



Health Literacy Interventions and Their Effects on Health Outcomes: A Critical Analysis

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Background and Aim. Health literacy is a key determinant of health behaviour, influencing individuals' ability to access, understand, and apply health information. Adequate health literacy is associated with healthier lifestyle choices, improved preventive practices, and more effective use of healthcare services, whereas limited health literacy may negatively affect behaviours such as smoking, physical activity, and vaccination attitudes. This study aimed to assess health literacy levels among adults and examine their relationship with vaccine literacy and health-related lifestyle behaviours.

Methods. A cross-sectional study was conducted among 587 participants using a structured questionnaire. Data included socio-demographic characteristics, health literacy, vaccine literacy, smoking behaviour, and physical activity. Descriptive statistics summarised participant characteristics and literacy scores. Internal consistency of the health literacy scale was evaluated using Cronbach's alpha. Associations between categorical variables were analysed using Chi-Square tests, while Spearman's correlation assessed relationships between literacy measures and lifestyle behaviours. Multiple regression analysis was performed to determine whether health literacy and vaccine literacy independently predicted physical activity after adjusting for socio-demographic factors.

Results. The mean health literacy score was 86.29 ± 22.04 , and the mean vaccine literacy score was 18.29 ± 2.72 . Health literacy was significantly associated with gender ($p < 0.001$), but not with age group ($p = 0.453$). Physical activity levels differed significantly by gender ($p < 0.001$), whereas smoking behaviour showed no significant association with gender ($p = 0.063$). Health literacy demonstrated a strong positive correlation with physical activity ($r = 0.717, p < 0.001$) and a weak negative correlation with smoking behaviour ($r = -0.111, p = 0.007$).

Conclusions. Higher health literacy is associated with healthier lifestyle behaviours, particularly increased physical activity and reduced smoking. Strengthening health literacy may contribute to improved public health outcomes.

Keywords: Health literacy; vaccine literacy; physical activity; smoking behaviour; lifestyle behaviours; public health

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Informed Consent Statement: This study was approved by the Ethics Committee of Lithuanian Sports University (No. SMTEK-75). All participants provided written informed consent prior to participation. The study was conducted in accordance with the Declaration of Helsinki.



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