

Consumer Health Informatics Challenges in Peradeniya Teaching Hospital in Central Province Sri Lanka

G.F. Jumadin^{1*}, P. Ranatunga², R.S. Rajakaruna¹

¹*Department of Zoology, University of Peradeniya, 20400, Sri Lanka*

²*Provincial Department of Health Services, Northwestern Province, 60000, Sri Lanka*
**s17073@sci.pdn.ac.lk*

Patients' understanding of Consumer Health Informatics (CHI) plays a crucial role in enabling them to make informed decisions about their health using digital tools and information technology. A cross-sectional survey was conducted to evaluate the knowledge, attitudes, and practices (KAP) of outpatients regarding CHI and to explore medical professionals' perceptions of patient engagement with CHI and progress in CHI adoption and to identify its challenges in Sri Lanka. Ethical clearance and necessary institutional permissions were obtained prior to initiating the study procedures. Data collection involved a pre-tested, structured, self-administered questionnaire capturing socio-demographics, computer literacy, and KAP concerning CHI. Knowledge was assessed across three dimensions: definition, application, and utilization. Attitudes and practices were measured using 5-point Likert-type scales and yes/no questions. The survey was conducted from October 2023 over a five-week period. Data collected from 371 outpatients were analyzed quantitatively, with mean scores for knowledge of CHI dimensions: 'definition', 'applications', and 'methods of use' being $43.9\% \pm 25.2$, $45.8\% \pm 25.4$, and $47.9\% \pm 25.8$, respectively. The overall mean knowledge score was $45.5\% \pm 19.8$, with most participants displaying low to intermediate knowledge levels (43.4% low, 53.6% intermediate, 3.0% high). About half of the participants (48.8%) exhibited limited understanding of CHI definitions, while intermediate knowledge dominated for 'applications' and 'methods of use'. Participants demonstrated comparatively positive attitudes toward CHI, with a mean score of $60.5\% \pm 13.8$. Most (71.2%) showed intermediate attitudes, 19.7% low, and 9.2% high. Practice levels, with a mean score of $50.4\% \pm 26.5$, showed 47.4% at intermediate levels, while 37.5% displayed low engagement and 15.1% high engagement. Qualitative interviews with three medical professionals provided insight into CHI challenges across several domains, including the impact of health apps and wearable devices, outcomes and obstacles, adoption factors, health literacy, patient decision-making, provider collaboration, and perceived behavioral changes among patients. In conclusion, the KAP of outpatients regarding CHI varied significantly. While attitudes toward CHI were positive, there is a need for enhanced knowledge and practice to address existing challenges and promote better adoption of e-health tools.

Keywords: Consumer health informatics, E-health, patient acceptance, intention to use, healthcare