

RESEARCH ARTICLE

Low Health Literacy: A Devious Enemy of Patient Treatment Adherence

Abdul Kader Mohiuddin

*Department of Pharmaceutical Technology, Faculty of Pharmacy, Dhaka University, Dhaka, Bangladesh***Received: 10 September 2022; Revised: 05 October 2022; Accepted: 08 November 2022****ABSTRACT**

To access, comprehend, and use information to make decisions about their health, people must possess certain personal traits and social resources, which are referred to as health literacy. Patients' ability to engage in complex disease management and self-care is strongly related to their level of health literacy. It can help us stay healthy by preventing illness and effectively managing existing illnesses. Personal health literacy refers to a person's ability to locate, comprehend, and apply information and services to support health-related decisions and actions for themselves and others. The World Health Organization recommends health literacy as a tool for achieving several key targets outlined in the sustainable development goals. Low health literacy (LHL) is most commonly associated with mature patients with chronic health conditions who have limited education and are not necessarily from a lower income group. Furthermore, being literate in general does not imply being literate in health. People with limited health literacy may find it difficult to manage their condition and prevent illness, which may lead to increased use of health-care services. Furthermore, LHL is associated with increased hospitalizations, increased use of emergency care, decreased use of preventative services, and a worsened ability to understand labels and health messages, a worsened state of health, higher mortality, and more expensive medical care. Health literacy improves a population's ability to care for themselves and aids in the reduction of health disparities. It has an impact on the use of health services, as well as on patient satisfaction and the physician-patient relationship. It is one of the major impediments to healthcare professionals adequately transmitting information to those under their care. Despite the negative implications of LHL, physicians are typically unaware of their patients' health literacy levels and their subsequent effects on their patients' outcomes.

Keywords: Avoidable medical costs, COVID-19 vaccine negligence, global health burden, healthcare, medication non-adherence, necessary health education, parental health literacy, understanding treatment guidelines

Many studies reveal that patients from high-income countries are not adequately adhering to medications as they are prescribed. Forgetfulness, confusion about the duration required for medication use, and mistrust about the overall efficacy of medication are among the reasons for non-adherence to diabetes management protocols in Middle Eastern countries.^[1] Conversely, after

World War II, Taiwan faced severe poverty, but it is now the 8th largest economy in Asia and also the home of Type 2 diabetes patients with more than 80% health literacy.^[2] A cross-sectional study of 259 school leaders in Hong Kong carried out during the COVID-19 pandemic between April 2021 and February 2022 shows that more than 50% of participants had Low health literacy (LHL), and their LHL was strongly associated with a negative attitude about vaccination, low information, and confusion about COVID-19-related information.^[3]

***Corresponding Author:**

Abdul Kader Mohiuddin,

E-mail: trymohi@yahoo.co.in

However, in this editorial, I would like to present a few more sensational facts in the form of an infographic model about LHL [Figure 1]:

- A. LHL is associated with people who cherish superstitions and stigma within their preset narrow mind, which prevents them from gathering relevant health information from their surroundings.^[4]
- B. LHL has a significant impact on patients' treatment guideline compliance, or, more directly, medication adherence, which leads to poorer health outcomes, higher health-care costs, increased hospitalizations, and even higher mortality rates.^[5]
- C. Only 12% of Americans have adequate health literacy, and improving health literacy could prevent nearly 1 million hospital visits and save more than \$25 billion per year, according to the US Centers for Disease Control and Prevention.^[6]
- D. The global economic cost of illiteracy is estimated to be \$1.19 trillion, but LHL alone costs the US economy \$238 billion per year.^[7]
- E. Both are found in both developed and developing countries around the world, and socioeconomic factors are not the only cause of LHL.^[8]
- F. Surprisingly, nearly 40% of US and UK adults have LHL, compared to around 50% of Europeans, 60% of adults in Canada, Australia, and the UAE, and nearly 70% of Chinese.^[9]
- G. In China, health literacy increased from 6.48% of the population in 2008 to 23.15% in 2020.^[10] However, only one in one military health providers of the Chinese People's liberation Army had adequate health literacy, found in a recent survey published in BMC Public Health.^[11]
- H. Evidence suggests that LHL has significant economic consequences at the individual, employer, and health-care system levels.^[12]
- I. The authors of the Hamburg Diabetes Prevention Survey, a population-based cross-sectional study in Germany, concluded that LHL is a significant risk factor for the metabolic syndrome's three conditions: Obesity, diabetes, and hypertension.^[13]
- J. Age, place of residence, education, and family status all have an impact on health literacy.^[14]
- K. More than half of Dutch health providers use health literacy-specific materials only infrequently.^[15]
- L. Mistrust and LHL perceptions were linked to high levels of vaccine hesitancy, providing evidential support for portraying these factors as perceived barriers to COVID-19 vaccine uptake.^[16]
- M. LHL is not uncommon among patients with a high level of education or with well-off patients. Moreover, patients with LHL, but with high education, had a higher probability of emergency department (ED) re-visits.^[7]
- N. According to patient-centered interventions, improving health literacy can reduce the risk of polypharmacy, medication non-adherence, and health-care costs.^[17]
- O. According to the 1996–2017 Medical Expenditure Panel Survey (Cheng and Tanna, 2022), LHL was more prevalent in glaucoma patients, and patients with LHL were prescribed more medications and had higher medication costs.^[18]
- P. Nearly 35% of diabetic patients worldwide have limited health-related education.^[19]
- Q. LHL is linked to gestational diabetes, maternal stress and depression, low birth weight, stillbirth, and congenital malformations during pregnancy and birth, all of which have negative consequences for the woman and her child.^[20]
- R. Empirical research based on a conceptual model estimated that LHL costs between 7% and 17% of total health-care expenditures.^[7]
- S. The prevalence of LHL in the ED varies greatly, with estimates as high as 88% depending on the patient mix and screening instruments used.^[21]
- T. In both low- and high-income countries, low parental health literacy was linked to poorer child health outcomes.^[22]
- U. Patients who are older, have less education, a lower income, and have chronic conditions are more vulnerable.^[23]
- V. LHL was discovered in more than 70% of formal paid caregivers of non-self-supporting older adults in Tuscany, Italy, and in more than



Figure 1: Low health literacy facts

- 50% of caregivers of heart failure patients in the United States.^[24]
- W. People with LHL may have 1.5–3 times the number of serious health outcomes, such as higher mortality, hospitalization rates, and disease management ability, as those with adequate health literacy.^[25]
- X. In cardiac patients, it has been linked to increased mortality, hospital readmission, and lower quality of life.^[26]
- Y. LHL represents nearly 50% of Germans.^[27] In Germany, every fourth to fifth person is not immunized against COVID-19.^[28]
- Z. According to a Waystar (Health Care Billing Software) report from 2019, nearly 40% of health-care consumers were unaware that the cost of their healthcare varied across facilities.^[29] Nonetheless, it goes without saying that health literacy is beneficial in addressing the health needs of even the most disadvantaged and marginalized

communities. To improve adherence, patients need to clearly and appropriately understand health information related to their specific illness or disease. This understanding may be essential to helping patients generate the motivation, beliefs, and appropriate health behaviors needed to improve overall adherence. LHL is a curse; it has to be minimized. All health-care providers, stakeholders, and even government and community authorities should work on it.

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DECLARATIONS

The present research was carried out exclusively to look into problems associated with LHL. With time and the availability of newer investigation in the same field, the statistical evidence or variables presented here may transform.

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CONFLICTS OF INTEREST

The author declares that he has no competing interests.

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