

Relationship between Narcissism, Self-Esteem, and Social Media Addiction in Preclinical Medical Students

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Abstract

Background: Narcissism is a condition in which people have a constant demand to be complimented and prioritized. Self-esteem is a subjective evaluation of one's worth. Several studies have linked narcissism and low self-esteem as a risk factor of social media addiction, a disorder where individuals displayed an unhealthy compulsion to access social media until it disrupts other activities. This study aimed to discover the relationship between narcissism, self-esteem, and social media addiction in preclinical medical students.

Methods: This study was a cross-sectional observational analytical study on 211 preclinical medical students at the Atma Jaya Catholic University of Indonesia. Instruments used in this study were Narcissistic Personality Inventory-16 (NPI-16), Rosenberg Self-Esteem Scale (RSES), and Bergen Social Media Addiction Scale (BSMAS). Data were analyzed statistically using Chi-square in STATA analytic program.

Results: Of all respondents, 6.6% were narcissistic, 19.9% had low self-esteem, and 34.6% had social media addiction. There was a significant relationship between narcissism and social media addiction (p 0.021) and between self-esteem and social media addiction (p 0.002).

Conclusions: There is a relationship between narcissism, self-esteem, and social media addiction in university students. This indicates the importance of preliminary psychological screening in students, especially regarding self-esteem, narcissism, and social media addiction, to develop approaches that will ensure good academic achievements and physical health among students..

Keywords: Narcissism, self-esteem, social media, social media addiction

Introduction

The use of social media has increased abundantly as internet usage grows. One hundred and fifty million people in Indonesia are classified as active users of social media. On average, Indonesian spends three hours and twenty-six minutes per day using social media.¹ Social media addiction is a disorder where individuals displayed an unhealthy compulsion to access social media while not paying attention to their time and health.² A study in China shows that 34% of 19 to 28 years old university students have suffered from social media addiction; whereas a study in Myanmar shows 27.5% of university

students have social media addiction.³

Individuals with social media addiction are often more indolent to interact with their friends and family, decreased academic performance, more sensitive, and nervous.⁴ Addiction also becomes a deep concern for medical students. In Iran, the level of social media addiction among medical students has reached 12.4%.⁵ Internet addiction has a negative impact on medical students, especially on their academic achievements, and physical health.⁵ High social anxiety, low self-esteem and depression are also associated with social media addiction in medical students.⁶

Considering the amount of social network addiction and the negative impacts it

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potentially creates, researchers have started examining the risk factors of social media addiction. A positive link between social networking addiction and narcissism has been established as well as a negative relationship between social media addiction and high self-esteem.⁷ However, research on the relationship of narcissism, self-esteem, and social media addiction in medical students in Indonesia is limited. Therefore, we wanted to investigate the connection between narcissism, self-esteem, and social media.

Methods

This research was an observational analytic study with a cross-sectional approach. This design was chosen to find out the relationship between narcissism, self-esteem, and social media addiction among preclinical medical students from the School of Medicine and Health Sciences Atma Jaya Catholic University of Indonesia, from the class of 2017 to 2019. The students were chosen with the cluster sampling method and the study was conducted from May 2019 to May 2020. This study's design had been approved by the Committee of Ethics Atma Jaya Catholic University of Indonesia.

After signing informed consent, several questionnaires were distributed among others a demographic questionnaire, Bergen Social Media Addiction Scale (BSMAS), Narcissistic Personality Inventory (NPI-16), and Rosenberg Self-Esteem Scale (RSES). BSMAS and NPI-16 had not been validated in Bahasa Indonesia, therefore, it had been used the English version, considering the minimum TOEFL score for preclinical medical students was 450.

The Bergen Social Media Addiction Scale

(BSMAS) questionnaire had a Cronbach's Alpha of 0.88. This questionnaire measured the six items of social media obsession: salience, mood modification, tolerance, withdrawal, conflict, and relapse. In total there were six questions, each measured with a 5-point Likert Scale. The respondent had social media addiction if he/she obtained a score above 19.8,9

The Narcissistic Personality Inventory (NPI-16) Questionnaire had a 0.72 Cronbach's Alpha. NPI-16 focused on five narcissism criteria: leadership, self-efficacy, assertiveness, vanity, and envy. In total there were 16 items in this questionnaire, each was answered with a yes or no question. When the respondent answered 'yes' in more than 8 questions, then the respondent had a narcissistic personality.¹⁰

The Indonesian translation of the Rosenberg Self-Esteem Scale (RSES) Questionnaire used in this study had a 0.706 Cronbach's Alpha and 15 RSES was used to measure the self-esteem level of the respondent. This questionnaire contained 10 questions, each using a 4-Point Likert Scale. The maximum score from this questionnaire was 30 and a score above or equal to 15 indicated high self-esteem whereas below 15 had low self-esteem.⁷ The data collected were further analyzed using Chi-Square.

Results

There were 211 respondents with ages varying from 16 to 21 years old (mean 19.02 years old). Most respondents (66.4%;n140) were below the average age, and 67.8% (n143) were female. The age when the respondents first access social media varied from 6 to 17 years old (mean 11.37 years old). The majority started when they were below the mean age

Table 1 Summary of the NPI-16, RSES, and BSMES score

Score	n	%
NPI-16		
Narcissistic	14	6.6
Not Narcissistic	197	93.4
RSES		
Low Self-Esteem	42	19.9
High Self-Esteem	169	80.1
BSMES		
Addicted	73	34.6
Not Addicted	138	65.4

Note: NPI-16; Narcissistic Personality Inventory-16 questionnaire, RSES Rosenberg Self Esteem Scale questionnaire; Indonesian version; BSMES Bergen Social Media Addiction Scale questionnaire

Table 2 Social Media Addiction based on Characteristics of Respondents

Characteristics of Respondents	Social Media Addiction	
	n	%
Age		
Under 19 years	53	37.9
>19 years	20	28.2
Gender		
Male	20	29.4
Female	53	37.1
Class		
2017	20	29.4
2018	33	46.5
2019	20	27.8

of 11.37 years old (53.6%; n113 respondents). About 73.0% (n154) used social media for > four hours per day, 10.9% (n23) for 3-<4 hours each day, and 10.9% (n23) for 2-<3 hours each day.

Mainly, the respondents used smart phone to access social media (96.7%; n=204), whereas the second most used gadget was computer/laptop (57.8%; n=122), followed by

a tablet (47.4%; n=100). Social network sites were the most used social media (54.5%), then media sharing sites (50.7%), status update services (45.5%), wikis (41.2%), weblog/blogs (34.1%), and social bookmarking (58.8%), respectively.

Narcissism, measured by the Narcissistic Personality Inventory-16 questionnaire, was determined in 6.6% (n14) and 19.9% (n=42)

Table 3 Social Media Addiction Based on Usage of Social Media Characteristics

Usage of Social Media Characteristics	Social Media Addiction	
	n	%
Age when they first accessed social media		
Under 11.37 years old	42	42.9
Above or equal to 11.37 years old	31	27.4
Duration of Social Media Usage/Day		
Less than 2 hours	2	18.2
Less than 3 hours	7	30.4
Less than 4 hours	5	21.7
More or equal to 4 hours	59	38.3
Gadget Used to Access Social Media (from the most common)		
Smartphone	71	34.8
Computer/laptop	36	29.5
Tablet	31	31.0
Others	72	35.0
Type of Social Media Used (from the most common)		
Social Network Sites	40	34.8
Media-sharing Sites	36	33.6
Status-update Service	37	38.5
Wikis	31	35.6
Weblog/blogs	26	36.1
Social Bookmarking	43	34.7

Table 4 Relationship between Narcissism and Social Media Addiction

Narcissism	Social Media Addiction				Total		P-value	OR	CI 95%
	Yes		No		n	%			
	n	%	n	%					
Yes	9	64.3	5	35.7	14	100	0.021	3.741	1.205-11.616
No	64	32.5	133	67.5	197	100			

have a low self-esteem score, measured by the Indonesian Rosenberg Self Esteem Scale questionnaire. There were 37.6% (n=73) respondents with media social addiction, assessed with the Bergen Social Media Addiction Scale questionnaire (Table 1).

The results showed that there were more respondents under the age of 19.02 years who experienced social media addiction (57.9%; n=53). Females experienced more social media addiction (37.1%; n=53). Respondents from class of 2018 had the highest level of social media addiction (46.5%; n=53) (Table 2).

Respondents who accessed social media for the first time under the age of 11.37 years experienced more social media addiction (42.9%; n=42). Respondents who accessed social media for more than or equal to four hours tended to experience social media addiction (38.3%; n=59). The study also found that 34.8% (n=71) who commonly accessed their account from the smart phone also experienced social media addiction, and 34.8% (n=40) who used social network sites most commonly also suffered from social networking dependency as depicted in Table 3.

Table 4 revealed a meaningful connection between narcissism and social media addiction as 64.3% (n=9) had a narcissistic personality who also experienced social media addiction (p-value <0.021; Fischer’s Exact bivariate). The odds ratio was 3.741, suggesting that individuals with narcissism had a risk of 3.741 times chance to experience from social media

addiction.

The results showed that 54.8% (n=23) with low self-esteem suffer from social media addiction (p-value=0.002; Chi-Square bivariate analysis), showing an evident relationship between the level of self-esteem and social media addiction. The Odds Ratio of 2.881, suggesting that individuals with low self-confidence had a risk of 2.881 times more probable to experience a social media addiction.

Discussion

A meaningful connection has been found between narcissism and social media addiction (64.3%), as well as between self-esteem and social media addiction (54.8%), resulting in 34.6% of preclinical medical students who suffered from social media addiction.

As many as 37.9% aged under 19 years old in this study have experienced social media addiction. This age falls under the category of adolescents based on psychosocial development theory by Erik Erikson (age 13–20 years). Indeed, the risk of experiencing social networking addiction is greater in adolescents.¹² More respondents with addiction have already begun accessing social media during their school-age (42.9%). The school environment has become a psychosocial element that can affect the growing incidence of social media addiction.¹³

The majority of the respondents (73%) have sustained social networking dependency

Table 5 Relationship between Self-Esteem and Social Media Addiction

Self-Esteem	Social Media Addiction				Total		P-value	OR	CI 95%
	Yes		No		n	%			
	n	%	n	%					
Low	23	54.8	19	45.2	42	100	0.002	2.881	1.443-5.753
High	50	29.6	119	70.4	169	100			

accessed social media for more than or equal to four hours each day. There is a review that there is a correlation between the period of media platform usage and depression in university undergraduates.³ Social media addicts also need a long time to use their social media, and the duration they need to achieve satisfaction will increase.^{14,15} Overall, 34.6% of the respondents have experienced social media addiction, a little higher compared to study in Myanmar, where 27.5% of students experienced social media addiction.³

There is a substantial connection between the level of narcissism and social networking dependency ($p=0.021$). There are 6.6% who have a narcissistic personality. Interestingly, 64.2% of respondents experienced narcissism and social media addiction (OR 3.741), suggesting that individuals who experience narcissism have a risk of 3.741 times greater to suffer from social media addiction. There is thus a definite connection between narcissism and social media addiction. Individuals with high egotism use social media as a tool to exhibit their life's free to as many people as possible.¹⁶ In order to receive positive feedback, narcissists may also manipulate their posts to create the image they want to build.¹⁷

Our study shows a significant connection between the level of self-confidence and social networking addiction ($p=0.002$). A total of 19.9% has low self-esteem, and 54.8% have experienced social media addiction. The OR 2.881 indicates that individuals with a minimum self-confidence have a risk of 2.881 times higher to experience a social media addiction. Low self-confidence is associated with behavior and communication problems, feeling deviant, and wanting to avoid others.¹⁸ They often regard media platforms as a protected place to hide from direct interaction with others.¹⁶ Social media addiction has a meaningful relationship with a low level of confidence or a high level of narcissism. Social media addiction is inversely proportional to confidence.⁷

Limitations of this study include the risk of recall bias. Several respondents have admitted difficulty in remembering the age they first used social media. Also, this study only describes the relationship between variables as this is a cross-sectional study. Further study is needed to be conducted in another area in Indonesia to provide overall data related to narcissism, self-esteem, and social media addiction in Indonesia.

In conclusion, there is a significant

relationship between narcissism, self-esteem, and social media addiction among preclinical medical students. The relationship between narcissism, self-esteem, and social media addiction among university students indicates the importance of preliminary psychological screening to their academic achievements and physical health.

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