when interpreting the result.

CONCLUSION

This study examined the relationship between social media integration and self-esteem among 150 secondary school students from one selected school in Klang Valley. The findings showed that higher social media integration was significantly associated with lower self-esteem. This indicates that respondents who reported stronger emotional attachment to social media and greater integration into daily routines tended to report lower self-esteem. The finding does not establish that social media causes lower self-esteem because the study used a cross-sectional correlational design. Within the participating school, the results provide preliminary evidence that stronger social media integration is associated with lower self-esteem. Social comparison, validation-seeking, and dependence on digital feedback may offer theoretical explanations, but these processes were not measured in the present study. Further multi-school research using more diverse samples and more comprehensively validated measures is needed before broader generalisations or policy conclusions are drawn.

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