

Critical Analysis of Health Literacy and its Impact on Health Outcomes

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Abstract

Objectives: Health literacy has to do with the individual's capacity to understand, access and apply information available to health so as to make better choices and decisions. In recent times, the increased numbers of health illiterate across the globe with many having difficulties in grasping the notion of disease prevention and several struggling with health promotion.

Design and settings: In many parts of the developing countries, there is serious rise in lifestyle linked health problems with high rate of infectious diseases. Also, about 70-80% of death is associated with lifestyle related diseases in developed countries. Thus, there is need to improve health literacy for disease prevention across the globe.

Methodology: Extensive literature search was conducted to find published articles on the internet that were involved in health literacy and outcomes. An organized search of MEDLINE/PubMed, Pro-Quest, Embase, Scopus, Google Scholar and Cochrane were conducted based on suitable synonyms and keywords. One researcher independently conducted the literature search and review.

Results: No doubt, that health literacy offers many benefits such as improving health outcomes, increases efficiency of health care system, make better decision, take preventive measures, reduced cost, reduce poverty level, eliminates discrimination, racism, and promotes justice and socio-economic values.

Conclusion: This review is focus on giving a general overview and critical analysis on health literacy and its impact on health outcomes.

Keywords: Health literacy; Health outcomes; Diseases; Lifestyle; Health care.

Introduction

Studies have shown that health literacy is rapidly advancing as an emerging field involving understanding, communication, assessment and appraisal of health information for promotion of good health care system. Health literacy impact on health outcomes through poor health decisions, and knowledge resulting into smoking, premature death, lack of physical activity, in-

creased morbidity and poor diet. All these are independent of risk factors like age, gender, education, income and ethnicity. Certain group of individuals are at high risk of having limited health literacy such as poor socioeconomic status individuals, migrants, ethnic minority individuals, aged people, people with chronic health conditions, and disables. Therefore, health liter-

Citation: Shoyemi OS, Abdulsalam A, Oni IFD, Hassan AI, Azeez TA. Critical Analysis of Health Literacy and its Impact on Health Outcomes. Med Discoveries. 2024; 3(3): 1136.

acy is an important empowerment tool for the improvement of health outcomes and reduce health inequalities. Improved health literacy will impact positively on health outcomes by build resilience, improve mental health, reduce disease severity, improve adherence to medical instruction, increase health knowledge, promote healthy lifestyle changes, improve involvement in health, improve engagement, improve self-esteem and confidence, empower individuals to effectively manage long-term health conditions [1]. Reported that health literacy is a critical strategy for improving quality in health care services system. The authors revealed that over the last few years, there has been growing attention between patient empowerment and the link to quality improvement in health care scenario. From their study, it was discovered that greater health literacy pave way for improved health consciousness and greater willingness to provide care [2]. Reported that health literacy is an important aspect of individual's development and growth that facilitates comprehension towards political, social and cultural environment for better understanding and response. The authors reported that across the globe, the population of adult that are illiterate is about 17% with an estimate of 122 million youth. This pose as a challenge in this modern time which can result into ineffectiveness in communication and gross unemployment, thus, impacting the society negatively. Health literacy has always been the strategy for health promotion, decision making, reduce risk and hazard, enhance prevention, quality of life and patient care. In health institutions, health literacy should be part of the quality assurance system as many patients cannot understand medical prescriptions and indications [3]. Reported that health literacy such as cultural, media, scientific and technological literacies is a very important aspect health education. Health literacy improves capacities and skills of an individuals for improve health decision making process, prevention and health promotion. Different studies have proposed several strategies to assist in improving patient's health literacy level [1]. The adequate use of patient's information materials is required such as leaflets and other information materials like audio and video tapes, websites and computer programs for reinforcing and supplementing information. The quality of information is also very important in helping patients take good choices and decisions like accessibility; readability, acceptability; comprehensibility; reliability and accuracy of content; style and attractiveness of presentation; comprehensiveness and coverage; arrangements and currency for review, updating; strength of evidence; reference to sources; further information; publishers, credibility of authors, relevance; sponsors; and utility [2]. Again, use of strategies that target patients using schools, hospitals, colleges, libraries and clinics to improve public health literacy. Complex medical jargons could be translated using simple phrases, simple sentences, charts, diagrams, and photographs [4]. Utilization of strategies that target health professionals. Health care providers interact with the patients and should be able to learn how to use the information gathered from the poor literate patients to make improved decisions and communication strategy [5]. Reported that health literacy is a prerequisite or catalyst for a functional health system in Nigeria. From the study, the authors demonstrated that it is required for health librarians and professional to be trained with the right skills and knowledge that will help them in making appropriate public health decisions. The authors noted that health literacy dimensions include cultural knowledge, speaking, listening, arithmetical, reading and writing skills. Empowering individuals about their health involves different areas of health literacy such as health promotion, health education and health com-

munication. The extent that allows an individual to access, find, think and comprehend basic health information required for health services or general health and decision making is health literacy according to. Functional health gives the individual ability to perform activities on a day-to-day basis with causing injury, pain or discomfort. If an individual is hampered from carrying out this kind of day-to-day activity is regarded as a compromised functional health. Thus, to actually optimize the functional health, regular exercise is key. Generally, health literacy includes health care provider quality support, taking responsibility for health challenges, seeming adequacy of health information, being focused about health, social support, capability to access health information and critical assessment of health resources. In health literacy, individual should have ability to obtain, process, understand, evaluate and communicate basic health services and information so as to make appropriate health decision, perform required functions and live healthy lives. Basic health literacy skills include reading, listening, writing, speaking, critical and numeracy analysis, interaction and communications skills. Low health literacy causes less awareness of preventive health measures, self-care instructions, less knowledge of the medical conditions, limited understanding of health concepts, lack of self-empowerment and poor understanding of medical instructions. Health literacy is subdivided into three main domains such as health communication, health promotion and health education. Health education uses framework or platform to promote health literacy. Using multimedia and mass media to inform the public on issues that boards on health through technological innovation is entrenched in health communication. Health communication includes edutainment, interpersonal communication, health journalism, social communication, organizational communication, medial advocacy, social marketing and risk communication [6]. Reported that there is a strong relationship between health outcomes and health literacy. The authors conducted research on patient's literacy level and discovered that those with the lowest form of health literacy had the worst health outcomes, use of health resources, knowledge, measures of morbidity, intermediate disease markers, and general health status. They therefore concluded that low literacy is linked with several adverse health outcomes. Poor health literacy may serve as marker for other adverse conditions like low socioeconomic status, low trust in medical providers, poor self-efficacy, and impaired access to care [7]. Reported that there is low literacy level in the United States of America with higher risk of poor health outcomes, care, cost, disparities and accessibility. The authors revealed that low health literacy is linked with increased hospitalization, increased emergency cases, low capability of taking medication, and high mortality index [8]. Revealed that health literacy is an emerging topic in health promotion research and identified various challenges associated with health literacy and education. The authors utilized a concept analysis and discovered that health literacy reading, comprehension, numeracy skills, successful functioning as a healthcare consumer, the capacity to use information in health care decision-making, lower health care costs, shorter hospitalizations, enhanced health knowledge, less frequent use of health care services. It is important that health care providers identify those with poor health literacy which is accompanied with risk for misunderstanding, inability to adhere to health care, shame linked with inadequate reading skills, inability to name medications, timing of their administration, explain their purpose, taking written instructions and comments related to forgetting glasses through use of plain language, avoiding medical jargon, usage of pictures, speaking

slowly, application of visual images, asking patients to recall essential information, limiting the amount of information communicated at a particular time, encouraging shame-free therapeutic environment and building trusting.

Promotion of health literacy with patients who speak second language is important for the health care provider to translate essential oral and written health information into the person's first language. Health care providers should be well educated on health literacy and nursing curricula quality nursing practice should enable nurses take active functions in shaping the policy of health literacy [9]. Showed that there is increased attention placed on improving health literacy across the globe through robust development of policies for interventional strategy like education, functional health literacy, interaction, and skills. Interventional tools and national policy require community practitioners to successfully implement all the strategies [10]. Analyzed functional health literacy and defined it as the extent to which individual can process, obtain, and understand basic health information to make corresponding decisions. There are several influencing factors in functional health literacy such as education, family, media, community, work, and policy [11]. Analyzed how interpersonal relationship and communication between patient and physician impact health outcomes and satisfaction. The authors noted that poor communication will significantly affect unintentional non-adherence to treatment, rate of hospital admission, and patients understanding. Health literacy is the major contributor to having effective communication, participation, preference, expectations, perception, and interventions. Patients across different backgrounds and diversity of cultural are constantly visiting health care system across the United State of America. It is important that health information and communication should be given utmost priority by training health care providers effectively on essential cultural norms and values involved in patient- physician dynamic [12]. Reported that health literacy is centered on the concept of skills, knowledge, information and decision making. They further noted that health literacy is built on three basic elements like knowledge about the health care system, self-management of health in collaboration with health care providers, and use and processing of various health information for decision making [13]. Reported that a study was conducted to elucidate the importance of health literacy in influencing cost effective in the use of health care system. From their study, they discovered that health literacy influences health accessibility and patient's characteristics [14]. Conducted a study to investigated the effectiveness of health literacy in relations to health outcomes among socioeconomically vulnerable people. The authors defined health literacy as individual's competence in understanding, accessing, applying, appraising and utilizing health information for decision making. Thus, improving health literacy among socioeconomically vulnerable people will invariably improve their health outcomes [15]. Conducted a study on factors linked to utilization of health services like emergency care and hospitalization which are directly linked to health literacy to analyze the consequences of low health literacy on health status and services utilization. From the study, it was discovered that there is a direct relationship between health outcomes and health literacy [16]. Discovered that in many parts of the poor countries national health education programs are utilized to improve health literacy among rural populations. Using quasi-experimental design, the authors were able to analyze the impact of health literacy on addressing healthy lifestyle among poor and vulnerable individuals [17]. Reported

that older individual's health literacy and skills affect their ability to utilize digital health services applications and platforms. They discovered that from their study that health interventional programs assist to enhance skills and health literacy in older people. Though, physiological impairment and cognitive ability in older people may play a major role in impairing the access to health care services [18]. Explored the health literacy culture in the United State and the implications to the health outcomes. They noted that United State experience limited health literacy level accounting for about 80 million adults which has impacted negatively on the quality of health resulting into more hospitalizations, lower cases of mammography screening, increased use of emergency care, influenza vaccine, poorer capability to interpret drug labels, poorer capability to demonstrate taking medications properly and health messages particularly among adults. The benefits of health literacy are to enable patients manage the health, reduce cost and mortality rate. Adults with high level of health literacy are able to make better and informed decision regarding their health treatment, diagnosis and quality lifestyle [19]. Defined health literacy as the motivation, knowledge, understanding, application, competence and appraisal of health information so as to make important health decision for healthcare, health promotion and disease prevention [20]. Investigated the sources of health information for individuals with health literacy limitations so as to address the issue of knowledge gaps. From the study, the authors discovered that poor health literacy resulted in low utilization of medical websites for reliable health information. Also, from these group of individuals there is increased dependence on celebrity webpages, social media, television and blogs for the health information [21]. Reported that obtaining health information became challenging particularly during COVID-19 pandemic. Active roles were play by health authorities in managing different health information concerning the disease. However, critical level of health literacy among the citizen is needed to evaluate health information. Educational interventions and public health frameworks could significantly improve critical health skills [22]. Showed that across the world, health literacy impacts the health care system. Poor health literacy is linked with inadequate management of long-term situations which is a social barrier to accessing health care services for appropriate treatment [23]. Reported the impact of health literacy on health communication. They evaluated the pitfalls and benefits associated with health literacy and use of social medical as source of health information. They noted that some of the pitfalls include misinformation and fake videos [24]. Accessed the influence of health literacy on the adolescent teenagers in the city of Iran on the health outcomes. From their study, it was discovered that teenagers with higher level of health literacy have health promoting and nutritional behaviors compared with the ones with low health literacy [25]. Analyzed the concept of health literacy and related barriers in health literacy interventions across the various countries. They noted that several part of health literacy are yet to be elucidated such as health beliefs, self-efficacy skills, negotiation skills, and illness management [26]. Examined the disparities in health outcomes as a result of health literacy level. The authors discovered that differences in the health literacy levels cause increased hospitalizations, reduced use of mammography, higher emergency care use, reduced cases of influenza vaccine, poorer capability to interpret labels, low assimilation of health messages, poorer capability to demonstrate taking medications correctly, increased mortality and poorer overall health status.

Theoretic and practical implications of health literacy research

Studies have indicated that improving health literacy will potentially assist in reducing health disparities and inequalities. An improved health literacy increases understanding, knowledge and skills of an individual for access to information, evaluation of data and delivery of services using health information. Likewise, limited health literacy is associated with unhealthy behaviors and lifestyles such as smoking, poor diet, lack of physical activity, premature death and increased risk of morbidity. These unhealthy lifestyles will potentiate emergency services, chronic health conditions, and increased cost. Also, social status and level of education has been linked to limited health literacy resulting into vulnerability and limited options and opportunity. Improved health literacy helps to boost confidence, skills, knowledge and resilience. Studies have shown different areas in health literacy such as critical health literacy, functional health literacy and interactive health literacy. The functional health literacy is an individual's ability to read, write and comprehend health information which is based on the individual's level of education attainment. Critical health literacy is linked to the ability of the individual to control diverse health determinants. Interactive health literacy is the ability to take decisions concerning the health condition in a challenging situation. Several studies have been carried out and report generated on limited health literacy among the developing nations with poor information and communication technology, education, and skills. There are various strategies utilized in the improvement of health literacy among disadvantage socioeconomic group such as demonstrating instructions, use of trained community workers to convey health information, ensuring that health materials are concise and clear, and use of plain English to communicate health information.

[27], reported that the core of health care service is the provision of quality health information for patient's assessment so as to make better decision. The authors alluded that poor health information is linked to bad health decision and choices affecting the patients, society, families, and health professionals. From their study, the authors discovered that significant health cost is linked to low health literacy level and that deliberate investment into health literacy will reduce health cost and boost population health outcomes. Health information should be relevant, timely, easy to understand and reliable for patients to benefit. There are different types of literacy such as basic literacy which deals with sufficient functional skills of writing and reading. Another is communication literacy which is literacy and cognitive skills and lastly the critical literacy which is an advanced skill for analysis and application to life situation and events [27]. Revealed that low health literacy is associated with high rate of hospitalization and utilization of emergency services. In a study conducted by [28], they reported that glycemic index and retinopathy were worsen in type 2 diabetic patients with inadequate health literacy level. This report suggested that low health literacy may even contribute significantly to the burden of diabetes associated issues among the vulnerable population.

Also, [29] revealed that poor health literacy is associated with high level of asthma and poor knowledge of improper metered-dose inhaler use. In their study, the authors demonstrated that illiterate patients are seen more at the emergency department during their attacks as compared with the literate patients. Also, few poor health literate patients have the understanding of vis-

iting their physicians during the asymptomatic period of their attacks compared to literate patients. Generally, report on the annual health care cost for poor literacy skills individual is four times greater than those who possess high level of literacy. This level of literacy also affects their knowledge, treatment protocols and preventive measures of these chronic diseases such as hypertension, diabetes, obesity, asthma, and stroke. Poor health literacy affects individuals' socioeconomic status resulting into less engagement with the society and poor life goals achievement. Poor health literacy should be tackled by health policies across all sectors. Though, promoting health policies to help in improving health inequalities may result into creating two-tiered system where the more literate individuals are able to access greater choices, while vulnerable individuals like elderly, uneducated, and disabled, are socially excluded. Thus, to improve the health services and literacy, all stakeholders such as policymakers, citizens, governments, public health agencies, health professionals, employers, social services, patient groups, insurers and the media must collaborate with the citizen at the core center [30]. Revealed that health literacy is based on competence and knowledge of an individual to meet the complex and changing health dynamics in a modern society. The authors revealed that over the last few years, there has been increasing awareness and recognition of the importance of health literacy. The authors proposed a model that will integrate public health and medical health that will serve as interventional strategy for conceptualization, validation, capturing, promotion, and disease prevention [31]. Demonstrated in their study how to explore health literacy of associations with demographic variables, primary care patients, hospitalization rates, frequency of visits and self-perception of health. The authors revealed that the population will greatly benefit from health literacy in diverse areas such as enhanced communication, engagement in self-care, adherence to treatment, eventually improved health with financial savings for healthcare givers. They also note that poor health literacy is linked to ageing, low income, low education levels, high mortality rate, lack of access to the internet, and socioeconomic inequalities.

Brand and [32] revealed that the history of health literacy is from the era of Gandhi to support some groups working in Africa to facilitate education and health programs. Health education programs is to support students to meet up with the minimum standard of grade levels. This health education is to maintain good health, orientation for clinical care, public health awareness and promote general understanding. Noncommunicable diseases are responsible for the highest number of deaths worldwide particularly among low- and middle-income countries. To address the issue of noncommunicable diseases, use of trained health workers in prevention, diagnosis, and associated risk factors in noncommunicable diseases using mobile health is needed to overcome structural barriers through outreaches, community based educational interventional programs and counselling. In different part of the world, issues of health literacy appear to be challenging, thus increased attention must be given to ensure improved level of health literacy is achieved among the socioeconomically poor individuals [32]. Poor health literacy causes use of alternative services, poor self-management skills, lack of understanding of one's medical condition, higher cost, delayed diagnoses, poor adherence to medical instructions. Several barriers to improved health literacy across vulnerable groups include underdevelopment of public libraries and poor health information [33]. Health information must be accessible, accurate, timely and authoritative, thus various

factors like use of infographics, mobile apps and videos may enhance health information and literacy among patient with diverse background [34]. Reported that health literacy influences health outcomes with different indirect and direct effects. The authors noted that poor health literacy is common among patients with chronic diseases like diabetes [35]. Revealed that different interventions that can be utilized to mitigate against low health literacy by health care professional in Jamaica. Some of the interventions are health policy, programs and training [36,37] provided evidences concerning health literacy as the main stream of health outcomes. Skills, knowledge and capacity to understand medical information is central to health literacy.

Identifying gaps in theoretic and practical implications of health literacy research

Medical libraries are equipped with medical information for health care professional to serve the patients. This information is reliable, quality, relevant and current to support programs and interventions [34] reported that one of the strategies of improving the economy of any region is through improvement in the health literacy particular among the vulnerable people [38]. Revealed that potential intervention and functional health literacy assessment [39]. Demonstrated that improving health outcomes implies that physician must have interaction with the patient, energy and educative programs for attitudinal changes [40]. Reported that health literacy is for the improvement of health outcomes among people. The author noted hat further research is needed in this area [41]. Showed that he predictor of health outcomes include education and income [42]. Noted that one of the important public health agenda is to improve health literacy. The authors study the interplay between chronic disease prevention and health literacy. They revealed that strong link exists between the occurrence of chronic diseases and health literacy level [43]. Carried out a study to assess the correlation between patient's emergency department visits, durations of hospital stay and hospital readmissions with health literacy. From the results, they discovered that significant association exists between health literacy and hospital readmissions or stay [44]. Revealed that health literacy is an asset that is required to improve health outcomes, disparities and potential clinical risk [45]. Showed that health literacy in stroke entails demonstrating high level of knowledge concerning risk factors for stroke and its prevention [46]. Demonstrated that health literacy plays a significant role in enhancing healthy behaviors, physical health [47]. Showed that low levels of self-efficacy, poor health status, increased mortality, and reduced quality of life are poor health outcomes that are influenced by health literacy. The authors evaluated the relationship between health outcomes and health literacy. They demonstrated that quality of life is moderated influenced by health literacy, thus requires more research.

Recommendation and future research: There is need to carry out further research on health literacy, expansion of library and collaboration information specialists and public health educators through multidisciplinary approach. Library should be well equipped with relevant health information and manned by trained personnel and development of policies for promoting health literacy and information services [34].

Conclusion

Generally, poor health literacy has been linked to poor health outcomes and behaviors which is central to health inequalities. Public health improvement of health outcome and information

is important in health literacy. No doubt that health literacy offers many benefits such as improving health outcomes, increases efficiency of health care system, make better decision, take preventive measures, reduced cost, reduce poverty level, eliminates discrimination, racism, and promotes justice and socioeconomic values.

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