

Media Health Literacy on Prevention of Noncommunicable Diseases in Adolescents (Systematic Review)

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ABSTRACT

Background: Health literacy has an important role in health promotion efforts, where literacy focuses on accessing, understanding, assessing, and applying the information obtained so that literacy can have an impact across generations. Health literacy in adolescents is an effort to prevent noncommunicable diseases through behaviors such as eating patterns, smoking, physical activities and others, which are areas that are less explored so it is very important to have an individual approach to healthy behavior. **Objective:** This study was to examine health literacy in preventing noncommunicable diseases in adolescents. **Methods:** Systematic review database method used, including Google Scholar, JSTOR, ScienceDirect, Springer Link, PubMed. Inclusion criteria used to select articles include articles using Indonesian and English, year of publication in the 2018-2022 range (last 5 years), full text or non-duplicate and the type of article selected is a research article. Five articles were selected that met the inclusion criteria 1 and 1 book as an additional reference. **Results:** Health literacy can help health promotion efforts to improve individual abilities in accessing, understanding, assessing, and applying information related to the prevention of noncommunicable diseases through various media. So that the health literacy in individuals and sources of information has the effect of changing lifestyles and a healthy environment. **Conclusion:** As a means of preventing noncommunicable diseases in adolescents from a young age, the development of health technology, which is a tool that improves individual abilities to obtain good health outcomes, has contributed to the prevention of noncommunicable diseases at an earlier age.

Keywords: Adolescents, Health literacy, Noncommunicable diseases, Social media.

INTRODUCTION

Currently, technology is expanding and the 4.0 Industrial Revolution has begun. This revolution is a period of new development during which a number of technologies, including physical technology, digital technology, and biological technology, have achieved significant advancements compared to the past. These three technologies can encourage the primary technologies for the Industrial Revolution 4.0, such as health services in the industrial era 4.0, which are also in flux, such as changes in technology, socioeconomics, lifestyles, and the environment, as well as numerous innovations in the field of health services (Lim 2017).

Health sector technology will essentially serve as a means to build health 4.0 capacity. In this instance, the expansion of health and medical technology

and applications, as well as wearables such as the Internet of Things (IoT) as sensors with large data capacities, will empower and enhance individuals' abilities to manage their own health, wellness, and illness. Health information technology can provide knowledge that enables individuals to have greater access to health information, thereby empowering them to make their own health-related decisions and, ultimately, enhancing their capacity. By accessing electronic health records (EHRs), individuals can gain a greater understanding of their health condition and participate more actively in health promotion, disease prevention, and care (Lim 2017).

Literacy is one of the factors that contribute to the success of the younger generation. Oral and written information will be easier to comprehend if the individual possesses strong literacy skills (Candrakusuma 2020). Health literacy is the

degree to which an individual is able to obtain, process, and comprehend basic health information and service necessary for making sound health decisions. This includes both the delivery of (the media) as a source of information and the degree to which the information can be comprehended (Dunn and Hazzard 2019).

The level of health literacy is still significantly below international standards. This is supported by the fact that many adolescents in Indonesia are more interested in literacy pertaining to gadgets, cosmetics, fashion, or even art, but rarely or never seek health-related information (CDC 2021). So that individuals require the knowledge, motivation, and ability to access, comprehend, evaluate, and apply information in order to form judgments and make decisions in their daily lives. Individual healthcare systems that emphasize prevention have played a major role in fostering health literacy.

Health literacy can also be defined as an individual's capacity to comprehend, unify behavior, and select health services in order to take action or prevent a disease. Health literacy is an important factor in preventing noncommunicable diseases (NCDs) caused by inactivity, poor diet, smoking, and alcohol consumption (WHO Regional Office for South-East Asia 2017; Duplaga 2020).

Health literacy can be used to analyze the importance of improving adolescent and adult health. A third of adult Americans have inadequate health literacy. Low health literacy is associated with lower satisfaction with disease status, so that the increase in the use of emergency care and services is greater than the increase in the use of prevention services. Additionally, low health literacy is associated with a sense of shame and a decreased propensity to make health decisions. (Fleary, Joseph, and Pappagianopoulos 2018).

With the advancement of technology, it is evident that adolescents are more media-savvy than the majority of other age groups. Despite adolescence's prominence in many global health agendas, adolescent health is less of a concern than that of other age groups (Paakkari et al. 2019). Adolescence is an important period of life. Widespread access to information via media, be it the Internet or other media, can raise significant concerns regarding adolescents'

health literacy and the reliability of the information they obtain. It is difficult for adolescents to find, select, and comprehend quality information due to their limited search capabilities and low literacy levels. Over 80% of adolescents own at least one new form of media technology (e.g., cell phones, PDAs, computers with Internet access), and they are increasingly using this technology to send text messages, email, blog, and access social networking sites (Chung 2017).

With this technology, the health of adolescents will be affected. The importance of adolescent health stems from the fact that at this age, adolescents begin to learn and are able to make independent decisions regarding their health and the health of others. According to data obtained from the 2018 Basic Health Research regarding lifestyle, people continue to lack consumption of fruits and vegetables (95.5%), have low physical activity (33.5%), and are daily smokers of productive age (29.5%) (Kementerian Kesehatan RI Badan Penelitian dan Pengembangan 2018).

The increase in the incidence of NCDs is due to a combination of risk factors that cannot be modified and risk factors that can be modified, according to these data. Tobacco use, lack of physical activity, an unhealthy diet, and alcohol consumption are modifiable risk factors. These risk factors may induce physiological changes within the human body, such as leading to high blood pressure, high blood sugar, high cholesterol, and obesity. In addition, in a relatively short period of time, it will cause noncommunicable diseases (NCDs) (Dinas Kesehatan Provinsi Jawa Tengah 2019).

The research aims to systematically conduct a literature review to present logical evidence from previous studies or published literature on the relationship between health literacy and the prevention of noncommunicable diseases that can be carried out from a young age. From the results of a systematic review or previous literature it is hoped that it will provide an overview of the mapping study on adolescent health literacy skills on adolescent behavior such as consuming behavior, tobacco, physical activity and others, so with exposure to information from the media, adolescents must have good literacy skills as a prevention effort.

METHODS

This study employs the Cronin, Ryan, and Coughlan methodology, which consists of four steps: identifying topics/problems, searching for relevant literature or articles, collecting, reading, and analyzing relevant literature, and writing reviews. Literature obtained via the Internet was in the form of scientific articles on health literacy and social media in relation to adolescent health behavior from various online journals accessible via Google Scholar, JSTOR, ScienceDirect, Springer Link, and PubMed served as the basis for this research. The obtained articles were screened for their title, abstract, and research content.

Studies that met the specified inclusion criteria were selected for further review. To be selected, studies must examine or identify factors or interventions related to health literacy in media that influence adolescent behavior that can lead to NCDs in the future. Research must contain elements of the ability to access health information through media related to consuming behavior, physical activity.

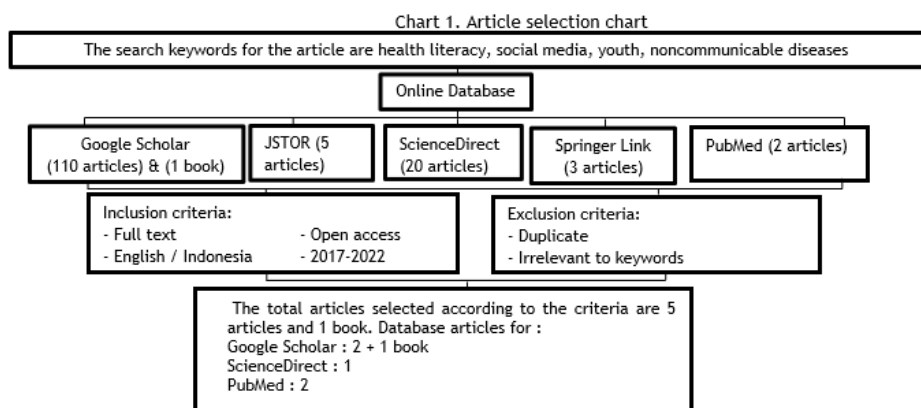
The selected studies were then assessed on the title, abstract, and then an assessment of the entire manuscript. Duplicate studies were removed from the list at initial screening. Studies that met predetermined criteria were set for further review.

The search results were for articles in the database relevant to the keywords used, and after article filtering was applied from 2018-2022, there were 450 articles and one book. Then the remaining articles were re-filtered for duplicate

articles and 350 articles remained. After screening by title or abstract, 210 articles were excluded. Finally, the selection of articles was based on several inclusion criteria, including the use of Indonesian and English, publication in the range of 2018-2022 (last 5 years), full text or non-duplicate status, and research article type. As many as 140 articles and one book were read in full, and based on predetermined inclusion criteria, five articles and one book were selected for further review.

In a span of five years (2018-2022), the most selected research was published in 2022 with a total of two studies, one study in 2020, one study in the form of a book in 2019, one study in 2018. These results indicate that the number of studies discussing health literacy in the media, published in reputable journals, varies from year to year. The data show an increasing number of studies discussing health literacy in the media and published in reputable journals from 2018-2022.

Furthermore, five studies used different research methods. Of these studies, one study used a qualitative cross-sectional study design, two interventions, one experimental, one quantitative. A total of five selected studies were extracted for information about the author, year of publication, study method/design, sample and population, characteristics of respondents and research measurement tools, health literacy goals in the media, adolescent behavior that has a risk of causing noncommunicable diseases, and core findings. The flow of selecting articles is as follows:



RESULTS AND DISCUSSION

The findings of five articles correspond to the topic, which is identifying the level of health literacy in the media in relation to adolescents' behavior in preventing noncommunicable diseases. Literacy skills can be used to shape and construct health behavioral change determinants; this is related to the expansion of media and health information sources, therefore, a comprehension of health literacy is required. Health literacy can influence changes in lifestyle or behavior.

This is comparable to Lawrence Green's theory describing the three types of behavior change. First, predisposing, which includes the knowledge, attitudes, enabling skills, and resources needed to perform health behaviors, reinforcing driving factors such as the role of parents, peers, health professionals, and the environment (Pakpahan et al. 2021). Youth can be the starting point for efforts to increase awareness, willingness, and ability to live a healthy lifestyle in order to improve health status. Because adolescence is a crucial time for the development of reproductive health and a healthy lifestyle. A healthy lifestyle is one of the most important factors in improving health status and encouraging human resources to be more productive in the future with regard to maintaining health quality (Okan et al. 2019).

A person's health behavior is influenced by illness and disease, the healthcare system, eating and drinking, and the environment. The quality of each human resource (HR) can be affected by health-related behaviors, which are influenced by two interconnected and interrelated factors. These elements include education and health. Health is the primary requirement for the success of educational endeavors, while education is one of the factors that contribute to an individual's high health status (Surahman and Supardi 2017). The following table displays the results of the articles that have been selected based on the specified criteria.

In an effort to prevent noncommunicable diseases, this section describes the findings of articles concerning health literacy among adolescents. Two of the five articles obtained intervene in adolescents to

determine whether health literacy can improve adolescent lifestyles. Interventions designed to improve adolescent health literacy and critical health literacy can maximize the impact of media socialization and promote health. Therefore, critical media health literacy skills should be incorporated into school curricula and clinical settings, as the ability to access, comprehend, evaluate critically, and apply health information to health decision-making is an essential life skill. The level of health literacy influences unhealthy behaviors, including alcohol consumption, smoking, physical activity, and health status. The importance of health literacy in planning and activities is fundamental (Smith and Magnani 2020).

Access to health-related information is the first step in enhancing adolescents' health literacy. By increasing access to information and the ability to use information effectively, the intervention through FGD or PBL has a significant impact on the health promotion lifestyle of adolescents. So that adolescents can learn what they should do to maintain and improve their health in daily life, as well as what behaviors they should engage in, and how to modify their behavior. Teenagers are taught to calculate their daily calorie intake and compare it to the maximum number of calories needed by teenagers per day based on hypothetical scenarios. They are also taught to read food labels and distinguish between healthy and unhealthy foods (Ferguson et al. 2020). They learn how to get the necessary amount of physical activity in and out of school and at home, so that it can be tailored to their age, physical condition, and level of education, allowing them to increase their physical activity without incurring additional costs (Helen et al. 2018; Solhi et al. 2019).

This intervention had a significant impact on the intervention group's health responsibility because it can heighten students' awareness and this case illustrates the problems that will arise if they disregard their health. In this case, it can be concluded that adolescents require reliable learning methods in order to apply health-related information in real life, as well as a significant need for health to communicate effectively with them. It also demonstrates the significance of equipping youth with the ability to comprehend and evaluate health-related information in

order to improve their lifestyle. To provide adolescents with health and healthy lifestyles information, it is necessary to be well-informed so that they can comprehend and evaluate the subject matter, and by considering its application in the real world, make the correct decisions. It is also essential that health information provides adolescents with a unique way to access and utilize communication channels and social networks (Karimi et al. 2018).

Associating health literacy with health education and communication that is geared toward individual behavior by addressing the environmental, political, and social factors that determine health broadens the meaning of health literacy (Nutbeam 2017).

This conception of health literacy includes a comprehensive understanding of health literacy that focuses on: (1) having the skills and capacity to comprehend that health encompasses emotional, mental, and spiritual well-being in addition to physical well-being. (2) largely influenced by the everyday circumstances in which people live (e.g., determinants of health), (3) comprehend the significance of active engagement and participation in enhancing health and well-being (Okan et al. 2019).

In an effort to prevent noncommunicable diseases in the future, the purpose of this review is to provide an updated perspective on how health literacy in the media has been used as a tool in the health sector to address adolescent health. Improving a population's health literacy requires more than just disseminating health information; To achieve greater autonomy in health decision-making and community empowerment, it is necessary to have sophisticated tools to ensure that health communication focuses not only on personal health, but also on social determinants of health (Duplaga 2020).

Health literacy can be utilized in health care systems, disease prevention, and health promotion to maintain and enhance life quality. Health literacy contributes to the sharing of responsibilities between health care providers and those receiving care, as well as to a greater mutual understanding between both parties during the communication process. Numerous factors, such as internet usage, mobile applications, demographics, sociocultural and psychosocial factors, general literacy level, personal characteristics, illness

experiences, and the health care system, are influenced by health literacy. Individuals with low health literacy are hospitalized and utilize the emergency department more frequently, participate in screening programs less frequently, receive protective health services less frequently, and have less knowledge about their illness and care. and even have an elevated mortality risk (Evans 2020).

In everyday clinical and public health practice, theory development, program evaluation and research, as well as a vast array of health and wellness-related activities, health literacy should play a central role in policy deliberation and decision-making. In contrast to many other determinants, such as gender, education, and income, health literacy is a modifiable factor. So that health literacy can achieve an influential level. Understanding in-depth health literacy regarding health education aims to influence individual lifestyle decisions and raise awareness of the determinants of health through methods that extend beyond information sharing and campaigning (Olisarova et al. 2021).

Media-based health literacy is an attractive addition to health promotion efforts and is intended to influence youth and garner support as a prevention strategy. Health literacy through media can take into account how the media influence adolescents and how adolescents can actively negotiate the meaning of messages by questioning and challenging assumptions, or by criticizing and giving statements depicted in the media (Okan et al. 2019).

Media literacy has the potential to be effective with diverse youth populations as it shifts from attempting to scare or persuade youth into healthy attitudes and behaviors to assisting adolescents in developing the skills to make better decisions (Fleary 2022).

Some individuals may adopt behaviors, values, or identities from one or more cultures where they have never existed in their life, but blend into local cultural identities and styles of behavior. So that the existence of media and the development of technology can influence adolescents to have a greater risk of consuming unhealthy foods. This is due to exposure to food advertisements featuring foods that are low in nutritional value and

high in fat, sugar and sodium (Ferguson et al. 2020).

This is related to the prevalence of risk factors for noncommunicable diseases (NCDs) among adolescents in many countries, but implementation and data on the impact of NCDs policies and laws are limited. Prevention of noncommunicable diseases (NCDs) is also crucial, and can be initiated by establishing multiple indicators for NCD surveillance that can be used to evaluate and inform programs and policies targeting NCD risk factors and health outcomes. Efforts to prevent noncommunicable diseases among adolescents and adults are intervention-required areas. The significance of structural and social determinants of NCD in this population, including national governance and youth empowerment, must be acknowledged. This underlying influence requires interventions and policies that span multiple sectors and determinants in order to be addressed (Bente, , and Rakovac, Wickramasinghe, Hennis, and Hai - Rim 2019; Roiefah and Pertiwi 2021).

Noncommunicable diseases (NCDs) pose significant obstacles for health systems in low- and middle-income nations. Therefore, as a result of the development of the media as a simple and effective instrument to aid in the prevention and management of NCDs, technology-based interventions are increasingly being developed to combat health care disparities (Goss et al. 2022). The potential roles of the media in the prevention and management of noncommunicable diseases include patient health education and information sharing, psychological support, self-management, public health campaigns, and health professional capacity building. There are few direct data on the use of media in the prevention and management of noncommunicable diseases. The media also face risks and obstacles, such as the dissemination of inaccurate information, the lack of data confidentiality, monitoring and regulation, commercial interests, unequal access, and the absence of standards. Regulatory guidelines and standards must be developed and adhered to in order to prevent negative outcomes (Akseer et al. 2020).

CONCLUSION

This study aims to identify individual information access skills. Due to the abundance of information sources, it can be convenient to find information from online media like the internet and social media. The capacity and role of adolescents in comprehending health and disease prevention information are still very low. Due to a lack of knowledge and motivation in going to health services, as well as healthcare that can be done by individuals in an effort to prevent disease, adolescents' abilities to apply information remain low. Therefore, it is hoped that health literacy can aid health promotion efforts by enhancing individuals' abilities to access, comprehend, evaluate, and apply health-related information obtained from media sources. As a means of preventing noncommunicable diseases in adolescents from a young age, the development of health technology, which is a tool that improves individual abilities to obtain good health outcomes, has contributed to the prevention of noncommunicable diseases at an earlier age. Thus, the relationship between individual abilities and information sources has the effect of altering healthy lifestyles so that health status can be improved.

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