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Literature Review: Overview of Health Literacy in Society

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ABSTRACT: Health literacy is one of the determinants of health that can help develop public health. It is an important component in empowering individuals regarding their health. Someone with low health literacy has limited information about their health condition and does not understand how to maintain it. The aim of this review was to explore health literacy in society and the factors that influence it. A literature search was conducted in March 2021. Research sources were taken from several databases, namely ScienceDirect, ProQuest, and PubMed. The ScienceDirect database contained 69,360 articles, ProQuest 130,006, and PubMed 17,038. From all databases, only 45 articles met the inclusion criteria. The variables in this study were the domains of health literacy and the factors that influence it. This literature review showed that the domains "feeling understood and supported by healthcare providers" and "understanding health information well enough to know what to do" had the highest scores, while the domains "appraisal of health information" and "navigating the healthcare system" had the lowest scores. Factors that affected health literacy included age, gender, education, income, language, health status, and marital status. The highest scores for health literacy were in domains 1 and 9, while the lowest scores were in domains 5 and 7. Education was the most influential factor across all domains of health literacy.

KEYWORDS: Age; education; health literacy; health status

1. Introduction

The development of information has accelerated in the digital era. To keep up with this, people must have a good level of information literacy. One area of literacy that needs to be expanded is health literacy. The concept of health literacy emerged in the 1970s in the United States, and interest in this topic has increased rapidly since the 1990s. Health literacy is one of the determinants of health that can help develop public health [1]. Health literacy is a combination of individual knowledge, motivation, and competence used to assess, understand, and apply health information so that a person can make judgments and decisions regarding health care, disease prevention, and health promotion to maintain or improve their quality of life [2]. It is also defined as the ability to access individual health services, understand and use health

information systems, interpret health-related issues, and make informed decisions [3]. Health literacy is not only the ability to read health promotion materials or communicate effectively with healthcare providers. It is more about enhancing the ability to access and use health information effectively. Health literacy is an important component of individual control over health [4]. Someone with low health literacy has limited information about their health condition and does not understand how to maintain it. In contrast, someone with high health literacy knows their health condition well and can take better care of their health [5]. Based on this background, a literature review was conducted to describe health literacy in the community. This review aimed to explore health literacy in the community and the factors that influence its level.

2. Materials and Methods

A literature search was conducted in April 2021. Researchers searched for data sources using several databases, namely ScienceDirect, ProQuest, and PubMed, by linking the main topic terms. Researchers set limitations on the search for related journals, restricting the publication years to 2016–2021 to ensure the inclusion of valid and up-to-date sources. A total of 216,404 articles were identified as highly relevant to the topics reviewed. Ninety-seven articles proceeded to the next stage, and 45 research articles that met the inclusion criteria were then reviewed for quality and synthesized in this final literature review report. The inclusion criteria for this literature review required that journals be related to health literacy values using the Health Literacy Questionnaire, that the studies provide information about the factors influencing health literacy values, and that full-text journal articles be available in English or Bahasa Indonesia. The exclusion criteria for this literature review study included literature review articles. The variables in this study were the domains of health literacy and the factors that influence health literacy.

The selection and analysis of data in this literature review were conducted by independent researchers. The ScienceDirect, ProQuest, and PubMed databases were searched using the same keywords: “feeling understood and supported by healthcare providers,” “having sufficient information to manage my health,” “actively managing my health,” “social support for health,” “appraisal of health information,” “ability to actively engage with healthcare providers,” “navigating the healthcare system,” “ability to find good health information,” “understanding health information well enough to know what to do,” and “health literacy.” During data synthesis, a total of 216,404 articles were retrieved from the ScienceDirect, ProQuest, and PubMed databases. After filtering by publication year (2016–2021), 136,091 articles were excluded. An additional 79,741 articles were omitted based on title screening, and 120 articles were excluded after reviewing their abstracts. As a result, 97 studies were identified as relevant because they discussed health literacy. During the full-text analysis of these 97 studies, another 52 articles were excluded because their data did not meet the inclusion criteria. Ultimately, this systematic review selected 23 relevant studies that met the study’s inclusion criteria. Figure 1 above illustrates the article selection process following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.

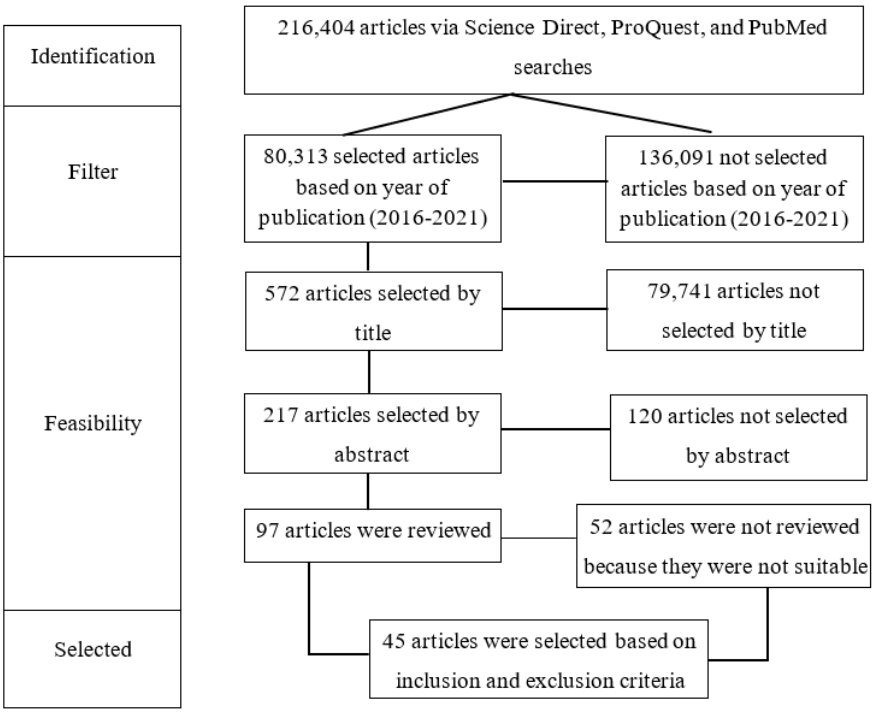

Figure 1. Diagram from Preferred Reporting Literature Reviews and Meta-analysis (PRISMA).

3. Results and Discussion

The initial search yielded a total of 216,404 articles showing high relevance to the topics reviewed. After duplicating articles and filtering out the year of publication, title, and abstract, 97 articles entered the next stage, namely full-text review, and feasibility based on the inclusion and exclusion criteria determined by the researcher. 45 research articles that met the requirements were then reviewed for quality and synthesized in this final literature review report (Table 1).

Table 1. Analysis of articles related to the overview of health literacy in society

Authors	Aims	Design	Sample	Results
Milner *et al.*, 2020 [6]	To examine the relationship between occupational gender ratio and health literacy in Australian men.	Longitudinal	Model 1: 6,691 workers Model 2: 6,693 workers Model 3: 6,709 workers	The highest health literacy scores across domains (ability to seek health information, ability to actively interact with health care providers, and feeling understood and supported by health care providers) were found in non-male-dominated occupations, while the lowest scores were found in male-dominated occupations.
Dahl *et al.*, 2020 [7]	Identifying core variables associated with independent domains of health literacy at 8 weeks after kidney transplantation	*Cross-Sectional*	159 patients	Health literacy scores on domains 1-5 (scale 1-4) were highest in the domain "feeling understood and supported by health care providers," while the lowest scores were in the domain "assessing health information." Health literacy scores on domains 6-9 (scale 1-5) were highest in the domain "ability to actively interact with health care providers," while the lowest scores were in the domain "navigating the health system." Each domain has factors that influence scores, such as age, health status, knowledge, duration of kidney disease, and self-efficacy, with different factors for each domain.

Authors	Aims	Design	Sample	Results
Yadav *et al.*, 2020 [8]	Examining the levels and determinants of health literacy and activation of Chronic Obstructive Pulmonary Disease patients in Nepal	*Cross-Sectional*	238 patients	There were 188 patients with low scores and 50 patients with high scores on the domain "feeling understood and supported by health care providers." There were 182 patients with low scores and 56 patients with high scores on the domain "having enough information to manage one's own health." There were 184 patients with low scores and 54 patients with high scores on the domain "social support for health." There were 179 patients with low scores and 59 patients with high scores on the domain "ability to seek good health information." There were 178 patients with low scores and 60 patients with high scores on the domain "understanding health information well enough to know what to do." Each domain was influenced by factors such as education, gender, caste, and income, with different factors for each domain.
O'Hara *et al.*, 2018 [9]	Exploring the relationships between health literacy, barriers to breast cancer screening, and breast screening participation for women from culturally and linguistically diverse backgrounds.	*Cross-Sectional*	317 respondents	In domains 1-5 health literacy, the highest value is in the domain "feeling understood and supported by healthcare providers" and the lowest value is in the domain "appraisal of health information". In domains 6-9 health literacy which has a scale of 1-5, the highest value is in the domain "ability to actively engage with healthcare providers" and the lowest value is in the domain "navigating the healthcare system" and "ability to find good health information". Emotional barriers are influenced by health literacy in domains 1, 4, and 9. While structural barriers are influenced by health literacy in domain 5.
Wahl *et al.*, 2020 [10]	Conducting a rigorous psychometric evaluation of health literacy based on data from a sample of psoriasis patients.	*Cross-Sectional*	825 respondents	Health literacy with low scores is in the domains of "feeling understood and supported by healthcare providers", "social support for health", and "appraisal of health information".
Zhang *et al.*, 2016 [11]	Assessing the health literacy level of medical students in Chongqing, China, and its influencing factors	*Cross-Sectional*	1,275 respondents	The lowest score is in the domain "feeling understood and supported by healthcare provider" and the highest score is in the domain "understand the health information well enough to know what to do". Domains 1, 3, 5, and 6 are influenced by class differences. Domain 1 is not influenced by gender. Domains 2, 4, 6, 7, and 9 are influenced by differences in residence location. All domains are influenced by faculty differences.
Seaton *et al.*, 2020 [12]	To describe health literacy in Canadian men with prostate cancer and explore whether sociodemographic and health factors are associated with men's health literacy scores.	*Cross-Sectional*	213 respondents	The highest health literacy scores are in the domains "understand the health information well enough to know what to do" and "feeling understood and supported by healthcare providers". Meanwhile, the lowest scores are in the domains "navigating the healthcare system" and "having sufficient information to manage my own health". Education influences health literacy domains 1, 3, 4, 5, 8, and 9, while comorbid diseases influence domains 2, 6, 7, 8, and 9.

Authors	Aims	Design	Sample	Results
Cepova *et al.*, 2018 [13]	To examine the relationship between health literacy and oral health-promoting behaviors and to assess the possible mediation effect of health literacy on the impact of socioeconomic status on oral health-promoting behaviors.	*Cross-Sectional*	360 respondents	Health promotion about the use of fluoride toothpaste is related to the domain “ability to find good health information”. Health promotion about the frequency of tooth brushing is related to domains 1, 2, 3, 4, and 5. Health promotion about dental hygiene equipment is related to domains 1 and 2.
Anwar *et al.*, 2020 [14]	Using multidimensional measurement tools to describe the health literacy of people living in fishing communities in northern Egypt.	*Cross-Sectional*	436 respondents	The highest health literacy scores are found in the "social support for health" and "ability to actively engage with healthcare professionals" domains. Meanwhile, the lowest scores are in the domains "having sufficient information to manage my health" and "ability to find good health information". Age has an effect on domains 2, 5, 8, and 9. Gender has an effect on domains 3 and 4. Occupation as a fisherman has an effect on domain 7. Economic status has an effect on domain 1. Internet use has an effect on domains 8 and 9. Education has no effect on domain 4.
Debussche *et al.*, 2018 [15]	To test the validity of a health literacy questionnaire and to describe the health literacy profile in a French population at risk of cardiovascular disease.	*Cross-Sectional*	175 respondents	The highest health literacy scores are in the domains “feeling understood and supported by healthcare professionals” and “understand health information enough to know what to do”. While the lowest scores are in the domains “having sufficient information to manage my health” and “navigating the healthcare system”. Education influences domain 8. Age influences domain 7. Employment status influences domains 5 and 7. Cohabitation status influences domain 4.
Olesen *et al.*, 2017 [16]	Exploring the relationship of health literacy to self-management and outcomes across socioeconomic groups.	*Cohort*	1,399 respondents	The highest health literacy scores are found in the domains "having sufficient information to manage my health" and "understanding health information enough to know what to do'". Meanwhile, the lowest scores are in the domains "appraisal of health information" and "navigating the healthcare system".
Griva *et al.*, 2020 [17]	Exploring the prognostic relationships between health literacy domains, depression, and 12-month health service utilization and mortality in patients with diabetes and end-stage renal disease.	*Cohort*	221 respondents	Ethnicity was related to all domains except domain 2. Language was related to all domains except domain 4. Age was related to domain 5. Education was related to domains 5, 8, and 9. Marital status was related to domains 4, 7, and 1. Depression was related to all health literacy domains. Anxiety was related to domains 3, 4, and 8.
Klinker *et al.*, 2020 [18]	Examining health literacy of VET students in Denmark and its relationship to health behaviors.	*Cross-Sectional*	6,119 students	Domain 3 in health literacy relates to gender, age, education, health status, breakfast habits, smoking habits, alcohol consumption habits, and exercise habits. Domain 5 relates to gender, age, health status, breakfast habits, smoking habits, and exercise habits.

Authors	Aims	Design	Sample	Results
Aaby *et al.*, 2020 [19]	Explores the health literacy challenges of people with long-term illness or multimorbidity and provides a detailed profile of health literacy strengths and weaknesses in the general Danish population.	*Cross-Sectional*	490 respondents	Domain 1 health literacy is influenced by age, gender, cohabitation, ethnicity, education, and multi-morbidity. Domain 2 is influenced by the duration of illness and multi-morbidity. Domains 3 and 4 are influenced by multi-morbidity.
Lim *et al.*, 2017 [20]	To determine the influence of health literacy and sociodemographic characteristics on fruit and vegetable intake in adults living in rural Australia.	*Cross-Sectional*	1,154 respondents	The highest health literacy scores were in the domains “feeling understood and supported by healthcare providers” and “understand health information well enough to know what to do”. The lowest scores were in the domains “appraisal of health information” and “navigating the health-care system”.Domains 3,5, 4, and 8 were influenced by fruit intake. Domain 3 was also influenced by vegetable intake. Domains 2, 4, and 5 were influenced by age, education, and health insurance.
Budhathoki *et al.*, 2019 [21]	Exploring the health literacy profiles of health science students in Nepal, aspiring health professionals and health literacy educators.	*Cross-Sectional*	700 students	The highest health literacy scores are found in the domains "social support for health" and "understand health information well enough to know what to do". The lowest scores are in the domains "actively managing my health" and "ability to actively engage with healthcare providers". Domains 2, 6, and 8 are influenced by gender. Domains 1 and 2 are influenced by age. Domains 1, 2, and 7 are influenced by education level. Domains 2, 5, and 7 are influenced by education major.
Skoumalova *et al.*, 2019 [22]	Assessing the multidimensional relationship of health literacy with non-compliance with food and fluid intake recommendations in dialysis patients.	*Cross-Sectional*	542 patients	The highest health literacy scores are found in the "social support for health" and "ability to actively engage with healthcare providers" domains. The lowest scores are in the domains "appraisal of health information" and "navigating the healthcare system". Patients with low health literacy domain 2 scores were found in patients with high serum phosphate levels. Patients with low domain 3 scores are found in patients who do not follow a diet. Patients with low domain 6 scores are found in patients who are overhydrated.
Milner, Shields and King, 2019 [23]	To understand the role of male gender norms in three domains of health literacy and to assess whether men with depressive symptoms have different health literacy scores compared to men without depressive symptoms.	*Longitudinal*	Model 1: 8,334 respondents Model 2: 8,329 respondents Model 3: 8,36 respondents	Men with depressive symptoms had lower health literacy scores in domains 1, 6, and 8. Domains 1, 6, and 8 were also associated with male masculinity.

Authors	Aims	Design	Sample	Results
Simpson, Knowles and Cathain, 2020 [24]	Describes the level of health literacy of adults in England using and showing how health literacy levels vary according to population characteristics.	*Cross-Sectional*	2,309 respondents	The domain "understand health information well enough to know what to do" is influenced by gender, health status, and marital status. The domain "ability to actively engage with healthcare providers" is influenced by health status, marital status, and education level.
Zavacka *et al.*, 2020 [25]	Exploring how health literacy influences the decision-making process regarding the selection of vascular access type.	*Cross-Sectional*	542 patients	Health literacy domains 6, 7, 8, and 9 influence decisions about selecting the type of vascular access.
Schwennesen, Barghadouch and Olesen, 2018 [26]	Investigating health literacy and self-care in people with type 1 diabetes and visual impairment in Denmark	*Case-Control*	Case: 38 patients Control: 1,387 patients	In the case group, the highest health literacy scores were in the domains "feeling understood and supported by healthcare providers" and "ability to actively engage with healthcare providers". The lowest scores were in the domains "appraisal of health information" and "understanding health information well enough to know what to do". In the control group, the highest health literacy scores were in the domains "having sufficient information to manage my health" and "understanding health information well enough to know what to do". The lowest scores were in the domains "appraisal of health information" and "navigating the healthcare system".
Holt *et al.*, 2020 [27]	Exploring the levels of health literacy, digital literacy, and e-health literacy in nursing students in Denmark	*Cross-Sectional*	227 nursing students	The highest health literacy scores are in the domains "social support for health" and "ability to find good health information". The lowest scores are in the domains "actively managing my health" and "navigating the healthcare system". Domain 1 is influenced by parents' occupation. Domain 3 is influenced by age and education. Domain 4 is influenced by respondents' area of origin and experience of being treated. Domain 6 is influenced by gender, health status. Domains 8 and 9 are influenced by drug consumption behavior.
Hosking *et al.*, 2018 [28]	Investigating the relationship between health literacy domains, sociodemographic and lifestyle characteristics, and anthropometric risk factors for chronic diseases.	*Longitudinal*	713 respondents	The highest health literacy scores are in the domains "feeling understood and supported by healthcare professionals" and "understand health information well enough to know what to do". The lowest scores are in the domains "appraisal of health information" and "navigating the healthcare system". Domain 1 is influenced by health insurance ownership. Domain 2 is influenced by region of origin, health insurance ownership, and alcohol consumption. Domains 3 and 4 are influenced by body mass index. Domain 7 is influenced by education level. Domain 8 is influenced by age, region of origin, health insurance ownership, and alcohol consumption. Domain 9 is influenced by education level.

Authors	Aims	Design	Sample	Results
Maindal *et al.*, 2016 [29]	Adapting health literacy and to examine factor structure, homogeneity, reliability and discriminant validity.	*Cross-Sectional*	481 respondents	Domain 2 is influenced by education, illnesses suffered, and health status. Domain 3 is influenced by illnesses suffered and health status. Domain 4 is influenced by age, education, illnesses suffered, and health status. Domain 5 is influenced by education and illnesses suffered. Domain 7 is influenced by education. Domain 8 is influenced by gender, education, and illnesses suffered. Domain 9 is influenced by education.
Jessup *et al.*, 2017 [30]	To determine the health literacy of hospital inpatients, and to examine whether there is a relationship between health literacy, sociodemographic characteristics, and use of hospital services.	*Cross-Sectional*	3,252 respondents	The highest health literacy scores are found in the domains "feeling understood and supported by healthcare professionals" and "understand health information well enough to know what to do". The lowest scores are in the "appraisal of health information" and "ability to find good health information" domains. Language influences domains 7, 8, and 9. Income influences domain 8.
Boateng *et al.*, 2020 [31]	Translating and assessing psychometric properties of health literacy in Asante Twi	*Cross-Sectional*	1,234 respondents	The highest health literacy scores are found in the domains "actively managing my health" and "ability to actively engage with healthcare providers". The lowest scores are in the domains "feeling understood and supported by healthcare providers" and "navigating the healthcare system". Age has an effect on domains 2, 3, 4, and 9. Education influences all health literacy domains.
Morris *et al.*, 2017 [32]	Evaluating health literacy measures in adults presenting to a hospital emergency department after a fall.	*Cohort*	433 respondents	The highest health literacy scores are found in the domains "feeling understood and supported by healthcare providers" and "ability to actively engage with healthcare providers". The lowest scores are in the "appraisal of health information" and "ability to find good health information".
Timková *et al.*, 2020 [33]	Testing the relationship between health literacy and periodontal disease indicators	*Cross-Sectional*	152 patients	The highest health literacy scores were in the domains “social support for health” and “understand health information well enough to know what to do”. The lowest scores were in “appraisal of health information” and “navigating the healthcare system”. Patients with gingivitis had lower health literacy scores compared to patients with healthy teeth.
Yiu and Bajorek, 2018 [34]	To categorize older patients taking warfarin, assess patients' knowledge levels, describe their strengths and limitations in health literacy, and explore the relationships between participant characteristics, knowledge, and health literacy.	Descriptive	34 patients	The highest health literacy scores are found in the domains "feeling understood and supported by healthcare providers" and "ability to actively engage with healthcare providers". The lowest scores are in the "appraisal of health information" and "ability to find good health information" domains. Domain 1 is influenced by the region of origin. Domain 9 is influenced by the length of treatment.

Authors	Aims	Design	Sample	Results
Stømer *et al.*, 2019 [35]	To investigate health literacy in patients with chronic kidney disease from a multidimensional perspective.	*Cross-Sectional*	187 patients	The highest health literacy scores are found in the domains "feeling understood and supported by healthcare providers" and "ability to actively engage with healthcare providers". The lowest scores are in the "appraisal of health information" and "ability to find good health information" domains. Domain 4 is related to the duration of chronic kidney disease.
Jansen *et al.*, 2018 [36]	Studying the influence of health literacy on education and use of out-of-hours Primary Care Services.	*Cross-Sectional*	1,811 respondents	The highest health literacy scores are found in the domains "feeling understood and supported by healthcare providers" and "understanding health information well enough to know what to do". The lowest scores are in the domains "appraisal of health information" and "navigating the healthcare system". Education is related to domains 2, 5, 6, 7, 8, and 9. Use of Primary Care Services outside of working hours influences domain 5.
Murali *et al.*, 2020 [37]	To compare the health literacy profiles of end-stage renal disease patients undergoing dialysis with non-dialysis patients and to examine the relationship between health literacy in patients with chronic kidney disease and end-stage renal disease.	*Cross-Sectional*	114 patients	In patients with chronic kidney disease and patients with end-stage renal disease, the highest health literacy scores were in the domains “feeling understood and supported by healthcare providers” and “ability to actively engage with healthcare providers”. The lowest scores were in the domains “appraisal of health information” and “ability to find good health information”. Patients with end-stage renal disease had higher scores for domain 4 than patients with chronic kidney disease. Depression affected domains 1-8. Education affected domains 8 and 9. Age affected domains 3 and 8. Employment status affected domains 3 and 5.
Urstad *et al.*, 2020 [38]	Implementing and testing health literacy exploring its usefulness in the field and testing it in groups of nursing students.	*Cross-Sectional*	368 students	The highest health literacy scores are found in the domains "social support for health" and "understanding health information well enough to know what to do". The lowest scores are in the domains "appraisal of health information" and "navigating the healthcare system".
Mullan *et al.*, 2017 [39]	Assessing and comparing the level of health literacy in health students	*Cross-Sectional*	374 students	The highest health literacy scores are found in the domains "actively managing my health" and "understanding health information well enough to know what to do". The lowest scores are in the domains "feeling understood and supported by healthcare providers" and "navigating the healthcare system".
Jessup *et al.*, 2018 [40]	Investigating the influence of hospital service type on individual health literacy.	*Cross-Sectional*	3,151 patients	In public and private hospital patients, the highest health literacy scores were in the domains “feeling understood and supported by healthcare providers” and “understanding health information well enough to know what to do”. The lowest scores were in the domains “appraisal of health information” and “ability to find good health information”. Private hospital patients had higher health literacy scores than public hospital patients.

Authors	Aims	Design	Sample	Results
Van Der Gaag *et al.*, 2017 [41]	To gain insight into the health literacy levels of ethnic minorities in the Netherlands and to examine the relationship between ethnicity and use of health services.	*Cross-Sectional*	2,116 respondents	Among ethnic minorities in the Netherlands, the highest health literacy scores were in the domains "having sufficient information to manage my health" and "understanding health information well enough to know what to do". The lowest scores were in the domains "appraisal of health information" and "navigating the healthcare system". Age and education were associated with domains 2, 6, 7, 8, and 9.
Bourne *et al.*, 2018 [42]	Determining the health literacy profile of patients admitted to a large private hospital in Melbourne, Australia, and its relationship to socioeconomic position, health behaviour, health status, and use of hospital services.	*Cross-Sectional*	3,121 respondents	The highest health literacy scores were in the domains "feeling understood and supported by healthcare providers" and "understanding health information well enough to know what to do". While the lowest scores were in the domains "appraisal of health information" and "ability to find good health information". Gender influenced domains 2 and 5. Marital status influenced domain 4. Language influenced domains 1, 2, 6, 7, 8, and 9. Occupation related to domain 8. Education influenced domains 5, 8, and 9. Income influenced domains 6, 7, 8, and 9. Internet use influenced domains 5, 8, and 9. Health insurance ownership influenced domain 5. Physical activity influenced domain 3. Health status influenced domains 8 and 9. Smoking habits influenced domains 3 and 4.
Walters *et al.*, 2020 [43]	Examining health literacy and health profiles of cardiac rehab patients in rural Scottish Highlands.	*Cross-Sectional*	282 respondents	The highest health literacy scores are in the "social support for health" and "understanding health information well enough to know what to do" domains. Meanwhile, the lowest scores are in the "appraisal of health information" and "ability to find good health information".
Dahl *et al.*, 2021 [44]	To identify changes in health literacy and related variables during the first year after kidney transplantation.	*Cross-Sectional*	196 patients	The highest health literacy scores were in the domains "feeling understood and supported by healthcare providers" and "ability to actively engage with healthcare providers". The lowest scores were in the domains "appraisal of health information" and "navigating the healthcare system". Self-efficacy and knowledge influenced all domains of health literacy. Health status influenced all domains except domains 5 and 9. Duration of kidney disease influenced domains 1, 7, and 8. Comorbid diseases influenced domain 2. Education influenced domains 8 and 9. Gender influenced domains 2 and 3. Marital status influenced domain 4. Age influenced domains 5 and 8.
Wahl *et al.*, 2021 [45]	Investigating the relationships between selected demographic and clinical variables, psychological well-being, and health literacy.	*Cross-Sectional*	158 patients	The highest health literacy scores were in the domains "feeling understood and supported by healthcare providers" and "understanding health information well enough to know what to do". The lowest scores were in "appraisal of health information" and "navigating the healthcare system". Mental health affected domains 1, 2, 3, 4, 6, and 7. Education affected domains 3, 7, 8, and 9. The number of diseases suffered affected domain 1. Smoking habits affected domain 2. Long duration of chronic obstructive pulmonary disease affected domains 5 and 8.

Authors	Aims	Design	Sample	Results
Degan *et al.*, 2019 [46]	Identifying health literacy in individuals attending mental health care and determining the profile and level of health literacy differing from other populations accessing health services and health characteristics.	*Cross-Sectional*	325 respondents	The highest health literacy scores were in the domains "feeling understood and supported by healthcare providers" and "understanding health information well enough to know what to do". The lowest scores were in the domains "appraisal of health information" and "navigating the healthcare system".
Degan, Kelly, Robinson and Deane, 2019 [47]	Examine the health literacy of people with substance use disorder treatment and examine the relationship of health literacy to quality of life mental health, and physical health.	*Cross-Sectional*	298 respondents	People with good quality of life will have high health literacy scores. People with psychological disorders will have low health literacy scores. People with good mental health will also have high health literacy scores.
Cianfrocca *et al.*, 2018 [48]	Understanding whether a multidisciplinary theoretical-practical training course can influence caregiver burden, health literacy, and needs.	Experimental	76 respondents	The highest health literacy scores are in the domains "feeling understood and supported by healthcare providers" and "ability to find good health information". The lowest scores are in the domains "social support for health" and "navigating the healthcare system". Training can improve health literacy in the domain "ability to find good health information".
Mather, Douglas and Jacques, 2018 [49]	Exploring the health literacy of health professions students at Tasmania's only island university and comparing it with students at other Australian universities.	Cross-*Sectional*	Tasmania: 886 respondents Australia: 1,574 respondents	Gender influences domain 9. Age influences domains 4, 5, and 7. Health status influences domains 1, 2, 4, 6, 7, and 8. Language influences domains 1, 2, 3, 7, and 8. Economic status influences all health literacy domains. Parenting and training influences domains 3, 4, and 7.
Zhang *et al.*, 2020 [50]	Examining health literacy among first-generation Chinese immigrants living in Australia and identifying health literacy domains associated with emergency department visits and self-assessment of health	*Cross-Sectional*	362 respondents	The highest health literacy scores were in the domains "social support for health" and "understanding health information well enough to know what to do". The lowest scores were in the domains "having sufficient information to manage my health" and "ability to find good health information". Age, length of residence in Australia, education, and English language skills influenced domains 6, 7, 8, and 9. Gender influenced domains 7, 8, and 9. Low scores in domains 4 and 5 resulted in low emergency department visits. Low scores in domain 2 resulted in low self-assessment of health.

Health literacy has various forms of measurement, one of which is the Health Literacy Questionnaire. This measurement assesses health literacy across nine domains. The first domain is *feeling understood and supported by healthcare providers*, the second is *having sufficient information to manage my health*, the third is *actively managing my health*, the fourth is *social support for health*, the fifth is *appraisal of health information*, the sixth is *ability to actively engage with healthcare providers*, the seventh is *navigating the healthcare system*, the

eighth is *ability to find good health information*, and the ninth is *understanding health information well enough to know what to do*. Domains 1–5 each have a score ranging from 1 to 4. Among these, domain 1 (*feeling understood and supported by healthcare providers*) most often has the highest score, while domain 5 (*appraisal of health information*) most frequently has the lowest score. Domains 6–9 have scores ranging from 1 to 5. Among these, domain 9 (*understanding health information well enough to know what to do*) most often has the highest score, whereas domain 7 (*navigating the healthcare system*) most frequently has the lowest score. Health literacy is influenced by various factors, including age, gender, education, income, language, health status, and marital status. Education affects all domains of health literacy but has the greatest impact on domain 8 (*ability to find good health information*) and domain 9 (*understanding health information well enough to know what to do*). Health status influences six domains, with the greatest effect on domain 3 (*actively managing my health*) and domain 4 (*social support for health*). In addition to health status, marital status also influences domain 4.

Health literacy is assessed across nine domains. The first domain, *feeling understood and supported by healthcare providers*, was reported in 20 articles as having the highest value compared to other health literacy domains, while four articles identified it as the lowest. This suggests that most people feel supported by the healthcare providers they have encountered. Such support makes it easier for individuals to access health information and take appropriate actions to improve or maintain their health. Research conducted at several health centers in Banjarmasin found that support from healthcare providers helps individuals in selecting contraceptives [51]. Similarly, a study in the Mampang Prapatan Health Center area of Jakarta found that support from healthcare providers increased the likelihood of exclusive breastfeeding by 1.6 times compared to those without such support [52]. These findings highlight the essential role of healthcare provider support in improving community health. The second domain, *having sufficient information to manage my health*, was reported in five articles as having the lowest value, while three articles identified it as the highest among the health literacy domains. These findings indicate that this domain tends to score low. Many people struggle to obtain adequate information about their health needs. A lack of sufficient health information can impact decision-making and public trust in health-related matters. Without reliable information, individuals are more susceptible to misinformation [53]. The third domain is *actively managing my health*. Two articles state that this domain has the highest value, while another two report it as having the lowest value. This suggests that the scores in this domain rarely reach extreme highs or lows. Some individuals can manage their health effectively, while others struggle with it. The ability to manage one's health is influenced by access to and comprehension of health information. Once individuals obtain and understand health information, they can use it to take better control of their health [17].

The fourth domain is *social support for health*. Eight articles report high values for this domain, while three indicate low values. These findings suggest that people generally receive good social support for their health needs. This domain tends to have higher values among individuals who live with their families [44]. Living with family provides a strong support system, making it easier for individuals to discuss health concerns and explore possible solutions [54]. The fifth domain is *appraisal of health information*. In this domain, 23 articles reported the lowest value among all health literacy domains, with no articles indicating a high value. This suggests that many people struggle to assess the accuracy of health information.

They often cannot distinguish between reliable and false information. The ability to critically evaluate health information is increasingly important, as misinformation can lead to poor health decisions [53]. The sixth domain is *ability to actively engage with healthcare providers*. Twelve articles reported this domain as having the highest value, while three articles indicated a low value. These findings suggest that many people are capable of actively engaging with healthcare providers. Increased involvement in healthcare interactions enhances community empowerment, which in turn contributes to better health outcomes [55].

The seventh domain is *navigating the healthcare system*. Similar to the fifth domain, no articles reported a high value for this domain, while 20 articles indicated it as the lowest. This suggests that many people struggle to access appropriate healthcare services. Language barriers contribute to difficulties in navigating the healthcare system, particularly among immigrants who may not be proficient in the local language [50]. The eighth domain is *ability to find good health information*. Nine articles reported this domain as having the lowest value, while two articles indicated a high value. This suggests that many people face challenges in finding reliable health information. The ability to locate quality health information is linked to internet use. While the internet can be a valuable tool for accessing health information [14], individuals must be educated on how to distinguish between reliable and misleading sources [56]. The ninth and final domain is *understanding health information well enough to know what to do*. In this domain, 20 articles reported the highest value, while two articles indicated a low value. These findings suggest that many people can comprehend and apply health information in their daily lives. This domain is closely related to an individual's health status. People in good health often have better concentration, allowing them to process and apply health information more effectively [24]. Several factors influence an individual's health literacy, including age, gender, education, income, language, health status, and marital status. Among these, education has the greatest impact on health literacy. Individuals with lower education levels often struggle to understand health information provided by professionals, lack sufficient knowledge to manage their health, and have difficulty finding and interpreting reliable health information. In some areas, uneducated individuals may also struggle to identify appropriate treatment options, delay seeking healthcare services, and face communication barriers with medical professionals [8].

4. Conclusions

This review highlights that health literacy is assessed through nine domains. The highest health literacy scores are observed in domain 1 (*feeling understood and supported by healthcare providers*) and domain 9 (*understanding health information well enough to know what to do*). Conversely, the lowest health literacy scores are found in domain 5 (*appraisal of health information*) and domain 7 (*navigating the healthcare system*). Several factors influence an individual's health literacy, including age, gender, education, income, language, health status, and marital status. Among these, education has the most significant impact across all domains of health literacy. A key recommendation is to strengthen the role of healthcare providers as the primary support system in improving health literacy. Regardless of regional and national differences, people benefit greatly from the guidance of healthcare workers. Their support makes it easier for individuals to access, interpret, and apply health information, ultimately helping them make informed decisions about their health. For future research, a more in-depth review focusing on the economic, geographical, social, and cultural conditions, as well as the availability of healthcare services in different regions or countries, is recommended. Such

studies would provide valuable insights into the specific challenges and solutions related to health literacy across diverse populations.

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Author Contribution

Putri Ayuni Alayyannur: conceptualization, methodology, writing, supervision; Rr. Sri Rejeki Eviyanti Puspita Sari: article collection, article analysis, writing; M. Malik Al Hakim: methodology, article collection, rriting.

Competing Interest

There is no conflict of interest between the authors in this article.

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