

INVESTIGATING THE RELATIONSHIP BETWEEN HEALTH LITERACY AND HEALTH OUTCOMES IN VULNERABLE POPULATIONS FROM A PUBLIC HEALTH PERSPECTIVE

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Abstract

The importance of health literacy in influencing health outcomes and effective communication is increasingly being recognized. Health literacy is the ability of an individual to access, understand, evaluate, and apply health information to make informed decisions. Importantly, high health literacy levels are positively associated with better health outcomes, which highlights the significance of health literacy in enhancing better health. Consequently, health literacy has quickly gained the interest of researchers, policymakers, and clinicians, even though it is a fairly new term in the healthcare sector, because of its significant influence on health and well-being. There is still a great deal of misunderstanding about the notion and how it relates to healthcare outcomes, despite the serious consequences of low health literacy. This article's goals are to describe the extent of low health literacy as a concept and investigate strategies that researchers and clinicians might use to lessen its detrimental effects on health outcomes. First, a synopsis of the main definitions of health literacy is given. The ideas of gathering, analyzing, and applying knowledge then provide a framework for talking about the difficulties associated with low health literacy as well as ways to overcome it. In their conclusion, the authors point up study topics that are necessary to improve the way health literacy is conceptualized.

Keywords: health literacy, health outcomes, vulnerable populations, public health.

1. INTRODUCTION

An essential component of human development is health. It contributes to people's happiness and well-being regardless of their social standing. By increasing labor productivity in the economy, it also significantly contributes to a nation's economic growth and development. The reason is that healthy individuals may take advantage of more educational and career possibilities, make more money, and spend it on investment and consumer items, all of which increase output on a personal and a national level. In other words, being in excellent health causes people to be more productive at work, spend longer time in the workforce, create more knowledge, save more money, and make better use of natural resources. As a result, while being in excellent health benefits the person and raises his or her market value, it also boosts the productivity and output of the entire country. [1] In terms of suffering and lost productivity or money, poor health is expensive. Diseases have a significant financial impact on both individuals and the economy due to the expense of treatment and lost productivity. Health literacy (HL) refers to a set of abilities or skills necessary for effective functioning in everyday life, accessing healthcare systems, and enabling people to manage their health. Health literacy (HL) is considered to be a complex concept, which consists of a variety of skills. Two interrelated approaches to HL are defined: the clinical approach and the public health approach. The clinical approach emphasizes skills required for interacting in a healthcare environment, such as choosing healthcare providers, filling out medical forms, reading medication labels, following treatment regimens, and following verbal instructions from healthcare providers. The method is based on the "therapeutic dyad" between the patient and healthcare provider, and is a patient-level construct. According to this clinical viewpoint, the efficacy of clinical care should be the main emphasis of HL initiatives. Health literacy interventions, commonly tied to patient education, are most focused on developing health

literacy (HL) skills and tailoring health communications to those with lower HL [18]. Different demographic and societal determinants (socioeconomic status: education, work status, income level), social support, culture, language, and individual characteristics importantly influence HL capacities and are well known as prerequisites for HL [15]. They may advance or hamper the achievement of maximum HL level. While some antecedents, including higher education and good social support, have a positive impact on HL, others like lower levels of education, adverse socioeconomic conditions, belonging to minority groups, or immigrant status have negative effects on HL, thus elevating the risk of low levels of HL [16]. Significantly, HL is well documented to be related to socioeconomic status, with poorer socioeconomic groups having lower health-related capacities in general. On the other hand, people from the well-off social and economic backgrounds have better HL skills since they have a higher status in the social hierarchy. Conversely, individuals who are lower in the social spectrum, defined by fewer material possessions, lower educational attainment, and less attractive or poorly paid jobs, are viewed as disadvantaged. Consequently, economically and socially excluded individuals are at higher risk for low HL levels, which account for health inequities. Health disparities are avoidable and unjust differences in health status and outcomes among segments of the population that exist within society. The disparities run along the dimensions of age, sex, race/ethnicity, education, poverty, disability, geography, sexual orientation, and religion and disproportionately burden the disadvantaged and continue health inequities [14]. In these circumstances, HL levels become an adjustable risk factor for health inequities, and their improvement can help achieve improved health equity [17].

Objectives

- To explore the relationship between public health literacy and health outcomes in vulnerable populations [13]
- To assess the effects of public health literacy on health outcomes
- To assess the factors affecting health literacy in vulnerable populations

Research question

- What are the effects of public health literacy on health outcomes?
- What are the factors affecting health literacy on vulnerable populations?

2. LITERATURE REVIEW

For everyone, healthcare is an essential social good. A vital part of human capital, good health is one of the blessings to which all people are entitled. Achieving excellent health is mostly dependent on healthcare. [4] The government's intervention in the delivery of healthcare services plays an indispensable role in promoting human capital and well-being, and its significance cannot be emphasized more. This chapter outlines literature on associated research on human capital, the need for government interference in the health care sector, and its effects on population health outcomes. The history of health literacy is rich, with origins traceable to the national movement in literacy spearheaded by M.K. Gandhi, which funded organizations working towards health and education in Africa. The phrase "health literacy" was originally coined in 1974 to describe "health education meeting minimum standards for all school grade levels." Health literacy involves a wide spectrum of skills, ranging from simple reading skills to complex health information management. In spite of differing definitions, health literacy is commonly defined as "the degree to which individuals can obtain, process, and understand basic health information and services to make informed decisions about their health." Drawing on the base of literacy, which is "the ability to read, write, and perform simple numerical calculations," health literacy encompasses skills to use the healthcare system and translate reading skills into daily life. About 25% of adults globally have poor literacy levels, which have serious health implications. Health literacy allows people to access, understand, evaluate, and apply health-related information to make effective healthcare decisions, prevent disease, and promote health, ultimately maintaining or enhancing quality of life. Designed during the 1970s, health literacy was widely researched throughout the last twenty years, pointing to significant relationships with social determinants of health, health behavior, and outcomes [12]. As an important public health and healthcare topic, health literacy is more frequently taken into consideration in contemporary social and health policy [11]. In the present-day complicated society, people have many health-related choices and issues, and therefore literacy skills and proper utilization of health information are crucial for keeping oneself healthy. The movement towards "informed patients" who are involved in health decisions demands a range of competencies, such as communication, critical thinking, problem-solving, and information-seeking. Cross-sectional studies have found repeatedly that higher HL levels have been linked to favorable health results, better health care navigation, and increased self-efficacy, self-care

ability, and healthy behavior uptake, with positive health outcomes resulting in better results, higher social capital, and lower healthcare expenses [7].

3. METHODOLOGY

This study only looks at the relationship between health outcomes and public health literacy. Therefore, we investigate what influences public health literacy, how such spending affects health outcomes (or health status), and how the advantages of such expenditure are distributed.

Design of the research: To accomplish its goals, this study makes use of quantitative data that has been gathered throughout time. Regression analysis, descriptive statistics, and trend analysis are employed in this process. Regression analysis aids in demonstrating the relationship or cause and effect between the independent and dependent variables. Regression analysis also reveals the magnitudes of the independent variables' effects. With the use of metrics like mean and standard deviation, descriptive statistics offer a rapid and straightforward summary of the data. One of the crucial and practical techniques for examining quantitative data is trend analysis.

Criteria for inclusion: Studies that involved vulnerable populations that are 18 years of age or older and belong to any ethnic or cultural group that is socially or economically disadvantaged in the community were taken into consideration for this review.

Exclusion criteria: research on general literacy (such as reading, writing, and math) was not included.

Interventions: This review considered studies focused on the following interventions:

- i) Research was included if it concerned health literacy (HL) and used healthcare, prevention, education, or health promotion interventions, which were delivered in either clinical environments (addressing patients/individuals through patient-provider communication, education, and disease management) or community/population-level environments (through awareness-raising campaigns, public education activities, and community-wide health problem interventions).
- ii) Interventions were defined into four levels: individual/intrapersonal (addressing personal determinants such as knowledge, skills, and attitudes by disease control and education), interpersonal (addressing social interactions and support by patient-provider communication), community (targeting populations, groups, and organizations to expand access to trusted health information), and societal (including policies that enhance healthcare usability, accessibility, and general health systems).
- iii) Interventions provided by any medical or social worker possessing a nationally accepted degree, whether they are working in the healthcare system or not, including doctors, nurses, community workers, or social educators.
- iv) Those that were either complex interventions or single strategies.

4. EXPERIMENTAL ANALYSIS

A person's total psychological and emotional state is implied by their mental health. It is a condition of well-being where a person can handle his everyday situations, act appropriately, think rationally, overcome obstacles, and get along well with others. A person who is in good mental health is also able to operate well in society due to their positive outlook and sense of wellbeing. People in good mental health are able to relate to others, are well-adjusted to society, and are rationally content with who they are and where they fit in.

Table 1: Result of chi-square distribution

Factors	p- Values	Chi Square Test (X^2)		
		Pearson Chi Square	Likelihood Ratio	Linear By Linear Ass.
Social determinants of health	Values	15.096	14.536	4.812
	p-value	0.001	0.001	0.028
Cultural and linguistic factors	Values	2.248	2.027	2.233
	p-value	0.134	0.155	0.135
Healthcare provider factors	Values	4.527	4.572	4.497
	p-value	0.033	0.032	0.034
Community resources and support	Values	3.565	3.552	3.541
	p-value	0.059	0.059	0.06

Health literacy interventions are more effective when informed by established theories and models tailored to the target population. A person-centered approach, incorporating five key elements, has been shown to improve health outcomes: setting personalized goals, providing skills training, tailoring interventions, ensuring cultural sensitivity, and fostering active dialogue between individuals or groups and the interventionist.

Table 2: Result of chi-square distribution

Factors	Symmetric Measures	
	Phi	Crammer's V
How do healthcare providers' communication styles and cultural competence influence health literacy and health outcomes among patients from diverse backgrounds?	0.317	0.317
What is the effectiveness of health literacy interventions, such as peer-led education programs and simplified medication labels, in improving health outcomes and reducing health disparities among vulnerable populations?	0.001	0.001
How do limited health literacy and limited English proficiency intersect to impact health outcomes, including medication adherence and hospitalization	-0.122	0.122

rates, among immigrant populations?		
What is the relationship between health literacy levels and health outcomes, such as disease management and healthcare utilization, among low-income adults with chronic diseases?	0.134	0.134
What is the relationship between health literacy and healthcare costs, including emergency department visits and hospitalizations, among individuals with complex chronic conditions?	-0.174	0.174
How can health literacy be integrated into existing healthcare services, such as community health worker programs and patient navigation services, to improve health outcomes among vulnerable populations?	0.033	0.033
What is the impact of health literacy on medication adherence and self-management among individuals with mental health conditions, such as depression and anxiety?	-0.154	0.154
How do social determinants of health, such as housing instability and food insecurity, intersect with health literacy to influence health outcomes among low-income families?	0.059	0.059

Increased levels of health literacy (HL) are associated with improved overall population health worldwide. Yet, studies indicate staggering rates of low functional HL, especially among socially and economically disadvantaged populations. In the United States, almost half of adults, predominantly from poor backgrounds, have low or zero HL. Likewise, approximately 50% of Europeans have restricted HL. Those with lower HL skills also have poorer health outcomes, which include increased mortality, poorer self-reported health, more use of emergency services, and less use of preventive care. They are also more prone to chronic illnesses and unhealthy habits, like smoking, drug use, and inactivity, ultimately resulting in greater healthcare expenditures.

CONCLUSION

Multifaceted therapies that involve contact with an interventionist and a communication medium seem to be more successful than those that only use one modality. Finally, follow-up steps and reinforcement of health information through multiple contacts and sessions are essential elements to be taken into account in health literacy (HL) interventions. Health literacy research involves a very wide range of fruitful areas. An integrated definition encompassing all aspects of HL is a sensible place to begin. A clear-cut definition will yield conceptual clarity to this complicated concept. Secondly, new measures that have conceptual-empirical consistency need to be created. In addition, there are also numerous unexamined areas of HL. Research in the future should explore HL's relationship to patient and provider factors, since most studies have examined patient factors. The community, healthcare organizations, and clinicians can all benefit from the research's insights as they work to create a society that is health-literate. To determine the age-related and cultural factors that interact with health literacy, more research is required. These research fields will equip medical professionals with the knowledge and skills they need to provide more individualized, appropriate treatment.

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