



Barriers and Social Determinants in Accessing NCD Care: A Community-Based Study from Madhya Pradesh, India

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Abstract

Non-Communicable Diseases (NCDs) such as hypertension, diabetes, and cardiovascular diseases are rising in prevalence across India, particularly in underserved regions like Madhya Pradesh. Despite national initiatives, access to NCD care remains uneven, affected by social and systemic determinants. This cross-sectional study aimed to assess the prevalence of NCDs, understand health-seeking behaviour, and identify access barriers among adults in selected rural and urban communities. A total of 422 respondents (≥ 30 years) were interviewed using a pretested, semi-structured tool. Findings reveal that 65.4% had at least one NCD, with hypertension and diabetes being most common. Key barriers included financial constraints (55.9%), long distances (40.8%), and lack of medicines (28.7%). Multivariate analysis showed poor access was significantly associated with low education, income, rural residence, and low awareness. The study highlights the urgent need for equity-based interventions in NCD care in Madhya Pradesh.

1. Introduction

The global epidemiological transition has resulted in a shift from communicable to non-communicable diseases (NCDs) as leading causes of death. In India, NCDs account for nearly 63% of all deaths, with hypertension and diabetes emerging as major health challenges. Despite the expansion of health services, large sections of the rural population in Madhya Pradesh remain underserved due to complex social determinants and health system limitations.



1.1 Background

Non-Communicable Diseases (NCDs) such as cardiovascular diseases, diabetes, chronic respiratory diseases, and cancers are rapidly becoming the leading causes of death and disability globally. According to the World Health Organization (WHO), NCDs are responsible for approximately 71% of global deaths annually. The burden is particularly high in low- and middle-income countries (LMICs), where over three-quarters of all NCD deaths occur. India, in the midst of an epidemiological transition, has witnessed a drastic rise in NCD prevalence over recent decades. In 2016 alone, NCDs accounted for over 60% of all deaths in the country.

In the state of Madhya Pradesh, this trend is especially concerning. Despite growing health infrastructure and national programs like the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS), large segments of the population—especially in rural and semi-urban areas- continue to experience poor access to preventive and curative NCD services. Limited awareness, financial hardship, and social determinants such as poverty and low education levels contribute to this growing public health crisis.

1.2 Significance of the Study

This study is significant because it addresses a critical public health challenge at the grassroots level. By investigating the social determinants and barriers to accessing NCD care in Madhya Pradesh, it provides evidence-based insights that can inform public health policy, resource allocation, and community-based interventions. The findings can help policymakers and health program implementers better understand the socio-economic and systemic barriers that hinder equitable healthcare delivery for chronic illnesses.

1.3 Scope of the Study

The study focuses on adults aged 30 years and above in selected rural and semi-urban communities in Madhya Pradesh. It explores the prevalence of common NCDs, the awareness and behaviour patterns related to healthcare-seeking, and the perceived and actual barriers to accessing timely diagnosis, treatment, and follow-up services. The study also examines associations between social determinants- such as education, income, gender, and residence-



and health outcomes, thereby offering a multi-dimensional understanding of access-related disparities.

1.4 Objectives

The specific objectives of this study are:

- To estimate the prevalence of common non-communicable diseases in selected communities of Madhya Pradesh.
- To assess awareness and knowledge regarding NCDs and their risk factors.
- To analyse health-seeking behaviour among individuals with NCDs.
- To identify key social determinants influencing access to NCD care.
- To examine the barriers in accessing diagnosis, treatment, and follow-up services.
- To recommend community-driven and policy-level strategies for improving accessibility and quality of NCD care services.

2. Objectives

- To estimate the prevalence of NCDs in selected regions of Madhya Pradesh.
- To assess awareness and knowledge regarding NCDs.
- To examine health-seeking behaviour among individuals living with NCDs.
- To identify social determinants and barriers affecting access to NCD care.
- To recommend community-driven strategies to improve NCD service delivery.

3. Methodology

Design: Community-based cross-sectional study.

Study Setting: One urban and one rural district of Madhya Pradesh.

Sample Size: 422 respondents aged ≥ 30 years.

Sampling Method: Multi-stage random sampling.

Data Collection Tool:

A pretested, bilingual, semi-structured questionnaire including:

- Socio-demographics

- Health status and NCDs
- Health-seeking behaviour
- Awareness of risk factors
- Barriers to care
- Social support and insurance coverage

Data Analysis:

- SPSS v25 was used.
- Descriptive stats, chi-square tests, and multivariate logistic regression were applied.
- A p-value < 0.05 was considered significant.

Ethical Approval: Institutional Ethics Committee clearance obtained.

4. Results

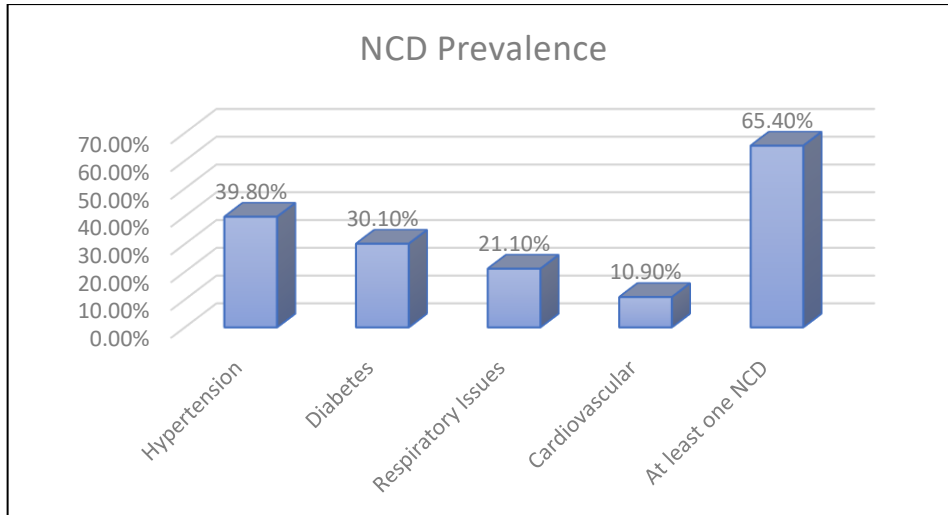
4.1 Socio-demographic Profile (N = 422)

Variable	Category
Gender	Male: 47.9%, Female: 52.1%
Education	No formal: 20.6%
Income (< ₹10,000)	60.9%
Residence	Urban: 51.2%, Rural: 48.8%

4.2 NCD Prevalence

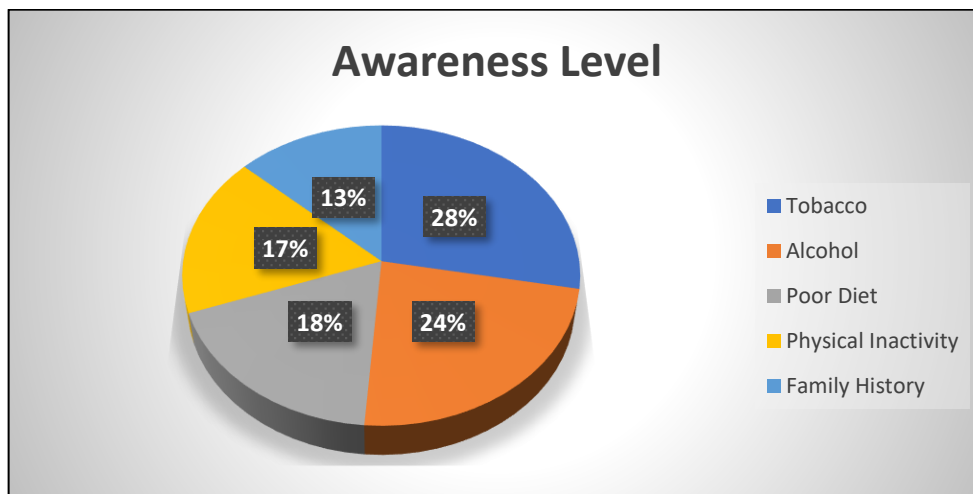
Condition	% Of Respondents
Hypertension	39.8%
Diabetes	30.1%
Respiratory Issues	21.1%
Cardiovascular	10.9%

Condition	% Of Respondents
At least one NCD	65.4%



4.3 Awareness Levels

Risk Factor	Awareness (%)
Tobacco	78.2%
Alcohol	65.3%
Poor Diet	51.1%
Physical Inactivity	48.5%
Family History	36.9%

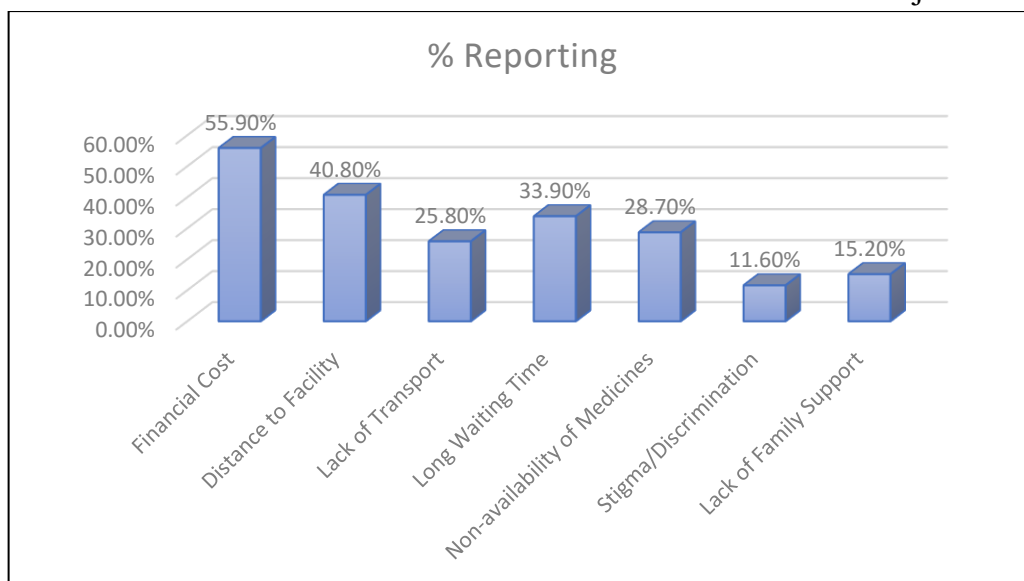


4.4 Health-Seeking Behaviour

Facility Type	Usage (%)
Govt. Health Facility	42.2%
Private Clinic	39.8%
Faith Healers/Self-Treated	18%

4.5 Barriers to NCD Care

Barrier Type	% Reporting
Financial Cost	55.9%
Distance to Facility	40.8%
Lack of Transport	25.8%
Long Waiting Time	33.9%
Non-availability of Medicines	28.7%
Stigma/Discrimination	11.6%
Lack of Family Support	15.2%



5. Data Analysis and Interpretation

Bivariate Analysis:

Poor access was significantly higher among:

- No formal education (66.7%) – $p = 0.002$
- Income < ₹5000 (71.2%) – $p = 0.001$
- Rural residents (62.1%) – $p = 0.030$
- SC/ST communities (60.8%) – $p = 0.045$

Multivariate Logistic Regression Results:

Predictor	Adjusted Odds Ratio	p-value
No formal education	2.1 (1.3–3.5)	0.002
Income < ₹5000	2.5 (1.6–4.0)	0.001
Rural residence	1.8 (1.1–3.0)	0.020
Low awareness	2.2 (1.4–3.5)	0.001



6. Discussion

The findings show a significant gap between need and access to NCD care in Madhya Pradesh. Rural residents, women, SC/ST groups, and low-income households face the harshest barriers. The trust deficit in government health systems is evident, with high preference for private providers despite costs. Integration of public health education with system reforms is critical.

7. Conclusion

Addressing NCDs in Madhya Pradesh requires more than biomedical intervention. Community-based awareness, subsidized medicines, accessible primary care, and targeted interventions for marginalized groups are essential. The state must strengthen its health systems through equity-focused policies and cross-sector collaboration.

8. Recommendations

- Strengthen government health infrastructure, especially in rural regions.
- Include NCDs in local health insurance schemes.
- Train ASHA/CHWs for NCD awareness and referral.
- Conduct regular health camps and screening.
- Implement behavioural change communication strategies for low-literacy populations.

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