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# Health literacy, socioeconomic status and digital device use among older adults

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## Background

Older persons often have multiple chronic conditions and limitations in functioning, for which they need care and medical attention. At the same time, older persons are expected to adopt a more active role in managing their own health. Health literacy means the combination of competencies and resources which individuals need in order to access, understand, appraise and use health related information and services and make decisions about health (Sorensen et al., 2012). High health literacy entails the ability to find relevant health information and it can enable older persons' more active involvement in the health-care system using the preventive health services, whereas low health literacy tends to be associated with poorer health outcomes and more frequent use of medical services.

Health information can be obtained from different sources. The role of digital media in health communication and disseminating health information are increasing rapidly (Levin-Zamir & Bertschi, 2018). Health information is more often offered on the Internet and to be able to get advantage of it, people need not only to be able to find and evaluate the reliability of information but also to have access to computers, tablets, and smartphones, i.e., digital devices that have Internet access.

The aim of this study was to investigate the association between health literacy, socioeconomic status and digital device use among older Finnish persons.

## Data and methods

Data were collected as part of a cohort study called “Active aging – resilience and external support as modifiers of the disablement outcome (AGNES)”, which is an ongoing research project taking place at the University of Jyväskylä (Rantanen et al., 2018). The main interests in the AGNES study are active aging, physical health, quality of life, physical and cognitive functioning, physical activity and mobility. Data were collected with at-home interviews, postal questionnaires and at the study laboratory. At the study baseline participants were 75-, 80- and 85-year-old women and men who lived independently in the city of Jyväskylä. Health literacy was assessed with the short form of the European Health Literacy Survey Questionnaire (HLS-EU-Q16), which is a comprehensive measure of subjective health literacy (Sorensen, 2013). It includes 16 questions dealing with finding, understanding, using and evaluating information on health promotion, disease prevention and health

care. In this study, the index score from the HLS-EU-Q16 was grouped into three categories: sufficient, problematic, and inadequate health literacy. The indicators of socioeconomic status included educational attainment, occupation in working-age and self-rated financial status and they were self-reported at the study baseline. Data on digital device use (yes vs. no) and perceived difficulty in using these devices (no difficulty vs. with difficulty) were asked with a questionnaire. Data were analyzed with chi square tests and logistic regression analyses. Logistic regression analyses were adjusted for age, gender and cognitive capacity.

## Results

750 persons were included in the study and 57% of them were women. 53.1% had sufficient, 35.1% problematic and 11.8% inadequate health literacy. Persons with highest health literacy were more likely to have high education, had been working in upper non-manual occupations, and rate their financial status as very good than persons with problematic or inadequate health literacy. Not using digital devices was more likely among persons who had inadequate and problematic health literacy, compared to those with sufficient health literacy. Among those who reported using digital devices, the likelihood of reporting difficulty in using them was higher among those with inadequate health literacy and those with problematic health literacy than those with sufficient health literacy.

## Discussion

Among older adults, the digital divide manifests as lower health literacy. While the Internet is without a doubt an extensive resource to individuals seeking information about health and illness, among older persons there are a significant number of individuals who do not use digital devices or face difficulties in using them. This decreases their opportunities to access up-to-date health information and may also affect their possibility to find and contact health care services. The importance of providing information targeted to older adults in other than digital forms is still needed. Moreover, interventions aimed at improving the digital competence of older persons should target the identified risk groups, such as persons with lowest education and less material and cognitive affluence.

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