



Digital Health Literacy and Self-Care Practices Among Adults with Chronic Diseases in Community Area

¹Dr. Rajiv Kumar Soni, ²Dr. Ghanshyam Patidar

¹Professor, ²Professor

¹Department of Community Health Nursing, ²Department of Mental Health Nursing

¹IDEAS Nursing College, Gwalior (M.P.), India, ²JNCT Professional University, Bhopal, (M.P.), India.

Abstract

Chronic diseases such as diabetes mellitus, hypertension, cardiovascular diseases, chronic respiratory diseases, and chronic kidney disease are among the leading causes of morbidity and mortality worldwide. Effective self-care practices play a vital role in preventing complications and improving the quality of life of individuals living with chronic diseases. With the rapid advancement of digital technologies, digital health literacy has emerged as an important determinant of successful self-management. Digital health literacy refers to an individual's ability to search, understand, evaluate, and apply health information obtained through digital platforms such as websites, mobile applications, telemedicine services, and social media. Individuals with higher levels of digital health literacy are better equipped to monitor their health, adhere to treatment regimens, communicate effectively with healthcare professionals, and make informed decisions regarding disease management. In community settings, community health nurses have an important responsibility in promoting digital health literacy through health education, counseling, and digital training programs. This article discusses the concept of digital health literacy, its relationship with self-care practices among adults with chronic diseases, the role of community health nurses, barriers to effective digital health utilization, and recommendations for strengthening community-based interventions. Improving digital health literacy has the potential to enhance self-care behaviors, reduce hospital admissions, and improve overall health outcomes.

Keyword- Digital health literacy, self-care, chronic diseases.

I. Introduction

Chronic diseases have become one of the greatest public health challenges of the twenty-first century. Conditions such as diabetes mellitus, hypertension, cardiovascular disease, chronic obstructive pulmonary disease (COPD), asthma, arthritis, and chronic kidney disease require continuous monitoring and lifelong treatment. According to the World Health Organization (WHO), non-communicable diseases account for approximately 74% of all deaths globally. Most chronic diseases cannot be cured completely but can be effectively controlled through proper self-care and lifestyle modifications.

Digital technology has transformed healthcare delivery by making health information readily accessible through smartphones, computers, wearable devices, mobile applications, and telemedicine services. Adults increasingly rely on digital resources to obtain information regarding disease prevention, medication management, healthy diet, physical activity, symptom monitoring, and appointment scheduling. However, the benefits of digital healthcare depend largely on an individual's ability to locate, understand, evaluate, and appropriately use online health information. This ability is known as digital health literacy.

Community health nurses play a critical role in empowering adults with chronic diseases to utilize digital health resources effectively. They educate patients regarding reliable health websites, mobile applications, electronic health records, online consultations, medication reminders, and remote monitoring systems. Improving digital health literacy strengthens self-care behaviors and contributes to better disease control, reduced healthcare costs, and enhanced quality of life.

II. Digital Health Literacy

Digital health literacy is defined as the ability to seek, access, understand, evaluate, and apply health information obtained from digital sources to make appropriate health-related decisions. It combines traditional health literacy with digital and technological skills.

Digital health literacy includes the ability to:

- Search for trustworthy health information online.
- Differentiate reliable information from misinformation.
- Use mobile health applications.
- Participate in telemedicine consultations.
- Access electronic health records.
- Use wearable health monitoring devices.
- Understand digital prescriptions and laboratory reports.
- Protect personal health information and maintain privacy.

People with good digital health literacy are more confident in managing their health and communicating with healthcare providers.

III. Chronic Diseases and Self-Care

Self-care refers to the activities individuals perform to maintain health, prevent disease progression, and manage symptoms independently. Effective self-care reduces disease complications, improves treatment adherence, and enhances physical and psychological well-being.

Important self-care practices include:

- Taking medications as prescribed.
- Regular blood pressure and blood glucose monitoring.
- Following healthy dietary practices.
- Maintaining regular physical activity.
- Avoiding tobacco and excessive alcohol consumption.
- Stress management.
- Adequate sleep and rest.
- Regular medical follow-up.
- Monitoring warning signs and seeking timely healthcare.

Patients who actively participate in self-care generally experience fewer complications and hospital admissions.

IV. Relationship Between Digital Health Literacy and Self-Care

Digital health literacy significantly influences self-care behaviors among adults with chronic diseases. Individuals who possess adequate digital literacy are better able to understand disease conditions and implement evidence-based health practices.

Digital health literacy improves self-care by:

- Increasing awareness regarding disease management.
- Enhancing medication adherence through reminder applications.
- Promoting healthy lifestyle behaviors.
- Facilitating home-based monitoring.
- Supporting remote consultation with healthcare professionals.
- Encouraging participation in online support groups.
- Improving confidence in disease management.
- Reducing unnecessary hospital visits.

Research has shown that adults with higher digital health literacy demonstrate better glycemic control, improved blood pressure management, and greater adherence to prescribed treatment plans.

V. Role of Community Health Nurses

Community health nurses serve as educators, counselors, advocates, coordinators, and facilitators in improving digital health literacy.

Their responsibilities include:

Health Education

Community health nurses educate community members regarding reliable digital health resources, preventive health practices, and disease management.

Digital Skills Training

They teach adults how to use smartphones, health applications, teleconsultation platforms, and patient portals effectively.

Disease Monitoring

Community health nurses encourage patients to use digital devices for monitoring blood glucose, blood pressure, body weight, and physical activity.

Counselling

They guide patients in interpreting online health information correctly and discourage reliance on unreliable social media content.

Community Awareness Programs

Nurses organize health camps, workshops, and awareness sessions on digital healthcare services.

Follow-up Care

Telephonic and virtual follow-up helps improve treatment compliance and continuity of care.

VI. Benefits of Digital Health Literacy

Improved digital health literacy offers numerous advantages for individuals and communities.

These include:

- Better disease knowledge.
- Increased medication adherence.
- Early identification of complications.
- Improved communication with healthcare providers.
- Greater patient empowerment.
- Reduced healthcare expenditure.
- Increased healthcare accessibility.
- Better quality of life.
- Improved health outcomes.
- Greater patient satisfaction.

Digital technologies also enable healthcare professionals to monitor patients remotely and provide timely interventions.

VII. Challenges and Barriers

Despite its benefits, several barriers limit the effective use of digital health technologies in community settings.

Common barriers include:

- Low educational status.
- Limited digital skills.
- Poor internet connectivity.
- Financial constraints.
- Lack of smartphones or computers.
- Language barriers.
- Fear of technology.
- Privacy and cybersecurity concerns.
- Misinformation available online.
- Limited awareness regarding authentic health websites.

Older adults often face additional challenges due to visual impairment, hearing problems, and reduced technological confidence.

VIII. Strategies to Improve Digital Health Literacy

Several interventions can improve digital health literacy among adults with chronic diseases.

These include:

- Organizing community-based digital literacy programs.
- Conducting smartphone training sessions.
- Developing health applications in regional languages.
- Promoting telemedicine services.
- Strengthening community health education.
- Improving internet accessibility in rural areas.
- Providing family-centered digital education.
- Encouraging healthcare professionals to recommend reliable digital resources.
- Establishing digital health kiosks at primary health centers.
- Incorporating digital health education into national public health programs.

IX. Importance for Community Health Nursing

Community health nursing focuses on disease prevention, health promotion, rehabilitation, and community participation. Digital health literacy complements these goals by empowering individuals to participate actively in their own healthcare.

Community health nurses can integrate digital health education into:

- Home visits.
- Non-communicable disease clinics.
- Village health and nutrition days.
- Community awareness campaigns.
- School health programs.
- Elderly care services.
- Primary healthcare centers.
- Self-help groups.

These interventions improve health equity by ensuring that vulnerable populations are not excluded from digital healthcare services.

X. Conclusion

Digital health literacy has become an essential component of chronic disease management in modern healthcare. Adults with chronic diseases who possess adequate digital health literacy are more likely to engage in effective self-care practices, adhere to prescribed treatment, and achieve better health outcomes. Community health nurses play a pivotal role in enhancing digital competencies through education, counseling, and community-based interventions. Strengthening digital health literacy should be considered a priority in community health programs to reduce disease burden, improve quality of life, and promote patient-centered care. Policymakers, healthcare organizations, educational institutions, and community health professionals should work collaboratively to ensure equitable access to digital health resources and training for all members of the community.

XI. References (APA 7th Edition)

1. Bautista, J. R. (2020). From solving a health problem to achieving quality of life: Redefining digital health literacy. *Journal of Medical Internet Research*, 22(7), e18772.
2. Norman, C. D., & Skinner, H. A. (2006). eHealth literacy: Essential skills for consumer health in a networked world. *Journal of Medical Internet Research*, 8(2), e9.
3. Nutbeam, D., & Lloyd, J. E. (2021). Understanding and responding to health literacy as a social determinant of health. *Annual Review of Public Health*, 42, 159–173.
4. Paige, S. R., Krieger, J. L., & Stellefson, M. (2017). The influence of eHealth literacy on chronic disease self-management. *Patient Education and Counseling*, 100(6), 1162–1169.
5. van Kessel, R., Wong, B. L. H., Rubinić, I., O'Nuallain, E., & Czabanowska, K. (2022). Is Europe prepared to go digital? Making the case for strengthening digital health literacy. *The Lancet Regional Health – Europe*, 14, 100316.
6. World Health Organization. (2023). *Noncommunicable diseases*. <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>
7. World Health Organization. (2021). *Global strategy on digital health 2020–2025*. <https://www.who.int/publications/i/item/9789240020924>

8. Zhao, Y., Zhang, J., Jiang, Y., & Zhang, H. (2022). The relationship between digital health literacy and self-management among patients with chronic diseases: A systematic review. *International Journal of Environmental Research and Public Health*, 19(21), 14188.

