

Use of Social Media for Health Information and Associated Factors among Students in Debrebirhan University

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Abstract

Contextsocial media applications allow peoples to communicate their information and thoughts over the internet rather than face-to-face, postal, journals, radio, television, magazine or newspapers Different informations like loves, entertainment, political, social, business, insights could be shared between individuals In some countries, the use of social media for health information communication was assessed among university's students yet in Ethiopia

Objective

The study aimed at determining the use of social media for health information and associated factors among university students. Design An institution-based cross sectional study was done in March 2019 SettingDebreberhan University. Participants 845 undergraduate students was selected using simple random sampling technique.Main outcome measures the use of social media applications for health information communication

Results from 845 study participants, 444 (52.5%) have used different social Media for different reasons The most preferred social media applications were Face book (82.4%), and mostly visited information was related to exercise (47.7%) Respondents' mothers educational status (AOR = 4.66, 95% CI:[1.96,11.08]),spent 240 minutes on social media network per day (AOR= 6.78, 95% CI: [1.65, 27.82]), daily users of social media (AOR= 1.79, 95% CI: [1.07, 3.02]), health profession students (AOR= 2.59, 95% CI: [1.45, 4.63]), and students who have good internet use skill (AOR= 2.94, 95% CI: [1.22, 7.09]) were significantly factors.

Keywords: Social media utilization; Health information; Students; Ethiopia

Conclusions

The use of social media applications for health information communication was good Spent more time on social media, being daily users, being health students and having good internet browsing skill were significantly associated factors

Introduction

Social media is used to refer group of online entities that have hugely changed the way individuals search for information and interact with each other [1] The term social media often comes with social networking sites and people tend to use the two terms interchangeably as the same concepts Social networking sites could be also defined as internet services where individuals construct a profile and connect with people of their interest and build their virtual human network[2] Throughout this paper, social media and social networking sites are used interchangeably

The availability of internet service allow individuals and organizations to create, share, discuss and exchange information and ideas on various topics such as social, economic, political, and health over the world through social media applications[3, 4] Regarding to health topics, some of the information browsed and shared via social communication platforms are concerning on preventative health care and regular health monitoring, and symptoms and treatment of illnesses [5-7] Specifically, patients can obtain and share their health experience and can communicate with their doctors or another support groups On the other hand, public health institutions can publicize messages for staying healthy and/or create and upgrade people's awareness of different extent or emerging diseases[8-12] Due to this fact, people are starting to use social media to get health related information matters in addition to health professionals Despite this, only a few studies have tried to investigate the individuals' use of social media platforms to look for health related information Thus, little is known on how sites are used for health information communication [6, 13, 14]

Nowadays, the youngsters use social media for health information communications better than others[15, 16] To mention, individuals aged 18-24 account about 80% [17]and

nearly 60% adults use internet to search health information[18] In most country setting, individuals in this age group are universities or colleges students where most of them are living in the campus, apart from their family Therefore, they start to grasp health information for their health matters from different sources including social media applications[15, 19, 20] For instance, they exchange medical-related information with their friends [21]; search for sexual and reproductive health issues, fitness and diet and nutrition [22], and search chronic disease prevention strategies [23]

In Ethiopia, there were limited number of social media users [19]but nowadays the accessibility of mobile data network services provided by Ethiopian telecommunication and the availability of Wi-Fi hotspots in higher education institutions, hotels, cafés and restaurants play an important role in increasing the number of users therefore today, it is common to see many Ethiopians in using social media applications from young to adult [19, 24-26] Yet, in Ethiopia, as far as the researchers' knowledge, no research has been conducted to assess students' practice in the use of social media for health information

Methods

Study Design and Setting

A cross-sectional study was done among Bachelor's degree program students in Debrebirhan University, Ethiopia from March3-18, 2019 The University is located 130 KM from Addis Ababa (the capital city) It has a total of 10,630 students under fifty departments in this academic year

Sample size, Study participants, and Sampling procedure

The sample size was calculated by taking into account the following assumptions: 50% prevalence of social media utilization since no prior research was conducted in determining the proportion of Social media network utilization for health information communication in Ethiopia, 95% level of confidence, 5% margin of error, and with 10% response rate with design effect two Finally, a sample size of 845 was obtained from15health and non-health departments These numbers of participants were selected by applying stratified multi-stage sampling technique by assuming that there is a difference between departments and year of study to our objective Except students with disability (who cannot see and hear) all from selected departments who were avail during the study period were included in the study

A pretested structured questionnaire consisting of socio-demographic, individual, academic, and technological variables was used to collect the data Five data collectors have been participated in data collection and the collection process was supervised by two supervisors after receiving two days of training about the objective of the study, data collection procedure, tools employed, and respondent's right

Ethics

We received ethical clearance from University of Gondar's Institution of Public Health Review Board. Also, verbal consent was gained from respondents after briefing the objective of the study for them

Statistics

Data were entered into EPI-info version 3 5 3 and analyzed using the Statistical Package for Social Sciences (SPSS) version 20 Descriptive statistics were used to summarize the study variables From binary logistic regression analysis report, all independent variables with a p value of <0 2 were selected as a candidate for multivariable logistic regression analysis Both crude odds ratio and adjusted odds ration with 95% confidence interval was used to measure the association between independent variables and social media utilization for health information Then variables reported with <0 05 p value were taken as significant. Data can be accessed from the corresponding author up on request

Results

Socio demographic characteristics of students in Debrebirhan University, Ethiopia, 2019

A total of 845 students with 100% response rate have participated in this study Of the all study participants, 487(57 6%) were male; 781(92 4%) were below the age of 25; 439(52%) students' were from rural area originally; 311(36 8%) participants mothers' cannot read and/or write (table 1)

Table 1: demographic characteristics of respondents

Variable	Frequency N (%)
Age categories	
<25	781 (92 4)
25-34	53 (6 3)
>34	11 (1 3)
Gender	
Male	487 (57 6)
Female	358 (42 4)
Mother educational status	
Cannot read and/or write	311 (36 8)
Read and write	276 (32 7)
Diploma	144 (17)
Degree and above	114 (13 5)
Father educational status	
Cannot read and/or write	152 (18)
Read and write	335 (39 6)
Diploma	145 (17 2)

Degree and above	213 (25.2)
Previous Residence	
Urban	406 (48)
Rural	439 (52)

Social media utilization for health information communication

From 845 study participants, 444 (52.5%) have used different social media for different reasons. The most preferred social media applications were Facebook (82.4%), YouTube (43.2%), Google plus (34.5%), Telegram (17.8%), Instagram (16.2%), and Twitter (1.6%). The students' intention to use social media was to look information related to: exercise (47.7%), diet (40.5%), medicine (25.9%), sexual and reproductive health (20.9%), and hygiene (12.4%). The main source of health information, browsed by participants, were sites of health institution (30.7%), health professionals (25.3%), people with similar health cases (23.8%), and health support group (20.2%). The reasons to seek health related information were interest in health-related information (28.4%), to update their health information (28.4%), and to find solution for their family health problem (12.5%).

Social media usage and associated factors

As table 2(a-d) depicts variables like mothers educational status, spent more time per day, frequently using social media, field of study, special IT training, and self-rated IT skill were factors associated with students social media network utilization for health information.

Table 2a: Bi-variable and multivariable analysis of factors associated with utilization of social media network for health information communication in Debrebirhan University, Ethiopia, 2019 (n=845)

Independent variables	Utilization yes no		Crude OR (95% CI)	Adjusted OR (95% CI)
Gender				
Male	239(28.3)	248(29.3)	1	1
Female	205(24.3)	153(18.1)	1.39(1.06, 1.83)	1.28(0.88, 1.86)
Mother educational status				
Cannot read and/or write	115(13.6)	196(23.2)	1	1
Read and write	142(16.8)	134(15.9)	1.81(1.29, 2.51)	1.49(0.93, 2.38)
Diploma	93(11.0)	51(6.0)	3.11(2.06, 4.69)	2.96(1.45, 6.01)*
Degree and above	94(11.1)	20(2.4)	8.01(4.69, 13.67)	4.66(1.96, 11.08)**
Father educational status				

Cannot read and/or write	52(6.2)	100(11.8)	1	1
Read and write	173(20.5)	162(19.1)	2.05(1.38, 3.06)	1.49(0.89, 2.51)
Diploma	58(6.9)	87(10.3)	1.28(0.80, 2.05)	0.33(0.16, 1.69)
Degree and above	161(19.1)	52(6.1)	5.95(3.77, 9.42)	0.84(0.38, 1.88)
Residence				
Urban	258(30.5)	148(17.5)	2.37(1.79, 3.13)	1.02(0.63, 1.64)
Rural	186(22.1)	253(29.9)	1	1

Table 2b: Bi-variable and multivariable analysis of factors associated with utilization of social media network for health information communication in Debrebirhan university, Ethiopia, 2019 (n=845)

Independent variables	Utilization yes no		Crude OR (95% CI)	Adjusted OR (95% CI)
Time spent				
Less than 60 minutes	261(30.9)	282(33.4)	1	1
60-120 minutes	89(10.5)	77(9.1)	1.25(0.88, 1.77)	1.17(0.76, 1.79)
121-240 minutes	67(7.9)	38(4.5)	1.91(1.24, 2.94)	1.60(0.91, 2.82)
Greater than 240'	27(3.2)	4(0.5)	7.29(2.52, 21.12)	6.78(1.65, 27.82)*
SMN Frequency				
Hourly	125(14.8)	89(10.5)	2.03(1.27, 3.24)	1.83(0.99, 3.37)
Daily	274(32.4)	247(29.3)	1.60(1.06, 2.43)	1.79(1.07, 3.02)*
Weekly	45(5.3)	65(7.7)	1	1
SMN Year of experience				
Less than 3 years	100(11.8)	151(17.9)	1	1
>=3 years	344(40.7)	250(29.6)	2.08(1.54, 2.80)	1.18(0.80, 1.75)

Table 2c: Bi-variable and multivariable analysis of factors associated with utilization of social media network for health information communication in Debrebirhan university, Ethiopia, 2019 (n=845)

Independent variables	Utilization yes no		Crude OR (95% CI)	Adjusted OR (95% CI)
Perceived health status				

Unhealthy	13(1 5)	2(0 2)	4 32(0 96,19 34)	2 48(0 47,13 24)
Somewhat unhealthy	27(3 2)	37(4 4)	0 48(0 28,0 82)	0 63(0 32,1 23)
Somewhat healthy	127(15 0)	178(21 1)	0 47(0 35,0 64)	0 69(0 48,1 01)
Healthy	277(32 8)	184(21 8)	1	1
Electronic device access				
Access to desktop	23(2 7)	13(1 5)	2 52(1 25,5 09)	2 13(0 80,5 64)
Access to laptop	180(21 3)	67(7 9)	3 83(2 75,5 34)	1 26(0 82,1 95)
Access to desktop & laptop	30(3 6)	20(2 4)	2 14(1 18,3 87)	0 74(0 32,1 68)
No access	211(25 0)	301(35 6)	1	1
Field of study				
Non Health	336(42 9)	353(45 1)	1	1
Health	69(8 8)	25(3 2)	2 90(1 79,4 69)	2 59(1 45,4 63)**

Table 2d: Bi-variable and multivariable analysis of factors associated with utilization of social media network for health information communication in Debrebirhan university, Ethiopia, 2019 (n=845)

Independent variables	Utilization yes no		Crude OR (95% CI)	Adjusted OR (95% CI)
Year of study				
1 year	148(17 5)	159(18 8)	1	1
2 year	130(15 4)	124(14 7)	1 13(0 81,1 57)	0 94(0 62,1 41)
3 year	110(13 0)	98(11 6)	1 21(0 85,1 75)	0 95(0 62,1 48)
4 year	47(5 6)	18(2 1)	2 80(1 56,5 05)	1 31(0 56,3 03)
5 year	9(1 1)	2(0 2)	4 83(1 03,22 74)	2 91(0 56,15 18)
Special IT training				
No	290(34 4)	362(42 8)	1	1
Yes	154(18 2)	39(4 6)	4 93(3 36,7 24)	2 50(1 52,4 14)**
Self-rated IT skill				
Very poor	9(1 1)	30(3 6)	1	1
Poor	80(9 5)	159(18 8)	1 67(0 76,3 70)	1 85(0 77,4 44)
Adequate	127(15 0)	122(14 4)	3 47(1 58,7 61)	2 94(1 22,7 09)*

Good	161(19 1)	61(7 2)	8 79(3 95,19 60)	5 57(2 22,13 99)**
Very Good	67(7 9)	29(3 4)	7 70(3 25,18 25)	2 20(0 80,6 07)

The result showed that respondents' whose mothers had diploma (AOR = 2 96 95% CI: [1 45,6 01]) were almost three times and mothers who had a degree and above (AOR = 4 66, 95% CI:[1 96,11 08] were nearly five times better to utilize social media network for health information respectively than respondents whose mothers cannot read and/or write

Relating to time spent on social media per day, study participants who have spent more than four hours (240') per day (AOR= 6 78, 95% CI: [1 65, 27 82]) were nearly seven times more likely to utilize social media network as compared to those who have spent less than an hour per a day. Similarly, respondents who are daily users (AOR=1 79, 95% CI: [1 07, 3 02]) were 1 79 times better in using social media for health information than weekly users

Regarding self-rated information technology skill, ability to browse information on social media applications, study participants who had adequate skill were almost three times (AOR = 2 94, 95% CI: [1 22, 7 09]) and those who had good skill were nearly six times (AOR= 5 57, 95% CI: [2 22, 13 99]) more likely to utilize social media network for health information respectively than participants who had very poor information technology skill. Study participants who had taken a special information technology training were 2 5 (AOR= 2 50, 95% CI: [1 52, 4 14]) times more likely to utilize social media network for health information than those had never taken information technology training

About students' field of study, health science students were 2 59 times (AOR= 2 59, 95% CI: 1 45, 4 63) more likely to utilize social media network for health information than to non-health science students

Discussion

The result of this current study revealed 52 5% of the study participants have searched health information over social media applications for the past six months. Facebook was the most preferred application by more than 80% of the utilizers. They have searched health information related to exercise, diet, medicine, sexual and reproductive health and hygiene from health institution sites, health support group, people with similar health condition to get information because a family member has health issues, interests in health information, and to update their information on health related issues

Respondents' whose mothers had diploma were 2 96 times more likely to utilize social media network for health information, similarly, respondents' whose mothers had a degree and above have used 4 66 times more than those respondents whose mothers cannot read and/or write. This might be because education has the power to enhance information-seeking nature and helps to adapt to emerging technologies [7]

Relating to time spent on social media in a day, study participants who spent more than four hours (240') per a day were 6.78 times more likely to utilize social media network as compared to those who spent less than an hour per day. Similarly, respondents who were daily users were 1.79 times more likely to utilize social media than those who utilize once in a week. This could be explained with that, whenever users spend more time on social media applications the possibility of seeking and sharing information will increase since they are attracted by timely changing information [14].

Regarding self-rated information technology skill, ability to browse information on social media applications, study participants who had adequate skill were 2.94 times and those who had good skill were 5.57 times more likely to use social media network for health information respectively compared to participants who had very poor information technology skill. This finding attests the fact that, operating applications and devices requires skill. In addition, the probability of exchange information would not be possible without skill despite having communication devices [2, 20, 24].

Study participants who had taken special information technology training were 2.5 times more likely to make use of social media network for health information compared to those who had never taken any information technology training. The possible reasons may be due to knowing more about current technologies and having skill on operating these technologies could increase internet browsing ability which in turn influences the utilization of social media network for health information [15, 27-29]. Pertaining to students' field of study, health science students use social media networks 2.59 times more than non-health science students. This relation could be explained with the reason that health science students have a passion and commitment to acquire a health related information by using different Media including social media applications [30].

Based on the findings, it is possible to conclude that, social media has been used by students for health information even if the prevalence is low. They use to search about physical exercise, diet, medicine, sexual and reproductive health and hygiene mainly from sites of health in situations based up on their interest or to update what they have known in relation to this information. Also being students from health profession and having better internet browsing skill were among the contributing factor in using social media besides with time spent and frequency of using those applications. Thus, the researchers suggest health institutional sites to continue posting health information on social media, and to the university community or any other concerned body to encourage non-health related profession students to use social media to browse about health information and to facilitate information technology related to internet browsing skill for students.

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