

ORIGINAL ARTICLE

Perceived Transactional eHealth Literacy and Its Association with the Demographic Characteristics among Undergraduate Level Students of Dhaka City in Bangladesh

Ashiqur Rahman¹, Nusrat Jahan Lima², Abu Sadat Mohammad Nurunnabi³, Nasif Khalid Shwadheen⁴, Md. Meshbahur Rahman⁵, Hafiza Sultana¹

ABSTRACT

Background: The number of internet user for health information is increasing day by day. eHealth literacy can promote knowledge and engagement, which will increase the frequency of information-seeking, effective patient-healthcare provider communication, proactive health behaviors, and better health related quality of life through effective use of internet. **Objective:** To assess eHealth literacy and perceived trust on digital channels for available health information among the undergraduate level students of Dhaka City, Bangladesh. **Methods:** This cross-sectional study was conducted, between January and December of 2023, among the undergraduate students hailing from four institutions of Dhaka city namely Jagannath University, Daffodil International University, Enam Medical College and Mandy Dental College. A total of 384 students participated in this study. pretested questionnaire including Transactional eHealth Literacy Instrument was administered for data collection. **Results:** Among 384 students, most of them were ≥ 21 years. Male students were predominant. Most of the respondents used internet for health information (55.5%) and preferred digital channels (89%) over broadcast channels for health information. The mean score of eHealth literacy was 3.56. Translational literacy was highest among the four categories (mean=3.80). The scores for communicative, critical, and functional literacy were 3.34, 3.44, and 3.73, in that order. Thus, communicative literacy is the area with the lowest literacy for the respondents. Significantly higher eHealth literacy was found among ≥ 21 years students, and students of medical background, used internet within the last week and digital channels users for health information ($P > 0.05$). However, no difference was found between male and female students. **Conclusion:** Our data revealed that eHealth literacy among the students was moderate. Improvement of eHealth literacy is needed for mass health promotion in the country.

Keywords: eHealth, health literacy, undergraduate students, Bangladesh

International Journal of Human and Health Sciences Vol. 08 No. 04 October'24

DOI: <http://dx.doi.org/10.31344/ijhhs.v8i4.730>

INTRODUCTION

Health literacy is one of the newer concepts of health promotion. It indicates the people's ability to process and access health related information to make appropriate decisions.^{1,2} It allows patients to take control of their own well-being by making smart healthcare choices. It improves communication with doctors and gives patients the information they need to advocate for themselves in a medical setting. Prevention of health problems

and protection of our health, better management of those problems and undesired situations can be managed by appropriate health literacy.² Even people who read well and are comfortable using numbers can face health literacy issues when they are not familiar with medical terms or how their bodies work. It is essential for control and prevention of diseases.^{3,4} Low health literacy suggested as a global problem and a challenge for the 21st century.⁵

1. Department of Health Education, National Institute of Preventive and Social Medicine (NIPSOM), Dhaka-1212, Bangladesh.
2. Department of Conservative Dentistry, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka-1000, Bangladesh.
3. Dalla Lana School of Public Health, University of Toronto, ON, Canada.
4. Department of English, Daffodil International University, Savar, Dhaka-1216, Bangladesh.
5. Department of Biostatistics, National Institute of Preventive and Social Medicine (NIPSOM), Dhaka-1212, Bangladesh.

Correspondence to: Dr. Ashiqur Rahman, Department of Health Education, National Institute of Preventive and Social Medicine (NIPSOM), Dhaka-1212, Bangladesh. Email: ashiqurrahmanmdch@gmail.com

Health information is now more readily available than ever on the internet. An increasing number of individuals are using internet to interact and conduct informational searches in their personal and professional life as a result of the internet's quick expansion.⁶⁻⁸ People frequently use the internet to look up medical and pharmacological information, and they use this knowledge to take a more active role in their healthcare.^{6,7} However, these sources are diversified and full of inaccurate and misleading information, as we specially observed during the COVID-19 pandemic.⁸ Mass population hardly demarcate real and fake network information, which puts them at risk.⁸ The public must be able to rapidly and accurately access reliable health information through networks which is now understood that increasing the population's e-health literacy is a successful strategy for obtaining high-quality, online health resources.⁶⁻⁸

In 2001, Eysenbach defined eHealth, as "the delivery of or enhancement of health services and information via the internet and related technologies and is an emerging topic at the crossroads of medical informatics, public health, and business".⁹ In a larger sense, the phrase describes not only a technological advancement but also a mindset, a style of thinking, an attitude, and a dedication to networked, global thinking in order to use information and communication technology to improve health care locally, regionally, and globally.^{2,9} The concept of e-health literacy was developed from the concept of e-health. The ability to seek, discover, and access health information from electronic resources to address health issues was initially described as electronic health literacy (eHealth literacy).^{10,11} eHealth literacy is outlined in four literacies by the Transactional Model of eHealth Literacy. These are functional, communicative, critical and transitional literacy. The model suggests that such literacy can promote knowledge and engagement of patients, which will increase the frequency of information-seeking, effective patient-healthcare provider communication, proactive health behaviors, and better health related quality of life. Based on this model the transactional eHealth literacy scale was developed to evaluate the eHealth literacy in more comprehensive way.¹¹

Bangladesh is a developing country of South Asia that has made significant strides in improving its healthcare system in recent years, including the

adoption of eHealth technologies. By creating a digital health strategy, the nation will be able to enhance its infrastructure, connection, quality, and validation of digital applications in healthcare system in a more structured and planned manner.¹² The internet is hybrid and comprised of various communication channels and sources. Without accounting for the heterogeneity of these digital channels oversimplifies the internet as a tool to provide health related information to diverse populations.^{13,14} Low eHealth literacy negatively influences the perceived trust of the consumers on digital health information channels.^{10,14} There is limited information available about eHealth literacy among Bangladeshi population.¹⁵ Hence, this study aims to assess the eHealth literacy and its association with the demographic characteristics among diverse groups of undergraduate level students of Bangladesh.

METHODS

This cross-sectional study was conducted in four university level institutes of Dhaka, Bangladesh. A total of 384 students (undergraduate level) hailing from Jagannath University, Daffodil International University, Enam Medical College and Mandy Dental College participated in this study between January and December of 2023. Convenience sampling technique was used for data collection. The institutes and the respondents were also selected conveniently.

Our inclusion criteria included students studying in bachelor level and willing to participate through informed written consent. Those who do not use cell phone or computer and non-Bangladeshi nationalities were excluded from this study. Respondents' socio-demographic variables such as age, educational status, internet use for health information and preferred channels for health information were considered independent variables. On the other hand, eHealth literacy was considered as dependent variables.

A pre-tested structured questionnaire consists of "Transactional eHealth Literacy Instrument" was used for data collection. The questionnaire includes the socio-demographic characteristics related questions, eHealth literacy related questions and perceived trust on digital channels related questions. Transactional eHealth literacy instrument includes 18-items using a 5-point

Likert-type scale, where 1 = strongly disagree and 5 = strongly agree. The four competencies this measure includes are: (1) Functional literacy (e.g., "I can summarize basic health information from the Internet in my own words."); (2) Communicative literacy (e.g., "I have the skills I need to talk about health topics on the Internet with multiple users at the same time."); (3) Critical literacy (e.g., I can tell when health information on the Internet is fake."); and (4) Translational literacy (e.g., "I can use the Internet as a tool to improve my health.") items. The total score of eighteen items was summed up. A higher score considered as better eHealth literacy level.

At first the questionnaire was prepared in English. Translation from English to Bangla was done in Back Translation Method.¹⁶ After preparing initial English version questionnaire, it was translated into Bangla. Experts of public health specialist and English linguist reviewed the Bangla version. Then a back translation was done by blindly from Bangla to English. Comparing the two versions a draft questionnaire was made. Then pretesting was done by collecting data from two resembling institutes. Response processes of the respondents were evaluated. Then data were coded and entered for analysis. Data was checked by making a master sheet. The level of internal consistency of the Transactional eHealth Literacy Instrument was (Cronbach's $\alpha=0.937$) excellent. Some minor corrections were made according to the findings of the pretesting. Finally, the questionnaire was checked and approved by the supervisor before the final data collection.

To ensure reliability and validity of the study results, we used a number of techniques: (i) conducted pre-testing of our study, and revised the questionnaire; (ii) collected the data by a trained data collection team; (iii) checked the data and fixed errors by observing descriptive statistics; (iv) employed Cronbach's alpha; (v) employed updated version of statistical software in data analysis, and (vi) finally, we randomly re-observed the eHealth literacy and perceived trust on various digital channels. In data analysis, the descriptive statistics were performed first to present the socio-demographic characteristics and mean eHealth literacy and perceived trust levels of the participants. To assess whether the eHealth literacy and perceived trust scores follow a normal distribution, we performed Kolmogorov-Smirnov (K-S) and Shapiro-Wilk tests and observed the

p-values associated with those tests. Since both the eHealth literacy and perceived trust scores did not follow normal ($P_{\text{Kolmogorov-Smirnov}} = <0.001$; $P_{\text{Shapiro-Wilk}} = <0.001$), independent samples Mann-Whitney U Test was done to determine the relationship of other variables with eHealth literacy. P-value of 5% was considered significant at the 95% Confidence Interval (CI) ($P > 0.05$). All the analysis was performed using MS Excel 2019 and SPSS (Version 25.0) software.

RESULTS

The majority (33%) of the study participants were 21 years old. The mean age of the respondents was 20.98 years, and the standard deviation was 1.18. Of the respondents, 53.4% were male and 46.6% were female. Most of the respondents used internet for health information (55.5%) and preferred digital channels (89%) for health information (Table 1). Among the four factors, highest level of literacy was found in translational literacy (mean=3.80) among the respondents. Functional literacy, critical literacy and communicative literacy was respectively 3.73, 3.44 and 3.34. Therefore, the low literacy was seen in communicative literacy. Overall mean eHealth literacy was 3.56 among the Bangladeshi university students. The mean literacy of the items was in a range between 3.08 to 3.95. The highest (3.95) literacy was found in person's ability to learn about topics relevant to the respondents. The lowest (3.08) literacy was found in respondents' ability of connecting personally with health information sharers (Table 2). A significant difference in respondents' eHealth literacy with socio-demographic characteristics was observed. The average eHealth literacy score was significantly higher among higher aged 21 years and above than that of the younger students aged 20 and below (mean eHealth literacy score 3.61 ± 0.51 vs. 3.47 ± 0.52 ; $P=0.006$). Similarly, the mean eHealth literacy score was higher among students having medical background (medical and dental colleges) compared to their non-medical counterpart ($P=0.012$). Moreover, eHealth literacy score was higher among those who used internet for last week within last week (3.70 ± 0.42 vs. 3.37 ± 0.57 ; $P=0.001$) and preferred digital channels over broadcast channels for health information (3.58 ± 0.52 vs. 3.37 ± 0.50 ; $P=0.005$). However, no difference was found between male and female students ($P=0.389$). (Table 3).

Table 1: Demographic characteristics of the study participants (n=384)

Characteristics	Frequency	Percentage
Age (in complete years)		
20 and below	142	37
21 and above	242	63
Sex of the respondents		
Male	205	53.4
Female	179	46.6
Type of educational institute of the students		
Medical	200	52.1
Non-medical	184	47.9
Used internet within last one week for health information		
Yes	213	55.5
No	171	44.5
Preferred channels for health information		
Digital channels	342	89
Broadcast channels	42	11

DISCUSSION

Our study revealed that the overall mean score across the eHealth literacy scale was 3.56 among the 384 survey participants. This result is consistent with the results of some of the previous reports. For example, a study conducted in China using an online survey, the mean score of eHealth literacy among the university students was found 3.00 ± 0.49 among 1060 participants.¹⁷ A study involving university students from China, Malaysia, and the Philippines found that the digital health literacy score for university students in East Asia and Southeast Asia was 2.89 ± 0.42 .¹⁸ A study among Vietnamese university students revealed, the mean score of eHealth literacy regarding COVID-19 was 2.87 ± 0.32 .¹⁹ Another research among university students from Ecuador, Spain and Puerto Rico revealed that the mean score for eHealth literacy was 2.94 ± 0.57 .²⁰

In the present study, the mean of functional literacy was found $3.73 (\pm 0.67)$, which is higher than that of Vietnamese students (3.50 ± 0.80) as found in a previous study.²¹ However, our result is lower than that of American cancer caregivers (4.43 ± 0.60) as reported in a previous study.²² Conversely, the mean of communicative literacy was in our study was $3.34 (\pm 0.69)$, which is lower than that of

Vietnamese students (3.40 ± 0.80)²¹ and American cancer caregivers (3.85 ± 3.75).²² The mean of critical literacy was found $3.44 (\pm 0.61)$, which is slightly higher than that of Vietnamese students (3.40 ± 0.80)²¹, but lower than that of American cancer caregivers (3.78 ± 3.60).²² Similarly, the mean translational literacy as we observed was $3.44 (\pm 0.61)$, which is slightly higher than that of Vietnamese students (3.40 ± 0.80)²¹, but lower than that of American cancer caregivers (4.10 ± 3.00).²² Translational literacy had the greatest extent of literacy observed among the four categories (mean=3.80). The scores for communicative, critical, and functional literacy were 3.34, 3.44, and 3.73, in that order. Therefore, communicative literacy is the area with the lowest literacy was observed.

According the study findings, sex of the respondents is not a predictor of eHealth literacy, which is similar to some other previous findings.^{15,23-25} Arguably, another previous study found significant difference between sex of the students regarding eHealth literacy.²⁶ Among the respondents, medical students had higher eHealth literacy than their non-medical counterpart, which is also consistent with the previous studies.^{27,28} The students who use the internet frequently have higher eHealth literacy, which was found statistically similar to the findings of a previous study done in Bangladesh.¹⁵ Preferring digital channels over broadcast channels for obtaining health information had statistically significant relationship with eHealth literacy of the respondents of our study, which was also consistent with the findings of the previous study.²⁹

Since this investigation used a cross-sectional study design, assessments of the independent and dependent variables were completed concurrently. As a result, there is no proof that the dependent and independent variables have a temporal connection. Subsequent research endeavors will concentrate on evaluating the temporal associations among predictor factors and eHealth literacy. Furthermore, this study might be subject to a recall bias due to its reliance on self-reported data by the respondents.

CONCLUSION

It is imperative that eHealth literacy be given due consideration in any healthcare system. It is highly beneficial for developing countries like Bangladesh, especially in areas where there are

Table 2: Transactional eHealth literacy of the participants (n=384)

Items		Responses (%)					Mean (SD)
		1	2	3	4	5	
Factor 1: Functional							
Q1	Summarize basic health information	4.7	6.3	24	58.6	6.5	3.56(.89)
Q2	Know to access basic health information	4.4	4.2	9.6	67.2	14.6	3.83(.88)
Q3	Create messages that describe health	2.1	7.8	16.4	61.2	12.5	3.74(.85)
Q4	Tell someone how to find basic health	1.8	5.5	21.4	56.3	15.1	3.77(.84)
Factor 2: Communicative							
Q5	Inform goals and help others have it	.8	9.1	21.9	59.4	8.9	3.66(.79)
Q6	Talk about health topics with users	3.1	20.3	27.9	41.1	7.6	3.30(.98)
Q7	Identify the emotion of health conversation	4.2	12	29.9	48.2	5.7	3.39(.92)
Q8	Contribute to health conversations	4.9	16.9	31.5	41.4	5.2	3.25(.96)
Q9	Connections with other to share information	4.4	27.3	30.5	31	6.8	3.08(1.0)
Factor 3: Critical							
Q10	Identify credible source of health information	2.9	11.5	42.7	38.5	4.4	3.30(.84)
Q11	Identify health information is fake	3.6	14.6	29.7	47.9	4.2	3.34(.91)
Q12	Identify website is safe for sharing personal health	2.6	14.8	29.7	45.1	7.9	3.41(.92)
Q13	Identify information is relevant to needs	2.3	4.7	25	58.9	9.1	3.68(.80)
Q14	Know how to evaluate credibility of others	2.1	11.7	28.1	52.1	6	3.48(.86)
Factor 4: Translational							
Q15	Learn to massage health in a positive way	1.6	3.6	20.6	63.8	10.4	3.78(.74)
Q16	Use the internet as a tool to improve health	.3	7	20.1	60.9	11.7	3.77(.75)
Q17	Use the information to make a decision	1	6.5	20.8	61.7	9.9	3.73(.77)
Q18	Learn about topics had relevant to me	4.7	6.3	24	58.6	6.5	3.95(.68)
Factor scores							
Factor 1: Functional							3.73
Factor 2: Communicative							3.34
Factor 3: Critical							3.44
Factor 4: Translational							3.80
All							3.56

Table 3: Association between demographic characteristics and eHealth literacy of the participants (n=384)

Characteristics	Mean (SD)	Mean Rank	Mann-Whitney U	Wilcoxon W	Z	P Value
Age (in complete years)						
20 and below	3.47(0.52)	172.31	14316.500	2.4469.500	-2.737	.006*
21 and above	3.61(0.51)	204.34				
Sex of the respondents						
Male	3.58(0.55)	197.04	17416.000	33526.000	-0.861	.389
Female	3.54(0.47)	187.30				
Type of educational institute of the students						
Medical	3.61(0.50)	206.12	15676.000	32696.000	-2.514	.012*
Non-medical	3.51(0.60)	177.70				
Used internet within last one week for health information						
Yes	3.70(0.42)	227.19	10822.500	25528.500	-6.854	.001*
No	3.37(0.57)	149.29				
Preferred channels for health information						
Digital channels	3.58(0.52)	198.11	5264.500	6167.500	-2.832	.005*
Broadcast channels	3.37(0.50)	146.85				
*Statistically Significant (P < .05)						

Mann-Whitney U test and Wilcoxon W test were done to see association between different socio-demographic characteristics and eHealth literacy; *= statistically significant

underdeveloped health systems. The future of the health system lies on university students. At this point, the health system can be greatly impacted by appropriate action. This study's eHealth literacy level was determined to be moderate among undergraduate students of Dhaka City, Bangladesh. eHealth literacy is heavily influenced by type of institute, internet use and preferring reliable health websites for health information. To improve students' eHealth literacy, curriculum should incorporate digital citizenship education and training³⁰ specifically designed to instruct on how to access health-related websites, recognize eHealth literacy content and misinformation, as well as internet usage techniques, etiquette and security.

Acknowledgements: The authors would like to acknowledge the technical support provided by the Department of Health Education, National

Institute of Preventive and Social Medicine (NIPSOM), Dhaka, Bangladesh, and sincere participation of the students from different institutions.

Conflict of Interest: None declared by the authors.

Funding Statement: No external funding received.

Ethical Clearance: This study was approved by the Institutional Review Board of the National Institute of Preventive and Social Medicine (NIPSOM), Dhaka, Bangladesh (NIPSOM/IRB/2023/06).

Authors' Contribution: Conception and design of the study: AR; Questionnaire development: AR, NJL, ASM; Data collection, compilation and analysis: AR, NJL, NKS, MMR; Literature search and critical review: AR, ASM; Manuscript writing, editing, revision and finalization: AR, NJL, ASM, NKS, MMR, HS.

REFERENCES

1. Berkman ND, Davis TC, McCormack L. Health literacy: what is it? *J Health Commun.* 2010;15(Suppl 2):9-19.
2. Sørensen K, Van den Broucke S, Fullam J, Doyle G, Pelikan J, Slonska Z, et al. Health literacy and public health: a systematic review and integration of definitions and models. *BMC Public Health.* 2012;12:80.
3. Richtering SS, Hyun K, Neubeck L, Coorey G, Chalmers J, Usherwood T, et al. eHealth literacy: predictors in a population with moderate-to-high cardiovascular risk. *JMIR Hum Factors.* 2017;4(1):e4.
4. Davis TC, Williams MV, Marin E, Parker RM, Glass J. Health literacy and cancer communication. *CA Cancer J Clin.* 2002;52(3):134-49.
5. Nutbeam D. Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. *Health Promot Int.* 2000;15(3):259-67.
6. Abdulai AF, Tiffere AH, Adam F, Kabanunye MM. COVID-19 information-related digital literacy among online health consumers in a low-income country. *Int J Med Inform.* 2021;145:104322.
7. Hämeen-Anttila K, Pietilä K, Pyökkänen L, Pohjanoksa-Mäntylä M. Internet as a source of medicines information (MI) among frequent internet users. *Res Social Adm Pharm.* 2018;14(8):758-64.
8. Dib F, Mayaud P, Chauvin P, Launay O. Online mis/disinformation and vaccine hesitancy in the era of COVID-19: Why we need an eHealth literacy revolution. *Hum Vaccin Immunother.* 2022;18(1):1-3.
9. Eysenbach G. What is e-health? *J Med Internet Res.* 2001;3(2):E20.
10. Hasannejadasl H, Roumen C, Smit Y, Dekker A, Fijten R. Health literacy and eHealth: challenges and strategies. *JCO Clin Cancer Inform.* 2022;6:e2200005.
11. Norman CD, Skinner HA. eHEALS: The eHealth Literacy Scale. *J Med Internet Res.* 2006;8(4):e27.
12. World Health Organization (WHO). Bangladesh initiates Digital Health Strategy. *WHO South-East Asia News.* (October 17, 2019). Retrieved from: <https://www.who.int/bangladesh/news/detail/17-10-2019-bangladesh-initiates-digital-health-strategy> (Accessed January 19, 2023).
13. Kershaw A. Patient use of the internet to obtain health information. *Nurs Times.* 2003;99(36):30-2.
14. Ye Y. Correlates of consumer trust in online health information: findings from the health information national trends survey. *J Health Commun.* 2011;16(1):34-49.
15. Islam MM, Touray M, Yang HC, Poly TN, Nguyen PA, Li YJ, et al. E-Health literacy and health information seeking behavior among university students in Bangladesh. *Stud Health Technol Inform.* 2017;245:122-5.
16. Brislin RW. Back-translation for cross-cultural research. *J Cross-Cult Psychol.* 1970;1(3):185-216.
17. Ning L, Zheng Z, Liu M, Gao S, Yang X, Bi J, et al. Profiles of digital health literacy among university students and its association with mental health during the COVID-19 pandemic: A latent profile analysis. *Digit Health.* 2024;10:20552076231224596.
18. Htay MNN, Parial LL, Tolabing MC, Dadaczynski K, Okan O, Leung AYM, et al. Digital health literacy, online information-seeking behaviour, and satisfaction of Covid-19 information among the university students of East and South-East Asia. *PLoS One.* 2022;17(4):e0266276.
19. Nguyen LHT, Vo MTH, Tran LTM, Dadaczynski K, Okan O, Murray L, et al. Digital health literacy about COVID-19 as a factor mediating the association between the importance of online information search and subjective well-being among university students in Vietnam. *Front Digit Health.* 2021;3:739476.
20. Rivadeneira MF, Miranda-Velasco MJ, Arroyo HV, Caicedo-Gallardo JD, Salvador-Pinos C. Digital health literacy related to COVID-19: validation and implementation of a questionnaire in Hispanic university students. *Int J Environ Res Public Health.* 2022;19(7):4092.
21. Nguyen TPT, Do AL, Do HN, Vu TMT, van Kessel R, Wong BLH, et al. Evidence of internal structure of the transactional eHealth literacy among Vietnamese youth: An instrument validation study. *Front Public Health.* 2023;11:1036877.
22. Vasquez TS, Bylund CL, Fisher CL, Paige SR. Validation of the transactional eHealth literacy instrument with cancer caregivers. *PEC Innov.* 2022;1:100075.
23. Park H, Park H. eHealth literacy skills among undergraduate nursing students in the U.S. and South Korea. *Stud Health Technol Inform.* 2016;225:899-900.
24. Tubaishat A, Habiballah L. eHealth literacy among undergraduate nursing students. *Nurse Educ Today.* 2016;42:47-52.
25. Rathnayake S, Senevirathna A. Self-reported eHealth literacy skills among nursing students in Sri Lanka: A cross-sectional study. *Nurse Educ Today.* 2019;78:50-6.
26. Dashti S, Peyman N, Tajfard M, Esmaeeli H. E-Health literacy of medical and health sciences university students in Mashhad, Iran in 2016: a pilot study. *Electron Physician.* 2017;9(3):3966-73.
27. Yang SC, Luo YF, Chiang CH. The associations among individual factors, eHealth literacy, and health-promoting lifestyles among college students. *J Med Internet Res.* 2017;19(1):e15.
28. Hsu W, Chiang C, Yang S. The effect of individual factors on health behaviors among college students: the mediating effects of eHealth literacy. *J Med Internet Res.* 2014;16(12):e287.
29. Tennant B, Stellefson M, Dodd V, Chaney B, Chaney D, Paige S, et al. eHealth literacy and Web 2.0 health information seeking behaviors among baby boomers and older adults. *J Med Internet Res.* 2015;17(3):e70.
30. Nurunnabi ASM, Mozaffar M, Jahan NA, Sultan MT, Alam SKS, Muqueet MA, et al. Digital citizenship: importance of education and training for medical teachers and students. *Bangladesh J Med Biochem.* 2020;13(2):62-69.