Proceedings of the ISymRU 2021
Medicine and Public Health: Oral Presentation

The Sinhalese Version of eHealth Literacy Scale (Si-eHEALS): Reliability and Validity Testing in Health Science Students

Rathnayake S.[1] ✉, **Liyanage I. P.**[2]

Abstract

An assessment tool measuring electronic health literacy is lacking for Sinhalese-speaking Sri Lankans, including health care professionals. This study aimed to develop a Sinhalese version of the eHealth literacy scale (Si-eHEALS) from its original English version. In the first stage, we translated and cross-cultural adapted the original version into Sinhalese. We used five stages proposed by Beaton et al. for questionnaire translation and cross-cultural adaptation, including forward translation, synthesis of the forward translation, backward translation, expert committee review, and pre-test. In the second stage, a cross-sectional online survey was conducted among a convenience sample of 268 health science students at the University of Peradeniya, Sri Lanka, to establish the psychometric properties of the eHEALS. We used the pre-final version of eHEALS developed in the first stage of this survey. A sub-sample of 72 health science students participated in the test-retest assessment. Content validity, construct validity (including concurrent and discriminant validity), internal consistency, test-retest reliability, and floor and ceiling effects were assessed in the second stage. This study was approved by the Ethics Review Committee, Faculty of Allied Health Sciences, University of Peradeniya. As part of the online survey, participants' consent was recorded. Si-eHEALS had a mean score of 28.51±4.87. The reported content validity index (.97), internal consistency (Cronbach's alpha = .91), and test-retest reliability (intraclass correlation coefficient - .776) were acceptable. Principal component analysis showed that the scale was unidimensional, accounting for 61.2% of the variance. No floor and ceiling effect was reported. Concurrent validity was supported by a significant positive association between Si-eHEALS score with the academic year (r_s = .146, p = .017), self-rated internet skills (r_s = .122, p = .046), the usefulness of the internet in health decision-making (r_s = .212, p < .001) and the importance of the ability to access health resources on the internet (r_s = .230, p < .001). Discriminant validity was supported, showing no significant difference in Si-eHEALS score based on gender (U = 5854, p = .550) and degree programme ($X^2(2)$ = 2.965, p = .564). Si-eHEALS showed adequate psychometric properties on a sample of health science students. Therefore, Si-eHEALS is a valid and reliable tool to assess eHealth Literacy skills among health science students in Sri Lanka. Further validation of Si-eHEALS will allow it to be applied to assess eHealth literacy levels of other Sinhalese speaking populations such as patients and caregivers.

Keywords: *eHealth literacy, eHEALS, reliability, Sinhala, validity*

[1]Department of Nursing, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka
[2]Department of Physiotherapy, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka
✉ Corresponding author: sarathr@pdn.ac.lk