Poster Session 5 of ISPOR Europe 2024 at Barcelona, Spain

The Influence of Health Literacy on the Selection of Healthcare Facilities: an Association between Health Literacy Level and Number of Healthcare Facilities Visited per Patient per Year Using **Real World Data in Japan**



Background

- In Japan, the healthcare system operates with a form of "open access," enabling patients to choose and visit any general practitioner or specialist without a referral. This system allows for greater flexibility in accessing healthcare services.
- As health literacy (HL) is defined as the ability to obtain, understand, and utilize appropriate health and clinical information [1,2], an individual with a higher HL level is expected to select an appropriate healthcare facility for each disease diagnosed.

Results and Discussions

Figure 1. Flow diagram for participants identification

All individuals included in the database 12,498,531

Study population

• 27,909 individuals were identified for the analysis (Fig. 1).

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• The highest proportion of individuals were males aged 55-64.

- Consequently, individuals with higher HL levels may visit a greater number of facilities than those with lower HL levels who rely on one facility regardless of disease category diagnosed.
- We examined the relationship between HL level and the number of healthcare facilities visited in one year (2022), considering the number of disease types diagnosed.

Methods

Study design and data source

• A claims-based study using a Japanese health insurance claims database provided by DeSC Healthcare Inc (Tokyo, Japan)

Study population

• Among individuals covered by employer-based health insurance, those who responded to the HL questionnaire in December 2022 and were enrolled throughout the entire year of 2022 were analyzed. (Fig. 1)



Categs., categories; Dis., disease; Facils, facilities; HL, health literacy.

Definition of health literacy level

- HL questionnaire [2]
 - The HL questionnaire, which asks whether participants are able to personally find and use information relevant to illness and health if necessary, included the following 5 questions.
 - **1.** I can gather information from a variety of sources, such as newspapers, books, TV, and the internet.
 - 2. I can select the information I seek from among a large selection of information.
 - 3. I can understand information and convey it to others.
 - 4. I can determine the extent to which information can be trusted.
 - 5. I can decide on a plan and actions to improve my health on the basis of information.
 - Participants responded to each question using a 5-point Likert scale (1: Strongly disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly agree):
- HL level
 - The first principal component of responses to the HL questionnaire obtained by principal component analysis.

Factors associated with the number of healthcare facilities

- 24,473 individuals with ≥ 1 diagnosis were analyzed.
- A greater number of healthcare facilities was associated with female gender, lower age, number of disease categories, and log costs, with statistical significance.
- HL level was not associated with the number of healthcare facilities.

Table 1. Result from the regression model analysis

Variable	Coefficient (β)	Standard Error	p-value
Intercept	-0.1948	0.0933	0.0037
Female	0.2995	0.0186	<0.0001
Age	-0.0159	0.0008	<0.0001
No of Disease Categories	0.4335	0.0043	<0.0001
Log Costs	0.4512	0.0211	<0.0001
HL	-0.0038	0.0045	0.3993

HL: health literacy.

Analysis

- The association between the number of healthcare facilities visited in 2022 and HL level, gender, age, number of disease categories, and the ordinary logarithm of total medical costs (log costs) was examined using a regression model.
 - ♦ Individuals with ≥ 1 diagnosis were included for the analysis.
 - Number of disease categories: The total number of ICD-10 disease categories identified from diagnoses given in 2022

Conclusions

 No significant relationship between health literacy levels and the number of healthcare facilities visited in one year is suggested based on this study.

References:

1. Institute of Medicine, Committee on Health Literacy: Nielsen-Bohlman L, Panzer AM, Kindig DA, editors. Health Literacy: A Prescription to End Confusion. Washington (DC): National Academies Press; 2004. 2. Ishikawa H, Nomura K, Sato M, et al. Developing a measure of communicative and critical health literacy: a pilot study of Japanese office workers. Health Promotion International. 2008;23(3):269-274.