



# Health Literacy Among Community Health Workers: Understanding, Challenges, And Opportunities

Ankit Chauhan,

Research Scholar,

GAE, SSS,

Jawaharlal Nehru University, New Delhi-110067

**Abstract:** Health literacy is critical to effective healthcare delivery, particularly in marginalized communities. Accredited social health activists (ASHAs) and Anganwadi workers (AWWs) are frontline community health workers (CHWs) in India and play a significant role in promoting health literacy among marginalized communities. This study aimed to assess the health literacy of AWWs and ASHAs, explore opportunities for enhancing their health literacy, and identify challenges in promoting health literacy among the communities they serve. A literature review explored the understanding, challenges, and opportunities for health literacy among CHWs. CHWs are central to addressing this gap but face significant challenges, including inadequate funding, human resource systems that devalue practical experience, and systemic obstacles. Despite these challenges, the paper identifies key opportunities to enhance CHW effectiveness and, consequently, public health literacy. These include creating standardized, accessible health education modules; leveraging digital tools for ongoing learning; strengthening CHW integration with primary healthcare; implementing health literacy assessments in training; and fostering community engagement for tailored health messaging. Addressing the identified challenges and leveraging opportunities can enhance the effectiveness of CHWs in promoting health literacy, ultimately bridging the gap between healthcare systems and marginalized communities.

**Keywords:** Health literacy, community health workers, well-being, and health care access

## 1.1 Background

India is one of the few countries where men and women have approximately equal life expectancies at birth. The absence of the traditional female advantage in life expectancy in India highlights systemic issues with women's health. Indian women have a significantly higher death rate, especially during their reproductive years. Indian women's health is inextricably tied to their social standing. According to research on women's status, the contributions Indian women provide to families are frequently neglected, and they are instead

viewed as economic liabilities (Victoria et al., 1998, p.1). Indian women have low levels of schooling and participation in the official labor force. They often have minimal autonomy because their fathers, husbands, and sons control them. These issues negatively impact Indian women's health (Chatterjee, 1990; The World Bank, 1996). Poor health affects not only women but also their families. Women in poor health are more prone to having low-birth-weight babies. They are also less likely to be able to provide appropriate food and care for their children. A woman's health impacts the household's economic well-being because a sick woman is less productive in labor. While women in India suffer a wide range of critical health issues, this profile focuses on just five: reproductive health, violence against women, nutritional status, unequal treatment of girls and boys, and HIV/AIDS. It is not unexpected that women's health differs widely among India's 28 states and eight union territories because of the wide variance in cultures, religions, and degrees of development (Victoria et al., 1998, p.1). Maternal deaths are disproportionately concentrated in remote rural areas and are among the least likely to be recorded (Gomes et al., 2017; Jha, 2014). This percentage accounts for 12% of all maternal fatalities worldwide (Registrar General India, 2006). According to the World Health Organization (WHO), the global MMR decreased significantly from 342 in 2000 to 211 in 2017, lowering the global maternal mortality from 451000 to 295000 during this period.

India has an unusually high illiteracy rate and poverty in urban and rural areas, contributing to low health literacy rates. Approximately 41% of women and 18% of men between 15 and 49 years of age have never attended school ((IIPS/India and ICF, 2015, Table 2.17). One hundred eighty-six million females cannot read and understand the simplest sentences, even in their regional languages (Chandra, 2019, p.24). Literacy is reliant on higher levels of literacy in general. Poor literacy can directly impact people's health by restricting their personal, social, and cultural development and obstructing the development of health literacy. 'Individuals with low health literacy are more likely to make drug errors, have poor health, require more hospitalizations, and spend more on healthcare than those with good literacy' (Zhang et al., 2016), p.2). Poor literacy can make it difficult to find important health information and process, analyse, and use it to make informed healthcare decisions. Low health literacy is linked to a lower level of vaccination in children, a greater occurrence of sexually transmitted illnesses in adolescents, an inability to interpret and follow up on recommended medication for elderly individuals, and, as a result, greater morbidity. Patients with lower health literacy are also more likely to die than those with higher health literacy when they have illnesses such as acute coronary syndrome or severe infections. In India, the literacy rate is relatively low, at 74.04% (UIS, 2020). This means that many people need help accessing and understanding written health information. India is multilingual, with over 22 officially recognized languages. This linguistic diversity can present a challenge to health literacy, as it is likely that health information is only sometimes provided in a language that is comprehensible to most of the population. Access to health care services in India is often limited due to a lack of resources and infrastructure, meaning that health information may only sometimes be readily available. In comparison, other countries, such as the United States, the United Kingdom, and Canada, have higher literacy rates, ranging from 86.3% to 99% (UNESCO Institute for Statistics (UIS), 2020). Individuals with lower health literacy may need help understanding basic health information, leading to poorer health outcomes. Additionally, individuals may need more resources and infrastructure to access healthcare services.

## 1.2 Health literacy

The term 'health literacy' initially appeared in the literature in the mid-20th century in the context of school health education (Ratzan, 2001). Health literacy implies the achievement of a level of knowledge, personal skills, and confidence to take action to enhance individual and community health through changing unique lifestyles and living conditions. Therefore, health literacy can be defined as reading pamphlets and making appointments. Health literacy is a critical empowerment through improving people's access to health information and their capacity to use it effectively (WHO, 1998). The World Health Organization also stated in the health promotion glossary that health literacy comprises the cognitive and social skills that verify the ability of individuals to access, understand, and use information in ways that promote and maintain good health (World Health Organization, 1998). Nutbeam (2000) stated that health literacy is the personal, cognitive, and social skills that determine an individual's ability to gain access to, understand, and use information to promote and maintain good health.

## 1.3 Community health workers

Community health workers (CHWs) include ASHAs, Anganwadi workers, Sanghni, and ANMs, and are frontline public health providers who are trusted members of that particular community and have an unusually close understanding of the community in which they provide health services. This relationship provides unique insights into the social, cultural, and economic factors that influence health access and promotion in the community. CHWs' significant role as healthcare providers, especially in marginalized communities, stems from their ability to bridge the gap between these communities and the primary healthcare system. This bridge also helps improve access to healthcare, culturally competent care, health education, awareness and promotion, advocacy and support, cost-effective healthcare, and community engagement.

## 1.4 Method

A literature review was conducted to understand the challenges and opportunities of health literacy in CHWs. The researcher reviewed existing research and identified, analysed, and synthesized resources such as systematic research literature, books, and reports available. The goal is to provide an overview of current knowledge and identify trends, gaps, and opportunities for health literacy.

### 1.4.1 Review of the literature

In this review of the literature, two themes were created to understand the current status of health literacy. The first theme is understanding of health literacy, and the second theme is challenges to health literacy. On the basis of these two categories, we attempt to understand opportunities for health literacy in India.

## 1.5 Understandings

The lack of health literacy (HL) among at least nine out of ten Indians, intensified by high rates of general illiteracy and extreme poverty, significantly exposes the nation's healthcare system. This widespread low HL contributes to unhealthy lifestyles, leading to frequent hospital visits, with many unable to afford out-of-

pocket costs for services or medicines. A chief consequence of low HL is poor health insurance coverage across India. Evident in significant gaps, especially in rural areas, where most states and Union Territories (excluding Andhra Pradesh, Telangana, Assam, and Kerala) report less than 50% of households with even one member covered by a health scheme, as per the National Family Health Service (Mathias et al., 2023).

The common occurrence of preventable diseases in India is attributed to a complex interplay of factors, with health literacy emerging as a crucial issue alongside cultural and financial barriers. India's general literacy rate was 65% in 2001. This underscores the need for fundamental improvements in literacy to subsequently enhance health. Kerala, with a high literacy rate of 90.92% in 2001 and even higher now (94% in 2011 and 95.3% in 2024), shows a clear correlation between increased literacy and improved health outcomes. Enhanced health literacy directly leads to the adoption of effective disease prevention methods, better adherence to treatment routines, and ultimately improved health. When health literacy is identified as a significant determinant, any intervention aimed at improving health must consider a patient's ability to understand, interpret, and act upon health information, whether communicated verbally or in written form (Firoz Babu, 2022).

Assessing HL among adolescents is vital for effective health interventions and policy development in India. Some research indicates that adolescent HL levels are moderate to high. Globally, challenges persist, with 8.4% of German adolescents struggling to understand health information and nearly a quarter having low health knowledge. Interestingly, females had greater HL according to univariate analysis, yet multivariate analysis indicated higher HL scores among males, in contrast to other Indian studies that reported no sex differences in HL. Linguistic background and state variations significantly influence adolescent HL in India. Multivariate analysis confirmed that the language medium and type of school in different states impact HL levels, which is consistent with global findings on the role of language in health literacy. The preference for English in medical communication creates a barrier, as evidenced by higher HL among students in local medium schools (Telugu, Kannada, Hindi). This suggests that in multilingual nations such as India, the influence of English on HL needs critical examination. Language barriers demonstrably hinder access to and comprehension of health information, as seen in a rural North Indian community where English-dominated health information impedes health-related decision-making. Adolescent health literacy in India is shaped by a multifaceted array of influences. The major determinants include parental education and socioeconomic status, the educational environment, prevalent cultural variabilities, the impact of peer influence, the pervasive role of media, and existing government policies (M et al., 2025).

Another study revealed a significant challenge in adolescent health literacy (HL) globally, particularly in India, where nearly 61.6% of adolescents in one study and over 50% of tertiary care patients in Karnataka exhibited limited HL. This tendency is echoed in Ghana and Nepal, where 55% and 61% of students, respectively, showed limited HL. Comparatively, Lithuania reported that 12.1% of high schoolers had low HL, and Melbourne reported that approximately one-quarter of high schoolers had low HL, whereas Lao PDR reported that 65.5% of high schoolers had inadequate sexual and reproductive HL. In contrast, studies in China and Singapore indicated that over 80% of participants possessed the desired HL. This disparity might be

attributed to well-established educational systems and easier access to health information in the latter, along with adults' potentially greater basic health knowledge and cognitive development, which enables better comprehension and interpretation of health information. Adolescents with less than 10th-grade education are more prone to limited health literacy, which is consistent with findings from Singapore, Nepal, and Wuhan. Sources such as family, school, and the internet were significantly associated with health literacy, whereas television, health professionals, and friends were not. This could be because television lacks interactivity, healthcare access can be inconvenient, and friends may not always provide accurate information. Over 50% of the limited health literacy of adolescents was attributed to challenges in accessing, appraising, and using health information and numeracy. These challenges likely stem from a lack of access to trusted and age-appropriate health resources, difficulty in assessing information reliability, practical barriers in applying health information due to cultural or resource limitations in rural areas, and insufficient access to quality education for numeracy development (Kayalkar, 2024).

Low health literacy in patients, coupled with a lack of awareness among physicians regarding its importance, significantly contributes to health disparities. This issue is further complicated by language and cultural barriers. The key hindrances to health literacy include a preference for home remedies over conventional medicine for minor ailments, scheduling conflicts preventing doctor visits, demanding work hours impeding self-care, and prioritizing family health over personal well-being. These findings align with the literature, underscoring the pervasive impact of social, systemic, and cultural barriers on improving health literacy (Cuthino et al., 2021).

### 1.6 Challenges

Community health workers (CHWs) face significant barriers, primarily concerning funding. The lack of sustainable and sufficient funding leads to low salaries and job insecurity, despite CHWs often coming from the populations they serve and being at risk of poverty themselves. This financial instability threatens CHW retention. Another major challenge lies in human resource systems that prioritize formal education over valuable lived experience. This disproportionately affects CHWs from marginalized populations, who may face financial burdens in pursuing higher education. Valuing lived experience would create more equitable advancement opportunities and reduce debt for CHWs. Furthermore, there is a critical need to address systemic racism within organizations, which perpetuates hierarchical leadership and limits equitable leadership paths for CHWs. A lack of awareness regarding the CHW role and its contributions to public health among employers, agencies, and the general public hinders the profession's recognition and respect. The development of robust communication and marketing strategies is essential for raising awareness, retaining experienced CHWs, and attracting new talent (Smithwick et al., 2023).

Improving CHW motivation and retention requires a deeper understanding of effective incentive strategies, as the current evidence is inconclusive. Future research needs to analyse how various financial and nonfinancial incentives, or combined packages, impact CHW motivation and retention. A comprehensive



CHW program should integrate incentives across the individual, community, and health system levels. By drawing on existing public health experience with CHW programs, policymakers and implementers can apply proven incentivization principles to enhance CHW retention and performance, ultimately leading to improved community health outcomes (Daniel & Maulik, 2023).

CHWs, specifically ASHAs in rural Manipurs, face numerous barriers hindering their effectiveness. In addition to individual mistrust, traditional home deliveries, and poor attitudes from service providers, the quality of existing health services themselves poses a significant challenge. In a conflict-affected region, issues such as insecurity, staff shortages due to migration, and harassment further hinder healthcare access, negatively impacting ASHAs' credibility when promoting these malfunctioning services. Furthermore, ASHAs struggle to fulfil their "activist" role owing to a lack of clear understanding of what activism entails, the inherently political nature of addressing systemic barriers in a patriarchal society, and a health system primarily focused on maternal health targets and incentive-based services, which disempowers them from critiquing deficiencies. Inadequate community sensitization about ASHAs' roles and limited engagement of community-based organizations further restrict their capacity, highlighting a critical gap in the literature regarding CHWs as activists and the support needed for empowered communities (Saprii et al., 2015).

CHWs face significant challenges, with workload being a critical determinant of their effectiveness. Overburdening CHWs with too many tasks and extensive catchment areas leads to reduced productivity and compromised service quality, as evidenced by studies showing that CHWs become overwhelmed and prioritize certain duties. To ensure optimal performance, CHW programs must establish clear, limited job descriptions with well-defined roles and standardized protocols, as demonstrated by successful initiatives where volunteers with focused responsibilities achieve high coverage. While increasing the range of services that CHWs provide is possible, compensatory adjustments such as reduced catchment populations, enhanced training, and stronger supervision are necessary. Continuous monitoring of workload and actively seeking CHW feedback are essential to maintain motivation, maximize productivity, and ultimately improve community health outcomes (Jaskiewicz & Tulenko, 2012).

CHWs with low health literacy face significant hurdles in navigating the healthcare system, impacting their ability to secure health insurance, communicate effectively with providers, understand written health materials, overcome language and cultural barriers, and cope with a fragmented healthcare system. The complexity of insurance options highlights the need for navigators to assist in enrollment. Poor oral communication is a critical issue, as patients often recall only approximately half of what providers say, and providers frequently overestimate patient comprehension. Strategies to improve this include brief health literacy screenings, using plain language, limiting information fragments to five or fewer, and assessing patient recall. Challenges with written materials, such as consent forms and medication instructions, often requiring computer or numeracy skills, necessitate clear, concise information at a sixth-grade reading level or lower, along with visual aids. The digital divide further disadvantages racial/ethnic minorities and those with lower income/education, who are less likely to use online health portals, emphasizing the need for participatory design in e-health. Language and cultural barriers for individuals with limited English

proficiency (immigrants and refugees) demand culturally sensitive, translated materials (Allen-Meares et al., 2020).

## 1.7 Opportunities

The following opportunities are presented on the basis of the above literature:

- 1- *Development of Standardized and Accessible Health Education Modules:* There is a significant opportunity to create and implement well-structured, culturally appropriate, and easily understandable health education modules specifically designed for CHWs. These modules cover a wide range of topics, from basic anatomy and physiology to common disease prevention, nutrition, maternal and child health, and the importance of sanitation. The content should be presented in local languages, using visual aids, storytelling, and interactive methods to enhance comprehension and retention among CHWs and, subsequently, the communities they serve.
- 2- *Leveraging Digital Tools and Mobile Technology for Continuous Learning and Information Dissemination:* Mobile phones are omnipresent in India, even in rural areas. This presents a massive opportunity to use mHealth applications, WhatsApp groups, and other digital platforms to provide CHWs with on-demand access to health information, training modules, and real-time support. These platforms can facilitate continuous learning, quick updates on health advisories (during outbreaks), and a peer-learning environment where CHWs can share experiences and seek clarification, thereby increasing their own health literacy and ability to disseminate accurate information.
- 3- *Strengthening linkages with primary healthcare facilities and medical professionals for enhanced knowledge transfer:* Creating more robust and formalized channels for CHWs to interact with doctors, nurses, and other healthcare professionals at primary health centers (PHCs) and subcenters is crucial. This could involve regular training sessions conducted by medical staff, opportunities for CHWs to observe patient consultations (with consent), and structured platforms for CHWs to ask questions and receive clarification on complex health issues. Such linkages can significantly improve CHWs' understanding of health conditions, treatment protocols, and referral pathways, empowering them to provide more accurate and confident guidance to the community.
- 4- *Integrating health literacy assessment and capacity building into CHW training and performance evaluation:* Currently, there might be varying levels of health literacy among CHWs. An opportunity exists to incorporate systematic health literacy assessments into their initial training and ongoing professional development. On the basis of these assessments, targeted capacity-building programmes can be designed to address specific knowledge gaps. Furthermore, including health literacy as a key performance indicator in CHW evaluations can incentivize them to continuously improve their understanding and communication skills, ensuring that they are effective conduits of health information.

- 5- *Promoting Community Engagement and Feedback Mechanisms to Tailor Health Messages:* CHWs are uniquely positioned to understand the cultural nuances, beliefs, and specific health challenges of their communities. There is an opportunity to empower CHWs to actively gather feedback from community members regarding their understanding of health messages and the effectiveness of health interventions. This feedback loop can be used to refine health literacy strategies, tailor messages to be more relevant and impactful, and address misconceptions or barriers to adoption. By actively involving the community in the process, CHWs can ensure that health information is not just delivered but truly understood and acted upon, fostering a healthier population.

## 1.8 Conclusion

Understanding health literacy, encompassing the ability to access, comprehend, and utilize health information, is paramount for effective public health. However, India faces critical challenges, such as widespread low health literacy, worsened by general illiteracy and poverty. This significantly strains the healthcare system, leading to poor health choices, escalating costs, and inadequate insurance coverage. Community health workers (CHWs), who are vital frontline health providers, are particularly impacted. They grapple with insufficient funding, HR systems that undervalue their lived experience, and systemic barriers, all of which hinder their effectiveness in promoting health.

Despite these challenges, significant opportunities exist to strengthen CHWs' health literacy and overall impact. These include developing standardized, accessible health education modules, leveraging digital tools for continuous learning, and strengthening their linkages with primary healthcare facilities for enhanced knowledge transfer. Furthermore, integrating health literacy assessments into CHW training and promoting robust community engagement and feedback mechanisms are crucial. By investing in CHW health literacy and support, India can foster better community health outcomes through more informed and empowered grassroots health leadership.

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