Social media addiction and self-esteem among students of degree colleges of Udupi Taluk, Karnataka, India

Sriparna Sarkar
Manipal College of Nursing, MAHE, Manipal, sree.porna92@gmail.com

Linu George
Manipal College of Nursing,MAHE,Manipal, linu.j@manipal.edu

Latha T
Manipal College of Nursing, MAHE, Manipal, latha.tbhat@manipal.edu

Social media addiction and self-esteem among students of degree colleges of Udupi Taluk, Karnataka, India

Cover Page Footnote

Social media addiction and self-esteem among students of degree colleges of Udupi Taluk, Karnataka, India

Sriparna Sarkar*, Linu Sara George, Latha T

Email: sree.porna92@gmail.com

Abstract

As an essential part of our routine life, social media users are projecting the success or their achievements to potentially large virtual onlookers to obtain visible recognition through positive comments from other social media users. **Objective:** The objective was to determine the relationship between social media addiction and self-esteem among college students. **Methods:** A correlative survey was conducted among 658-degree college students from selected colleges. Prior to this study, administrative permissions were obtained from the colleges which were selected by using a simple random sampling technique. Informed consent was obtained from each student and then Social Media Addiction Scale, Rosenberg's self-esteem scale, and background proforma were used for data collection. **Result:** The most used (97.3%) social media application was WhatsApp followed by Facebook and Instagram. Among 658 students, 9.3% were severely addicted to social media though the majority (50%) had normal self-esteem. A weak negative correlation (r = -0.08, p < .05) was found between social media addiction and self-esteem. **Conclusion:** Once started as a platform for getting connected to people and communication, now social media has become a superabundant part of our life. This ranges from kids, adults to an elderly population where the most prolific users are young adults. The impelling force of various social media platforms on young adults and their mental health is somehow concerning. It may be a debatable statement if social media is a blessing in disguise or not? Here, let us not forget the consequential pressure of keeping up to the standards set by others in social media.

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

Introduction

The communication platform through the internet and technologies came to mainstream facilities a few decades ago, and now it has become a quintessential part of our routine life. The use of the internet has increased over the years, and now the "Global Village" has spread its tremendous effect all over the world in people's lives. The internet may have advantages in maintaining worldwide communication, but excessive use can also produce negativities to the population (Romer, Bagdasarov, & More, 2013).

The communication platform through the internet and technologies came to mainstream facilities a few decades ago, and now it has become a quintessential part of our routine life. The use of the internet has increased over the years, and now the "Global Village" has spread its tremendous effect all over the world in people's lives. While determining the effect of both older and newer media use on social, mental health and academic outcome in adolescents and young adults, it has been found that heavy use of the internet was associated with mental illnesses like depression and withdrawal from leisure activities such as sports. Moreover heavy use of the internet may be more of a symptom of mental health problems than a cause (Romer, Bagdasarov, & More, 2013).

Sriparna Sarkar[1], Linu Sara George[2], Latha T[3]

[1] Assistant Professor, Institute of Child Health, Kolkata, West Bengal, India and M.Sc. Nursing graduate, Manipal College of Nursing, Manipal Academy of Higher Education, Manipal, Karnataka, India. 567104.

[2] Professor, Department of Fundamentals of Nursing, Manipal College of Nursing, Manipal Academy of Higher Education, Manipal, Karnataka, India.576104.

[3] Assistant Professor, Manipal College of Nursing, Manipal Academy of Higher Education, Manipal, Karnataka, India. 576104.

*Corresponding Author

Twenty per cent of the population in the age group of 12-18 years have social media addiction associated with daily use of the internet (Hamade, 2013). In a study, results showed that students highly use Twitter and Facebook to view the sites more frequently than to post stories. The drawbacks reported in this study are time consumption and neglecting the work/study. This study reported many positive impacts such as more involvement in social, political, and cultural activities and a better relationship with family, relatives, and friends. Females and males had different scores for the items on considering internet addiction as a bad habit (41.2% of females and 37% of males); any heavy use of the Internet (32% of females and 24.5% of males). Students were aware of the bad effects of internet addiction and a good advice was considered a treatment for this addiction (Hamade, 2013).

Adolescents are daily internet users in a heavy quantity which makes them withdraw from sports activities. Psychiatric disorders like depression establish a positive correlation with disordered online social networking use as an inevitable turn out to the fact that the use of online social networking sites could be potentially addictive. Poor emotion regulation skills and increased susceptibility to both substance and non-substance addiction are the clusters of symptoms of disordered social regulation skills (Hormes, Kearns, & Timko, 2014). Self-esteem is a psychological, social and partly physical emotion that starts at birth and changes as the child grows. A student who has high self-esteem has been reported to have better physical health, initiate and enjoys social relations, and performs well in education and social life (Serınkan, Avcık, Kaymakçı, & Alacaoğlu, 2014). A published study reported the needs related to satisfaction of autonomy and relatedness; and the positive predictor of the individual's self-esteem was the basic psychological needs (Ümmet, 2015).

The dimension of social media usage reveals a positive relationship between social media addiction with the satisfaction of using it. The majority of people tend to have the action of immediacy to check about the person on social media soon after meeting an unknown person (Bahrainian, Alizadeh, Raeisoon, Gorji, & Khazaee, 2014). The users were using social media as a legitimate platform to project the success or their achievements to potentially large virtual onlookers. Thus, it enables the individual to obtain visible recognition through positive comments from other social media users. Social media indeed affects today's daily living. In our psychological well-being, it is equally necessary to know how people feel about themselves through their self-esteem. The users were using social media as a legitimate platform to project the success or their achievements to potentially large virtual onlookers. Thus, it enables the individual to obtain visible recognition through positive comments from other social media users. Social media indeed affects today's daily living. As for one's psychological well being, it is equally necessary to know how people feel about themselves by assessing their self-esteem.

The gender difference is noticeable in the case of involvement in social media. Females are noticed to have more preference for online social interaction. Online interaction is often found to have a positive association with internet addiction, and this affects the self-esteem of an individual (Van Rooij, Schoenmakers, Van de Eijnden, & Van de Mheen, 2010). Negatively affected self-esteem is higher among the higher social media addicted population. Persevered with the fact, narcissism is also an area of human personality that is negatively affected by social media addiction (Kircaburun, 2016).

Another study reported significant correlations between depression, self-esteem, daily internet use and social media addiction. Depression was found to be directly negatively associated with self-esteem and positively with daily internet use. Social media addiction was found to have an indirect positive effect on the depression levels of adolescents. (Students who have stayed longer on the internet had higher scores on depression inventory, self-esteem, daily internet use and social media addiction were found among the students who stayed longer on the internet and reported to be the significant predictors of depression among Turkish adolescents (Kircaburun, 2016).

Very few studies are done in the southern part of India on identifying social media addiction. No studies have been done to find the association of social media addiction with students' self-esteem. Therefore, the

present study was conducted to fulfil the following objectives.

Objectives

The objectives of the study were to:

- assess the social media addiction among students as measured by the social media addiction scale.
- determine the self-esteem of the students as measured by Rosenberg's self-esteem scale.
- find the relationship between social media addiction and self-esteem.
- find the association between social media addiction and selected socio-demographic variables like- age, gender, type of family, number of siblings, place of stay, educational stream.

Material and methods

A correlative survey design was adopted for the study, where three colleges were selected randomly using the chit method among nine colleges from Udupi taluk. The population of this study comprised of the entire college students studying Bachelor of Science (BSc), Bachelor of Commerce (BCom), and Bachelor of Arts (BA) from the selected degree colleges of Udupi taluk, Karnataka. Udupi taluk was selected for the study population by convenience sampling as it had most of the colleges among the five taluks. The sampling frame of degree colleges was obtained from the Mangalore University website, which has nine-degree colleges. Among them, the two colleges did not permit conducting the study. Excluding those two colleges, four colleges were selected by simple random sampling among the rest of the seven colleges. While obtaining written permission for conducting the study, one college among the selected four colleges disagreed to permit. Hence, finally, three colleges were selected for conducting the main study. Formal administrative permissions were obtained from the concerned colleges before the study. The study was conducted from 7 to 12 January 2018. On the day of data collection, a participant information sheet and the consent form were given to all the 658 students based on the inclusion criteria. The tools were administered to the subjects in their classroom in the presence of the investigator.

Sampling criteria

The inclusion criteria were set as for BSc, BCom, or BA students enrolled in a college affiliated with Mangalore University and the students who have access to the internet through phone/laptop/desktop. The students who were not willing to participate in the study were excluded from the study.

Tools

Background Proforma. This tool was developed by the researcher to collect the socio-demographic data having two sections. Section A includes age, gender, religion, type of family, number of siblings, place of stay, educational stream, and section B includes enquiring about the social media usage pattern using access, usage and source of information about social media sites.

Social media addiction scale. This Likert Scale was developed by the researcher by referring to the existing standardized scales like Young's Internet addiction test, Bergen social media addiction scale, and obtained suggestions from the tool validators. The tool was interpreted as Mild addiction (0 – 26), Moderate addiction (27 – 53), and Severe addiction (54 – 80).

Rosenberg's Self-esteem scale. This is a structured and standardized scale for assessing people's self-esteem. It is a standardized tool developed by Rosenberg (Rosenberg,1965). The scale consists of 10 items; each item has a scoring of '1' to '4' points under the options: strongly agree, agree, disagree, and strongly disagree. Five statements are positive, and five statements are negative with a total score of 30. The reported internal consistency reliability of this tool ranges from (r = 0.85 to 0.88). Scores below 15 were inferred as low self-esteem, a score between 15 and 25 was normal self-esteem, and a score above 25 was inferred as high self-esteem.

Validity and reliability

The initial draft of the Background proforma had 12 items. During the validation, all the validators suggested removing one item from this Likert scale which was asking about the data recharge plan per month of the students because it was found to be not perfectly relevant for the present tool. Seven items out

of eleven had 100% agreement and two items had 67% agreement. The other two items had 33% agreement but suggestions were given to reform the sentence and not to remove it from the questionnaire. However, the rest of the corrections were based on the sentence reformation for the tool. The scale validity index of this tool was 0.82.

The social media addiction scale consisted of 20 items. During validation, only modifications had been done and no items had been removed or added to the tool. Six items out of twenty items had 100% agreement where no modifications had been done. Twelve items had 67% agreement with modifications in sentence reformation. Rest two items had 33% agreement and suggested not to remove with the reformation of sentence for clearer understanding. The scale validity index of this tool was 0.78. To determine the reliability, the tools were administered to 20 students according to the inclusion criteria. The reliability of the social media addiction scale was determined by Cronbach's alpha and found to be reliable with the score $\alpha = 0.81$.

The reported internal consistency reliability of Rosenberg's self-esteem scale ranges from r = 0.85 to 0.88. In this study, reliability of the Rosenberg's self-esteem scale was determined by Cronbach's alpha and obtained $\alpha = 0.70$. The tools (Background Proforma and Social media addiction scale) were validated by seven experts. For reliability, the Background Proforma and the Social media addiction scale were administered to 20 students according to sample inclusion criteria. The scale validity index of Background Proforma was 0.82 and the social media addiction scale validity index was 0.78. The reliability of the social media addiction scale was determined by Cronbach's alpha and found to be reliable with the score $\alpha = 0.81$. The reported internal consistency reliability of Rosenberg's self-esteem scale ranges from (r = 0.85 to 0.88). In this study reliability of the Rosenberg's self-esteem scale was determined by Cronbach's alpha and obtained $\alpha = 0.70$. Ethical clearance was obtained from Institutional Ethics Committee (IEC), Kasturba Hospital, Manipal (IEC No. 831/2017), Clinical Trials Registry - India (CTRI) Approval (Registration No. CTRI/2018/01/011323) and administrative permission from Principals of selected Colleges.

Results

The data collected were categorized and analysed based on the study objectives using descriptive and inferential statistics. SPSS version 16.0 was used for data analysis. The study findings were categorized as,

Description of the sample characteristics

The majority (50.8%) of the students were males, and 73.9% were Hindus. Most of them (66.9%) belonged to the nuclear family, 56.7% had one sibling and 86% of the total students used to stay at home. The data regarding the educational stream depicted 88% were BCom students, 6.1% were BSc students, and 5.9% were BA students.

Table 1 shows the frequency and percentage distribution of social media usage. In the social media usage proforma*,* participants answered a multiple-response questionnaire.

Table 1

Frequency and Percentage Distribution of Social Media Usage among Selected College Students

N = 658

Sample Characteristics	Frequency (f)	Percentage (%)
Source of information regarding social networks*		
Friends	549	83.4
Relatives	108	16.4
Television	173	26.3
Others	20	3.0
How many social media sites are you a member of? *		
Facebook	428	65
WhatsApp	640	97.3
Twitter	103	15.7
Instagram	423	64.3
Tinder	17	2.6
LinkedIn	22	3.3
Others	83	12.6
How many hours per day do you spend being online on social media?		
< 2	308	46.8
2 - 4	233	35.4
5 - 7	88	13.4
> 7	29	4.4
How do you access to social media sites? *		
Desktop/ personal computer	23	3.5
Laptop	63	9.6
Smartphone	652	99.1

Note. ***** - Multiple responses

Table 1 showed the social media users among the total students. 97.3% had an active account on WhatsApp, 65% on Facebook, 64.3% on Instagram, 15.7% on Twitter. In the "Others" category, the Hike application is mentioned as a quite frequently used application with the involvement of 12.6% of the total samples. The data also showed that the majority of students (46.8%) use social media sites for less than two hours per day, and they use it mostly (99.1%) through a smartphone.

Description of social media addiction

About social media addiction among the students, the majority of them (51.4%) had moderate social media addiction, 39.4% had mild social media addiction, and 9.3% were severely addicted to social media (Figure 1).
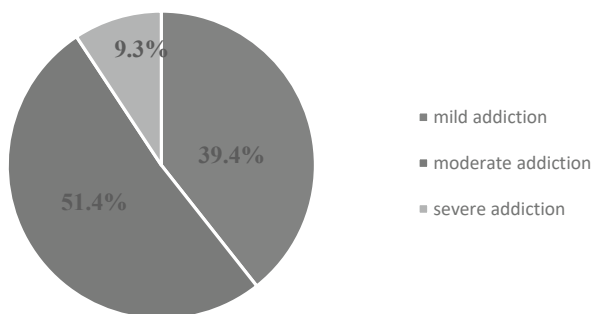

Figure 1. A Pie chart showing level of social media addiction among Degree College students.

Description of self-esteem

The self-esteem among the college students was also calculated by using frequency and percentage. Most of the students (90%) had normal self-esteem, 5.5% had low self-esteem and 4.6% had high self-esteem. The mean and standard deviation of social media addiction is depicted in Table 2.

Table 2

Description of Social Media Addiction Scale Scoring among Selected College Students

N = 658

Category	Maximum	Minimum	Mean	N	SD
Low self-esteem	15	9	12.94	36	1.413
Normal self-esteem	25	10	19.66	592	2.599
High self-esteem	29	26	26.80	30	0.847

Note. SD = Standard deviation.

Relationship between social media addiction and self-esteem

The relationship between social media addiction and self-esteem has been analysed using Pearson Correlation Coefficient. The data presented in Table 3 reveals that there is a weak negative correlation (r = -0.08, $p < .05$) between social media addiction and self-esteem.

Relationship between social media addiction and self-esteem has been analysed using Pearson Correlation Coefficient in inferential statistics. Initially, the Kolmogorov-Smirnov test has been done but since the data was not normally distributed hence Pearson Correlation Coefficient test has been performed.

Table 3

Correlation between Social Media Addiction and Self-esteem among College Students

N = 658

Variable	r	p-value
Social media addiction Self-esteem	-0.08*	.048

Note. * - Significant at $p < .05$

Data presented in Table 3 reveals that there is a weak negative correlation (r = -0.08, $p < .05$) between social media addiction and self-esteem which infers that deviation in the self-esteem of the students is not related to the level of social media addiction.

Association between Social Media Addiction and selected Socio-demographic Variables

The association between social media addiction and selected socio-demographic variables have been analysed by the Chi-square test and is presented in Table 4. Table 4 showed that, gender ($\chi^2 = 27.799$, $p < .001$), place of stay ($\chi^2 = 12.453$, $p = .014$), educational stream ($\chi^2 = 47.142$, $p = < .001$) were significant with social media addiction at .05 level of significance. No association was observed between social media addiction and age, type of family, and the number of siblings.

Table 4

Association between Social Media Addiction and selected Socio-demographic Variables

N = 658

Variables	Social media addiction (count)			χ²	df	p-value
	Mild	Moderate	Severe			
Age in years						
17-19	160	232	46	5.466		
20-22	99	106	15		2	.065
Gender						
Female	158	147	19	27.799		
Male	101	191	42		2	< .001*
Type of family						
Extended	20	27	8			
Joint	76	72	15	7.197		
Nuclear	163	239	38		4	.126
Number of siblings						
None	37	34	4			
One	143	193	37	4.833		
Two	50	76	14		6	.559
More than two	29	35	6			
Place of stay						
Home	225	288	53			
Hostel	21	38	1	12.453		
Outside campus (as paying guest)	13	12	7		4	.014*
Educational stream						
Bachelors in Arts	33	6	0			
Bachelors in Commerce	208	310	61	47.142		
Bachelors in Science	18	22	0		4	< .001*

Note. * - Significant at *p* < .05

Discussion

Social media is not a subset of the internet; it is the internet today. People use social media and become addicted precisely because it gives us immediate attention, direction, and value as a person and thus provides gratification. In search of recognizing the utilization of social networking, it has been found that social network plays a significant role as a better connector with family and companions. When it comes to the matter of effect, both positive and negative on youths, especially college students, it can be said that it leads to more association in social and political exercises (Al-Menayes, 2015).

The use of various social media has an impact on our psychological status and vice versa. The status of our relationships in our personal life often controls our behaviours toward society. Accepting a familial life change or change in important relationship status may differ based on gender. The self-esteem of females is lower than males when it comes to trust-in and the difference between their own mother and stepmother (Cabral, 2008). Even the rate of low self-esteem of females than males are often related to their parent's educational level and economic status (Idubor, 2015). This study revealed that 65% of students are active members of Facebook followed by 64.3% of users of Instagram and Twitter with 15.7% of participants. A similar finding is also seen in the study (Cabral, 2011) where the majority (98.4%) used Facebook, followed by Twitter (34.2%) LinkedIn received 18.5% of the respondents. Idubor in 2015 inferred from her study that Facebook with 65.2% and Twitter with 56.1% user involvement was ranked as the most used social media platform among undergraduate students of the University of Ibadan.

Being online on social media is the fashion for the youths. Addictive behaviour towards social media is a trending phenomenon nowadays. The result of this

study is that gender of the students has a significant association with social media addiction (x^2= 27.799, p-value = .000) where a greater number of highly addicted students were males is contradicting another cross-sectional survey among 23,532 Norwegians indicating that women may tend to develop more addictive use of activities involving social interaction than men (Andreassen, Pallesen, & Griffiths, 2017). Though this cross-sectional survey infers the notion of addictive social media use reflecting a need to satisfy the ego (i.e., narcissistic personality traits and an attempt to inhibit a negative self-evaluation i.e., self-esteem), the influence of biased societal practices like more freedom to spend time outside the house and with friends, visit internet cafes, game networks enables them to spend more time surfing the social media. Supporting this point and contradicting this study result, a cross-sectional study conducted among 257 adolescents found evidence among females for the mediating role in case of preference for online social interaction in the relationship between self-esteem and internet addiction and no significant effects were found for males (Fioravanti, Dèttore, & Casale, 2012).

The result of a study conducted to find associations between the use of online social networks and internet addiction showed that the presence of online social networking in a manner of disorder was present among 9.7% of the participants, which referred to have a significantly positive association with the internet addiction test (Fioravanti, Dèttore, & Casale, 2012). When comparing different media specifically to Facebook, Myspace, Twitter, and LinkedIn to assess the membership of college students in the absence of WhatsApp in the option, the majority (98.4%) reported using Facebook (Ko, Yen, Liu, Huang, & Yen, 2009; Andreassen, Pallesen, & Griffiths, 2017). Instagram social media addiction among high schools in Jakarta, showed a relationship between Instagram social media addiction and self-esteem with a daily engagement of 3 to 6 hours on the particular platform (Ardiana & Tumanggor, 2020). Whereas, in the current study, WhatsApp was found to be the most used application, followed by Facebook in the second position and Instagram in the third position.

Another study result demonstrated that after-effects of shared associated factors like online gaming, online gambling and watching violent TV programs, adolescents with Internet addiction were more likely to have aggressive behaviours. The association was more significant among adolescents in junior high schools than in senior high/vocational schools. As this is the age of finding identity versus role confusion, teens may develop internet addiction to compensate for the sense of low self-esteem by searching for online recognitions (Ko C. H., Yen, Liu, Huang, & Yen, 2009). Social media addiction influences the self-esteem of the students. And conversely, if the Instagram social media addiction owned by high school students is low, then self-esteem is also low. The results of this study are consistent with research conducted by (Hawi & Samaha, 2017). The present study was focused on social media platforms in general. However, when checking for Instagram, a photo and video sharing social media, the addiction among high schools in Jakarta was found to have a relationship between Instagram social media addiction and self-esteem with a daily engagement of 3 to 6 hours on the particular platform (Ardiana & Tumanggor, 2020). The limitation of the present study was confined only to three-degree colleges where students were studying BSc, BCom, and BA courses under Mangalore University. Thus generalization of the findings can be made for the sample studied. A self-reported questionnaire was used to collect the data and the responses were considered true, which are considered the limitations of the study.

Given the findings reported in the present study, a few recommendations are made for further research, like initiatives to plan activities to reduce social media addiction and to determine the other comorbid psychiatric conditions other than self-esteem like depression, multiple addiction problems, and personality disorders.

Conclusion

Once started as a platform for getting connected to people and communication, now social media has become a superabundant part of our life. This ranges from kids, adults to an elderly population where the most prolific users are young adults. The impelling force

of various social media platforms on young adults and their mental health is somehow concerning. Students with low self-esteem and higher use of social media content are at high risk of developing psychological distress. Awareness programs can play an important role in assertiveness to improve the self-esteem of the students starting from the school level to the college level. It may be a debatable statement if social media is a blessing in disguise or not? Here, let us not forget the consequential pressure of keeping up to the standards set by others in social media. To understand the factors associated with it and the perilous effects of social media addiction, more research studies need to be done in longitudinal prospects. The educational organisations may work in collaboration with college teachers and guidance counsellors as well as nurses, psychologists, social workers where they can help the students to improve their psychological wellbeing.

Acknowledgement

References

Al-Menayes, J. J. (2015). Dimensions of social media addiction among university students in Kuwait. *Psychology and Behavioral Sciences, 4*(1), 23-28. DOI:10.11648/J.PBS.20150401.14 Corpus ID: 33893735.

Andreassen, C. S., Pallesen, S., & Griffiths, M. D. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive behaviours, 64*, 287-293. https://doi.org/10.1016/j. addbeh.2016.03.006.

Ardiana, T. R., Tumanggor, O. R., (2020). Social Media Instagram Addiction and Self-Esteem in High School Students. *Advances in Social Science, Education and Humanities Research*, 478, 290 - 294. https:// dx.doi.org/10.2991/assehr.k.201209.042.

Bahrainian, S. A., Alizadeh, K. H., Raeisoon, M., Gorji, O. H., & Khazaee, A. (2014). Relationship of Internet addiction with self-esteem and depression in university students. *Journal of preventive medicine and hygiene, 55*(3), 86. https://www.ncbi.nlm.nih. gov/pmc/articles/PMC4718307/

Cabral, J. (2011). Is generation Y addicted to social media. *International Journal of Sciences: Basic and Applied Research, 2*(1), 5-14. https://www.elon. edu/u/academics/communications/journal/wp-content/uploads/sites/153/2017/06/01Cabral. pdf.

Fioravanti, G., Dèttore, D., & Casale, S. (2012). Adolescent Internet addiction: testing the association between self-esteem, the perception of Internet attributes, and preference for online social interactions. *Cyberpsychology, Behavior, and Social Networking*, 15(6), 318-323. http://doi. org/10.1089/cyber.2011.0358.

Hamade, S. N. (2013). Perception and use of social networking sites among university students. *Emerald Publishing Library Review. 6/7*(62), 388-397. DOI 10.1108/LR-12-2012-0131.

Hawi. S. N., Samaha, M. (2017). The Relations Among Social Media Addiction, Self-Esteem, and Life Satisfaction in University Students. *Sage Journals, 5*(35), 576-586. https://doi. org/10.1177%2F0894439316660340.

Hormes, J. M., Kearns, B., & Timko, C. A. (2014). Craving Facebook? Behavioural addiction to online social networking and its association with emotion regulation deficits. *Addiction, 109*(12), 2079-2088. doi: 10.1111/add.12713.

Idubor, I. (2015). Investigating social media usage and addiction levels among undergraduates in University of Ibadan, Nigeria. *Journal of Education, Society and Behavioural Science*, 291-301. http:// dx.doi.org/10.9734/BJESBS/2015/15808.

Kircaburun, K. (2016). Self-Esteem, Daily Internet Use and Social Media Addiction as Predictors of Depression among Turkish Adolescents. *Journal of Education and Practice, 7*(24), 64-72. https://files. eric.ed.gov/fulltext/EJ1112856.pdf

Ko, C. H., Yen, J. Y., Liu, S. C., Huang, C. F., & Yen, C. F. (2009, June). The Associations Between

Aggressive Behaviors and Internet Addiction and Online Activities in Adolescents. *Journal of Adolescent Health, 44*(6), 598-605. https://doi.org/10.1016/j.jadohealth.2008.11.011

Romer, D., Bagdasarov, Z., & More, E. (2013). Older versus newer media and the well-being of United States youth: results from a national longitudinal panel. *Journal of Adolescent Health, 52*(5), 613-619. https://doi.org/10.1016/j.jadohealth.2012.11.012.

Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press. https://fetzer.org/sites/default/files/images/stories/pdf/selfmeasures/Self_Measures_for_Self-Esteem_ROSENBERG_SELF-ESTEEM.pdf.

Serınkan, C., Avcık, C., Kaymakçı, K., & Alacaoğlu, D. (2014). Determination of students self-esteem levels at pamukkale university. *Procedia-Social and Behavioral Sciences, 116*, 4155-4158. DOI: 10.1016/j.sbspro.2014.01.908.

Ümmet, D. (2015). Self-esteem among college students: a study of satisfaction of basic psychological needs and some variables. *Procedia-Social and Behavioral Sciences, 174*, 1623-1629. https://doi.org/10.1016/j.sbspro.2015.01.813.