Social Media Addiction and Associated Factors among Madda Walabu University Students, Southeast Ethiopia

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ABSTRACT

Social media is a relatively new technology, and little studies have been conducted on its addiction and associated factors. It has become popular among college and university students of young population. Social media is addictive specially using it for chatting is very attractive and addictive. Once you sign in to this public site, you may follow others' comments, gossip, and get in touch with the whole society or world. You can't stop when you want since you are controlled. The present study is designed to evaluate social media addiction and associated factors among university students. An institutional based cross-sectional study was conducted from April 11 - 30 /2017. A simple random sampling method was conducted to recruit the study participants. Data was collected by using pre-tasted, structured and self-administered questioner and analyzed using SPSS version 20 statistical software. A total of 149(99.3%) of respondents were reported as social media users. From this figure the majority 104(69.8%) of participants used Facebook. From the total users about 32(21.3%) of students were addicted. Variables such as being male, young in age (18-22 years), and excessive use of social media per day significantly associated with higher odds of addiction. Therefore, students should limit and use appropriately the social media through self-regulation.

Keywords: Social Media Addiction, Facebook Users, Addiction Measurement Scale, Self-Regulation, Excessive Use of Social Media, University Students

Background

Social media (SM) have spread widely all over the world and are used by many users for various reasons and purposes [1]. Day to day social web sites particularly Face book is increased melodramatically and it has increased significantly over the last few years [2]. Social Media are computer-mediated tools that allow people to create, share or exchange information, idea, picture videos in cybernetic societies and system [3]. It is defined as a "group of internet-centered applications that build the technological and philosophical basis of Web 2.0 and that allow the formation and user-created content [4]. According to U.S census bureau report on March 2012, over 7,182,406,565 people living on the planet of whom around 42.3% have internet access; from this figure about 975,943,960 persons are Facebook users [5]. Currently this number increased to 1.44 Billion users in March 2015 making 20.2% of the population. A study of 3000 students from across the US found that 90% of university students use Facebook [6]. Africa in turn has 15.7% of the total population of the world. The people who have internet access are nearly 9.81% in June 2014 out of which 51,612,460 people is Facebook users creating only 3.58% of all social media users. In December 2000, only 10,000 people had internet access in Ethiopia. This number dramatically increased in 2008 making the number of social media users in Ethiopia 360,000 with a penetration rate of 0.4%. Furthermore, in 2014, the number enlarged to 1,836,035 or nearly 1.9% of the population out of which 902,440 are Facebook users making Ethiopia the 106th most internet using country in the world and 15th from Africa [5].

Compared to other types of social medias, Facebook gets new features and developments on regular basis making it the world's top social network with over 1.44 billion monthly active users, and at least 802 million of these users logged into Facebook every day [7-9]. According to these statistics, it is not surprising that Facebook

is the most popular social media in the world. Facebook is a social networking service that lets you link with friends, co-workers and others who share similar interest or who have related background. Many use it as a way to stay in touch after finishing school, or as a way to share their publicly. What make Facebook different from other social Medias are its extensive privacy controls, its advance platform, and its large fast growing user base [10, 2].

The social media are largely used for social purposes, mostly related to the upkeep of established disconnected networks, relative to individual ones. A survey conducted among university students from the USA shows that the primary motivations for social media usage were to form and maintain social connections. Several studies have reinforced the importance of relationship maintenance as a key reason for Facebook use. Indeed, different researchers argue that relationship maintenance is the main motivator for all SNS use [2, 9].

Addiction is a condition that results when a person ingests a substance such as alcohol, cocaine, nicotine or involves in an activity like gambling, sex, online shopping that can be pleasurable but the continued use or act of which becomes compulsive and interferes with normal life, such as, health, relationships or work [11]. The concept of addiction is considered as being materially or mentally possessed towards someone or something [12]. Comparable cases are also documented due to overuse of technological devices and applications like computers, online games, internet, tablets, and smart phones. In the previous years the leading conversation issue was the addiction to television, gambling, drug, and alcohol addictions, today's issues deal with social media addiction and the increased amount of time young people and adults spend on searching the networking site. Social media is addictive specially using it for chatting is very attractive and addictive. However, users may not be aware that their actions are out of control and causing problems for their life and offend others due to social media addiction (13, 1). Once you sign in to this public site, you follow others' comments, gossip, and get in touch with the whole society or world, and you can't stop when you want since you are controlled [14]. Social media addiction has been defined as a failure to regulate usage, which leads to negative personal outcomes. One emerging theory of online addiction is social skill model of generalized problematic internet use [15]. This model states that individuals who prefer to communicate in an online environment are at greater risk of experiencing negative outcomes related to excessive online use [6, 12]. These individuals, who demonstrate poor self-regulation of internet use, tend to engage in online social communication as a means of escaping from negative mood states, such as loneliness or anxiety and communicating online alleviates negative moods (known as mood alteration), which then reinforces online use [2]. Internet use plays in the lives of today's young adults, understanding possible health implications is of clinical importance. In specific, problematic internet use (PIU) or social media addiction is a new and developing health concern for adolescents and young adults [13]. University and college students specially youths are highly affected with social media (Facebook) addiction [10]. Researchers have recently started to examine the factors that related with social media addiction [2,7]. As a result, in Ethiopia there is no study among students about social media addiction and associated factors. Therefore, the current study aims to determined social media addiction and associated factors among university students. The present study will effort to answer questions about the relationship between social media use and addiction specified in the following questions.

METHODS

Study Settings

An institutional based cross sectional survey was conducted to assess social media addiction and associated factors among Madda Walabu University, Goba referral hospital students from April 11 - 30 /2017. The university is located in Goba town which is far 445 kilo meters from Addis Ababa. It is one of the second generation universities in Ethiopia and established in 2007. At the data collection time the university trains health professions with different departments such as Public Health (Health Officer), Nursing, Midwifery, and Medicine with a total of 1958 regular students.

Study Participants

All regular students of Madda Walabu University, Goba referral hospital in 2017 academic year were included in the study. Students who were absent from the school during the study period due to illness, academic withdrawal or for educational attachments at the time of data collection were excluded from the study.

Sample Size Calculation and Sampling Technique

The sample size was calculated using a formula for estimation of a single population proportion; assuming the prevalence of Facebook addiction among students to be 11%, confidence interval 95%, marginal of error 5%. Considering 5% non-response rate, the final sample size was calculated to 158. We used the students' attendance sheet as a sampling frame to pick the study participants using simple random sampling technique.

Data Collection and Data Quality Control

A pre-tested and structured self-administered questionnaire was used to collect the data. Questions for this survey were adapted from different literatures [14-16]. The questionnaire contained detailed information about socio-demographic, social media usage, user's social life and mental health issues. We used only five point likert type scale and close ended questions. A five-point likert type scale from 1 to 5, (1 for very rarely to 5 very often) was applied to assess social media addiction among university students. We used the six addiction component scale each has 3 items, overall 18 likert type items to assess the respondents social media addiction status. Three data collectors were involved in data collection after two days training. The training was focused on issues such as the data collection tool, field methods, inclusion-exclusion criteria and record keeping. The questionnaire was pre-tested on 8 students in order to identify potential problems, unexpected interpretations and objections to any of the questions. Based on the pre-test results, adding or omitting of some questions was prepared before the actual data collection.

Measurements

The outcome variable of this study was a self-reported social media addiction status. It was measured by Mark Griffiths addiction measurement scale. He uses the six core components of addiction criteria (i.e. salience, mood modification, tolerance, withdrawal symptoms, conflict and relapse) to determine social media addiction. Many researchers agree that social media addiction disorder criteria, such as mental preoccupation, neglect of personal life, escapism, mood modifying experiences, tolerance, and concealing the addictive behavior, appear to some individuals who use social medias excessively [9]. Any behavior such as social

networking usage that fulfills these six criteria can be defined as an addiction [16]. According to our objective the likert type scale items were computed in order to find an overall score for the questionnaire. Variables such as socio-demographic variables (sex, age, religion, ethnicity, department, marital status, family income,) and social media usage (social media experience, frequency of using social media, amount time spent on social networking site, type of used social media, purpose of using social media) were under explanatory variables for this study. A mixture of questions was asked that further described the respondents' relationship with social media and their personal usage. These questions assessed emotions, inner conflicts and personal habits. A likert type scale items used to evaluate the respondent's attitude towards social media usage from a frequency standpoint of "Very Often" to "Very rarely," while connecting to the six-core components of addiction. The Cronbach's alpha of the reliability and validity of the instrument was put at 0.997. It was highly acceptable and measured the degree to which scale items are all computing the same fundamental trait or it estimate the average correlation among all of the questioners that make up the scale.

Data Analysis

The data was entered to EPI data 3.1, and exported to SPSS version 20 statistical package for analysis. Frequency distribution, mean, standard deviation and percentage calculations were employed for most variables. We designed a sequence of questions that measure a particular characteristic when combined. The likert type scale items combined into a single composite score or variable during the data analysis process. So we breakdown the levels of the dependent variable into two levels or outcomes and run binary followed by multivariable logistic regression to see the effects of predictors to the dependent variable. Variables with P-value less than 0.25 in the bivariate logistic regression analysis were selected for multivariate analysis. Then variables P-value of less than 0.05 in multivariable analysis were taken as significance and included in the final model. The goodness of fit of the model was checked by Hosmer and Lemeshow test model using backward likelihood ratio method [17].

Operational Definition

Social media: Any website that allows social interaction is considered a social media, including social networking sites such as Facebook, MySpace, and Twitter; gaming sites and virtual worlds such as Club Penguin, Second Life, and the Sims; video sites such as YouTube; and blogs [3].

Social media addiction: For this five point likert scale was used to measure the addiction of students towards social media. By computing and taking the mean of addiction variables, 'spent a lot of time thinking about content and events on social media (SM), Thought about how you could free more time to spend on SM, Thought a lot about what has happened on SM recently, spent more time on SM than initially intended, etc.' (Table 3). All the addiction variables were computed and those who scored below the mean labeled as addicted, and those scored above the mean labeled as non-addicted.

Ethical Considerations

Ethical approval was obtained from Ethical Committee of Madda Walabu University, Goba Referral Hospital. The questionnaires were distributed to the participants after verbal consent was obtained. They were also informed that their involvement was voluntary and that they could withdraw from the interview at any time. The participants were confident that their responses would be treated privately through the use of strict coding measures.

## RESULTS

Socio- Demographic Characteristics

A total of 150 students participated in this study making the response rate of 95%. From the total participants, the majority (70.7%) of the students were male. Over half (52%) of the respondents were range between 23-27 years of age. Regarding ethnicity seventy two percent of the participants were Oromo. The majority, thirty seven percent of them were Orthodox followers. (Table 1).

Social Media Usage Characteristics

From a total of 150 participants we found that 99.3% of the participants used one or the other social networking site. The majority of respondents (69.3%) used Facebook. The students used the social media for different reasons and purposes. In this study around half (46.9%) of the participants used the social media to chat with friends (Table 2).

The Six Components of Addiction

About one- thirds (32.2%) of students sometimes spent a lot of time with thinking about social media. Nearly forty percent of participants sometimes thought about how they could free more time to spend on social media. Around one- thirds (28.6) of the respondents often thought a lot about what has happened on social media recently (Table 3).
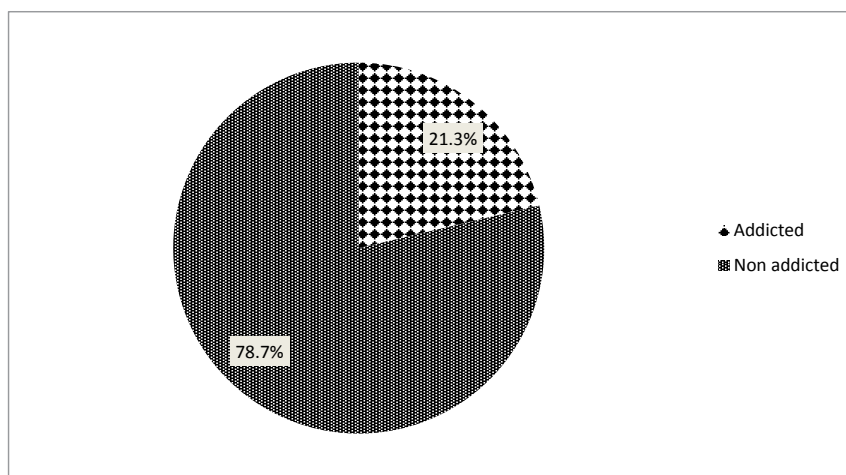
Figure 1: Social media addicted and non-addicted groups among Madda Walabu University, Goba referral hospital students, Goba, Ethiopia, 2017.

Table 1. Socio-demographic characteristic of Madda Walabu University, Goba referral hospital students, Goba, Ethiopia, 2017.

VARIABLES	FREQUENCY	PERCENT (%)
Age in years		
18-22	49	32.7
23-27	78	52.0
> 27	23	15.3
Sex		
Male	106	70.7
Female	44	29.3
Ethnicity		
Amhara	23	15.3
Gurage	8	5.3
Oromo	108	72
Tigre	7	4.7
Others	4	2.7
Department		
Public Health	36	24
Nursing	73	48.7
Medicine	23	8.7
Midwifery	28	18.7
Religion		
Catholic	4	2.7
Muslim	43	28.7
Orthodox	56	37.3
Protestant	38	25.3
Other	9	6
Marital Status		
Single	136	90.7
Married	12	8
Divorced	2	1.3
Residence		
With Family	101	67.3
With Spouse	12	8
Alone	37	24.7
Father's Occupation		
Employed	56	37.3
Personal Business	81	54
Has no job	13	8.7
Family Income		
<1000 birr	24	16
1001-1500	19	12.7
1501-2000	19	12.7
>2000	88	58.9

Table 2: Social media usage characteristics of Madda Walabu University, Goba referral hospital students, Goba, Ethiopia, 2017.

VARIABLES	FREQUENCY	PERCENT (%)
Types of social media used		
Facebook	104	69.3
Goggle plus	23	15.3
You tube	20	13.3
Others	3	2.0
Purposes of usage		
Chatting with friends	70	46.9
To meet old friends	40	26.7
For academic purposes	12	7.8
To share and upload photos	26	17.3
Others	2	1.3
Type of device used to browse		
Smart mobile phone	100	66.7
Personal computer	43	28.6
Library computer	7	4.7
Time spent on social media per day		
Less than ½ hour	8	5.4
From ½ to 1 hour	22	14.8
From 1 to 2 hours	77	51.2
More than 2 hours	43	28.6
Frequency per day		
1 times	33	22.1
1-2 times	41	27.6
>2 times	76	50.3

Table 3: The six-essential components of addiction: salience, tolerance, mood modification, relapse, withdrawal, and conflict scale items among Madda Walabu University, Goba referral hospital students, Goba, Ethiopia, 2017.

COMPONENTS	VERY RARELY		RARELY		SOMETIMES		OFTEN		VERY OFTEN	
1. Salience	N	%	N	%	N	%	N	%	N	%
Do you spent a lot of time thinking about content & events on SM?	36	24.2	40	26.8	48	32.2	20	13.4	5	3.4
Thought about how you could free more time to spend on SM?	26	17.3	30	20.2	58	38.7	29	19.3	6	4.5
Thought a lot about what has happened on SM recently?	19	12.7	31	20.7	40	26.7	42	28.6	17	11.3
2. Tolerance										
Spent more time on SM than initially intended?	24	16.1	39	25.5	49	32.2	28	18.5	9	6.5
Felt an urge to use SM more and more?	21	14.2	40	26.7	59	39.3	21	14	8	5.4
Felt that you had to use SM more and more in order to get the same pleasure from it?	16	10.7	35	23.3	60	40.3	26	17.3	12	8.2
3. Mood modification										
Used SM in order to forget personal problems?	20	13.3	30	20.2	55	36.7	34	22.7	10	6.8
Used SM to reduce feeling of anxiety and depression?	22	14.7	28	18.7	52	34.7	29	19.3	18	12.5
Used SM in order to reduce restlessness?	29	19.3	29	19.6	52	34.7	28	18.7	11	7.3
4. Relapse										
Experienced that others have told you to reduce your use of SM but not listened to them?	37	24.7	46	30.7	45	30.2	15	10.1	6	4.2
Tried to cut down on the use of SM without success?	31	20.7	48	32.4	49	32.7	17	11.3	4	2.7
Decided to use SM less frequently, but not managed to do so?	25	16.7	32	21.3	59	39.7	26	17.3	7	4.7
5. Withdrawal										
Become restless or troubled if you have been prohibited from using SM?	32	21.3	46	30.7	38	25.3	24	16.4	9	6.1
Become irritable if you have been prohibited from using SM?	34	22.7	33	22.5	47	31.3	22	14.7	13	8.7

Felt bad if you, for different reasons, could not log on to SM for some time?	32	21.3	46	30.7	36	24.3	23	15.3	12	8.2
6. Conflict									
Used SM so much that it has had a negative impact on your job or studies?	38	25.3	42	28.3	42	28.3	17	11.3	10	6.7
Given less priority to hobbies, leisure activities, and exercise because of SM?	36	24.2	36	24.1	42	28.3	26	17.3	9	6.1
Ignored your partner, family members, or friends because of SM?	63	42.2	34	22.7	30	20	15	10.3	7	4.7

Table 4: Factors associated with social media addiction, using multivariable logistic regression model, in Madda Walabu University Goba referral hospital students, Goba town, Ethiopia 2017.

VARIABLES	SOCIAL MEDIA (SM) ADDICTION STATUS		CRUDE OR, (95% C.I)	ADJUSTED OR, (95% C.I)
Age of students	Yes	No		
18-22	21	28	1.00	1.00
23-27	7	71	1.96(1.99 - 2.44)*	3.92(0.14 - 3.98)*
>27	4	19	0.37(0.23 - 0.59)#	0.409(0.29 - 0.86)#
Sex of students				
Male	27	79	1.00	1.00
female	5	39	0.37(0.23 - 0.59)#	0.505(0.29 - 0.86)#
Time spent on SM per day				
< ½ hour	2	6	1.00	1.00
½ - 1 hour	5	17	2.74(1.39 - 7.12)#	3.36(0.84 - 8.33)*
1 – 2 hours	10	67	3.74(1.45 - 5.78)*	2.86(1.98 - 5.83)#
> 2 hours	15	28	5.74(1.32 - 6.62)#	5.96(2.56 - 8.33)#

Social Media Addiction

The computed variable has a mean and a standard deviation (SD) of 47.56, and 17.49 respectively. Based on the addiction score, 32(21.3%) of respondents were addicted and 118(78.7%) of them were non addicted (Fig.1).

Factors Associated With Social Media Addiction

An odds of addiction among those have age above 27 years were 0.4 times less likely addicted compared with those aged from 18-22 [AOR= 0.409, 95% CI, (0.29 - 0.86)], Males were 50% more likely addicted than females [AOR= 0.505, 95%CI (0.29 - 0.86)], Amount of time spent on social media became statistically significant independent predictor of addiction. Students who are spent more than 2 hours per day have nearly 6 times more likely addicted than students who spent less than ½ hour [AOR= 5.96, 95% CI, (2.56 - 8.33)], and participants who are spent from 1- 2 hours per day have almost 3 times more likely addicted than students who spent less than ½ hour per day [AOR= 2.86, 95% CI, (1.98 - 5.83)] (Table 4).

DISCUSSION

Currently, a health and safety issues aren't only comes from the so called situation of the individual, but also within the web 2.0 environment [13]. In this study almost all participants were social media users of whom the majority 69.8% of the students used Facebook. This was agree with Al-Menayes found that 90% of US university students use Facebook [6]. Different studies revealed that majority of users visited their social networking sites almost daily, and this shows that the extent of usage of social media sites is frequent [7]. The most important purpose given was to follow up-to-date gossips, and meeting new friends were also prominent reasons for use social networking sites. Therefore, by using Facebook and other websites students maintain their existing relationships and communicate with others [2] Social media addiction among Madda Walabu university undergraduate students reported 21.3%. This finding was comparable with a study carried out by Zhou (2010) he assessed social media game addiction on 342 Chinese college students aged from 18 to 22 years [18]. Social networking site game addiction was stated when they endorsed a minimum of five questions out of eight items. Using this cut off, Zhou classified 24% of the participants reported as addicted. However, [19] found a relatively low level of Facebook addiction prevalence 1.6% and 11% among university students. Alabi (2012) surveyed Facebook addiction using stratified and purposive sampling among 1,000 Nigerian undergraduate university students. He used the Facebook Addiction Symptoms Scale (FASS) with good internal consistency and a Cronbach's Alpha of 0.73. Respondents answer the statements on a four-point Likert scale from 1 to 4 (1coded- Not at all to 4 -Very regular). The FASS contains three items each under the following five categories: (1) preference for social network site, (2) loss of control, (3) preoccupation, (4) negative life consequences, and (5) withdrawal. Results showed that 31% of the sample opened their Facebook account every hour [14,19].

This study revealed that participants age greater than 27 reduced the odds of social media addiction by 0.4 times as compared with age range from 18 to 22 years, [AOR= 0.409, 95% CI, (0.29 - 0.86)]. The highest use of Facebook is also reported between 18 and 24 years old high school students in Turkish [10]. The possible reason is that when age increases people feel responsibility and maturity help them to decide right things. These individuals usually cannot easily attract and diverted from their purposes. Generally they experience balanced life, time management and good self-regulation of social media use, by focusing on their goals. So, they will use social media for their benefit, for academic purpose and meaningful social interactions. Adolescents and young adults are the population most at risk for social media addiction. Because they have the highest rates of internet use and frequency [18].

Younger students tended to use Facebook more frequently than older students to keep in touch with friends from school or from their hometown [20]

Being female: decreased social media addiction by 50% as compared with male [AOR= 0.505, 95%CI (0.29 - 0.86)]. Different researchers examined the relationship between gender and uses and gratifications of social media mainly Facebook [2]. In these studies, women were more likely than men to use Facebook for connecting with existing contacts. In contrast, men were more likely than women to be motivated by making new friends or forming new idealistic relationships on Facebook. The above results highlight a fundamental difference between women and men in their uses and gratifications of Facebook; women prefer to use the site to maintain their existing social networks, while men prefer to use it to expand their social networks [21]. Given that past research has linked social media addiction with a tendency to prefer communicating with new online friends, it is possible that men may be more likely to fail to regulate their online communication and become addicted to Facebook. In light of these conflicting results, it is clear that gender plays in the development of Facebook addiction. In fact, it may be the case that there are multiple ways to addiction, and these are intervened by different communicative motivations [7,2]. In addition, Pontes, Kuss, and Griffiths (2015) reviewed twelve studies with nationally representative samples epidemiological data published between January 2014 and February 2015. Except one study, all remaining studies providing data on adolescent samples. Regarding the variances in prevalence rates of social media websites addiction among males and females, except one study the review found that almost half of the studies reported higher prevalence rates among males [22]. Educational experience of gender seemed to play a factor in social media use as well. Men and women were more likely addicted to social media sites if they are being in a higher year level at university [2, 18].

Another important finding of this study was that the odds of addiction among students who spent time on social media such as Facebook from 1 to 2 hours per day, and for more than 2 hours per day were 2.86 times, and 5.96 times more compared to those who used social media for less than ½ hour per day [AOR= 2.86, 95% CI, (1.98 - 5.83)], and [AOR= 5.96, 95% CI, (2.56 - 8.33)] respectively. Many researchers have used the term "excessive internet use" interchangeably with the term internet addiction. Hong et al., [23] pointed to a link between heavy internet usage and addiction; however, there are mixed views on this argument. For excessive time spent online does not automatically qualify an individual as addicted. There are many non-problematic Internet behaviours that would involve extended periods of time online, such as study or work-related research. However, while not all people who spend large amounts of time on Facebook per day are necessarily addicted, due to the role that deficient self-regulation is thought to play. Generally, it makes sense that Facebook addicts would generally be heavy users [2]. For excessive time spent in this manner could lead to the problematic behavior known as social media addiction [24]. It is viewed as a psychological dependence on or a behavioral addiction to the social network sites resulting in excessive usage [25]. In addition, many researchers have argued that the attractiveness of the social media could lead to excessive use known as internet addiction [13]. On the other hand, [6] and Young (1998) argued that the social media itself is not addictive, but highly communicating applications such as online chatting and texting can be addictive behavior [26,27]. Madda Walabu university students were reported to have the most number of Facebook

friends and frequent users, spend more time on Facebook and might be addicted to Facebook too [28-30]. Eagerness for Facebook is particularly apparent among them. Even though Facebook is used to connect with people and improve the social life of students, it was also noticed that excessive use of social media or Facebook usage bring bad consequences; increased use of the internet, face book profiles, publication of personal data, to be attracted to use social media, chatting with friends a lot, uncontrolled use of are expression of signs of social media addiction [31]. Therefore, excessive use of social media brings the risk of developing an internet addiction [32,33].

CONCLUSION

In this study high prevalence of social media addiction was reported among university students relatively compared to other studies. The students have used social media specially Facebook excessively. Age of students, sex, and amount of time spent on social media per day were associated with social media addiction among university students. Therefore, each student should have good self-regulation to limit the time spent on social media, and to use it in non-problematic internet behaviours such as study, to do assignments or work-related research.

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