

Low Health Literacy (LHL) Facts

Abdul Kader Mohiuddin¹

¹ Alumnus, Faculty of Pharmacy, Dhaka University

Correspondence: Abdul Kader Mohiuddin, Alumnus, Faculty of Pharmacy, Dhaka University.

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Abstract

In order 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. It can assist us in maintaining good health, preventing illness, and effectively managing existing illnesses. The degree to which a person can locate, comprehend, and make use of information and services to support health-related decisions and actions for themselves and others is known as personal health literacy. Low health literacy is linked to more hospitalizations, more use of emergency care, less 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.

Keywords: parental health literacy, necessary health education, understanding treatment guidelines, self-care, public health

1. Introduction

Health literacy enhances a population's self-care capacity and helps to reduce health inequalities. Low health literacy (LHL) is associated mostly with mature patients with chronic health conditions, who have limited education, not necessarily from a lower income group, and those who cherish superstitions and stigma inside their preset narrow mind that prevents them from gathering some relevant information about health or health system access, diseases, and drugs from their surroundings, with a few exceptional cases. Also, being generally literate does not automatically make one to be health literate. LHL is not uncommon among patients with a high level of education or with well-off patients (Van der Heide I, Wang J, Droomers M, Spreeuwenberg P, Rademakers J & Uiters E., 2013).

2. Global Burden and Prevalence of LHL

The cost of illiteracy to the global economy has already exceeded \$1.19 trillion in 2013 (Cree A, Kay A & Steward J., 2022) but LHL alone costs the US economy \$200 billion every year (Shahid R, Shoker M, Chu LM, Frehlick R, Ward H & Pahwa P., 2022). Only 12% Americans have adequate health literacy and according to the US Centers for Disease Control and Prevention (CDC), improving health literacy could prevent nearly 1 million hospital visits and save over \$25 billion a year (CDC, 2021). LHL influences a lot of patients' treatment guideline compliance or more directly medication adherence leads to poorer health outcomes, higher healthcare expenditures, increased hospitalizations, and even higher mortality rates in patients with chronic diseases (Mohiuddin, A. K., 2020). LHL is one of the main barriers preventing healthcare

professionals from adequately transmitting information to people in their care (Mohiuddin AK., 2022).

Evidence shows that LHL is significantly associated with economic ramifications at the individual, employer, and healthcare system levels. But it is common to both developed and under-developed countries around the world and socio-economic conditions are not at all the sole factor of LHL. Surprisingly, close to 40% of the US and the UK adults have LHL (Emerson MR, Buckland S, Lawlor MA, et al., 2022; Public Health England, UCL Institute of Health Equity, 2015), which is around 60% in Canada (Kyabaggu R, Marshall D, Ebuwei P & Ikenyei U., 2022), Australia (Ellender CM, Boyde M & Scott IA., 2022), UAE's adult population (Ibrahim H & Nair SC., 2021), and 50% in the European population (Sørensen K, Pelikan JM, Röthlin F, et al., 2015). Even China, home of the world's greatest scientists and inventors issued "Health China 2030" in 2016, planning the rate of national health literacy is aimed to increase to 30% by 2030 (Li Y, Lv X, Liang J, Dong H & Chen C., 2022). The GDP per capita of these countries ranges from \$11,800 to \$62,200, based on Trading Economics-2022 data.

3. LHL and Non-Compliances

Many studies reveal that patients from high-income countries are not adequately adherent 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 (Mohiuddin AK, 2022). After World War II, Taiwan faced severe poverty which is now the 8th largest economy in Asia and also home of T2DM patients with 82% health literacy (Lovrić B, Placento H, Farčić N, et al., 2022).

Canada is the top most educated country with a GDP close to 2 trillion and a GDP per capita of more than \$44,000—a recent survey granted by the Royal University Hospital Foundation in two urban tertiary care hospitals in Saskatoon shows that around 50% of the patients admitted to the general internal medicine unit had LHL. Moreover, patients with LHL, but with high education, had a higher probability of emergency department re-visits (Lau SSS, Shum ENY, Man JOT, et al., 2022).



Figure 1. Low Health Literacy Facts (Pictorial Presentation/info graphic)

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 LHL and their LHL was strongly associated with a negative attitude about vaccination, low information, confusion about COVID-19-related information and secondary symptoms of burnouts (Shahid R, Shoker M, Chu LM, Frehlick R, Ward H & Pahwa P., 2022).

In the USA, a cohort study by Vanderbilt Center for Health Services Research (Nashville, Tennessee) of over 46,000 hospitalized patients showed that hypertension was more common in people with LHL. Also, authors of Hamburg Diabetes Prevention Survey, a population-based

cross-sectional study in Germany concluded that LHL is an important factor in the 3 conditions of metabolic syndrome--obesity, diabetes, and hypertension (Tajdar D, Schäfer I, Lühmann D, et al., 2022).

4. Conclusion

Finally, it can be said that LHL is associated with patient non-compliance but it warrants further studies to judge whether it is the top-most reason for the same or not, as many studies conducted in developed countries revealing a high prevalence of cost-related patient non-adherence. Nevertheless, it can be said beyond reason health literacy provides a benefit 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 behaviors. LHL is a curse, it has to be minimized. All healthcare providers, stakeholders and even government and community authorities should work on it.

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Declaration

The study states an impartial judgment, the author is not biased, supports differences of opinion, logic and believes that facts can be changed with time.

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Conflict of Interest

The author declares that he has no competing interests.

Informed Consent

N/A

References

- Van der Heide I, Wang J, Droomers M, Spreeuwenberg P, Rademakers J, Uiters E., (2013). The relationship between health, education, and health literacy: results from the Dutch Adult Literacy and Life Skills Survey. *J Health Commun.*, 18(Sup 1), 172-184. doi:10.1080/10810730.2013.825668.
- Cree A, Kay A, Steward J., (2022, September). The Economic and Social Cost of illiteracy: A snapshot of illiteracy in a global context. World Literacy Foundation. <https://worldliteracyfoundation.org/wp-content/uploads/2022/08/The-Economic-Social-Cost-of-Illiteracy-2022.pdf>. Published September 2022. Accessed January 12, 2023.
- Shahid R, Shoker M, Chu LM, Frehlick R, Ward H, Pahwa P., (2022, September 12). Impact of low health literacy on patients' health outcomes: a multicenter cohort study. *BMC Health Serv Res.*, 22(1), 1148. Published 2022 Sep 12. doi:10.1186/s12913-022-08527-9.
- CDC, (2021). Health Literacy basics-Talking points about health literacy. Centers for Disease Control and Prevention. <https://www.cdc.gov/healthliteracy/shareinteract/TellOthers.html>. Published May 21, 2021. Accessed January 12, 2023.
- Mohiuddin, A. K., (2020). "Chapter 11. The Enigma of Patient Behavior". *The Role of the Pharmacist in Patient Care: Achieving High Quality, Cost-Effective and Accessible Healthcare Through a Team-Based, Patient-Centered Approach*, Universal-Publishers, 2020, pp. 189-210. ISBN-10: 1627343083, ISBN-13: 9781627343084. <https://www.universal-publishers.com/book.php?method=ISBN&book=1627343083>.
- Mohiuddin AK., (2022). Our low health literacy needs urgent fixing. *The Daily Star*. <https://www.thedailystar.net/opinion/views/news/our-low-health-literacy-needs-urgent-fixing-3193246>. Published December 11, 2022. Accessed January 12, 2023.
- Emerson MR, Buckland S, Lawlor MA, et al., (2022). Addressing and evaluating health literacy in mHealth: a scoping review. *Mhealth*, 8, 33. Published 2022 Oct 30. doi:10.21037/mhealth-22-11.
- Public Health England, UCL Institute of Health Equity, (2015). *Local action on health inequalities-Improving health literacy to reduce health inequalities*. UK Government Publishing Service. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/460710/4b_Health_Literacy-Briefing.pdf. Published September 2015.
- Kyabaggu R, Marshall D, Ebuwei P, Ikenyei U., (2022). Health Literacy, Equity, and Communication in the COVID-19 Era of Misinformation: Emergence of Health Information Professionals in Infodemic Management [published correction appears in *JMIR Infodemiology*, 2, e35012.]. *JMIR Infodemiology*, 2(1), e35014. Published 2022 Apr 28. doi:10.2196/35014.
- Ellender CM, Boyde M, Scott IA., (2022). Health literacy assessment in the clinic: benefits, pitfalls and practicalities. *Aust J Prim Health*,

28(5), 365-370. doi:10.1071/PY22015.

Ibrahim H, Nair SC., (2021). Comment on Health Literacy: The Common Denominator of Healthcare Progress. *Patient*, 14(6), 869-870. doi:10.1007/s40271-021-00556-6.

Sørensen K, Pelikan JM, Röthlin F, et al., (2015). Health literacy in Europe: comparative results of the European health literacy survey (HLS-EU). *Eur J Public Health*, 25(6), 1053-1058. doi:10.1093/eurpub/ckv043

Li Y, Lv X, Liang J, Dong H, Chen C., (2022). The development and progress of health literacy in China. *Front Public Health*, 10, 1034907. Published 2022 Nov 7. doi:10.3389/fpubh.2022.1034907.

Mohiuddin AK, (2022). Medication adherence: Fact or fictions? *Current Research in Public Health*, 2(1), 18-21. doi:10.31586/crph.2022.533.

Lovrić B, Placento H, Farčić N, et al., (2022). Association between Health Literacy and Prevalence of Obesity, Arterial Hypertension, and Diabetes Mellitus. *Int J Environ Res Public Health*, 19(15), 9002. Published 2022 Jul 24. doi:10.3390/ijerph19159002.

Lau SSS, Shum ENY, Man JOT, et al., (2022). COVID-19-Related Health Literacy of School Leaders in Hong Kong: A Cross-Sectional Study. *Int J Environ Res Public Health*, 19(19), 12790. Published 2022 Oct 6. doi:10.3390/ijerph191912790.

Tajdar D, Schäfer I, Lühmann D, et al., (2022). The Link Between Health Literacy and Three Conditions of Metabolic Syndrome: Obesity, Diabetes and Hypertension. *Diabetes Metab Syndr Obes.*, 15, 1639-1650. Published 2022 May 26. doi:10.2147/DMSO.S363823.