eHealth Literacy of Medical and Health Science Students and Factors Affecting eHealth Literacy in an Ethiopian University: A Cross-Sectional Study

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Abstract

Background eHealth literacy is individual's ability to look for, understand, and evaluate health information from electronic sources. Integrating eHealth literacy to the health system could help lower health care costs and ensure health equity. Despite its importance, the eHealth literacy level in Ethiopia has not been studied on medical and health science students, who are important parties in the health system. Understanding their level of eHealth literacy augments practice of health care, efficiency in education, and use of eHealth technologies.

Objective This research study aims to determine eHealth literacy level and identify its associated factors among medical and health science students in University of Gondar (UoG).

Methods An institution-based cross-sectional study was conducted from March to May 2019 among undergraduate medical and health science students in the UoG. Stratified multistage sampling was used. The eHealth literacy scale was used to measure eHealth literacy. A binary logistic regression model was fitted to measure association between eHealth literacy and the independent variables.

Results A total of 801 students participated in this study with a 94.6% of response rate. The majority (60%) were male and previously lived-in urban areas (68%). The mean eHealth literacy score was 28.7 and 60% of the participants possessed high eHealth literacy. Using health-specific Web sites (adjusted odds ratio [AOR] = 2.84, 95% confidence interval [CI]: 1.86–4.33), having higher Internet efficacy (AOR = 2.26, 95% CI: 1.56–3.26), perceived usefulness of the Internet (AOR = 3.33, 95% CI: 1.95–5.69), medical app use (AOR = 1.70, 95% CI: 1.13–2.55), being female (AOR = 1.55, 95% CI: 1.08–2.22), and being health informatics student (AOR = 2.02, 95% CI: 1.149–3.148) affect a high eHealth literacy level.

Conclusion The level of eHealth literacy in this study was moderate. Using specific reputable health Web sites, using smartphone medical applications, and Internet efficacy determine eHealth literacy significantly.

Keywords
- eHealth literacy
- health inequality
- Internet
- health information

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Background and Significance

Technologies during the past two decades have advanced remarkably.[1,2] This advancement has significantly changed the way health care is delivered.[3–6] This change in health care is greatly influenced by the ubiquity of the Internet and the subsequent health information availability.[4,5] The Internet has become a very common tool to seek information about health care and health conditions.[7] Health information is one of the most searched topics on the Internet.[8] The amassed health information on the Internet has resulted in more users turning to the Internet as their first source of health information.[9,10] However, the health information that is available on the Internet is of varying quality.[11] Users of health information on the Internet need a skill to identify and evaluate between these varying qualities.[12,13] This skill is known as eHealth literacy. "eHealth literacy is the ability of an individual to seek, find, understand, and appraise health information from electronic sources and apply the knowledge gained to addressing or solving a health problem."[12] Two scholars, namely Norman and Skinner, in 2006 first proposed the above definition for eHealth literacy.[12] They defined eHealth literacy by modifying the U.S. Institute of Medicine definition of health literacy.[14] Norman and Skinner's definition was contributory to the world of scholars as different studies used their definition.[15–20]

eHealth literacy is an essential skill for users of eHealth resources like the Internet.[12] In Ethiopia, during the past 7 years access to the Internet has increased exponentially.[21] This increased access inevitably paves the way for seekers of health information to engage.[22] Without the necessary eHealth literacy skills, seekers of health information will face difficulties in obtaining quality information.[23] A low level of eHealth literacy creates health inequality giving way for chronic diseases and higher health care cost expenditure, causing poor health outcomes.[24] A 2013 report by the World Health Organization indicated that low eHealth literacy brings about health inequality.[25] Health inequality refers to the "differences, variations, and disparities in the health achievements of individuals and groups."[26] Therefore, low eHealth literacy means higher health inequalities[25] that make eHealth literacy a prime public health agenda.[27] In addition, eHealth literacy contributes greatly to the acceptance of eHealth services and eHealth solutions.[28]

In 2016, the Ethiopian Federal Ministry of Health announced the inception of the Health Sector Transformation Plan (HSTP).[29] The HSTP has four main transformation agendas namely: woreda transformation; bringing quality and equity in health care services; compassionate, respectful and caring health professionals; and information revolution. The Information Revolution is one of the HSTP's transformation agendas, has aimed at improving the use of health information to drive decisions and employing eHealth solutions.[30] As eHealth literacy directly relates to health information use and eHealth solutions' acceptance, this study will contribute its fair share in inputting the Information Revolution agenda. Similarly, developing countries like Nigeria, Mali, and Kenya have put in place health sector transformation plans that included eHealth solution.[31–33]

Compared with the general population, medical and health science students are relatively equipped with electronic devices and the knowledge of utilizing them.[20,34] These students are well suited for such studies and they are the prospects of the health system. Therefore, this study aims to assess the level of eHealth literacy and the associated factors among medical and health science students who are the futures of the health system.

Methods

Aim, Design, and Setting of the Study

An institution-based cross-sectional study was performed from April to May 2019 at the University of Gondar, Ethiopia, to assess the eHealth Literacy of medical and health science students. The College of Medicine and Health Science at the University of Gondar is the pioneering medical school in Ethiopia.[35] As of March 2019, the college had around 5,000 undergraduate students enrolled in 12 undergraduate programs. The college alongside the University of Gondar Comprehensive Specialized Hospital works toward delivering and improving health care throughout Ethiopia.

Data Collection Instrument and Procedure

The data collection instrument used in this study is a pen and paper-based structured self-administered questionnaire. The questionnaire is designed in English and comprised four sections; namely socio-demographic, eHealth literacy, Internet-use-related, and organizational-related sections. Pretest of the data collection instrument was performed on 41 students, which is 5% of the total sample size. The pretest was conducted on medical and health science students from Debre Markos University. A different institution but similar type of participants, this strategy was chosen to prevent biases that may result from the actual participants being informed beforehand. The participants of the pretest were asked for their comments on the questionnaire. Subsequently, the research team appropriated the questionnaire based on comments from the participants. After the pretest, analysis of the eHealth literacy scale (eHEALS) data signified the instrument's reliability with an internal consistency Cronbach's alpha score of 0.82.

The questionnaires were distributed by four trained data collectors each with a minimum of BSc degree in Health Informatics. Training for data collectors was given for 7 days prior to data collection. The data collection took 4 weeks to complete and entailed stringent supervision throughout. Questionnaires were distributed to the study participants based on proportionally allocated sample sizes to each of the selected strata. Data collection was performed while students were in classes. Because most questionnaires were filled and returned at the same instant, coupled with the close supervision of the data collectors, the response rate was high.

Participants

Participants of this study are undergraduate medical and health science students. The students spend at least 4 years

and utmost 6 years based on the respective study lengths of their undergraduate program. Upon completion of their study, students are recruited in health facilities where they are expected to be involved in providing care for patients and utilizing electronic health systems including the Internet to excel the health care.

All undergraduate medical and health science students were included in the study.

Sample and Procedure

The sampling technique used in this study is stratified multistage sampling enabling a fair representation of subpopulations. Stratification was done by considering field of study and year of study. Therefore, the population was stratified based on fields of study and in each stratum, there is a substratum named year of study that comprises at least four groups. This stratification technique is chosen to account for differences between field of studies and year of study. As each field of study has its own curriculum and respective study length, it is essential considering it while studying such a topic.[36,37] Information about the fields of study is provided in ►Table 1.

The sample size was then allocated in a proportional manner to each stratum in the study population. Primarily, sample size was determined using the single population proportion formula and it was 385. However, as the study employed multistage sampling, it was multiplied by a design effect of two and adding a 10% of nonresponse rate the final sample size was 847.

Measurement

Dependent Variable

eHealth literacy was measured using the eHEALS. eHEALS is an 8-item scale developed in 2006 by Norman and Skinner.[38] In this study, participants who scored greater than the mean eHEALS score were categorized as having "high eHealth literacy."

Even though other measurement tools[39–41] of eHealth literacy do exist, none are checked for their validity in a variety of languages and contexts as the eHEALS. A 2015 systematic review confirmed that 85% of studies on eHealth literacy around the world used the eHEALS while the rest 15% used unique tools each which has not been validated elsewhere.[42] Therefore, this study employed the eHEALS to measure eHealth literacy.

Independent Variable Measurements

Self-rated health status: Measured with the question "In general, How would you describe your current health?" with "excellent," "very good," "good," "fair," and "poor" responses.[43]

Physical activity: Measured with the question "During the past month, other than your regular job, did you participate in any physical activities or exercise, such as running, calisthenics, football, gardening, or walking for exercise?" with a "yes/no" responses.[44]

Table 1 Socio-demographic information of medical and health science students of University of Gondar in 2019

Variables	Frequency (%)
Age in years	
≤21	414 (51.7%)
>21	387 (48.3%)
Gender	
Male	483 (60.3%)
Female	314 (39.7%)
Religion	
Orthodox	605 (75.6%)
Protestant	125 (15.6%)
Muslim	58 (7.3%)
Catholic	10 (1.3%)
Others	2 (0.2%)
Field of study	
Health informatics	58 (7.2%)
Health officer	76 (9.5%)
Nurse	100 (12.5%)
Physical therapy	52 (6.5%)
Medicine	378 (47.2%)
Pharmacy	92 (11.5%)
Optometry	45 (5.6%)
Previous residence	
Rural	253 (31.7%)
Urban	545 (68.3%)
Mother's educational status	
Unable to read and write	210 (26.5%)
Read and write only	101 (12.8%)
Primary education	49 (6.2%)
Secondary education	101 (12.8%)
Diploma or above	331 (41.8%)
Father's educational status	
Unable to read and write	134 (17.5%)
Read and write only	105 (13.7%)
Primary education	37 (4.8%)
Secondary education	79 (10.3%)
Diploma or above	409 (53.5%)
Physical activity	
Active	164 (20.8%)
Inactive	627 (79.2%)

Internet efficacy: Measured with a 5-item scale.[45] Internet efficacy assesses students' perceived efficacy on using the Internet.

Health specific Web site use: Defined as directly accessing health-specific Web sites for health information purpose.

Those students who use specific health Web sites for information needs from the web are labeled as "users of specific websites" and those students who do not use specific Web sites to access health information are labeled as "nonusers of specific websites."

Statistical Analysis

Data were entered into Epi Info 7. The entered data were then transferred to Statistical Package for Social Science (SPSS) version 23 for analysis. Data were checked for consistency and missing values were handled properly.[46] Normality test for relevant variables was performed using the Shapiro–Wilk test. Internal consistency for the eHealth literacy was determined using the Cronbach's alpha and found to be 0.82, which is highly consistent.[47] Descriptive statistics was used to describe variables (both dependent and independent). Dependent variable was described using mean score and percentage.

A binary logistic regression model was fitted to identify and measure association between the dependent variable and independent variables. Variables with a p-value of less than 0.2 in the bivariable binary logistic regression were included in the multivariable logistic regression model. Adjusted odds ratio (AOR) with a p-value <0.05 and 95% confidence interval (CI) was used to measure the association between the dependent variable and the independent variables. Overall model fitness was checked with the Hosmer–Lemeshow test and the model was fit with a p-value of >0.05.

Result

This study determined the level of eHealth literacy of medical and health science students, identified the factors associated with it, and quantified the strength of the association.

A total of 801 respondents accounting for a response rate of 94.6% responded to the self-administered questionnaire. Majority of the respondents (483; 60%) were male and the mean age was approximately 21.7 years (standard deviation [SD] $\pm$ 2.1 years) with a maximum and a minimum age of 18 and 32 years, respectively. The largest groups were made up of medical students (378; 47.2%), Christian orthodox (605; 75.6%) by religion, and those who lived in urban areas (545; 68.3%). In addition, respondents were classified as clinical student or nonclinical student. Clinical students were slightly higher, accounting 50.9%, compared with their counterparts. ►Table 1 provides detailed information about socio-demographic characteristics.

Perceived Organizational Factors

Respondents were asked to rate access to computer in the university. About 22% of them perceived there is adequate access to computer. About 29% of the respondents also perceived their access to the Internet in their university as adequate. In addition, majority of the respondents (615; 76.8%) have taken computer-related courses offered by the university. Nonetheless, only 18.5% of the respondents believed that the course they took is helpful in searching for health information on the Internet. This can justify the logistic regression result, which found no significant relation between taking information technology-related courses and eHealth literacy. Detailed information about organizational factors is provided in ►Table 2.

Table 2 Perceived organizational factors among medical and health science students of University of Gondar in 2019

Variables	Frequency (#)	Percentage (%)
Perceived access to computers provided by the college		
Inadequate	314	39.2
Fair	314	39.2
Adequate	173	21.6
Perceived access to the Internet provided by the college		
Inadequate	251	31.3
Fair	320	40.0
Adequate	230	28.7
Have taken computer-related course		
Yes	615	76.8
No	186	23.2
Rating of the course(s) in relation to health information searching		
Inadequate	286	46.5
Fair	215	35.0
Adequate	114	18.5

eHealth Literacy

The mean eHealth literacy score of the respondents, measured with the eHEALS, was 28.7. In this study, more than half of (60%) the respondents are found to have a high eHealth literacy level. The majority of the respondents with high eHealth literacy were male students (246; 51.2%) and 314 (65.4%) were from urban areas. Respondents were classified with regard to their clinical exposure as clinical and preclinical year students. Out of 391 clinical year students, 238 (60.9%) have high eHealth literacy. Among medical students (378), 208 (55%) have a high eHealth literacy level. The median hours per week spent on the Internet among the respondents who have high eHealth literacy level was 14 hours (interquartile range: $\pm$ 17.5 hours) per week.

Factors Affecting eHealth Literacy

The multivariable binary logistic regression analysis revealed that using specific Web sites that are designed for health information purpose, using medical-related mobile applications frequently, student's Internet efficacy, perceived Internet usefulness to make decisions about health, gender, and field of study were found to be significantly associated with the eHealth literacy level of the respondents. The report includes AOR and CI for each significant variable.

In this study, the use of health specific sites was found to affect the level of eHealth literacy. The odds of having a high eHealth literacy was about three times (AOR = 2.84, 95% CI:

1.86–4.33) higher among students who use one or more specific sites for accessing health information than who do not use specific sites. With regard to Internet efficacy, the odds of having high eHealth literacy was about twice (AOR = 2.26, 95% CI: 1.56–3.26) higher among students with good Internet efficacy when compared with students who have poor Internet efficacy. The odds of having high eHealth literacy was about three times (AOR = 3.33, 95% CI: 1.95–5.69) higher among students who felt the Internet is useful in helping make health decision compared with those who felt it was not useful. The use of medical applications was also significantly associated and the odds of having high eHealth literacy was about two times (AOR = 1.70, 95% CI: 1.13–2.55) higher among students who use medical applications more frequently when compared with students who do not use.

With regard to gender, female students were 55% (AOR = 1.55, 95% CI: 1.08–2.22) more likely to having high eHealth literacy compared with their male counterparts. Similarly, the odds of having high eHealth literacy was two times (AOR = 2.02, 95% CI: 1.149–3.148) higher among health informatics students when compared with other health science students. ►Table 3 shows the bivariable and multivariable binary logistic regression results in detail.

Discussion

The present study revealed two key findings. First, the mean eHealth literacy level of students, determined by using the eHEALS, was 28.7 (SD ± 5). In addition, 60% of the students were labeled as having high eHealth literacy. The second main finding is that using health-specific Web sites, having higher Internet efficacy, perceived usefulness of the Internet, medical app use, being female, and being a health informatics student were found to contribute to a high eHealth literacy level. The following paragraphs and subsections interpret the current study's findings in light of similar studies around the world.

eHealth Literacy

The currents study's mean eHEALS score of 28.7 is higher compared with a study done in a Bangladeshi university,[19] which reported a mean score of 27.5. This difference might be due to the nature of the study participants of the former study as they were all nonhealth students. Studies have shown that being a health student or being a health major increases students' level of eHealth literacy.[36,37] A study from an Iranian university among medical and health science students also reported a slightly lower level of eHealth literacy with a mean eHEALS score of 28.[20] Compared with the present study participants, the Iranian participants lacked access to credible health-specific Web sites.[20] This disparity would be explained by a study that reported the use of specific Web sites with credible health information increases the level of eHealth literacy.[48] A 2010 study done in Canada reported a similarly low finding as to the Iranian study.[16] Generally, eHealth literacy evolves with time[49] and the time difference between the Canadian study and the present study explains the observed disparity in eHealth literacy levels. The present study found that 480 (60%) of the students have high level of eHealth literacy. This finding is significantly higher compared with studies done in Vietnam among medical and pharmacy students and in North Korea among nursing students where only 46 and 51% were found to have high eHealth literacy levels, respectively.[18,34]

In contrast to the present study, the finding from a Sri Lankan study conducted among selected nursing students with a mean score of 31 was significantly higher compared with the current study.[17] The higher level of eHealth literacy could be due to the convenient sampling method used by the Sri Lankan study; hence, convenient sampling is prone to bias and overestimation.[50]

Factors Affecting eHealth Literacy

In this study, eHealth literacy was about three times higher among users of specific Web sites when compared with general (nonspecific) Web site users. This result is in line with an Iranian study among medical and health science students where using specific Web sites was a significant predictor of eHealth literacy.[20] Using specific reputable sites increases eHealth literacy by boosting the confidence of the users to select and apply information to make appropriate health decisions.[11] Another finding of the present study is that female students have about two times higher odds compared with their male counterparts to achieve high eHealth literacy levels. This might be because the majority of female students from the current study (66%) use health-specific Web sites. In addition, a study has shown that females spend more time on the Internet compared with males.[51] The study from Vietnam among medical and pharmacy students is in accordance with the above result.[34] On the other hand, the Iranian study on medical and health science students found out that male students have a 27% higher probability to have high eHealth literacy.[20] Arguably, several studies found no significant difference between male and female students regarding eHealth literacy.[19,52–54]

The present study also found that perceived usefulness of the Internet to make health decisions is associated with the level of eHealth literacy. Exact same findings were obtained suggesting a strong correlation between the perceived usefulness of the Internet to make health decisions and level of eHealth literacy.[18,53,55] The use of medical applications was also significantly associated with the level of eHealth literacy. Over recent years, medical applications have proven to be more than standalone apps[56,57] by enabling access and communication of health information which contribute to eHealth literacy.[58–62]

The odds of having high eHealth literacy is about two times higher among students with good Internet efficacy compared with those with poor Internet efficacy. This result is in harmony with a Jordanian[53] and a South Korean[52] study both conducted among nursing students. It is indisputable that having better skills on the Internet brings about positive changes in the levels of eHealth literacy.[63]

Table 3 Factors associated with eHealth literacy of medical and health science students of University of Gondar in 2019

Variables	eHealth literacy		Crude OR	Adjusted OR
	Low *N* (%)	High *N* (%)	(95% CI)	(95% CI)
Gender				
Male	237 (29.6%)	246 (30.7%)	1	1
Female	129 (16.1%)	189 (23.6%)	1.41 (1.01–1.88)*	**1.55 (1.08–2.22)****
Previous residence				
Rural	133 (16.7%)	120 (15.0%)	1	1
Urban	231 (28.9%)	314 (68.3%)	1.50 (1.12–2.03)*	1.27 (0.86–1.85)
Internet efficacy				
Poor	232 (29.0%)	115 (14.4%)	1	1
Good	134 (16.7%)	320 (40.0%)	4.82 (3.56–6.510)*	**2.26 (1.56–3.26)*****
Field of study				
Health sciences	181 (22.6%)	184 (23.0%)	1	1
HI	15 (1.9%)	43 (5.4%)	2.82 (1.51–5.26)*	**2.02 (1.15–3.15)*****
Medicine	170 (46.4%)	208 (47.2%)	1.20 (0.90–1.60)	0.88 (0.60–1.28)
Time spent on the Internet (per week)				
≤14 h	230 (28.7%)	157 (19.6%)	1	1
>14 h	136 (17.0%)	278 (34.7%)	3.00 (2.24–3.99)*	1.35 (0.931–1.949)
Use of specific site				
Nonusers	199 (24.8%)	70 (8.7%)	1	1
Users	167 (20.8%)	365 (66.4%)	6.21 (4.47–8.62)*	**2.84 (1.86–4.33)*****
Internet usefulness				
Not useful	123 (15.4%)	25 (3.1%)	1	1
Unsure	54 (6.8%)	33 (4.1%)	3.01 (1.63–5.53)*	1.62 (0.81–3.24)
Useful	188 (23.6%)	374 (46.9%)	9.79 (6.15–15.57)*	**3.33 (1.95–5.69)*****
Years of study				
1–3 y	239 (29.8%)	198 (24.7%)	1	1
4–6 y	127 (15.9%)	237 (29.6%)	2.25 (1.69–3.00)*	1.38 (0.76–2.51)
Clinical year status				
Preclinical	213 (26.8%)	191 (24.0%)	1	1
clinical	153 (19.2%)	239 (30.0%)	1.73 (1.30–2.29)*	1.07 (0.59–1.92)
Medical app use				
Nonuser	187 (23.6%)	91 (11.5%)	1	1
User	175 (22.1%)	338 (42.7%)	3.97 (2.91–5.41)*	**1.70 (1.13–2.55)****

Abbreviations: CI, confidence interval; HI, health informatics; OR, odds ratio.
*p-Value ≤ 0.05 for bivariable analysis.
**p-Value < 0.05.
***p-Value < 0.001 for multivariable analysis.

In this study, time spent on the Internet was found to be uncorrelated with the level of eHealth literacy. Similarly, studies from Jordan,[53] South Korea,[52] and Sri Lanka[17] found no significant correlation. On the contrary, the Bangladeshi study found a significant correlation with daily users of the Internet having three times higher odds compared with users who use it once a month.[19] Similarly, the Sri Lankan study among 440 nursing students found a significant association between time spent on the Internet and eHealth literacy.[54] These differences could be attributed to the purpose of using the Internet,[64,65] students spent most of their time on the Internet using social media sites, and the information on social media tends to be more of an opinion than credible expert explanation.[66] Physical activity was also found to be uncorrelated with students' level of eHealth literacy, which is contrary to a finding of a Greek study among Greek citizens where those who are active were 30% more likely to have high eHealth literacy. The difference

could be attributed to the reason that majority of the participants from the Greek study are older adults where physical activity is part of their healthy lifestyle. Studies have shown that healthy lifestyles are related to eHealth literacy.[36,37,67]

The external validity of the study is something that is well figured out from the start. The study employed a probability sampling technique and the sample size was determined statistically, which ensured a fair representation of the study population. Thus, the results of this study can be generalized to similar populations from developing countries in higher education institutions. This study's results are applicable to undergraduate students from medical and health science fields of study.

Conclusion

The importance of eHealth literacy in any health system should not be overlooked. Particularly, developing countries with weak health system can use it to a great benefit. Medical and health science students are the future of the health system. Appropriate intervention at this stage can hugely impact the health system. The level of eHealth literacy in this study was found to be moderate. Using specific reputable health Web sites, using smartphone medical applications, and Internet efficacy determine eHealth literacy significantly. Tailored eHealth literacy content including the use of health specific Web sites and skills of using the Internet should be embedded in the students' curriculum to increase student's eHealth literacy skills.

Limitations

As this study employed a cross-sectional study design, the dependent and independent variables were assessed simultaneously. Thus, it lacks evidence of a temporal relationship between dependent and independent variables. Future studies shall focus on assessing temporal relationships between eHealth literacy and predictor variables. Additionally, this study relied on self-reported data, which makes it prone to recall bias. Due to the limited time and cost allocated to this study, it was difficult to employ experimental methods that account for recall bias. Future research studies shall focus on measuring eHealth literacy using actual performance-based measurements and assessing factors by administering interventions. Thus, we suggest interventional study designs for future researchers on eHealth literacy.

Clinical Relevance Statement

eHealth literacy has the potential to transform a health system into an efficient entity. Having students and professionals equipped with the skill of eHealth literacy greatly contributes to the reduction of medical errors and to the increase of accuracy in diagnosis and treatment. In the clinical setting, the use of eHealth resource like the Internet has become more common but eHealth literacy of the users has not been taken into account. This use should be supported not only by the institutions that recruit professionals but also by the institutes that nurture these professionals.

Multiple Choice Questions

1. Which one of the following variables is associated with the level of students' eHealth literacy?
   a. Time spent on the Internet
   b. Being preclinical student
   c. Using health specific Web sites
   d. Students' year of study

   Correct Answer: The correct answer is option c. From the alternatives listed above, the result of the binary logistic regression identified using health-specific Web sites as a factor that influences students' eHealth literacy level.

2. Which one of the following measures was used to determine the magnitude of the association between the dependent variable (eHealth literacy) and the independent variables?
   a. Relative risk
   b. Odds ratio
   c. Confidence interval
   d. Hazard ratio

   Correct Answer: The correct answer is option b. The measure used in this study to determine the relationship was odds ratio because the analysis used was logistic regression.

Protection of Human and Animal Subjects

Ethical clearance was obtained from research and ethical review board of University of Gondar. The study participants were informed about the objective and expected outcomes of the study and written consent was available guaranteeing choices of participation or refusal. Thus, participants read the consent form and provided a written approval or refusal for participation. All the information recorded was anonymous and kept confidential throughout the study.

Conflict of Interest

None declared.

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