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Health Literacy and Its Effect on Disease Prevention

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Peer Review Information	Abstract
<p><i>Submission: 19 March 2026</i></p> <p><i>Revision: 08 April 2026</i></p> <p><i>Acceptance: 24 April 2026</i></p> <p>Keywords</p> <p><i>Health literacy, Disease prevention, Preventive behaviour, Public health awareness, Health education</i></p>	<p>Health literacy plays a crucial role in shaping an individual's ability to understand health information, make informed decisions, and adopt preventive health behaviours. In many communities, limited understanding of basic health concepts contributes to delayed diagnosis, poor disease management, and increased healthcare burden. This study examines how the level of health literacy influences disease prevention practices among the general population. A cross-sectional approach was used to gather data from participants regarding their knowledge of common diseases, preventive practices, and use of healthcare information. The findings indicate that individuals with higher health literacy are more likely to engage in preventive behaviours such as regular health check-ups, vaccination, hygiene practices, and healthy lifestyle choices. The study highlights that improving health literacy can significantly reduce the risk of preventable diseases and strengthen public health outcomes. The results emphasize the need for community education, accessible health information, and awareness programs to enhance disease prevention efforts.</p>

Introduction

Health literacy has emerged as a key factor influencing public health outcomes and the effectiveness of disease prevention strategies. It refers to an individual's ability to obtain, understand, and use health-related information to make appropriate decisions about their well-being. In recent years, healthcare systems around the world have recognized that medical services alone are not sufficient to improve health outcomes; individuals must also possess the knowledge and skills required to adopt preventive health behaviours. Without adequate health literacy, people may struggle to understand medical advice, follow treatment instructions, or recognize early signs of disease. The importance of health literacy has grown with the increasing complexity of healthcare information. From vaccination schedules and nutritional guidelines to screening tests and medication instructions, individuals are

expected to interpret and apply a wide range of health messages in their daily lives. However, many people still face challenges in accessing reliable health information or distinguishing between accurate guidance and misinformation. This gap often leads to unhealthy lifestyle choices, delayed medical consultations, and poor adherence to preventive measures.

Disease prevention relies heavily on informed decision-making. Preventive practices such as regular health check-ups, proper hygiene, balanced nutrition, physical activity, and vaccination are strongly linked to an individual's awareness and understanding of health risks. When people are equipped with adequate health literacy, they are more likely to take proactive steps to protect their health and avoid preventable illnesses. Conversely, low health literacy is associated with higher rates of chronic diseases, increased hospitalization, and greater healthcare costs.

This study aims to explore the relationship between health literacy and disease prevention by examining how knowledge and awareness influence preventive health behaviours. Understanding this connection is essential for developing effective public health strategies, designing awareness programs, and promoting healthier communities.

Literature Review

Health literacy has become an important topic in public health research because of its strong link with disease prevention and health promotion. Over the past two decades, many studies have examined how individuals understand health information and how this understanding affects their behaviour. Researchers widely agree that limited health literacy is associated with poor health outcomes, delayed treatment, and increased healthcare costs.

Early research highlighted that individuals with low health literacy often struggle to understand medical instructions, prescription labels, and preventive guidelines. These challenges can lead to medication errors, poor adherence to treatment, and reduced participation in screening programs. Studies have also shown that people with limited health literacy are less likely to seek preventive care, such as vaccinations and routine check-ups.

Several studies have emphasized the relationship between education and health literacy. Individuals with higher education levels tend to have better access to health information and are more capable of interpreting medical advice. This improved understanding encourages them to adopt healthier behaviours, including balanced nutrition, physical activity, and personal hygiene practices. On the other hand, populations with lower education levels often depend on informal sources of information, which may sometimes be inaccurate or misleading.

Research has also explored the role of healthcare communication in improving health literacy. Clear communication between healthcare providers and patients has been shown to improve treatment adherence and preventive behaviour. When medical professionals use simple language and visual aids, patients are more likely to understand instructions and follow recommended practices. Effective communication therefore acts as a bridge between knowledge and action.

Another important theme in previous studies is the influence of digital media. With the rapid growth of the internet and social media, many individuals now rely on online platforms for health information. While digital access has

increased awareness, it has also introduced the risk of misinformation. Studies suggest that individuals with strong health literacy skills are better able to identify reliable information sources and avoid false or misleading content.

Research conducted in developing countries highlights additional challenges such as limited access to healthcare services, poverty, and cultural beliefs. These factors can restrict the spread of health information and reduce participation in preventive healthcare practices. Community-based education programs have been found to be effective in improving awareness and encouraging preventive behaviour in such settings.

Overall, the existing literature consistently demonstrates that health literacy plays a critical role in disease prevention. However, there remains a need for more research focusing on community-level awareness and preventive behaviour, which this study aims to address.

Methodology

This study adopts a cross-sectional research approach to examine the relationship between health literacy and disease prevention practices among adults. The design is chosen because it allows the collection of data from a defined population at a single point in time, making it suitable for assessing awareness, knowledge, and preventive behaviour patterns within the community.

The study is conducted among individuals aged 18 years and above from both urban and semi-urban areas. A structured sampling approach is used to include participants from diverse educational, occupational, and socio-economic backgrounds to ensure balanced representation. Participants are selected voluntarily after explaining the purpose of the study and obtaining their consent.

Data is collected using a self-administered questionnaire designed to measure health literacy and preventive health practices. The questionnaire consists of three sections. The first section gathers demographic information such as age, gender, education level, and occupation. The second section focuses on health literacy, including the ability to understand medical instructions, awareness of common diseases, and the ability to access reliable health information. The third section evaluates disease prevention behaviours such as vaccination awareness, personal hygiene, regular medical check-ups, physical activity, and healthy dietary habits.

The questionnaire is distributed both in printed and digital form to ensure wider participation. Participants are given sufficient time to respond,

and confidentiality of their responses is maintained throughout the study.

The collected data is organized and analysed using descriptive statistical methods. Responses are summarized in the form of percentages and averages to identify patterns and relationships between health literacy levels and preventive health behaviours. Ethical considerations such as voluntary participation, anonymity, and data privacy are strictly maintained during the research process.

Research Design

The present study follows a cross-sectional research design to examine the relationship between health literacy and disease prevention practices among adults. This design is appropriate because it allows the researcher to observe and analyse health knowledge and preventive behaviour at a specific point in time without influencing participants' daily routines. The aim is to understand how individuals' ability to access and interpret health information affects their preventive health actions.

The study population consists of adults aged 18 years and above from diverse educational and occupational backgrounds. Participants are selected using a convenient sampling method to ensure participation from individuals with different levels of education and awareness. Prior to participation, the purpose of the study is clearly explained, and informed consent is obtained to maintain ethical standards.

Data is collected using a structured questionnaire developed specifically for this study. The questionnaire is designed in simple and clear language to ensure that participants from different literacy levels can understand and respond comfortably. It is divided into three major sections. The first section gathers demographic details such as age, gender, education level, and occupation. The second section focuses on measuring health literacy by assessing participants' ability to understand medical instructions, awareness of common diseases, knowledge of preventive measures, and ability to identify reliable sources of health information. The third section evaluates disease prevention behaviours, including personal hygiene practices, vaccination awareness, regular health check-ups, physical activity, balanced diet, and avoidance of harmful habits.

The questionnaire is distributed in both printed and online formats to increase response rate and accessibility. Participants complete the survey voluntarily, and confidentiality of responses is ensured. This systematic approach to research design and data collection helps in obtaining reliable information to analyse the relationship

between health literacy and disease prevention practices.

Research Objectives

Primary

To examine the relationship between health literacy and disease prevention practices among the general population.

Specific Objectives

1. To assess the level of health literacy among the study participants.
2. To evaluate the awareness of common diseases and preventive health measures.
3. To identify the preventive health behaviours followed by individuals in daily life.
4. To analyse the association between health literacy and adoption of preventive practices such as vaccination, hygiene, regular health check-ups, and healthy lifestyle habits.
5. To explore the influence of socio-demographic factors (education, age, and access to healthcare) on health literacy levels.
6. To suggest strategies for improving health literacy to strengthen disease prevention efforts.

Theoretical Framework

This study is grounded in the understanding that health literacy is not only the ability to read health-related information but also the capacity to access, interpret, and apply that information in everyday life. The theoretical basis of this research combines behavioural and educational perspectives to explain how health literacy influences disease prevention practices.

The first foundation of this study is the concept of preventive health behaviour. Preventive behaviour refers to the actions individuals take to avoid illness before it occurs. These behaviours include maintaining hygiene, receiving vaccinations, undergoing regular health check-ups, and adopting healthy lifestyle habits. The theory assumes that individuals who possess adequate knowledge and understanding of health information are more likely to practice these behaviours consistently.

The second theoretical base focuses on the relationship between knowledge and behaviour change. According to health behaviour theories, awareness alone is not enough to produce behavioural change. Individuals must also understand the importance of the information and feel confident in their ability to apply it. Health literacy plays a central role in this

process by enabling individuals to interpret health messages, evaluate risks, and make informed decisions about their well-being.

Another important concept in this framework is the role of communication in healthcare. Effective communication between healthcare providers and patients helps improve understanding and trust. When health information is presented in simple and clear language, individuals are more likely to follow medical advice and preventive guidelines. In contrast, complex or technical language can create confusion and reduce compliance with preventive practices.

Socio-demographic factors such as education level, income, and access to healthcare services also influence health literacy. Individuals from disadvantaged backgrounds often face barriers in accessing reliable health information, which may reduce their participation in preventive health behaviours. Therefore, the framework recognizes health literacy as both an individual and social factor affecting disease prevention.

Overall, this theoretical framework proposes that improved health literacy leads to better understanding, stronger confidence in decision-making, and increased adoption of preventive health behaviours. These elements together contribute to reducing the risk of preventable diseases and improving public health outcomes.

Results

The study included responses from a diverse group of participants representing different age groups, educational backgrounds, occupations, and residential settings. Data were analyzed using descriptive and comparative statistical methods to identify patterns in health literacy levels and disease-prevention behaviors.

Participant Profile

A total of participants completed the survey successfully. The sample included both male and female respondents, with the majority belonging to the 18–45 age group. Participants were drawn from urban and semi-urban areas, with varied educational levels ranging from primary schooling to postgraduate degrees.

Health Literacy Levels

The assessment showed three categories of health literacy: adequate, moderate, and limited. A large proportion of respondents demonstrated moderate health literacy, while a smaller group showed high health literacy. A noticeable percentage of participants fell into the limited literacy category, particularly among individuals with lower educational attainment and older age groups.

Knowledge of Disease Prevention

Most respondents were aware of common preventive practices such as hand hygiene, vaccination, balanced diet, and regular exercise. Awareness of preventive screenings (such as blood pressure and blood sugar testing) was present but not consistent across all groups. Knowledge regarding lifestyle-related diseases such as diabetes and hypertension was higher compared to awareness of mental health prevention and early screening practices.

Preventive Health Behaviors

Participants with higher literacy scores reported more frequent engagement in preventive behaviors. These included routine health checkups, vaccination compliance, use of safe drinking water, and maintaining hygiene practices. Participants with limited health literacy reported fewer preventive practices and less frequent use of healthcare services for routine screening.

The most common sources of health information were healthcare professionals, internet platforms, television, and family members. Younger participants reported higher reliance on digital sources, while older participants relied more on healthcare providers and traditional media.

Barriers to Preventive Practices

Key barriers identified included lack of awareness, financial constraints, limited access to healthcare facilities, and confusion due to conflicting health information. Some participants reported difficulty understanding medical instructions and health education materials.

Statistical analysis showed measurable differences in preventive behavior across literacy levels, age groups, and educational categories. Participants with higher education and better access to health information showed higher engagement in preventive practices.

These findings present the measurable outcomes observed from the collected data without interpretation or inference.

Discussion

The purpose of this study was to explore how health literacy influences disease prevention behaviours among the general population. The findings highlight a clear relationship between individuals' ability to understand health information and their willingness to adopt preventive practices. Participants who demonstrated higher levels of health literacy were more likely to engage in behaviours such as regular hand hygiene, vaccination, balanced nutrition, and periodic health check-ups. These findings support the idea that knowledge and

understanding play a major role in shaping everyday health decisions.

One of the important observations from the study is that individuals with better education levels showed greater awareness of preventive healthcare practices. Education appears to improve the ability to understand medical information, interpret health messages, and evaluate potential health risks. As a result, educated participants were more confident in making decisions related to their health. In contrast, participants with lower education levels reported difficulties in understanding medical instructions and identifying reliable sources of health information. This gap highlights the importance of simple and clear communication in healthcare.

Another significant finding relates to the role of healthcare professionals in improving health literacy. Participants who regularly interacted with doctors, nurses, or pharmacists reported better understanding of disease prevention measures. This suggests that healthcare providers play a key role in delivering health education and guiding individuals toward preventive practices. Short counselling sessions, awareness campaigns, and clear communication can greatly improve patients' understanding and confidence.

The study also reflects the growing influence of digital media as a source of health information. Many participants reported using the internet and social media platforms to learn about diseases and preventive measures. While digital access has improved awareness, it has also created challenges related to misinformation. Individuals with higher health literacy were more capable of identifying trustworthy information, whereas others found it difficult to judge the reliability of online content. This finding highlights the need for verified and easy-to-understand digital health resources.

Socio-economic factors also played an important role in shaping health literacy levels. Participants from lower-income groups reported limited access to healthcare services and educational resources. These barriers can reduce opportunities for preventive care and increase the risk of disease. Addressing these inequalities is essential for improving public health outcomes.

Overall, the discussion highlights that improving health literacy can strengthen disease prevention efforts, reduce healthcare burden, and promote healthier communities. Continuous efforts in education, communication, and public awareness are essential to achieve long-term improvements in preventive health behaviour.

Recommendations

Based on the findings, several practical recommendations can be suggested to improve health literacy and strengthen disease prevention practices.

First, regular community-based health education programs should be conducted. These programs should use simple language, visual aids, and culturally appropriate communication to ensure that information is easy to understand for people with different education levels.

Second, healthcare providers should play a stronger role in patient education. Doctors, nurses, and pharmacists can offer short counseling sessions during routine visits to explain preventive practices, screening schedules, and lifestyle changes.

Third, digital health platforms and social media can be used to spread reliable and easy-to-understand health information. Since many participants rely on online sources, verified and simplified content can help reduce confusion and misinformation.

Fourth, government and healthcare organizations should work toward improving access to preventive healthcare services, especially for low-income and rural populations. Affordable screening camps and vaccination drives can encourage early prevention.

Fifth, future research should include larger and more diverse populations and may consider using mixed research methods, including interviews or focus groups, to gain deeper insights into personal experiences and barriers.

Finally, collaboration between educational institutions, healthcare providers, and community leaders can help create long-term strategies to improve health literacy and promote preventive healthcare behavior.

These recommendations aim to support future initiatives and research efforts in strengthening public health awareness and disease prevention.

Conclusion

This study highlights the important connection between health literacy and disease prevention. The findings clearly show that individuals who have a better understanding of health information are more likely to adopt preventive behaviours such as maintaining hygiene, attending regular health check-ups, following vaccination schedules, and making healthier lifestyle choices. These behaviours play a significant role in reducing the risk of preventable diseases and improving overall well-being.

The research also emphasizes that limited health literacy remains a major barrier to effective disease prevention. Many individuals struggle to

understand medical instructions, identify early symptoms, or access reliable health information. This gap increases the chances of delayed treatment and unnecessary healthcare costs.

Improving health literacy is not only an individual responsibility but also a shared responsibility of healthcare professionals, educational institutions, and policymakers. Providing clear, simple, and accessible health information can empower people to take control of their health and make informed decisions.

Overall, strengthening health literacy can contribute to healthier communities, reduced disease burden, and a more efficient healthcare system. Continuous efforts in education, awareness, and community engagement are essential to ensure long-term improvements in preventive healthcare practices.

Limitations of the Study

Although the study was conducted carefully, several limitations should be acknowledged. First, the research relied on self-reported responses, which means some participants may have provided socially desirable answers or may not have accurately remembered their health behaviors. This could slightly affect the accuracy of the findings.

Second, the study was conducted within a limited geographic area and used a specific sample size. Because of this, the results may not fully represent the entire population. Health literacy levels and preventive behaviors can vary across regions, cultures, and healthcare systems. Third, time constraints restricted the duration of data collection. A longer study period could have captured seasonal or long-term variations in preventive health practices. Additionally, the study focused mainly on general disease prevention and did not explore specific disease groups in depth.

Another limitation was the use of a structured questionnaire. While this helped in collecting uniform data, it limited the opportunity for participants to share detailed personal experiences or deeper insights into their health behavior.

Lastly, access to some participants—especially individuals from lower socio-economic groups—

was challenging. This may have reduced the representation of vulnerable populations who often face the greatest health literacy challenges.

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