



Health Literacy Among Adults of Ahmedabad - An Observational Study

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Abstract

Health literacy involves applying various skills to health situations, such as reading, listening, analytical, and decision-making skills. Physiotherapists spend considerable time with patients so they can deliver health information, engage patients in preventive activities, enhance self-management, and change risky lifestyle behaviours. To assess health literacy in adults of Ahmedabad by using the Health Literacy Instrument for adults (HELIA). Adults from the community of Ahmedabad, aged 18-65 years, who understood English and Hindi and were willing to participate, were included using convenience sampling in this observational study. The study was explained to participants, and informed consent was taken. A Google form was generated to collect the data like age, gender, profession, and HELIA. Descriptive statistics and chi-square analysis were done by using SPSS. 265 participants with a mean age of (31.96 ± 12.28) years completed the study, including 144 (54 %) females and 121 (46 %) males, consisting of 36.1% healthcare professionals. Mean Health literacy is (54.28 ± 15.61). Amongst them, 203 participants (76.6 %) have limited and 62 participants (23.4 %) have adequate health literacy. Chi-square analysis between health literacy and health care profession shows $\rho = 260.1$, $p = 0.302$. Health literacy level is low in adults of Ahmedabad and has no significant association with being in the healthcare profession. The study indicates the need for attention to health education and promotion programmes. Planning and implementing educational interventions using media or a simple training method are recommended to improve health literacy in adults in Ahmedabad.

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Introduction

According to WHO, Health literacy (HL) is the ability of individuals to gain access to, understand, and use information in ways that promote and maintain good health. It is a multifaceted concept covering the interacting capacities of the individuals and the systems to meet the complex demands of health in society. HL is associated with age, gender, education, and information sources from family (Kayalkar & Dmello, 2024), so it is reasonable to assume that individuals with limited literacy also have limited HL (Ishikawa & Kiuchi, 2010). Association of limited HL with less adherence to medical treatment and understanding of

self-management has also been seen (van der Gaag et al., 2022). Adults are assumed to be regulators in most Indian households. Adequate HL equips them to make wise decisions about their health and well-being.

A scoping review suggests that it is important to include healthcare workers in creating and executing HL interventions to improve the outcomes. (Glane et al., 2023). A physiotherapist (PT) engages extensively with the patient while taking history and daily treatment. They have a vital role in health promotion, lifestyle management, posture and movement education, injury prevention, and pain management. So, they should find the opportunity to spread awareness and educate patient about their condition and self-management. Although exposure to learn about HL is found to be limited at all stages of PTs' careers (Simkins et al., 2023).

Association of higher HL has been found with better self-management in various diseases like Chronic Kidney Disease (CKD), Depression, Chronic Obstructive Pulmonary Disease (COPD), and adolescents with Cerebral Palsy (CP), etc. (Ho et al., 2025)(Adesina et al., 2024)(Borge et al., 2024). This understanding is vital for making informed decisions about their health, including preventive measures, treatment options, and lifestyle choices. Currently, awareness of HL is increasing in India, different HL enhancement activities are being conducted, and various validated tools have been made/translated for measuring general HL, disease-specific HL, and for special populations. Health literacy instrument for adults (HELIA) (Tavousi et al., 2020) and Health literacy measurement for adolescents (HELMA) (Pavić & Simin, 2024) etc. are tools to measure general HL. Mental HL questionnaire for young adults (MHLq) (Pant, 2022) Oral health literacy adults questionnaire (OHL-AQ) (Chandu et al., 2020) Etc. are also commonly used disease-specific tools for special populations. Translations and cross-cultural adaptations in Indian languages and culture are available for only a few scales.

HL plays a vital role in assessing the credibility of health information and actively participating in decision-making with healthcare providers, but the prevalence of HL is less studied in Ahmedabad. Thus, there is a need to find out HL in the general adult population. This study aimed to find the level of HL in adults of Ahmedabad by using HELIA.

Methods

An observational study was conducted among Adults from the community of Ahmedabad. The sample size was calculated based on a previous study. (Abel et al., 2015). The formula used was $n = 4\sigma^2 / d^2$ (where σ is the standard deviation and d is the estimated error of 5%). The study was done according to the principles of the Declaration of Helsinki. 265 adults aged 18-65 years, who understood English and Hindi and were willing to participate, were included using convenience sampling. The scale was distributed through various social media platforms, and the Google form explained the study, e.g., WhatsApp and Instagram. Before filling out the form, participants gave consent to participate. Data like age, gender, whether in the health care profession (HCP) or not, and HELIA were collected by the Google form. The scale was translated into Hindi by the authors, and the reliability and validity were assessed. (Jain & Sheth, 2024). Both English and Hindi versions were used to collect data. The study was explained to participants, and consent to participate was obtained.

Research instrument

HELIA is an instrument for measuring general HL. It has 33 questions and includes five major domains of HL: Reading, Access, Understanding, Appraisal, and Decision making/ Intention to behave. Scoring is done on a point Likert scale. The maximum score of HELIA is 100 which is divided into four ranks: Inadequate (0-50), Problematic (50.1-66), Sufficient (66.1-84) and Excellent (84.1-100); and two levels: Limited (0-66) and Adequate (66.1-100).

Data analysis

Descriptive statistics were done, and chi-square analysis was applied between HL and health care professionals by using SPSS version 20.0. For chi-square analysis between HL and health care professionals, two levels (Limited and Adequate) of HL were considered.

Results

All participants were 265 participants with a mean age of (31.96 ± 12.28) years who participated in the study. There was no missing data as all the questions in the Google form were compulsory. Graph 1 shows distribution distribution of participants according to gender, while Graph 2 shows the distribution of participants according to their profession, e.g., Healthcare professional (HCP) or others.

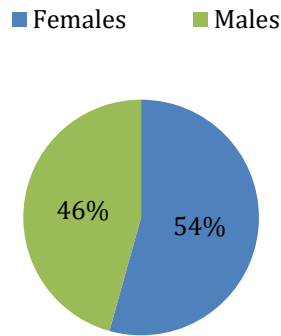


Figure 1. Gender of participants

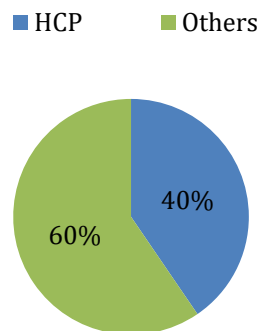


Figure 1. Profession of participants

The mean HL score was (54.28 ± 15.61) . Amongst them, 203 (76.6%) participants have a limited level, and 62 (23.4%) participants have an adequate level of HL. 131 (49%) had inadequate HL, 78 (29%) had problematic HL, 56 (22%) had sufficient HL, and 0% had excellent HL. Chi-square analysis between HL and health care professionals shows $(\chi^2 (1) = 260.1, p = 0.302)$.

Discussion

The present study aimed to assess HL in adults of Ahmedabad, and it was found that problematic HL is present in adults. These findings are supported by Ho Van Hoa et al. (2020), it was found that there is low HL in older adults of Vietnam and that is significantly associated with age and occupation. (Van Hoa et al., 2020). The population affected by limited perceived HL increases by age. Limited perceived HL is associated with limited functional HL, low social status, and a high frequency of doctor visits. (Berens et al., 2016). Low HL has been found in developed countries like the United States and Denmark, as well as in semi-developed countries like Southeast Iran. Systemic factors such as limited educational opportunities, racism, health system mistrust, and a lack of culturally tailored health information and services were barriers for this population. (Muvuka et al., 2020)(Svendson et al., 2020)(Ansari et al., n.d.).

While in India, illiteracy, limited government schemes, lack of HL programmes and educational opportunities, deep distrust of the existing medical system, poverty, inequality, discrimination, and traditional culture may be the major barriers for HL. (Passi et al., 2023)(Sparks, 2012). Government plays a critical role in empowering the public through HL by conducting public education and awareness programs, establishing different policies and regulations, and supporting HL initiatives. Reema A. Karasneh et al. did a community-based cross-sectional study in a developing country, Jordan. They assessed HL and related health behaviour and found that 27.1% people have limited HL, and it's significantly associated with education level, age, living area, and chronic conditions. (Karasneh et al., 2020).

In the present study, it is also found that there is no significant association between HL and health care profession. Tanasombatkul K (2021) also found similar results. (Tanasombatkul et al., 2021). This may be because of having more healthcare students and workers who are in the initial years of the work into their studies. Previous studies have also found that health professionals have a limited understanding of HL and the consequences of low HL for their patients. (Nutbeam & Lloyd, 2021).

Limited HL is associated with poor adherence to medical treatment and inappropriate communication with health professionals, more hospitalisation, increased medical and health expenditure, higher mortality and morbidity, and poorer self-care (Ad Hoc Committee on Health Literacy for the Council on Scientific Affairs, 1999). This can be because of low literacy level, lack of awareness programs, and access to information. Less practice of health promotion by community PTs can also be a major factor. Health education programs are necessary through online or offline mediums. Arranging different camps, seminars, and workshops, and adding them to the school curriculum, may also work. The promotion of HL would not only result in positive effects on an individual level but also contribute to a stronger implementation of activities on school health promotion. (Dadaczynski et al., 2020). Training programs are being conducted for PTs to be responsive to their clients' HL needs, and it is found that HL skills are improved by 65% after that. (Bird et al., 2022).

HL can differ from urban to rural settings; in different age groups and occupations, which have not been differentiated in this study. Social media bias could affect the result. Factors affecting the level of HL and formulation of educational programme, as well as the effect of different training programmes, can be studied in the future.

Conclusion

Health literacy level is low in adults of Ahmedabad and has no significant association with being in the health care profession. Study indicates need for attention to health education and promotion programmes. Training for physiotherapists and other healthcare professionals about delivering health education is also needed. Various mass media campaigns, seminars, and webinars can be done. Health care material, including medical forms, consent, and discharge forms, can be simplified. Culturally relevant health education programs can be developed and implemented in schools, workplaces, and communities, using simple language and diverse formats (visual aids, storytelling, group discussions).

Conflicts of Interest

The author affirms that there is no conflict of interest in this research.

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