Impact of Instagram Usage Intensity on Self-Esteem among Preclinical Medical Students

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Abstract

Background: Instagram is one of the social media that is growing rapidly in Indonesia. However, the impact of Instagram usage intensity, especially on the users' emotional well-being, is still unclear. This study aimed to explore the impact of the intensity of using Instagram on the self-esteem among preclinical medical students in Jakarta.

Methods: This study was an observational analytic study with a cross-sectional approach in preclinical medical students in Jakarta, Indonesia, conducted from January 2020 to January 2021. Sampling was performed by stratified random sampling followed by simple random sampling. Instagram usage intensity and self-esteem were measured using the Instagram Intensity Scale Questionnaire (IISQ) and the Rosenberg Self-Esteem Scale (RSES). Data were analyzed using the Chi-Square test.

Results: Of the108 students, 45.4% had used Instagram above the usage intensity average (average 3.01), of whom 30.6% had low self-esteem (15 out of 49). There was a significant relationship between Instagram usage intensity and self-esteem (p=0.031).

Conclusion: Instagram usage intensity has an impact on the self-esteem of preclinical medical students. Further studies are needed to explore this issue, as to see other contributing factors and a larger population with different characteristics.

Keywords: Instagram, intensity, self-esteem, social media

Introduction

Instagram is a social media that focuses on sharing audio-visual content such as photos or videos and offers different communication options with photos, videos, or texts.[1] Instagram users in Indonesia are reported to be the largest in Asia Pacific with forty-five million users,[2] making it one of the fastest growing social media in Indonesia. Most of the Instagram users use this platform to upload their own photos or videos. This can be a trigger for other Instagram users to compare themselves to the content they see. According to the social comparison theory by Leon Festinger,[3] humans tend to maintain their self-image. Knowing one's self-image is to compare oneself to others. If the group is compared to a group with a higher socio-economic level or other things that are considered valuable, an upward social comparison might occur which has a negative impact. Thus, these unfavorable social comparisons affect how people view themselves, and have undesirable effects such as negative body image and declined self-esteem.[4]

Students have the risk of using social media excessively because it is easily accessible and can be used to treat mental stress due to academic burden.[5] A study in Lebanon[6] stated that students who frequently use social media have lower self-esteem due to feelings of inferiority. Self-esteem is a person's perspective on himself, which is influenced by many factors such as family, friends, and the mass media. It has an essential role in daily behavior and decisions. Individuals with low levels of self-esteem are more likely to isolate themselves and increase the risk of developing depression.[7] Another study showed that the

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frequency of Instagram use was correlated with depressive symptoms, self-esteem, general and physical appearance anxiety, and body dissatisfaction, mediation by social comparison.[8] Seeing the harmful effects of low self-esteem and the moderately high use of Instagram among students, this study aimed to explore how the intensity of Instagram use would affect self-esteem among medical students.

Methods

This research was an analytic observational study with a cross-sectional approach to 108 preclinical medical students at the School of Medicine and Health Sciences Atma Jaya Catholic University of Indonesia who regularly used Instagram. They were chosen by the stratified random sampling method followed by simple random sampling. The study protocol was approved by the ethics committee of Atma Jaya Catholic University of Indonesia (No. Approval: 18/11/KEP-FKIKUAJ/2020), and all participants provided informed consent. Data were collected from November to December 2020 using a questionnaire distributed via a Google Forms link.

The questionnaire used to measure the intensity of Instagram use was the Instagram Intensity Scale Questionnaire (IISQ). There were eight questions in this questionnaire which were measured using a five-point Likert scale with Cronbach's Alpha value of 0.83. The intensity of Instagram use was obtained by calculating the mean of all the items in the questionnaire.[10] The average score obtained by participants grouped into those who used Instagram on average, above, and below the average intensity of Instagram usage. This was done to compare the Instagram use intensity of each respondent with their peer group, which is represented by the average score.

The Rosenberg Self-Esteem Scale (RSES) was created to assess a person's global self-esteem measured using a four-point Likert scale with Cronbach's Alpha of 0.89. This questionnaire contains ten questions, including five positive items and five negative items that needed to be reverse coded. Scores were totalled, and a higher score implies a higher level of self-esteem.[1,9,10]

The data obtained from the two questionnaires were then analyzed using the Chi-Square test to evaluate the impact of the Instagram usage intensity on self-esteem among students.

Results

This study involved 108 respondents with an average age of 20 years (range 17 to 22 years; SD=0.94). Most of the respondents were female (71.3%). The respondents' body mass index (BMI) was not normally distributed with eight respondents having BMI >28, while the rest had BMI <26 (mean of 22.4; range 16.2 to 32.7; SD=3.54).

Almost all respondents (98.2%) had chosen mobile phones as the most frequently used devices to access Instagram. The three main reasons for using Instagram were

Table 1 Demographic Characteristics of Preclinical Medical Students Associated with Self-Esteem

Characteristics	Self-Esteem Level			
	High		Low	
	n	%	n	%
Age (years)				
<20	63	80.8	15	19.2
≥20	22	73.3	8	26.7
Gender				
Male	29	93.5	2	6.5
Female	56	72.7	21	27.3
BMI				
Underweight (<18.5)	12	85.7	2	14.3
Normal (18.5 – <25)	56	75.7	18	24.3
Overweight (25 – <30)	10	76.9	3	23.1
Obese (≥30)	7	100	-	-

Note: BMI= Body mass index

Table 2 Instagram Usage Associated with Self-Esteem

Instagram Usage Characteristics	Self-Esteem Level			
	High		Low	
	n	%	n	%
Gadgets frequently used to access Instagram				
Cell phone	83	78.3	23	21.7
Tablet	1	100	-	-
Laptop/Computer	1	100	-	-
Three main reasons for using Instagram				
Maintain relationships and communication with old friends	75	83.3	15	16.7
Gain new friends	12	92.3	1	7.7
Entertainment	82	78.1	23	21.9
Online shopping	26	72.2	10	27.8
Channel hobbies	18	75.0	6	25.0
Follow public figures or celebrities	35	71.4	14	28.6
Others	7	100	-	-
Years since the first time using Instagram				
<5.8 years	38	79.2	10	20.8
≥5.8 years	47	78.3	13	21.7
Account(s)				
1 account	35	81.4	8	18.6
2 accounts	44	80.0	11	20.0
More than 2 accounts	6	60.0	4	40.0
Received negative comments				
Yes	8	80.0	2	20.0
No	78	81.6	21	18.4

for entertainment (97.2%), to maintain relationships and communication with old friends (83.3%), and to follow public figures or celebrities (45.4%). Respondents had used Instagram for quite a long period of time with an average of 5.8 years (range 2–10 years). The results also shown that 50.9% had two Instagram accounts. Most respondents have never received negative comments (90.7%).

Demographic characteristics associated with self-esteem showed that more respondents aged above or equal to 20.05 years had low self-esteem (26.7%). Respondents with low self-esteem were mostly female (27.3%). Based on BMI, low self-esteem was mostly experienced in the group of respondents with a normal BMI (24.3%) (Table 1).

The results showed that respondents who used cell phones to access Instagram had lower levels of self-esteem (21.7%).

Table 3 Scores of the Instagram Intensity Scale Questionnaire and Rosenberg Self-Esteem Scale among Preclinical Medical Students

Summary of the IISQ and RSES Scores	n	%
IISQ		
Lower than average (<3.01)	59	54.6
Higher than or on average (>3.01)	49	45.4
RSES		
Low self-esteem (<15)	23	21.3
High self-esteem (>15)	85	78.7

Note: IISQ= Instagram intensity scale questionnaire, RSES= Rosenberg self-esteem scale, Mean IISQ (3.01 points) was used

Table 4 Relationship between Instagram Usage Intensity and Self-Esteem

Instagram Usage Intensity	Self-Esteem Level				p-value
	High		Low		
	n	%	n	%	
Lower than average (<3.01)	51	86.4	8	13.6	0.031
Higher than or on average (>3.01)	34	69.4	15	30.6	

Respondents who used Instagram to follow public figures or celebrities had the lowest self-esteem level (28.6%). The results also showed that respondents who had more than two Instagram accounts had the lowest level of self-esteem, namely 40.0%, and respondents who had received negative comments when using Instagram were also stated to had lower levels of self-esteem (20.0%) (Table 2).

The IISQ showed that the average intensity of the respondents' Instagram use was 3.01 points, with 54.6% below the average. The RSES questionnaire showed that 78.7% had high self-esteem (Table 3). There was a significant relationship (p-value 0.031) between the Instagram usage intensity and the level of self-esteem (Table 4).

Discussion

This study has shown that there is a strong relationship between Instagram usage intensity and self-esteem among medical students.

The age range of respondents was 17–22 years old, with a mean of 20.05. It was found that students with low self-esteem were identified in every age group. This might be due to the internet and social media being used by university students to overcome mental stress related to academic burden, but it has a negative impact on students who open their social media more often to believe that their lives are less happy than other people.[5,6] More female respondents have lower self-esteem than men. A previous study has stated that women tend to have a low levels of self-esteem associated with social media use because social media can increase negative social comparisons leading to bad moods and decreased levels of self-esteem.[11] Interestingly, this study also found that more respondents with normal BMI (18.5–<25) have low self-esteem. This may occur due to self-dissatisfaction and a desire to achieve beauty standards, which, although unrealistic, were set, normalized, and supported by the number of modified and beautified-edited photos uploaded on Instagram.[8,12,13]

Almost all respondents use cell phones to access Instagram, of which 21.7% have low self-esteem levels. Smartphones use is said to be correlated with a person's low psychological well-being.[14] The use of cell phones tends to become a compulsive behavior, thus leads to decreased self-control. Students who use Instagram to follow public figures or celebrities have the lowest level of self-esteem. Social media users, especially celebrities, tend to post a picture of the ideal life. This then causes other users to assume that what they see are standards and norms without knowing these public figures and celebrities' real daily life. Such uploads trigger Instagram users to make negative social comparisons, which lead to negative feelings and decreased self-esteem.[15,16] Respondents in this study have used Instagram for quite a long time, with an average length of use of 5.8 years. More than half of respondents have used Instagram longer than average, of whom 21.7% have low self-esteem. Also, more respondents with more than two Instagram accounts (40.0% or 4 respondents) have a low level of self-esteem. The length of time a person has used Instagram and the number of accounts certainly increases one's exposure to Instagram, leading to a higher risk of having negative effects from the platform. Most respondents have never received negative comments while using Instagram. However, of respondents who had received negative comments, 20.0% had low self-esteem. Negative responses received via social media are associated with low self-esteem.[11] Moreover, high-intensity online interactions make responses obtained faster and in greater numbers.

This study shows an evident relationship between Instagram intensity usage and the user's self-esteem. As many as 30.6% (15 out of 49) respondents with the Instagram intensity of use above or equal to 3.01 points have low self-esteem levels. The intensity of Instagram use is defined as the frequency and duration of

use, as well as active engagement, the extent to which individuals were emotionally connected to Instagram, and Instagram's integration into its users' daily lives.[9] Social media's function was to make communication easier, but this purpose has shifted to become a 'competition' for each individual to maintain their social status in cyberspace. Users become more focused on building relationships and images on social networks, leading to high-intensity use of social media.[17] Instagram, focused on sharing visual and audiovisual media, triggers social comparisons among its users. This social comparison and desire to obtain peer approval caused varying self-esteem scores.[18] Other studies have also stated that Instagram causes its users to experience negative feelings and make negative social comparisons, leading to bad moods and decreased self-esteem levels.[11,16] If the harmful effects of Instagram were supported by high intensity of use, it would undoubtedly affect the way someone views themselves negatively, leading to a decrease in one's self-esteem level.[16]

This study has several limitations. The cross-sectional study design could not see the relationship between the two variables in a causal manner. Also, respondents of this study may not represent the population, for they are students from the same university. The data collection of this research was self-reported, so there was always a possibility of human error. Furthermore, Instagram is the only social media being focused in this research. As time goes by, social media platforms are growing rapidly, with the messaging platform such as WhatsApp and Telegram as the most dominant activity, followed by networking (LinkedIn, Facebook), media sharing (i.e., YouTube, Instagram, Snapchat), microblogging (i.e., Twitter). More unique platforms are expected to affect one's self-esteem level.[19] This study also did not assess other factors that can affect self-esteem, or oppositely factors that are affected by social media usage. More studies are being conducted to evaluate the connection between social media use and mental health, as current studies showed a high prevalence of depression in high-intensity social media usage.[20,21] Further studies are needed to know more about these issues.

To conclude, the use of Instagram has a negative impact on the self-esteem of medical students. This needs to be observed in other populations with different age groups and occupancies to back-up Instagram usage regulations to minimize the negative effects of the social media, especially on young adults.

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