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Health literacy and barriers to health information seeking: A nationwide survey in South Korea

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ABSTRACT

Objective: To identify the level of health literacy and barriers to information seeking and to explore the predictors of health literacy.
Methods: A cross-sectional descriptive design was used. A total of 1000 Korean adults were recruited through proportional quota sampling. Health literacy, barriers to health information seeking, sociodemographics, and health-related characteristics were surveyed. Descriptive statistics and binary logistic regression were performed for data analysis.
Results: About 61% of participants were classified as inadequately health literate. "No health fairs/activities near home" was the most frequently reported barrier. Older age, lower education, living in the capital city, barriers regarding how to get information and access to expensive books and magazines were predictors of inadequate health literacy.
Conclusion: Strategies for improving health literacy and reducing barriers to health information seeking should be designed. Education on how to access health-related information with easily accessible sources either free or inexpensive could be a way to help adults with limited health literacy.
Practice implications: Health care professionals should assess clients' health literacy levels, particularly amongst those who are older or have less education. They should provide clients with information on how to access credible and readily available sources of health-related information, considering their health literacy level.

1. Introduction

Health is the ultimate goal of many fields, such as nursing, psychology, and medical science. In recent years, an information and communication technology revolution has prompted the creation and sharing of health-related information and allows people to live in a flood of health-related information [1]. Low quality and credibility of health information may negatively influence the health status of individuals who use that information [2]. Failure to properly acquire or understand health-related information has negative impacts on an individual's health and can lead to health disparities [1,3]. Health disparity is a challenge that many countries, including the United States (U.S.) [4] and South Korea [5], face. To eliminate health disparities and improve the health of individuals, people should have access to credible and high-quality health-related information, and be capable of interpreting and understanding that information properly (i.e., have adequate health literacy).

Health literacy is a crucial factor in health and well-being [6]. Health literacy is defined as "The degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" and it is vital to "opening doors to health and well-being" [7]. Inadequate or limited health literacy has been shown to be related to lower health status, negative health outcomes, higher healthcare costs, and lower quality of care [8–12].

Nowadays, research into health literacy has moved beyond a focus on the individual and towards the interaction between the demands of health systems and the skills of individuals [13]. Therefore, health literacy must be considered on the national level. Interest in health literacy has considerably increased since the introduction of 'Healthy People 2010' by the U.S. Department of

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Health and Human Services [8], and many research papers have been published in Western countries on this issue. Health literacy has been assessed on the national level in a few countries, such as the U.S. [14], and the results have been or can be used for planning and instituting health-related guidelines, strategies, and policies.

However, empirical research on the health literacy of South Koreans is limited. Although a few studies on health literacy have been done in South Korea, they were restricted to the development of health literacy instruments [15–17] or to exploring health literacy levels in specific age groups [18–20]. As those studies measured health literacy with instruments developed in Korea, they cannot be easily compared to studies performed in other countries. To establish health-related guidelines and policies for South Koreans, the national health literacy level and the factors that affect it must be identified based on the findings from a nationwide survey.

The effect of health literacy on health outcomes begins with the ability to seek information [21]. People with low health literacy may experience barriers when they attempt to access and use sources of information [22], which may negatively impact their health-related knowledge and behaviors [21]. However, little is known about the relationship between health literacy and barriers to information seeking.

Therefore, this study aimed to identify the levels of health literacy and barriers to information seeking and to explore the predictors of health literacy in a nationally representative sample of Korean adults. The findings of our study will provide an understanding of the health literacy status of Korean adults and direction for improving health literacy in South Korea and elsewhere.

2. Methods

2.1. Design

This was a cross-sectional descriptive study that used a structured questionnaire.

2.2. Participants

The target population for this study was Korean adults 20 years of age or more. Participants were recruited by Gallop Korea, a specialized market research company, through proportional quota sampling; the quotas used were age and residential location [23]. The sampling error was ±3.1% with a 95% confidence interval. A total of 1000 adults participated in this study.

2.3. Measurements

The questionnaire included items on health literacy, barriers to health information seeking, sociodemographics, and health-related characteristics.

2.3.1. Health literacy

The Newest Vital Sign (NVS), developed by Weiss et al. [24], translated into Korean, was used to measure the health literacy of study subjects. The instrument consists of six questions that assess the ability to read and apply information from a nutritional label. Each question was scored 0 or 1, with the total score ranging from 0 to 6. Participants with four or more correct responses were classified into the adequate health literacy group, and those with fewer than four made up the inadequate health literacy group [24–26].

The reliability and validity of the NVS are well documented [24]. The Cronbach's alpha coefficients for the English version (NVS-E) of the original instrument and the Korean version (NVS-K) used in this study are 0.76 and 0.74, respectively. The criterion validity of original instrument was established using the Test of Functional Health Literacy in Adults (TOFHLA).

2.3.2. Barriers to health information seeking

Barriers to health information were measured using the Health Information Barriers Scale developed by Shieh et al. [21]. The scale consists of 12 items, each of which focuses on either personal or contextual barriers to information seeking. As the scale was originally developed in English for pregnant women, it was translated, and words related to pregnancy were eliminated for use in Korean adults. Responses for each item were dichotomized into "no barrier" (strongly disagree, disagree, or no opinion) and "barrier present" (agree or strongly agree) categories. Content validity of the revised scale was tested among six nursing professors. The content validity index of the scale was 0.83, and that of each item ranged from 0.67 to 1.00.

2.3.3. Sociodemographic and health-related characteristics

The sociodemographic characteristics recorded were age, gender, marital status, education, monthly family income, and residential district. Health-related characteristics included perceived health status, presence of current or past illnesses, having had a health exam within the past two years, and interest in health-related information.

2.4. Data collection

This study was approved by the Institutional Review Board (IRB) of the Chonbuk National University. Data were collected through face-to-face interviews using structured questionnaires from June 4–22 in 2012. Trained surveyors explained to potential participants the purpose and procedures of the study. In addition, participants were guaranteed confidentiality of the collected data and informed that they could withdraw from the study at any time. After obtaining written informed consent, surveyors read the questionnaire to participants and filled it out according to their responses. To recruit the sample of 1000 adults, a total of 2774 adults were accessed, and the response rate was 36.1%. The response rate was similar to that of usual surveys performed by Gallop Korea.

2.5. Data analysis

Health literacy level, barriers to health information seeking, sociodemographics, and health-related characteristics were analyzed using descriptive statistics. To compare the sociodemographics, health-related characteristics, and barriers to health information between the inadequate health literacy group and the adequate health literacy group, chi-square tests and independent *t*-tests were used. Binary logistic regression was performed to identify the predictors of health literacy, which was a dichotomous variable. Sociodemographics (age, marital status, etc.), health-related characteristics (perceived health status, etc.), and barriers to health information seeking (the ability to obtain information, etc.) that were statistically significantly different between the two groups in the univariate analyses were included as covariates in the binary logistic regression analysis. The statistical significance level was set at $p < 0.05$. Statistical analyses were conducted using SPSS, version 21.0 (IBM SPSS Statistics for Windows, Armonk, NY: IBM Corporation).

3. Results

3.1. Health literacy of participants

The health literacy of participants is presented in Table 1. The mean score of health literacy of all participants was 2.91 (SD = 1.91)

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