

# Indonesian Student

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# Indonesian Student Nurses' E-Health Literacy Skills

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**Abstract. Background:** Nurses should have a good level of e-health literacy to help patients utilize e-health information. **Objective:** To measure e-health literacy skills and contribute factors. **Methods:** A cross-sectional study of 2209 nursing student in Indonesia (October- November 2019) using eHeals. **Result:** The overall eHealth literacy was 4 (Scale 1- 5). There were statistically significant differences between e-Heals score with contribute factors (<0.001). **Conclusion:** Indonesian nursing students already have basic necessary skills of e-health.

**Keywords.** e-health, Indonesia, literacy, student nurse

## 1. Introduction

Indonesia is the world's 4th most populous country, with more than 260 million people, and half of the country's population (57%) consists of internet users [1]. The use of electronic resources in health care is increasing. Nurses should have the skills to help their patients utilize e-health information and correct any misunderstood information resulting from misinterpretation of information gathered from the internet [2].

Presently, there is no sufficient information about the e-health literacy skills of student nurses. This makes it challenging to map the e-health literacy skills among student nurses to predict their readiness to use e-health as part of their nursing service. Therefore, there is an urgent need to identify the Indonesian student nurses e-health literacy skills and the factors that contribute to the e-health literacy of nursing students all around Indonesia.

## 2. Methods

A cross-sectional study was conducted among 2209 student nurses from 73 schools of nursing in Indonesia (response rate 34%). Surveys were administered online from October to November 2019. Eight-items eHealth Literacy Scale (e-Heals) [3] was used to assess combined knowledge and perceived skills to examine, evaluate, and apply health information from the internet.

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### 3. Result

The overall median score for eHealth literacy was 4, ranging from 1-5 which indicated that nursing students in this study had a good perceived level of eHealth literacy (Table 1). While 67.63% of students perceived that they had good internet skills, 51.96 % found the internet useful in helping them make decisions about their health. The findings also indicated that there were statistically significant differences between e-Heals score with self-perception of internet skills ( $p<0.001$ ), the importance of internet ( $p<0.001$ ), the usefulness of the internet ( $p<0.001$ ) and the frequency of internet use for other purposes ( $p<0.001$ ) (Table 2).

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**Table 1.** Self-reported eHealth Literacy Scale (eHEALS).

eHeals statement	Responden, n (%)					Median
	Strongly agree	Agree	Unsure	Disagree	Strongly disagree	
I know what health resources are available on the internet	213 (9.64)	1591 (72.02)	361 (16.34)	40 (1.81)	4 (0.18)	4
I know where to find helpful health resources on the internet	377 (17.07)	1619 (73.29)	196 (8.87)	13 (0.59)	4 (0.18)	4
I know how to find helpful health resources on the internet	354 (16.03)	1669 (75.55)	171 (7.74)	10 (0.45)	5 (0.23)	4
I know how to use the health information I find on the internet to help me	465 (21.05)	1632 (73.88)	102 (4.62)	7 (0.32)	3 (0.14)	4
I know how to use the internet to answer my questions about health	471 (21.32)	1593 (72.11)	132 (5.98)	11 (0.50)	2 (0.09)	4
I have the skills I need to evaluate the health resources I find on the internet	203 (9.19)	1458 (66.00)	507 (22.95)	35 (1.58)	6 (0.27)	4
I can tell high-quality health resources from low-quality resources on the internet	326 (14.76)	1562 (70.71)	283 (12.81)	35 (1.58)	3 (0.14)	4
I feel confident in using information from the internet to make health decisions	230 (10.41)	1567 (70.94)	363 (16.43)	43 (1.95)	6 (0.27)	4

**Table 2.** Factors associated with eHealth Literacy Scale (eHEALS).

Characteristics	Number, n	%	Statistics (Kruskal-Wallis H)	EHEALS significance	Mean rank
<b>Frequency of using internet for health-related purpose</b>					
More than 3 times a day	601	27.21	<b>0.000</b>	<b>0.000</b>	1237,06
Alternated days	1014	45,9			1081,21
Once a week	237	10,73			1083,23
Some times in a month	357	16,16			964,7
<b>Perceived importance of internet</b>					
Very important	1157	52,38	<b>0.000</b>	<b>0.000</b>	1300,61
Important	978	44,27			900,35
Unsure	40	1,811			356,49
Not important	4	0,181			953,25
Not important at all	30	1,358			1251
<b>Perceived usefulness of internet</b>					
Very useful	1148	51,97	<b>0.000</b>	<b>0.000</b>	1283,17
Useful	1024	46,36			925,01
Unsure	27	1,222			379,35
Not use ful	8	0,362			1027,81
Not use ful at all	2	0,091			1097,5
<b>Perceived level of Internet skills</b>					
Very good	552	24,99	<b>0.000</b>	<b>0.000</b>	1414,87
Good	1494	67,63			1013,11
Average	157	7,107			885,21
Poor	6	0,272			1228,92

#### **4. Conclusions**

This study demonstrates a baseline reference for e-health literacy among nursing students in Indonesia. Indonesian nursing students already have the necessary basic skills of e-health. This finding is consistent with a study among nursing students in Jordan (2016), Iran (2017) and Nepal (2019) [2]. However, additional skills are needed by introducing and scaffold health sciences students' learning experience on health information and communication technology to prepare them for their future workplace [4].

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