

FROM DIMENSIONS, LEVELS AND DOMAINS TO CONTEXT-SPECIFIC CONCEPTUALIZATIONS OF HEALTH LITERACY

OD DIMENZIJ, RAVNI IN DOMEN DO KONTEKSTUALNO SPECIFIČNIH KONCEPTUALIZACIJ ZDRAVSTVENE PISMENOSTI

Sara ATANASOVA^{1*}, Tanja KAMIN¹

¹University of Ljubljana, Faculty of Social Sciences, Kardeljeva pl. 5, 1000 Ljubljana, Slovenia

Received: Jun 1, 2022

Accepted: Jun 6, 2022

Invited editorial

ABSTRACT

Keywords:

health literacy,
e-health literacy,
vaccine literacy,
mental health literacy

Health literacy refers to skills and knowledge that enable individuals to navigate health-related information environments, to function in healthcare systems, and to practice behaviors that lead to better health outcomes. Accordingly, health literacy is one of the major preoccupations of public health scholars, policies, and strategies. However, it is a complex, multidimensional, and dynamic concept that incorporates different kinds of health-related skills and knowledge. This editorial briefly presents dimensions, levels, and domains of health literacy and discusses a growing need to acknowledge health literacy as a context-specific concept that includes various forms with context-specific conceptualizations. More specifically, it focuses on three health literacy forms that are gaining attention, namely e-health literacy, vaccine literacy, and mental health literacy. By emphasizing the importance of health literacy research for this journal and in general this editorial calls for increasing engagement in this field and invites further contributions on the topic.

IZVLEČEK

Ključne besede:

zdravstvena pismenost,
e-zdravstvena
pismenost, zdravstvena
pismenost v povezavi s
cepljenjem, pismenost
o duševnem zdravju

Zdravstvena pismenost se nanaša na veščine in znanja, ki posameznikom omogočajo usmerjanje v informacijskih okoljih, povezanih z zdravjem, delovanje v zdravstvenih sistemih in vedenja, ki lahko vodijo v boljše zdravstvene izide. V skladu s tem je zdravstvena pismenost ena glavnih zanimanj strokovnjakov, politik in strategij na področju javnega zdravja. Pri tem je pomembno izpostaviti, da je zdravstvena pismenost kompleksen, multidimenzionalen in dinamičen koncept, ki vključuje različne, z zdravjem povezane veščine in znanja. Pričujoči uvodnik na kratko predstavi dimenzije, ravni in domene zdravstvene pismenosti ter obravnava naraščajočo potrebo po priznavanju zdravstvene pismenosti kot kontekstualno specifičnega koncepta, ki vključuje različne oblike in ima specifične konceptualizacije. Uvodnik se natančneje osredotoči na tri oblike zdravstvene pismenosti, ki pridobivajo pozornost: e-zdravstvena pismenost, zdravstvena pismenost v povezavi s cepljenjem in pismenost o duševnem zdravju. S poudarjanjem pomena raziskav zdravstvene pismenosti za to znanstveno revijo in na splošno uvodnik poziva k povečanju angažiranosti na tem področju in vabi k pripravi nadaljnjih prispevkov na to temo.

*Corresponding author: Tel. + 386 1 580 5167; E-mail: sara.atanasova@fdv.uni-lj.si

1 INTRODUCTION

Health literacy is one of the key determinants of health and pertains to individuals' social and cognitive ability and competencies to obtain, understand, process, communicate, appraise and apply health-related information to attitudes, decisions and behaviors aimed at health promotion, disease prevention, and the maintenance and improvement of personal health (1, 2). Research has shown that lower levels of health literacy lead to poorer health knowledge, difficulties in managing health conditions and illnesses, inadequate use of health services, poorer health, shorter survival rate, and higher health care costs (3, 4). Accordingly, it is not surprising that increasing health literacy is one of the WHO's preoccupations (5). Health literacy plays a crucial role also in current infodemic management plans (6) intended to protect people from an increasing overabundance of (in)valid information related to specific health topics, conditions or diseases in the physical and digital environment (7).

Like many other countries, Slovenia has joined the WHO Action Network on Measuring Population and Organizational Health Literacy (8). The recent project *Dvig zdravstvene pismenosti v Sloveniji* (Raising health literacy in Slovenia), which has for the first time investigated the level of health literacy in the Slovenian population, revealed that almost half (48%) of the Slovenian adult population has limited health literacy; not so much with regard to accessing and understanding health-related information but mostly with regard to appraising and applying relevant health information to various health-related practices (8).

Assessment (and exact measurement in particular) of health literacy is not an easy task. Health literacy is a complex, multidimensional and dynamic concept that incorporates different kinds of health-related skills and knowledge (2, 9). The majority of early studies on health literacy was conceptualized on the individual level, as an individual's ability to understand health-related information and to make appropriate informed decisions (10). Newer research on health literacy emphasizes the need to move beyond the individual level and in an integrative approach to health literacy that encompasses its various levels, dimensions, and domains (2, 9).

The aim of this editorial is twofold. First, we briefly present the dimensions, levels, and domains of health literacy. Second, we discuss a growing need to acknowledge health literacy as a context-specific concept that includes various forms with context-specific conceptualizations. For example, a person can be very health literate with regard to vaccines, but rather illiterate with regard to mental health. Hence a tendency to develop issue-specific health literacy. In this editorial we will focus on three health literacy forms that are gaining attention, namely e-health literacy, vaccine literacy, and mental health literacy.

2 DIMENSIONS, LEVELS AND DOMAINS OF HEALTH LITERACY

Health literacy refers to skills and knowledge that enable individuals to navigate health-related information environments, to function in healthcare systems and to practice behaviors that lead to better health outcomes (1, 11). According to Palumbo (9), the health literacy construct was formally introduced by Simonds (12) in the 1970s as one of the essential issues in social policy that connects education and health. According to the integrative approach to health literacy (2), this construct is multidimensional, consisting of four dimensions or four types of competencies; competencies to 1) access, obtain or search for relevant health information, 2) understand obtained health information, 3) appraise or process and thus assess and interpret accessed health information, and 4) apply or use gathered health information to make a decision to sustain or improve health. Each of these competencies is highly related to one's ability to obtain (and assess) quality of information. Misinformation or wrongly interpreted and/or used otherwise accurate information, i.e. "bad literacy" can lead individuals to inappropriate health-related choices, decisions, self-diagnosis, and treatments, which might result in negative health outcomes (13).

Thus, the four dimensions of health literacy are regarded as assets that unfold in domains of healthcare, disease prevention, and health promotion (2). In the healthcare domain, health literacy concerns the individual's ability to access, understand, and assess information on medical or clinical issues and to use it to make informed health-related decisions. In the domain of disease prevention health literacy pertains to the individual's competencies of obtaining, understanding, appraising and applying information on health risks. Health literacy in the domain of health promotion, on the other hand, focuses on individuals' ability to make decisions based on an awareness of the determinants of health in the social and physical environment (2).

Besides on the individual level, health literacy can be observed also on a population level, and on an organizational level (2, 9). Functional interpretation on the individual level, for example, focuses on an individual's ability to understand health information, and use it appropriately to navigate the healthcare service system (9). But there are conceptualizations of health literacy that go beyond medical contexts and individual competencies, and incorporate broader public health perspectives. Proponents of population health literacy usually view health literacy through Nutbeam's (1) proposition that incorporates three sets of interconnected health-related competencies: functional, interactive, and critical health literacy. In this way, health literacy is viewed as one of the important factors that influence the use of health services, health-related behaviors, participation in self-

care and the healthcare system, and has an impact on the equity in public health (2). However, low levels of health literacy should not just be observed as a personal fault of individuals (9). Often healthcare settings do not take into consideration individuals' health literacy skills and as such prevent appropriate access to healthcare services and adequate use of available health resources (9). Thus, health literacy concerns also healthcare organizations. Organizational health literacy refers to the "ability of healthcare organizations to establish a clear and comfortable relationship with patients, in order to encourage their engagement in the design and delivery of care" (9).

3 CONTEXT SPECIFIC CONCEPTUALIZATIONS OF HEALTH LITERACY AND ITS VARIOUS FORMS

Besides being a multidimensional and multilevel construct, health literacy is also a context-specific construct, differing with regard to health-related contexts and fields. The health literacy concept in general concerns general health-related competencies, but if we want to study and measure literacy in relation to specific health contexts, fields, topics, and even diseases, these forms of health literacy require more exact definitions; conceptualizations with regard to specific issues. Many forms of health literacy have been already defined and studied, such as navigational health literacy (14), communicative health literacy with physicians (8), pharmaceutical literacy (15), diabetes (health) literacy (16), to name just a few. All of these context-specific health literacies deserve more attention. However, in this editorial we aim to expose three: e-health literacy, vaccine literacy, and mental health literacy. All these context-specific health literacies are especially relevant for the infodemic debate and are gaining momentum due to the increased use of various digital and online resources to access and obtain health-related information (17) and due to complexities related to vaccination and mental distress that became increasingly discussed and politicized in the recent COVID-19 pandemic (18-20).

3.1 E-health literacy

According to Norman and Skinner (21), e-health literacy, or what is often also referred to as digital health literacy, is a complex construct that consists of six types of literacy, namely: (1) computer or digital literacy, which refers to skills related to using a computer and the Internet; (2) information literacy, which includes the competences of searching, evaluating and using retrieved information; (3) media literacy, which pertains to the skills and knowledge required to interpret various audio and visual forms of resources and create meaning out of their content; (4) traditional literacy, which refers to the basic skills of writing, reading, calculating, understanding and

interpreting information in a given context; (5) science literacy, which consists of competences of knowing basic scientific concepts and reasoning, which helps individuals to understand, evaluate, and give meaning to basic scientific facts; and (6) health literacy.

With the majority of online health-related sources and information, which are accessible to many different types of users and patients, e-health literacy has become one of the most crucial abilities and resources that enable individuals to make meaningful and informed decisions, undertake effective strategies for coping with and managing health issues, have more confidence in medical encounters with healthcare providers, effectively navigate the healthcare system, and achieve positive health outcomes (22-24).

3.2 Vaccine literacy

Vaccination is one of the major public health issues that became even more emphasized during the COVID-19 pandemic (19). Information on vaccines and vaccination is often complex, and with the dissemination of these types of information online and on various digital media, individuals are often confronted with information overload and ambiguity about the quality of vaccination-related information (25). High levels of vaccine literacy (or often also referred to as vaccination health literacy) is crucial for individuals to make informed decisions about vaccination. Vaccine literacy refers "to individuals' knowledge, motivation, and skills to find, understand, and evaluate immunization-related information in order to make adequate immunization decisions" (8). Recent research in 11 EU countries, including Slovenia, revealed that vaccine literacy is highly related to vaccination-related attitudes and behaviors, and that people with lower socio-economic status had lower levels of vaccine literacy (8).

3.3 Mental health literacy

Mental health literacy is still an evolving, context-specific, health literacy construct with various definitions, but one of the more integrative ones defines mental health literacy as (1) an understanding how to obtain and maintain positive mental health; (2) understanding mental disorders and their treatments; (3) decreasing stigma related to mental disorders; and (4) enhancing help-seeking efficacy (knowing when and where to seek help and developing competencies designed to improve one's mental health care and self-management capabilities) (26). During the COVID-19 pandemic, which has considerably affected the mental health of people around the world (18), mental health literacy proved to be especially important. Due to increased levels of fear, anxiety, and stress, more people have been in need of psychological help, yet, due to the stigma around seeking help, many were not seeking and receiving psychological help (27). This points to the need to include the concept of stigma in the health literacy

construct, as it might significantly interfere with help-seeking efficacy and consequently health outcomes.

4 CONCLUSION

Health literacy is an evolving construct, especially with regard to context-specific health literacies. As advised by Pinheiro (28), more research is needed in the health literacy field; the field that draws theories and constructs from research traditions related to two major topics: health and literacy. Stronger conceptual foundations of health literacy are needed, as well as valid and reliable measurement instruments, especially for under-researched context-specific health literacies. Explanatory and predictive research requires valid and reliable scales, as they will shape our understanding of the topic, and measured results are often translated into public health policies and/or interventions. Except for the study of Wilhelmova et al. (29), research published in the Slovenian Journal of Public Health has so far not extensively engaged in this topic. It is hoped that this editorial has emphasized the importance of health literacy research for this journal in general, and is recognized as an invitation for further contributions in this field.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

FUNDING

This editorial was produced without external funding.

ETHICAL APPROVAL

Ethical approval is not required for this editorial.

REFERENCES

- Nutbeam D. The evolving concept of health literacy. *Soc Sci Med*. 2008;67(12):2072-8. doi: 10.1016/j.socscimed.2008.09.050.
- Sørensen K, Van den Broucke S, Fullam J, Doyle G, Pelikan J, Slonska Z, Brand H; (HLS-EU) Consortium Health Literacy Project European. Health literacy and public health: a systematic review and integration of definitions and models. *BMC Public Health*. 2012;12:80. doi: 10.1186/1471-2458-12-80.
- Duplaga M. Determinants and consequences of limited health literacy in Polish society. *Int J Environ Res Public Health*. 2020;17(2):642. doi: 10.3390/ijerph17020642.
- Lorini C, Ierardi F, Bachini L, Donzellini M, Gemmi F, Bonaccorsi G. The antecedents and consequences of health literacy in an ecological perspective: results from an experimental analysis. *Int J Environ Res Public Health*. 2018;15(4):798. doi: 10.3390/ijerph15040798.
- WHO. Improving health literacy. Accessed May 31st, 2022 at: <https://www.who.int/activities/improving-health-literacy>.
- Rubinelli S, Purnat TD, Wilhelm E, Traicoff D, Namageyo-Funa A, Thomson A, et al. WHO competency framework for health authorities and institutions to manage infodemics: its development and features. *Hum Resour Health*. 2022;20(1):35. doi: 10.1186/s12960-022-00733-0.
- Eysenbach G. How to fight an infodemic: the four pillars of infodemic management. *J Med Internet Res*. 2020;22(6):e21820. doi: 10.2196/21820.
- M-POHL. International report on the methodology, results, and recommendations of the European Health Literacy Population Survey 2019-2021 (HLS19) of M-POHL. Vienna: Austrian National Public Health Institute, 2021. Accessed May 31st, 2022 at: <https://m-pohl.net/node/42>.
- Palumbo R. The bright side and the dark side of patient empowerment: co-creation and co-destruction of value in the healthcare environment. Cham: Springer, 2017.
- Biasio LR. Vaccine literacy is undervalued. *Hum Vaccin Immunot*. 2019;15(11):2552-3. doi: 10.1080/21645515.2019.
- Squiers L, Peinado S, Berkman N, Boudewyns V, McCormack L. The health literacy skills framework. *J Health Commun*. 2012;17(Suppl 3):30-54. doi: 10.1080/10810730.2012.713442.
- Simonds SK. Health education as social policy. *Health Educ Monogr*. 1974;2(Suppl 1):1-10.
- Schulz PJ, Nakamoto K. "Bad" literacy, the Internet, and the limits of patient empowerment. In: AAAI Spring Symposium on Artificial Intelligence & Health Communication. Stanford, USA, 2011.
- Griese L, Schaeffer D, Berens EM. Navigational health literacy among people with chronic illness. *Chronic Illn*. 2022;17423953211073368. doi: 10.1177/17423953211073368.
- Vervloet M, van Dijk L, Rademakers JDDJM, Bouvy ML, De Smet PAGM, Philbert D, et al. Recognizing and addressing limited pharmaceutical literacy: development of the RALPH interview guide. *Res Social Adm Pharm*. 2018;14(9):805-11. doi: 10.1016/j.sapharm.2018.04.031.
- Black S, Maitland C, Hilbers J, Orinuella K. Diabetes literacy and informal social support: a qualitative study of patients at a diabetes centre. *J Clin Nurs*. 2016;26(1-2):248-57. doi: 10.1111/jocn.13383.
- Wang X, Shi J, Kong H. Online health information seeking: a review and meta-analysis. *Health Commun*. 2021;36(10):1163-75. doi: 10.1080/10410236.2020.1748829.
- Brooks SK, Webster RK, Smith LE, Woodland L, Wessely S, Greenberg N, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet*. 2020;395(10227):912-20.
- Griebler R, Straßmayr C, Dietscher C, Flaschberger E, Nowak P. Bereitschaft zur Corona-Schutzimpfung und Gesundheitskompetenz. ÖPGK-Factsheet. Version 02/2021. Wien: Österreichische Plattform Gesundheitskompetenz (ÖPGK), 2021.
- Kamin T, Perger N, Debevec L, Tivadar B. Alone in a time of pandemic: solo-living women coping with physical isolation. *Qual Health Res*. 2021;31(2):203-17. doi: 10.1177/1049732320971603.
- Norman CD, Skinner HA. eHEALS: the eHealth literacy scale. *J Med Internet Res*. 2006;8(4):e27. doi: 10.2196/jmir.8.4.e27.
- Norman CD, Skinner HA. eHealth literacy: essential skills for consumer health in a networked world. *J Med Internet Res*. 2006;8(2):e9. doi: 10.2196/jmir.8.2.e9.
- Petrič G, Atanasova S, Kamin T. Ill literates or illiterates? Investigating the eHealth literacy of users of online health communities. *J Med Internet Res*. 2017;19(10):e331. doi: 10.2196/jmir.7372.
- Seçkin G, Yeatts D, Hughes S, Hudson C, Bell V. Being an informed consumer of health information and assessment of electronic health literacy in a national sample of internet users: validity and reliability of the e-HLS instrument. *J Med Internet Res*. 2016;18(7):e161. doi: 10.2196/jmir.5496.
- Dubé E, Gagnon D, Nickels E, Jeram S, Schuster M. Mapping vaccine hesitancy - country-specific characteristics of a global phenomenon. *Vaccine*. 2014;32(49):6649-54. doi: 10.1016/j.vaccine.2014.09.039.
- Kutcher S, Wei Y, Coniglio C. Mental health literacy: past, present, and future. *Can J Psychiatry*. 2016 Mar;61(3):154-8. doi: 10.1177/0706743715616609.
- Genc AB, Kara E. Mediating role of self-disclosure in the relationship between attitudes towards online counselling and perception of social stigma due to receiving psychological help. *Eur J Educ Res*. 2021;10(2):919-32.
- Pinheiro P. Conceptualizations of health literacy: past developments, current trends, and possible ways forward toward social practice. *Health Lit Res Pract*. 2021;5(2):e91-5. doi: 10.3928/24748307-20210316-01.
- Wilhelmova R, Hrubá D, Veselá L. Key determinants influencing the health literacy of pregnant women in the Czech Republic. *Zdr Varst*. 2014;54(1):27-36. doi: 10.1515/sjph-2015-0004.