

The Relationship Between the Use of Artificial Intelligence-Based Symptom Assessment Applications and Health Literacy: The “Neyim Var” Example

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Abstract

Research Problem: The proliferation of digital health technologies and artificial intelligence-based applications has significantly transformed individuals' access to health information and their roles in health decision-making processes. In particular, artificial intelligence symptom checker applications reshape health service usage behavior by offering individuals the opportunity to make preliminary assessments of possible health conditions before consulting a healthcare provider. However, how these technologies are embraced by society and how their use relates to individuals' health literacy levels has not yet been sufficiently clarified. The conscious use of digital health tools is thought to be closely related to individuals' capacity to understand and evaluate health information.

Objective: The objective of this study is to reveal the prevalence of use of an artificial intelligence-based symptom assessment application called “Neyim Var” and to examine whether there is a significant difference in health literacy levels between individuals who use the application and those who do not. The study aims to evaluate the role of digital health technologies in individuals' health decision-making processes from a health literacy perspective and to present empirical findings on the societal impacts of AI-supported health applications.

Method: This research is a cross-sectional, quantitative, and exploratory field study examining the relationship between the usage status of the AI-based “Neyim Var” application developed by the Ministry of Health and individuals' health literacy levels. The research was conducted with 385 participants aged 18 and over living in Trabzon province and its districts between 2025 and 2026. Data were collected using face-to-face and online surveys, including a Personal Information Form, the “Awareness Scale for the Neyim Var Application,” the “Readiness Scale for Using the Neyim Var Application,” and the Health Literacy Scale-Short Form. The reliability of the scales was tested using Cronbach's Alpha coefficient, and all scales were found to have high reliability levels ($\alpha=0.837-0.922$). Validity analyses were performed using Exploratory Factor Analysis, and KMO and Bartlett test results confirmed the suitability of the analyses. The data were evaluated using t-tests, One-Way ANOVA, and correlation analyses in the SPSS program.

Result: According to the research findings, 61.5% of the participants obtained information about health issues from the internet at least occasionally, but they were more cautious about directly applying the information obtained from the internet. The analysis results showed that individuals who used the “Neyim Var” application had statistically significantly higher levels of health literacy compared to those who did not use it ($t=2.726$; $p=0.007$). The level of readiness to use communication technologies among individuals who use the application is also significantly higher ($p<0.05$). In contrast, no significant difference was found between the groups in terms of their level of readiness to use the internet. It was determined that health literacy and digital health readiness levels increased with higher education levels, while the perception of barriers to digital health applications increased with age. No significant difference was found based on the gender variable.

Conclusion: The research results show that the use of AI-supported health applications is closely related to individuals' health literacy and readiness levels for digital technology. The findings reveal that digital health technologies are not equally adopted in society and are more widely used, especially among individuals with high health literacy. This situation points to the importance of education and awareness policies aimed at increasing digital health literacy in the dissemination of AI-based health applications.

Keywords

Artificial Intelligence, Digital Health, Health Literacy, Symptom Monitor, Health Technology Acceptance.