

REVIEW PAPER

# Exploring the Socio-economic Ramifications of Health Literacy and Medication Adherence on Hypertensive Patients

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## ABSTRACT

This analysis examines the intricate interactions that exist link medication adherence, health literacy, and the socio-economic effects on individuals with hypertension. Hypertension, one of the most prevalent chronic conditions worldwide, requires in-depth understanding of the intricate relationships that exist between patients' access to health information, adherence to prescribed treatment plans, and the broader socio-economic context. The appraisal reviews recent studies on the health literacy's effect on hypertension patients' adherence to medicine, with a focus on the contributions of social, institutional, and personal factors. It also examines the socio-economic consequences of low medication adherence and health literacy, emphasizing disparities in healthcare outcomes, increased medical costs, and worse life quality. This study looks at different methods to raise the level of health literacy and medication adherence in hypertensive populations, both individual and systemic. It emphasizes the significance of patient education programs, tailored communication strategies, and system innovations to address the unique challenges confronted by people with differing degrees of health knowledge. Furthermore, the study investigates the potential financial benefits of enhancing medication compliance and health literacy, illustrating how targeted interventions could reduce medical expenses, prevent problems, and foster a more robust community. It emphasizes the need for collaboration between lawmakers, communities, and medical professionals in order to enact workable policies and decrease the socio-economic toll that hypertension has. The intricate interactions between medication adherence, health literacy, and socio-economic determinants in relation to hypertension are highlighted in the analysis's conclusion. By understanding and addressing these characteristics, healthcare stakeholders can develop targeted treatments to improve outcomes for patients with hypertension, advance health equity, and improve societal well-being.

## HIGH LIGHTS

- ① People with low health literacy may find it challenging to understand medical information, especially instructions on prescription drugs.
- ① Inadequate health literacy is often associated with low medication adherence, leading to insufficient management of long-term conditions such as hypertension.
- ① Socio-economic status (SES) has a major influence on health outcomes. There is a connection between lower SES and higher rates of hypertension and its effects.
- ① A patient's ability to pay for prescribed medications, receive regular therapy, and obtain healthcare services may be hampered by financial constraints.
- ① It will be necessary to address issues with health literacy and increase access to healthcare services in order to reduce these disparities.
- ① To address the underlying causes of health inequities, it is imperative to address socio-economic determinants of health, such as economic empowerment and access to reasonably priced healthcare.

**Keywords:** Exploring, Socio-economic Ramifications, Health Literacy, Medication Adherence, Review, Hypertensive Patients

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Medication adherence and health literacy are essential elements of efficient healthcare management that significantly affect people's overall health with long-term illnesses like hypertension. Hypertension, or elevated blood pressure, is a widespread and sometimes asymptomatic illness that has a significant impact on world health (Gordon, D. P., 2023). Effective treatment of hypertension requires not just medication adjustments but also patient comprehension and commitment to taking prescription drugs as directed and leading a healthy lifestyle. The purpose of this analysis is to examine the complex link that exists between medication adherence, health literacy, and the socio-economic consequences that people with hypertension face. The capacity to access, analyze, and comprehend basic health information is known as health literacy, and it is essential for enabling people to make knowledgeable decisions about their health.

Moreover, reaching ideal blood pressure management and averting consequences related to hypertension depend greatly on medication adherence, or the degree to which people take their prescriptions as directed by medical specialists. The socio-economic dimensions of medication adherence and health literacy are critical because they have a substantial influence on overall health outcomes and healthcare expenditures. People with low health literacy may have trouble understanding prescription directions, realizing the significance of taking medications on a regular basis, and making lifestyle changes.

These difficulties may lead to less than ideal medication compliance, which may result in insufficient blood pressure regulation and a higher risk of cardiovascular events. Furthermore, a person's socio-economic background might affect their capacity to adopt health-promoting activities, their access to healthcare services, and the cost of their prescription drugs. Inequalities in drug adherence and health literacy may make already existent ones worse, putting vulnerable communities at greater risk of unfavorable health consequences. This thorough analysis synthesizes the body of research to provide insight into the complex interactions that occur between medication adherence, health literacy, and the socio-economic consequences that hypertension patients confront. Through a knowledge of these dynamics,

researchers, policymakers, and healthcare providers may create focused interventions to reduce socio-economic disparities related to the treatment of hypertension, enhance the adherence to medicine, and increase health literacy (Onunekwu, V. C., 2023). In the end, this understanding could open the door to more fair and successful approaches to dealing with the multifaceted problems that hypertension presents to society and individuals alike.

## Methods

Using internet sources such as PubMed, Google Scholar, MEDLINE, and PsycINFO, a thorough literature search was carried out to find pertinent studies investigating the connections link medication adherence and health literacy, and socio-economic characteristics among those who suffer from hypertension. Different combinations of keywords like "hypertension," "health literacy," "medication adherence," and "socio-economic status" were used to find relevant publications that were published in peer-reviewed journals. Studies that addressed the connection between socio-economic status and, medication adherence, and health literacy in the context of hypertension were included; those that only addressed other chronic diseases or had no bearing on the goals of the research were eliminated.

## Objectives

- (i) To examine how health literacy levels affect hypertension patients' compliance with their medication.
- (ii) To investigate the socio-economic factors influencing health literacy and medication adherence in hypertensive individuals.
- (iii) To study the connection between hypertensive populations' health outcomes (such as blood pressure management and hospitalizations) and health literacy and medication adherence.
- (iv) To identify barriers to effective health communication and patient education regarding hypertension management.
- (v) Investigating methods and treatments to enhance medication compliance and health literacy in hypertension patients while taking socio-economic differences into account.
- (vi) To make recommendations about how to enhance hypertension patients' health literacy

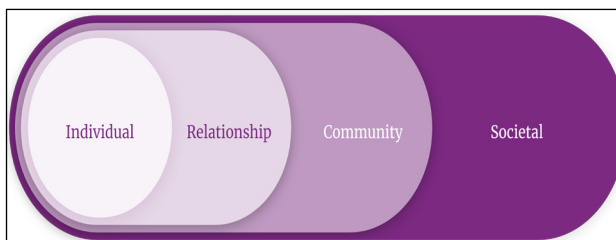
programmes and medication adherence to legislators, stakeholders, and medical professionals.

## Literature Review

Studies looking at the connection between medication adherence, health literacy as well as socio-economic outcomes in people with hypertension are included in the review of the literature (Shi, S. *et al.* 2019). Research indicates that those with low health literacy are more prone to use antihypertensive drugs not as prescribed (Benson, J., & Britten, N., 2002), which can lead to inadequate blood pressure management and an increased risk of cardiovascular events. Moreover, socio-economic inequities are exacerbated by differences in health literacy, since underprivileged populations face disproportionate obstacles to efficient hypertension care (Hardman, R., Begg, S. & Spelten, E., 2020). These inequities are made worse by elements including poor communication between patients and providers, complicated prescription schedules, and restricted access to healthcare services (Smith, D.L. 2009). This leads to a vicious cycle of poor health outcomes and rising healthcare expenses.

## Socio-ecological Model on Health Literacy and Medication Adherence in Hypertensive Patients

The Socio-ecological Model propositions a framework for comprehending the complex interplay of individual, interpersonal, communal, and societal elements as well as their varied effects on health behaviors and results (Leggat, S.G. 2004).



(Krug, E., *et al.* 2002).

Fig. 1

Using this model, the researchers developed the following model to look at the socio-economic effects of medication adherence and health literacy among patients with hypertension.

- ♦ **Individual Level:** Individual traits and actions have a major impact on health outcomes at this level. Regarding patients with hypertension:
  - **Health Literacy:** Low health literacy can make it difficult for someone to comprehend medical information, particularly directions on how to take their medications on time and manage their hypertension. This may result in inadequate drug compliance and a worsening of existing health problems.
  - **Medication Adherence:** Adherence to prescribed drug regimens can be impacted by individual variables such as forgetfulness, a lack of awareness of the significance of medication adherence, or worries over side effects.
- ♦ **Interpersonal Level:** Health-related habits and results can be influenced by interactions with family, friends, and caregivers:
  - **Social Support:** By offering reminders, encouragement, and help with medication management, family members' or caregivers' support can have a good effect on drug adherence.
  - **Social Norms:** Individual actions might be influenced by perceptions of social norms in one's social group regarding medication adherence and health practices.
- ♦ **Community Level:** Environments and community resources can influence health behaviors:
  - **Access to Healthcare Services:** Communities that are socioeconomically poor might not have easy access to pharmacies and primary care physicians, which could make it difficult for them to get prescription drugs and undergo routine health checkups.
  - **Health Education Programs:** Programs for hypertension patients that are centered on community-based health education can raise drug adherence and enhance health literacy.
- ♦ **Societal Level:** Health outcomes are shaped by broader socio-economic factors:
  - **Socio-economic Status (SES):** Access to resources for treating hypertension, including medicine, and health literacy levels are

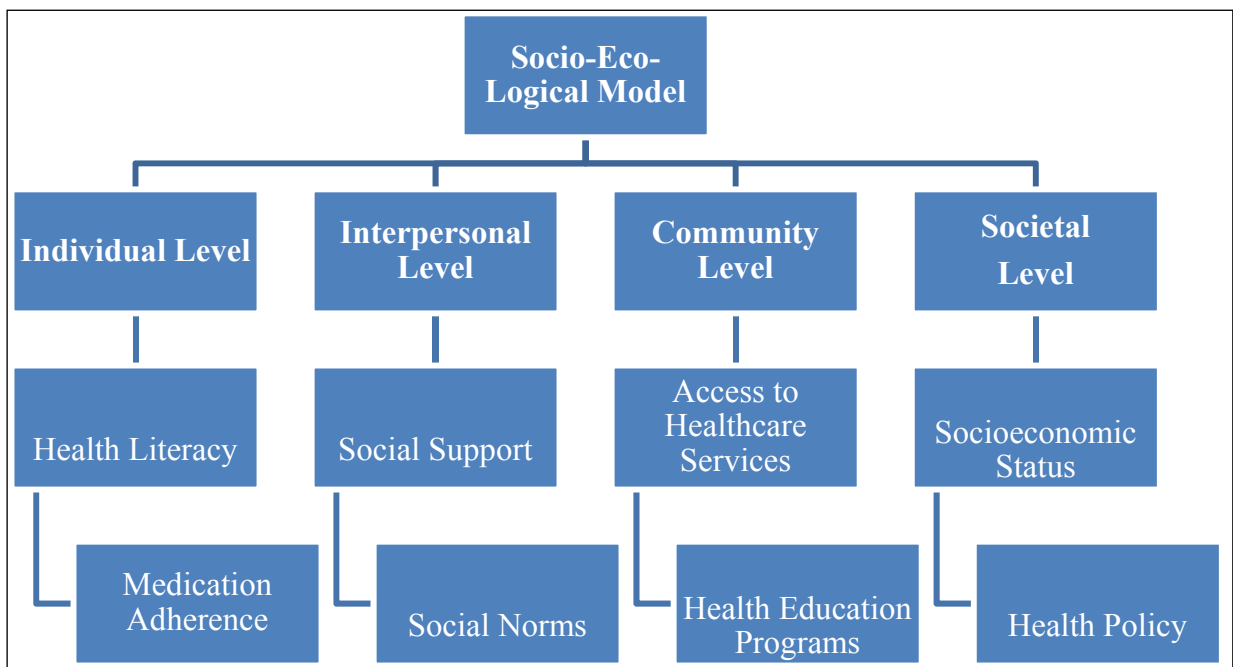


Fig. 2: Socio-ecological model on health literacy and medication adherence in hypertensive patients (Sarkar, P., 2024)

influenced by socio-economic factors such as income, education, and work possibilities.

- **Health Policy:** The availability and pricing of medications can be impacted by government laws pertaining to healthcare access, insurance coverage, and pharmaceutical restrictions. This can have an influence on hypertension patients' adherence to their prescribed regimens.

Understanding the socio-ecological factors influencing health literacy and medication adherence among hypertensive patients is crucial for developing comprehensive interventions and policies to address disparities and improve health outcomes in this population. Strategies may include tailored health education programs, improving access to healthcare services, and addressing socio-economic barriers to medication.

## RESULTS AND DISCUSSION

Summarizing findings from pertinent studies, analyzing the implications of these findings, and discussing potential strategies for addressing any issues found are usually included in the results and discussions section of a review on the socio-economic implications of health literacy and medication adherence among hypertensive patients.

**Health Literacy and Medication Adherence:** Medication adherence is essential for people with hypertension. The ability to get, process, and understand basic health information and services needed to make educated decisions about one's health is known as health literacy. Low health literacy and ineffective adherence to antihypertensive treatment are clearly correlated. (Delavar, F. *et al.* 2020).

**Socio-economic Status and Health Outcomes:** Health outcomes and socio-economic status (SES), which include elements like income, education, and occupation, are strongly correlated (Clark, A.E. & Oswald, A.J. 1996). People with lower socio-economic status (SES) are more likely to face obstacles while trying to get access to healthcare services, including prescription drugs. This can make it more difficult for them to properly manage chronic illnesses like hypertension (Burnier, M. & Egan, B.M. 2019).

**Barriers to Medication Adherence:** Health outcomes and socio-economic status (SES), which include elements like income, education, and occupation, are strongly correlated. People with lower socio-economic status (SES) are more likely to face obstacles while trying to get access to healthcare services, including prescription drugs. This can make it more difficult for them to properly manage

chronic illnesses like hypertension (Arpey, N.C., *et al.* 2017).

**Health Disparities:** It is commonly known that there are differences in the way that hypertension and medication adherence are managed, and that those from underprivileged or marginalized populations have a harder time properly controlling their condition. These differences may worsen already-existing health inequalities and lead to worse health outcomes for some communities (Arcaya, M.C. *et al.* 2015).

**Interventions and Strategies:** The socio-economic factors of hypertension patients' health literacy and medication adherence have been the subject of several treatments and methods. These might include community outreach projects, pharmaceutical regimen simplifications, enhanced access to healthcare services, patient education campaigns, and policy actions meant to lower structural obstacles to care (World Health Organization, 2003).

**Multidisciplinary Approach:** A multidisciplinary approach involving healthcare providers, policymakers, community organizations, and other stakeholders is essential for developing comprehensive strategies to improve outcomes for hypertensive patients across diverse socio-economic backgrounds, given the complex interplay between socio-economic factors, health literacy, medication adherence, and health outcomes (Kuhmmer, R. 2016).

### Impact on Socio-economic Outcomes

Medication non-adherence and low health literacy have a variety of socio-economic effects. The costs of treating patients with uncontrolled hypertension are greater because these have avoidable hospital stays, ER visits, and consequences from poorly treated hypertension (Koçkaya, G. & Wertheimer, A. 2011). Furthermore, the economic costs incurred by individuals and society as a whole are increased by productivity losses resulting from disability and absenteeism. The interaction of health literacy, socio-economic status, and medication adherence highlights the need for comprehensive treatments that target the underlying reasons of non-adherence and advance health equity.

### Major Discussions

The results highlight the critical need for multimodal treatments to address socio-economic factors and health literacy obstacles that affect hypertension patients' adherence to their medications. The promotion of health literacy skills and patient-centered communication are critical roles that healthcare practitioners play in improving drug knowledge and adherence. Furthermore, addressing socio-economic disparities in the management of hypertension requires interventions focused on social determinants of health, drug cost reduction, and improved access to inexpensive healthcare services. To enhance medication adherence and lessen the socio-economic effects of hypertension, effective solutions must be implemented in concert with legislators, healthcare providers, and community partners.

### CONCLUSION

In individuals with hypertension, targeted interventions are crucial to reducing the socio-economic consequences of poor health literacy and medication noncompliance. Making patient education a priority is crucial. To encourage drug adherence and enhance health literacy, healthcare practitioners should use targeted interventions and clear communication strategies. Furthermore, technology-enabled solutions, such as telemedicine platforms and mobile health apps, can increase accessibility and give patients more control over their care. Promoting equitable health outcomes also requires policy measures that address the socio-economic determinants of health and lower structural obstacles to healthcare access. Through the implementation of a holistic strategy that tackles the intricate relationship among health literacy, medication compliance, and socio-economic elements, interested parties may propel endeavors to maximize hypertension control and enhance the welfare of impacted persons and communities.

### Future Directions

- ◆ Recommendations for more studies that will examine the connection between socio-economic characteristics, medication adherence, and health literacy.

- ♦ Suggestions for putting into practice and assessing initiatives meant to enhance hypertension patients' health literacy and medication adherence.
- ♦ Consideration of the possible effects of resolving these problems on patient outcomes and the effectiveness of the healthcare system.

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