VIA MEDICA

Cancer prevention and public health

NOWOTWORY Journal of Oncology
2023, volume 73, number 1, 39–44
DOI: 10.5603/NJO.a2022.0066

ISSN: 0029–540X, e-ISSN: 2300-2115
www.nowotwory.edu.pl

The role of health literacy and health education in the prevention and course of neoplastic diseases

Dominik Olejniczak, Agata Olearczyk

Public Health Department, Medical University of Warsaw, Warsaw, Poland

The idea of health literacy is a relatively new term in contemporary health promotion, especially in Poland, where it has only recently started to be used. It was created as a result of the need to name a certain set of conditions and competences that could realistically determine the health of individuals and populations. This applies to both healthy people, including those at high risk of disease (the use of health literacy in prevention), as well as sick people (the use of health literacy in the course of a disease), including people suffering from oncological diseases.

Key words: health literacy, health education, health promotion, neoplastic diseases

Introduction

The idea of health literacy is a relatively new term in contemporary health promotion, especially in Poland, where it has only recently started to be used. It was created as a result of the need to name a certain set of conditions and competences that could realistically determine the health of individuals and populations. This applies to both healthy people, including those at high risk of disease (the use of health literacy in prevention), as well as sick people (the use of health literacy in the course of a disease), including people suffering from oncological diseases.

The sources of this term can be found in the Ottawa Charter from 1986, where the starting point for health literacy is the phrase "developing individual skills" [1].

Taking into consideration the Ottawa Charter and comparing the scope of health literacy with the components of health promotion, health education should be considered the most important element for generating this skill.

Health education is a key tool in ensuring the goals of health promotion are met. The original one focused only on providing society with knowledge about health (often selective, encyclopedic). Currently, the concept of modern health education encourages society to engage and proactively participate in the achievement and enhancement of well-being. This also fits in with the objectives and definitions of public health, which indicates a strong relationship between these areas and health literacy. Recalling Winslow's definition that "public health is the science and art of preventing disease, prolonging life and promoting physical and mental health and well-being through organized community efforts for the sanitation of the environment, the control of community infections, the education of the individual in principles of personal hygiene, the organization of medical and nursing service for the early diagnosis and preventive treatment of disease and the development of the social machinery which will ensure to every individual in the community a standard of living adequate for the maintenance of health", a relationship can be noticed between "community involvement" and health literacy, which will be discussed later in the article [2].

How to cite:

Olejniczak D, Olearczyk A. ***The role of health literacy and health education in the prevention and course of neoplastic diseases.*** *NOWOTWORY J Oncol* 2023; 73: 39–44.

Health education

Returning to health education, Woynarowska defined it as "a lifelong process of teaching people how to live in order to maintain and improve their health and that of others, and in the event of a disease or disability, actively participate in its treatment, cope with and reduce the negative effects" [3].

Andruszkiewicz and Banaszkiewicz write about health education as follows: "Health education can be directed towards an individual or a group of people. In both strategies, the essence of actions is to develop the ability to make the right decisions in solving health problems" [4]. Dudkiewicz and Kamińska, on the other hand, say about health education that: "It is a process in which people learn to take care of their own health and the health of the society in which they live. Health education covers: knowledge about social, political and environmental factors influencing health; knowledge about health related to the functioning of one's own body; the ability to prevent and cope with difficult situations; knowledge and skills related to the use of the healthcare system" [5]. The above-mentioned definitions will allow for a precise evaluation of the programs submitted for analysis, in terms of achieving the objectives of health education in the context of assessing the needs and capabilities of the chosen target groups and selected tools.

Effective health education creates opportunities to engage society in health matters by building key skills aimed at health described in the literature as "health literacy".

From the point of view of pro-health behaviors and activation of the society in acquiring and maintaining healthy habits, health literacy is a key skill. It is a concept whose importance has been appreciated by the gratest authorities in the field of health promotion around the world, including Kickbush. It says that health literacy consists of:

1. information and knowledge about health,
2. understanding the social components of health,
3. ability to negotiate with the environment, understanding and balancing the risk of individual and social behavior,
4. coping skills,
5. care delivery skills,
6. ability to use the healthcare system,
7. moving from fatalistic acceptance of health issues to the implementation and use of health knowledge [6].

Taking into account building knowledge about health, especially oncological diseases, the role of so-called therapeutic education should be recognized. When discussing the concept of therapeutic education, the starting point should be broadly understood health education – one of the components of health promotion. It is worth emphasizing that health education should be treated as a process, a series of planned activities, and not as an individual or incidental transfer of knowledge. Only continuous, consistently implemented health education, also in terms of slightly broader scope than therapeutic education, can bring results, both in primary, secondary and tertiary prevention, which is particularly important in the case of neoplastic disease.

Therapeutic education

Health education is also an integral part of therapy, especially in chronic diseases – e.g., oncological diseases, hence the concept of therapeutic education emerged. As in the case of health education, there are many definitions of this concept as well. Nevertheless, it should be talked about as an immanent element of the treatment process, taking into account in a special way the empowerment of the patient and their adaption as regards functioning in the new reality – the existence of the disease.

The effectiveness of therapeutic education has been scientifically proven, and its application particularly applies to chronic diseases, such as, inter alia, metabolic diseases – e.g. diabetes, respiratory diseases – e.g. asthma, neoplastic diseases as well as dermatological diseases – e.g. atopic dermatitis. It was the growing number of people with chronic diseases that forced the creation of tools that would facilitate an increase in the patient's independence during the course of their disease. Therefore educational content should be in line with the specificity of a given diseases entity and its impact on the patient.

Effective implementation of therapeutic education should be preceded by a precise assessment of health needs, including the patient's educational needs. This is important because a therapeutic education program will bring the desired results only if it is adjusted to the needs and capabilities of the patient (e.g. to the perceptual and cognitive abilities dependent on or resulting from age, health status or education level).

The main goals of therapeutic education include building a high level of competences and skills in the field of broadly understood health, obtained through the proper use of information sources, allowing for minimizing the occurrence and impact of health risk factors on the individual and the environment of living, in order to improve or avoid worsening the current state of health. In English-language literature (although also in Polish), this competence is called health literacy. By acquiring such skills, another goal of therapeutic education can be achieved, which is building the independence and self-sufficiency of the patient, in order to improve their quality of life with the disease.

Another goal of therapeutic education is to build self-treatment skills. The English-language literature provides many equivalents for this concept, incl. self-treatment and self-care. The self-treatment concept (successfully functioning in countries with a high level of education) concerns the independent, self-use of medications by chronically ill people. Such people are usually better educated in terms of their disease entity than patients treated on an ad hoc basis. This often happens as a result of effective therapeutic education. The competences acquired in this way allow even the self-regulation of doses of some medications to a limited extent

(for example, adjusting the dose of an anticoagulant based on the results of tests performed by so-called cardiological patients with implanted valves). At the same time, the concept of self-care extends the discussed area by, for example, ability to care for a diabetic foot or proper hygiene of the stoma belt. Mastering these skills affects quality of life, giving a sense of real agency to the situation and the course of the disease, which is an obvious reference to the sense of coherence [7].

It is worth noticing that therapeutic education, referring to the definition of health education, should be a process – planned and based on the concept of EBM and EBH (respectively: evidence-based medicine and evidence-based health). If there is such possibility, its assumptions should be implemented by the therapeutic team from the moment of diagnosis, which is often a critical moment for the patient.

Failure to implement therapeutic education may lead to serious consequences, not only physical – such as the lack of self-care skills or its improper implementation, resulting in e.g. infection of a wound or failure to regulate diabetes. There may also be psychological consequences, such as the lack of acceptance of a chronic disease, which may increase the risk of secondary health issues, for example depression.

It can be stated with certainty that striving to increase the patient's independence, especially in the course of oncological diseases – in view of the growing burden on health care systems – is currently one of the main challenges for public health policy, and, in particular, for health promotion (including health education) not only in Poland, but also around the world.

Health literacy – concept development

Returning to health literacy, the concept itself began to develop intensively in the late 1990s. It was then that an attempt was made to define the concept. Kickbush states that health literacy covers information and knowledge about health, but also understanding the social components of health and the skills, as it is put, to negotiate with the environment, understand and balance the risks of individual and social behaviors, coping skills, the ability to deliver care, use of available health services and implementation of health knowledge [8]. It is worth underlining, that the definition of Kickbush strongly emphasizes the social dimension of health, which suggests the direction in which to go in order to define the concept as fully as possible.

Nutbeam underlines that health literacy is one of the most important challenges and tasks for public health in the 21st century. He states that health literacy is closely related to individual, cognitive and social skills, which constitutes the ability of individuals to access information, as well as understand and use it in order to promote and maintain good health [9]. In Nutbem's deliberations, one can observe a reference to the sense of coherence, therefore it can be concluded that coherence and health literacy are related and interdependent. Nutbeam included three elements among the abovementioned skills:

1. Improving self-sufficiency in the implementation of specific health tasks

This is an element that fits in with the idea of building social responsibility for one's own health. A certain self-sufficiency in this respect is possible only with a sufficiently high level of health awareness and perception. Generating responsibility for one's own health is determined by the individual's perception of health as a value – an individual resource that needs to be achieved and maintained. In the process of building responsibility for one's own health, it should be emphasized that losing it may also have an impact on the living environment of an individual. In the case of neoplastic diseases, at the stage of their prevention, one can talk about increasing one's knowledge about risk factors, and – in terms of secondary prevention – about regular preventive examinations, especially in cases of high-risk medical or family history.

2. Increasing knowledge and understanding of the importance of health determinants

A reference to the definition of health promotion can be observe here, consisting in assigning a special rank to knowledge about the health determinants. The resulting possibility of increasing control over some of them should be the basis for building health literacy. This, in turn, leads to the achievement of the goals of health literacy.

3. Changing attitudes and motivations in relation to health behaviors

Changing health behaviors and attitudes towards health is a long-term process that is not easy to implement [10]. It is associated with difficulties in finding motivation to change negative behaviors. Activities for health can only bring effects if they are implemented consistently and in accordance with the ideas of evidence-based medicine.

In Poland, the concept of health literacy was initially translated as "the ability to read / perceive health". However, with a deeper understanding of the meaning of the concept, slightly more accurate expressions began to be used, such as "health alphabetism", "health literacy", or, which seemed to be the most accurate translation, "health competence" [11].

The proper and complete definition of health literacy is somewhat difficult, because it is a broad concept, encompassing a whole range of behaviors, competences and individual skills.

Taking into account the existing definitions of health literacy and comparing them with the multidimensionality of the concept, it can be proposed to define it as a set of competences and skills in the field of broadly understood health, obtained through the proper use of information sources, allowing to minimize the occurrence and impact of health risk

factors on the individual and the living environment in order to improve and maintain good health.

As can be deducted, the level of health literacy is positively correlated with the level of education and health potential. The sense of coherence is important as well. It can also be concluded that the level of health literacy among citizens is the higher the earlier health education begins, which includes not only elements of lifestyle, but also the ability to navigate the healthcare system, or the so-called critical health literacy.

Health literacy in health promotion

From the point of view of health promotion, it is important to use health literacy in practice and place it in projects that pursue the goals of health promotion. Health literacy accompanies health promotion practically at every stage: from the assessment of health needs (a low level of health literacy is evidently a health need), to the evaluation of changes in the level of health literacy among target groups.

Health literacy is still an insufficiently recognized and underestimated issue in Poland, especially in the prevention of diseases, including neoplastic diseases. This may result from some shortcomings in the Polish-language literature and the inability to use it in practice. In order to facilitate the understanding of the meaning of health literacy, one should go back to the perception of health not in the way of salutogenetic concept (which is focued on presence of health) but in the opposite way – from the point of health's absence. Referring to Lalonde's fields (modern health promotion seems to be departing from this concept), which say that lifestyle impacts health in about 50%, it can be concluded that the level of health education, manifested by the type of health-related behaviors, has a decisive influence on individual's health. The level of an individual's education is also determined by many factors. In the era of universal access to data sources (e.g. the internet), not always of evidence-based nature, it depends on the ability to search, select and interpret information related to health. This is where health literacy is used, and more precisely one of its part – the aforementioned critical health literacy. The ability of an individual to make evidence-based decisions about health is one of the measures of health literacy and should be analyzed when assessing health needs for selected groups of the population. The level of this skill can provide an answer to the question about the health potential of the group, and thus facilitate the decision e.g. about the selection of the information flow channel, or, in the case of direct education, about the selection of appropriate teaching methods and about choosing the material with the proper scope and adequate level adjusted to the group's needs and capabilities. Appreciating the importance of the assessment of health needs as an integral part of the implementation of the health promotion program, it is noticeable how important the inclusion of the level of health literacy in such an assessment can be.

By implementing activities and interventions aimed at building broadly understood health awareness in relation to the evaluation phase, it can be argued that, in addition to checking the substantive knowledge (e.g. on a given disease unit), the evaluation should also include examining the level of health literacy, expressed by skills [12].

Bearing in mind the above statement, it can certainly be concluded that the health education of society should be directed to a lesser extent at specific health problems and at providing encyclopedic knowledge, but above all, at stimulating people to acquire it on their own. This fits in with the idea of so-called modern health education, which involves stimulating the society to be active and creating conditions for changing health behaviors, instead of merely providing "dry" theoretical knowledge [3].

It is therefore visible that the degree of public involvement in pro-health initiatives is also a measure of the level of health literacy. We can also reverse the situation and put forward a thesis that the low level of health literacy significantly hinders the involvement of citizens in social life and joint care for increasing access to the healthcare services and safety, and thus the implementation of the idea of health promotion and public health [9].

Regarding the procedure in the prevention of diseases, including neoplastic diseases, one should focus on the issue of using the internet as a source of knowledge about health, which is now a common practice both in Poland as well as worldwide [13, 14]. In the era of universal access to information, it seems natural to search for information online, especially in terms of health. Also in an era of inefficient healthcare infrastructure, patients often use information from websites to try to assess their own health, as well as to interpret the observed symptoms, ending with treatment methods. Keeping in mind that a lot of information available in the discussed source is not evidence based, , health literacy and the ability to apply it in practice, i.e. through the selection of online sources, return to the force.

It can therefore be concluded that building health literacy is one of the main challenges for contemporary health promotion and public health. As one of the elements conditioning social commitment, it significantly facilitates the achievement of health goals in various thematic areas. It should be emphasized that a certain developed scheme of action, which is allowed by the appropriate level of health literacy, can be used to counteract many different health problems. It seems much more beneficial to educate society on how to deal with health issues through the use of a certain proven scheme, than saturating educational content with substantive information. The idea is to generate society's ability to inter alia, the independent search for evidence-based information on given health problems.

One of the necessary conditions for building a high level of health literacy is the so-called information society. It has to

do with access to data, information – in this case about health. In order to define a given society as informational, three conditions must be met:

- the existence of databases, information (including resources contained, for example, on the internet),
- access to the databases in question,
- society's ability to use these databases [15].

In information societies, due to free access to the information, there are more favorable conditions for the development of health literacy, but there are also more threats. They are created by a large number of sources that provide a significant amount of information that an individual may have problems to classify as substantive and trustworthy [16].

Thus, it can be seen that building an information society should go hand in hand with generating health literacy in the community. In an era of dynamic technological development and popularization of access to the internet, i.e., the main source of information about health, it is this medium that should focus on building health competences. It is visible, therefore, that health literacy is a broad concept and there are many ways to nurture this skill. The basis, however, seems to be the information society, i.e., building the idea of e-Health in a broader perspective. This idea offers opportunities when it comes to the health potential of the society, for example by computerization of the healthcare system, like the electronic registration system. This has a positive effect, for example, on access to services and waiting times for appointments.

In terms of access to services, health literacy is used, for example, when searching for medical facilities in which the waiting time for a visit to a specialist is the shortest, i.e. it is manifested by lack of "attachment" to one facility. However, this is related, firstly, to the fact that the choice of the medical facility in which the patient wants to be treated is his or her right (some patients in Poland are still convinced of the regional limitation in delivering medical services through public system, which shows gaps in basic knowledge about healthcare system in general), and secondly, the ability to find a facility in which the waiting time for an appointment may be shorter. It should also be emphasized that behavior consisting in canceling scheduled medical appointments, where the patient can't be present, is also a component of health literacy, expressed in pro-social behavior, i.e., freeing space for another patient – the ability to be sensitive to the health needs of other member of the local community.

Building a high level of health literacy is accompanied by many dependencies and changes. It is a slow and long-term process, but it is worth investing in its development. This facilitates the implementation of the idea of making people responsible for their own health, which is also an activity toward improving the functioning of the healthcare system. It may be manifested, for example, by a greater tendency to implement secondary prevention by carrying out regular preventive health check-ups.

The need for social responsibility for health is also emphasized by the World Health Organization (WHO), inter alia in the Jakarta declaration of 1997 [17]. Special attention should also be paid to health literacy in the context of different groups of the population. This mainly concerns school-age adolescents and pregnant women, as well as young mothers, and groups at higher risk of developing a given disease (e.g. cancer). In case of adolescents, it is about searching for information on risky health behavior, including intoxication with psychoactive substances.

For young people, the Internet is a source of information about methods of intoxication, or about the way of using various types of substances, ranging from designer drugs, to medications (mainly from the OTC group), to induce intoxication. The sources of such information are most often internet forums and closed groups of social networking sites. These sources contain a type of instruction, but do not indicate health consequences, creating a false sense of security [18].

Conclusions

Summing up, the construction of high-level health literacy and the implementation of all ideas and projects serving it should be considered a priority task for central and local authorities. With the support and involvement of international institutions such as the European Union or the World Health Organization, it is possible to achieve visible health effects faster, also in terms of cancer prevention. Local communities can benefit from it, and it can also translate into economic effects in the form of increasing the efficiency of the system, for example in the context of the rational use of resources, or reducing costs due to the earlier detection of health problems.

It is also worth noting that building health promotion strategies on each level (whether at a local of central level) related to oncological diseases, including high level of health literacy, should be treated as a priority, because no healthcare system will function properly without conscious and well-educated patients.

Conflict of interest: none declared

Dominik Olejniczak
Medical University of Warsaw
ul. Żwirki i Wigury 61
02-091 Warszawa, Poland
e-mail: dolejniczak@wum.edu.pl

Received: 5 Dec 2022
Accepted: 9 Dec 2022

References

1. Karski JB. Praktyka i Teoria Promocji Zdrowia. Cedetu, Warszawa 2003.
2. Zdrowie publiczne – geneza, przedmiot i zakres. Wprowadzenie do zagadnienia. In: Opolski J. ed. Zdrowie Publiczne. Wybrane Zagadnienia – Tom 1. Szkoła Zdrowia Publicznego CMKP, Warszawa 2011.
3. Woynarowska B. Edukacja zdrowotna: podręcznik akademicki. Wydawnictwo Naukowe PWN, Warszawa 2007.

4. Andruszkiewicz A, Banaszkiewicz M. Promocja zdrowia. Wydawnictwo Lekarskie PZWL, Lublin 2008.
5. Dudkiewicz K, Kamińska K. Edukacja zdrowotna. Wydawnictwo Nasza Księgarnia, Warszawa 2001.
6. Kickbusch I. Think health: what makes the difference? Health Promot Int. 1997; 12(4): 265–272, doi: 10.1093/heapro/12.4.265.
7. Krajewski-Siuda K. ed. Odpowiedzialne i nowoczesne samoleczenie w systemie ochrony zdrowia. Raport. Fundacja Obywatele Zdrowo Zaangażowani, Warszawa 2016.
8. Kickbusch I. Think health: what makes the difference? Health Promot Int. 1997; 12(4): 265–272, doi: 10.1093/heapro/12.4.265.
9. Nutbeam D. Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. Health Promot Int. 2000; 15(3): 259–267, doi: 10.1093/heapro/15.3.259.
10. Nutbeam D. Health literacy as a public health goal: a challenge for contemporary health education and communication strategies into the 21st century. Health Promot Int. 2000; 15(3): 259–267, doi: 10.1093/heapro/15.3.259.
11. Cianciara D. Zarys współczesnej promocji zdrowia. Wydawnictwo Lekarskie PZWL, Warszawa 2010.
12. Kardialik K, Olejniczak D, Religioni U. Wykorzystanie umiejętności odczytywania (postrzegania) zdrowia przez studentów w procesie pozyskiwania informacji o chorobach. Hygeia Public Health. 2012; 47(1): 89–94.
13. Wojtecka A, Wojnarowska M, Zarzeczna-baran M. Use of the internet as a source of health information. Review of selected studies in the world. Ann Acad Med Gedan. 2016; 46: 107–113.
14. Bhatia S, Patnaik L, Pattanaik S, et al. Internet use for patient care and health research: A cross-sectional study among physicians in a teaching hospital of Eastern India. J Family Med Prim Care. 2018; 7(5): 993–997.
15. Webster F. Theories of the Information Society. Taylor & Francis Group, New York 2006.
16. European Opinion Research Group. European Union citizens and sources of information about health. 2003.
17. Ewles L, Simnett I. Promoting health: a practical guide. 5th ed. Baillière Tindall, London 2003.
18. Jezierska I, Olejniczak D. Problem zażywania narkotyków i „dopalaczy" w grupie wiekowej 18–25. Polski Przegląd Nauk o Zdrowiu. 2011(3): 316–319.