THE ECONOMIC BURDEN OF NON-COMMUNICABLE DISEASES AND THEIR COMORBIDITIES: ANALYZING OUT-OF-POCKET EXPENDITURE AND ITS IMPLICATIONS

Presented by: Vedanshi Sharma
MBA - HM 28
1881

Guided by: Dr. Anupam Mehrotra
Associate Professor
IIHMR-U

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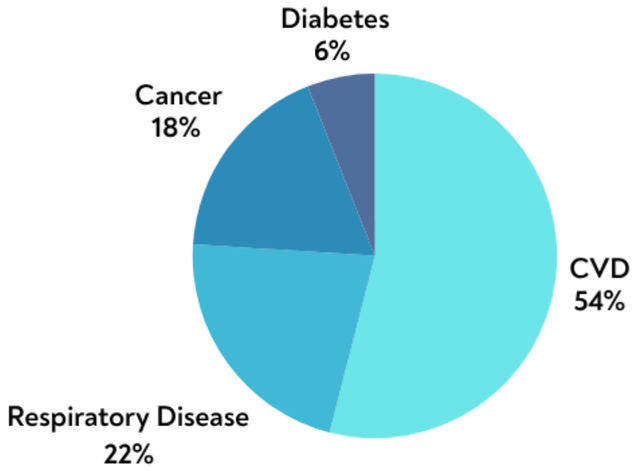
INTRODUCTION

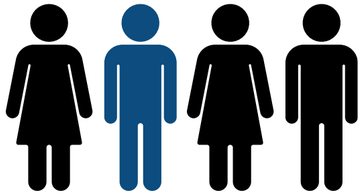
Burden of NCDs in India

NCDs are referred to as chronic diseases that last for a long period and they develop slowly due to genetics, body functions, the environment and habits

NCDs account for 63% of all deaths in India (WHO, 2018)

The Major contributors of NCDs related deaths are CVDs, COPD, cancer, Diabetes





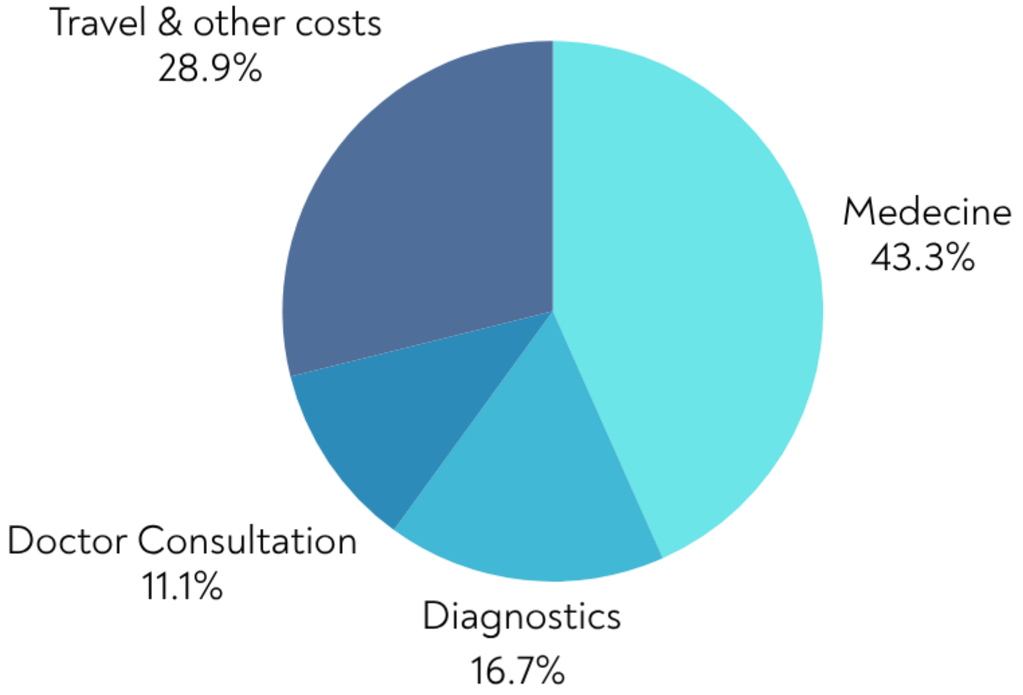
One in four Indians is at risk of dying prematurely from NCDs

DALYs due to NCDs rose from 30% (1990) to 55% (2016)

Economic Strain of NCDs

- NCDs contribute significantly to catastrophic healthcare expenditure, especially for the poor.
- NCDs often require chronic treatment, regular diagnostics, and long-term medication, amplifying costs.
- In public hospitals, NCD households spend ₹13,170 vs ₹6,245 by non-NCD households.

Composition of OOPE in NCD



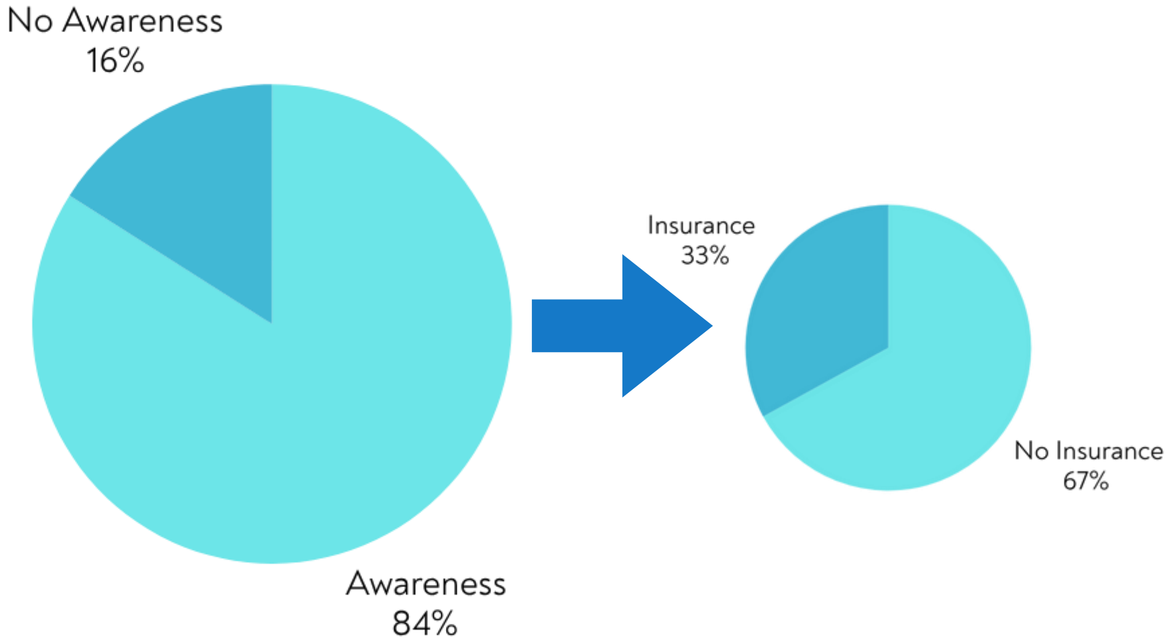
Impact on Poverty

- 55 million Indians pushed into poverty yearly due to healthcare costs (WHO 2022).
- Around 2.2% of the population falls below poverty line due to medical expenses.
- 32–39 million individuals affected by NCD-related catastrophic health expenses annually.
- 10% of families with CVDs are pushed into deeper poverty.

Limitations of Current Schemes

- Ayushman Bharat (AB-PMJAY) offers ₹5L/year for secondary/tertiary inpatient care – no OPD coverage.
- ESIC offers OPD, but is limited to organized sector.
- State schemes mostly focus on hospitalization, not routine chronic care.

Private Insurance & OPD Coverage



Rural-Urban & Gender Disparities

- Urban OPD cost (private): ₹**778** | Rural: ₹**649**
- Greater income proportional burden in rural areas
- Gender influences OOPE patterns – delays in seeking care increase burden

Only 33.6% of people have health insurance despite 84.3% awareness.

Research Question

What is the economic burden of non-communicable diseases (NCDs) on Indian households, particularly in terms of out-of-pocket expenditure, and how does it affect their financial stability and access to healthcare?

Objectives

01 To estimate out-of-pocket expenditure (OOPE) incurred by households for the management of NCDs, including costs for medicines, diagnostics, and consultations.

02 To analyse coverage of health insurance among different sociodemographic factors.

03 To analyze the impact of NCD-related OOPE on healthcare-seeking behavior and financial stability of households.

REVIEW OF LITERATURE

Review of Literature

01

Assessing the household economic burden of non communicable diseases in India: Verma et al. (2021)

In rural areas, 17.7% of individuals receiving treatment for NCDs in 2014 were treated for cardiovascular conditions, a figure that climbed to 20.7% by 2017–18. The impact was even greater in urban settings, where cardiovascular diseases accounted for over 25% of the total NCD burden.

02

Uneven economic burden of non-communicable diseases among: Kastor, A., & Mohanty, S. K Indian households

The expenditure by NCDs household in most public hospitals is somewhere around 13,000 Rs which is almost twice the amount spend by Non – NCD Households which is approximately 6000rs.

03

Can health insurance protect against out-of pocket and catastrophic expenditures and also support poverty reduction: Sarpong et al. (2016)

The results indicated that around 7- 20% of the households who have insurance experience CE when compared to the households with no insurance it turns out to be more around 30-40%. It has been observed that around 3-5% of the people are pushed into poverty due to OOPE

04

Cost of screening, out of pocket expenditure & quality of life for diabetes & hypertension in India: Sathish et al. (2023)

Population-based screening for diabetes and hypertension is relatively low-cost, patients, especially those with diabetes or both conditions, face significant out of pocket expenses and a notable risk of catastrophic health expenditure. Additionally, these patients report lower health-related quality of life scores.

RESEARCH METHODOLOGY

Research Methodology

Study Design

Cross - Sectional Study

Study Population

20-60 years of age

Sample Size

Collected - 219

Sampling Technique

Convenience Sampling

Data Collected

Data is collected using a structured questionnaire administered through google form,

Inclusion Criteria

- Age above 20 Years
- Citizens of India
- Willingness to Participate

Exclusion Criteria

- Individuals who were younger than 20 years of age at the time of data collection
- Individuals who declined to provide informed consent or were unwilling to participate

Study Tool

The Questionnaire was divided into the Following:

a) Demographic Information
b) Health Status & Insurance Coverage
c) Healthcare Utilization d) Healthcare Expenditure
e) Financial Impact & Behavior
f) Policy Suggestions

Data Management & Analysis

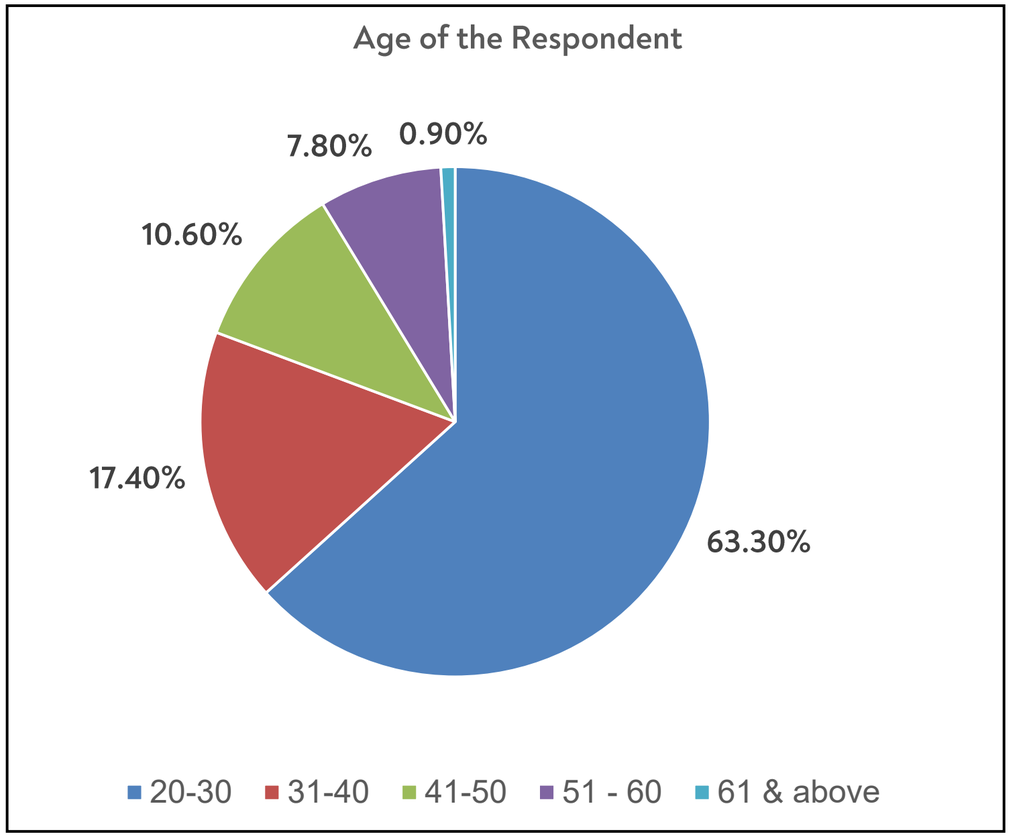
Data from structured questionnaires were systematically cleaned, coded, and analyzed using Excel and SPSS for both quantitative and qualitative insights. Descriptive statistics and thematic analysis were used to identify healthcare access patterns and financial burdens, informing policy recommendations.

Ethical Consideration

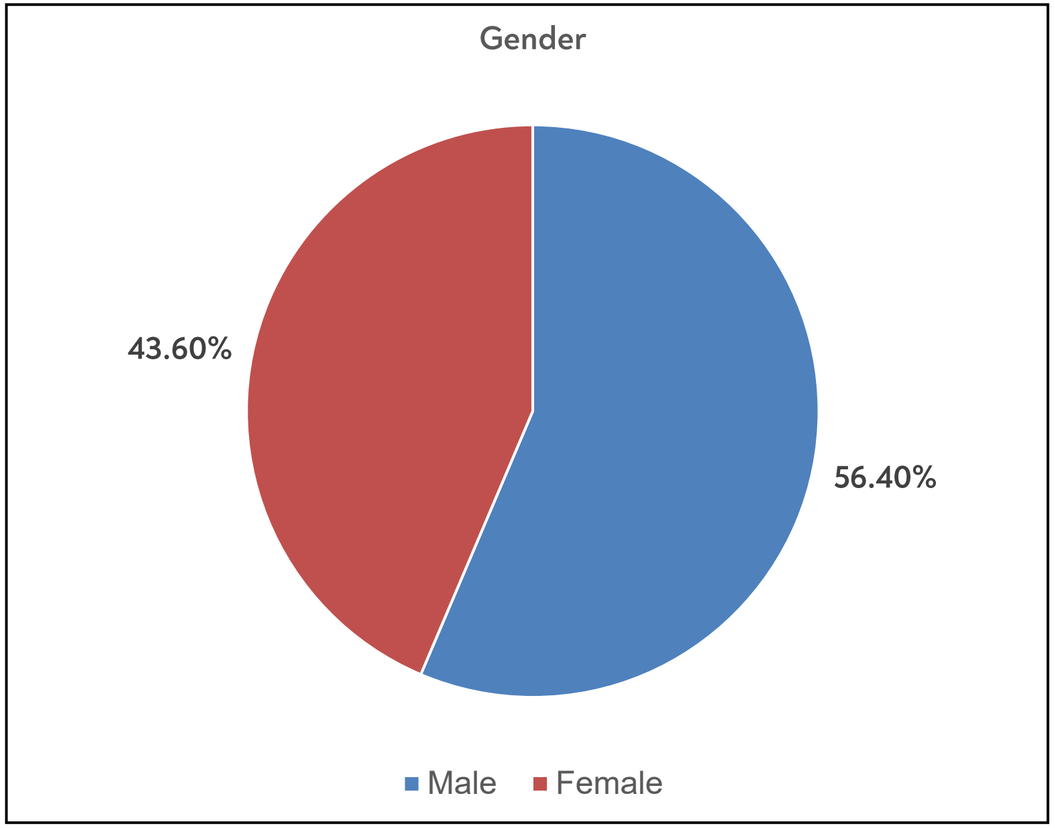
- Voluntary Participation: All participants took part in the study voluntarily
- Informed Consent: Respondents were made well aware about the purpose of the study
- Keeping Anonymity: All responses were anonymous so that participants' identities could not be revealed.
- Data Protection: All the data gathered was kept confidential and used strictly for research and academic work.

RESULTS & DISCUSSION

Sociodemographic Information of the Respondents (n= 193)

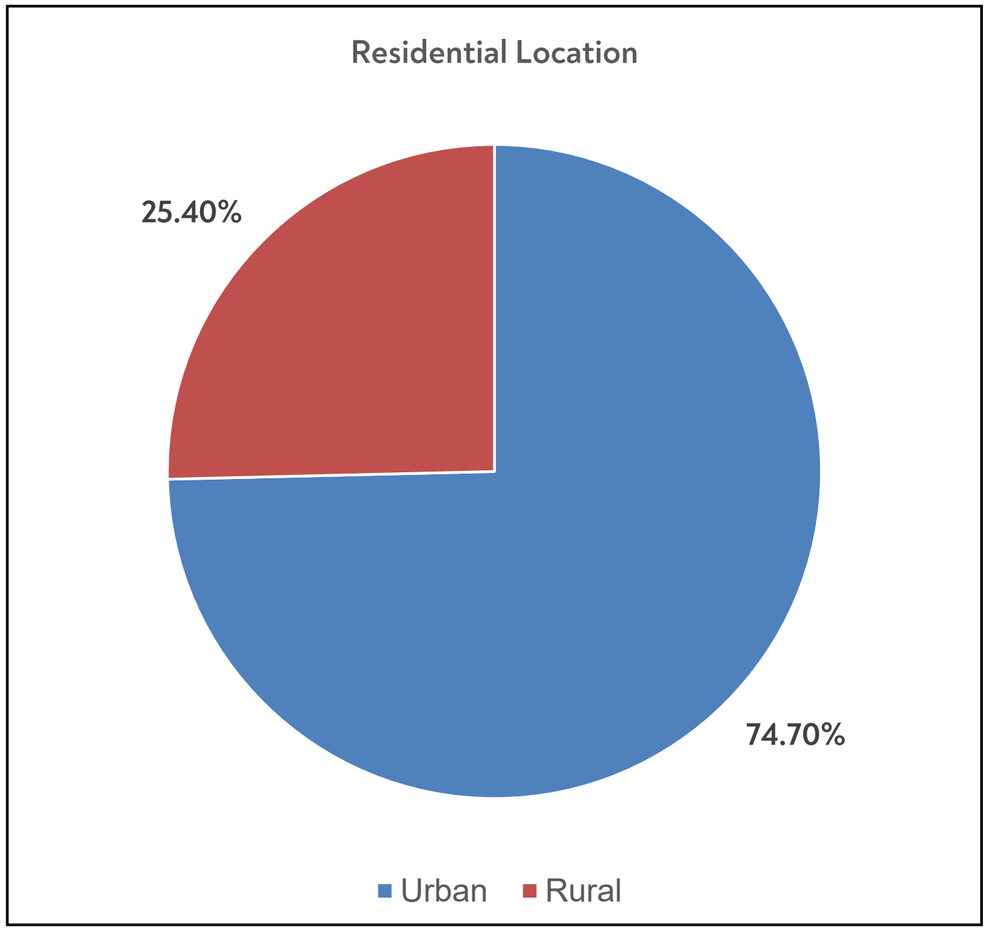


Majority of the respondents belongs to the age group 20-30 yrs, and very few from the age group 61 and above

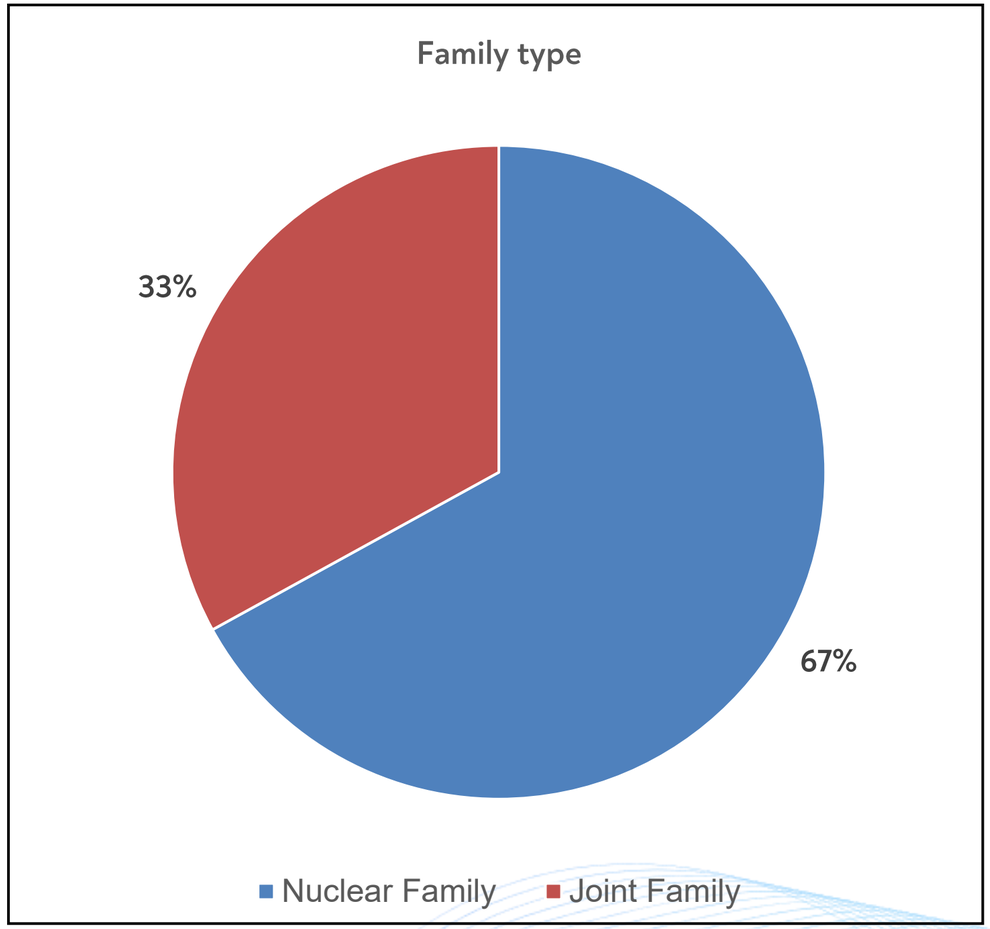


More than half of the respondents and male and only a few less than half are females

Sociodemographic Information of the Respondents (n= 193)

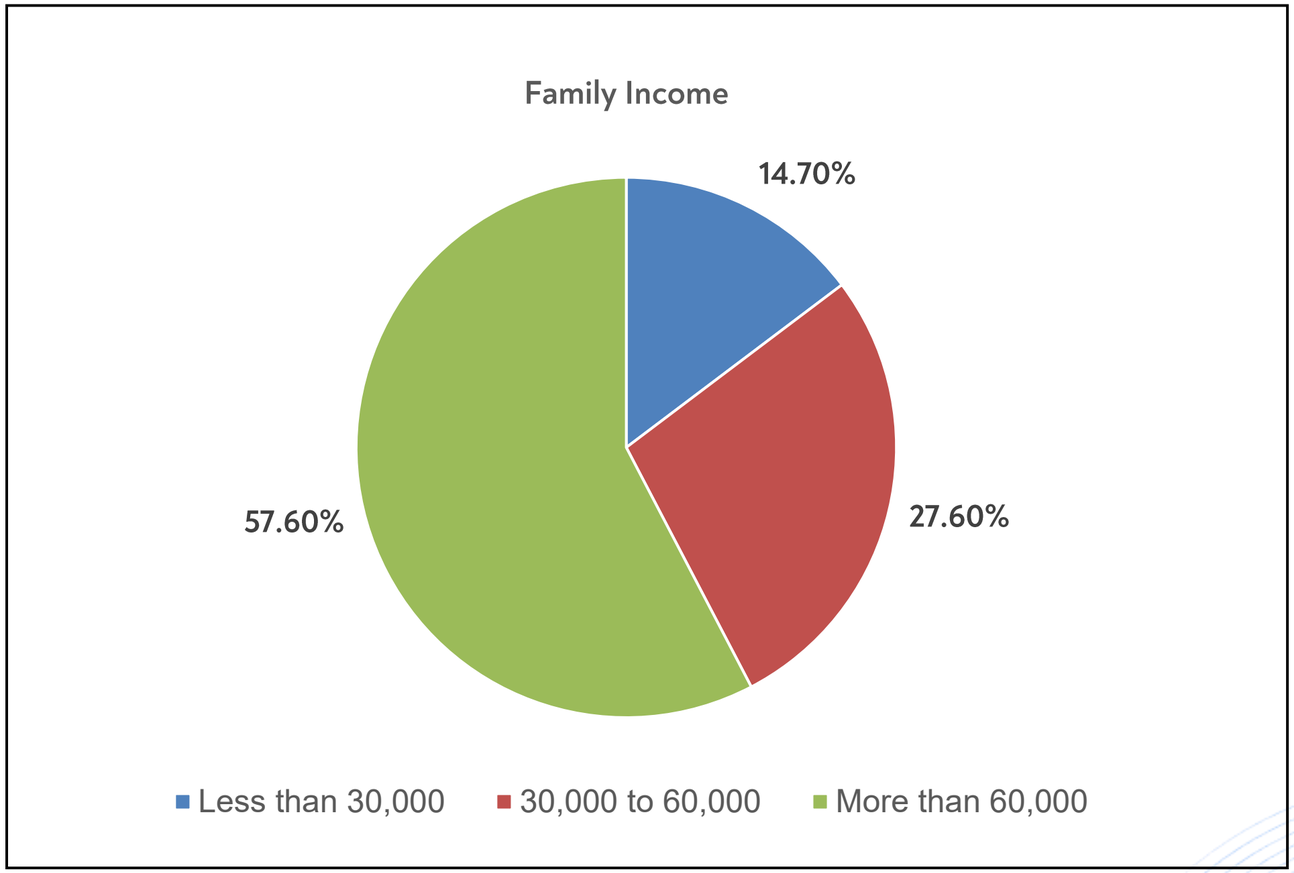


More than half of the respondents reside in the Urban area



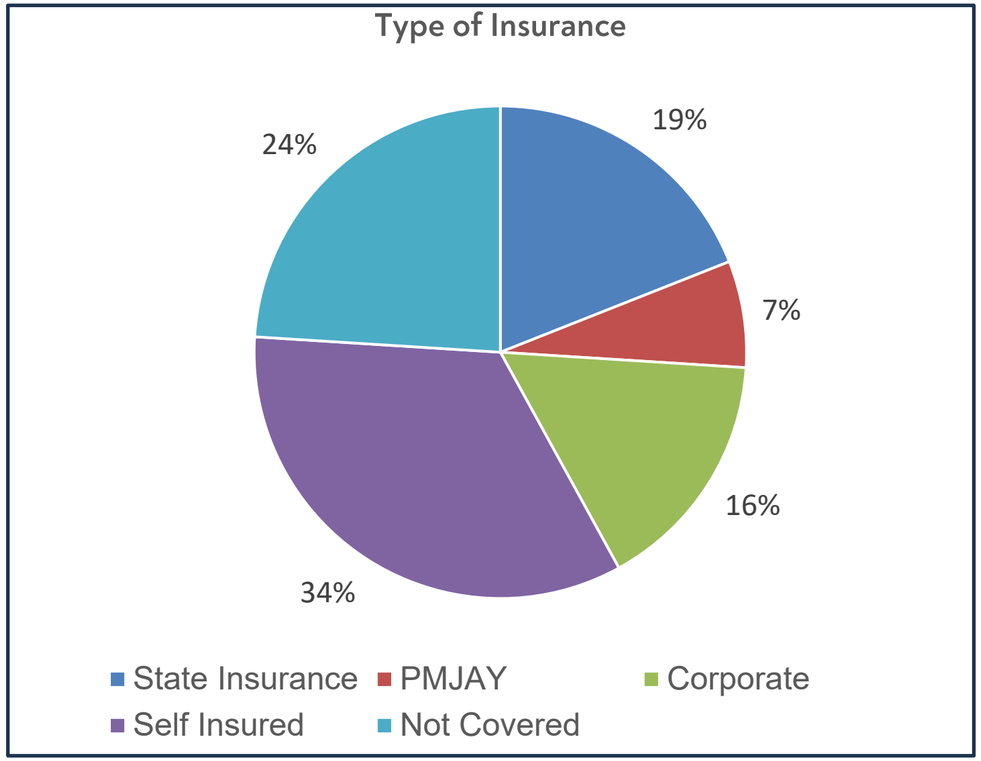
Majority of the respondents belongs to joint family

Sociodemographic Information of the Respondents (n= 193)



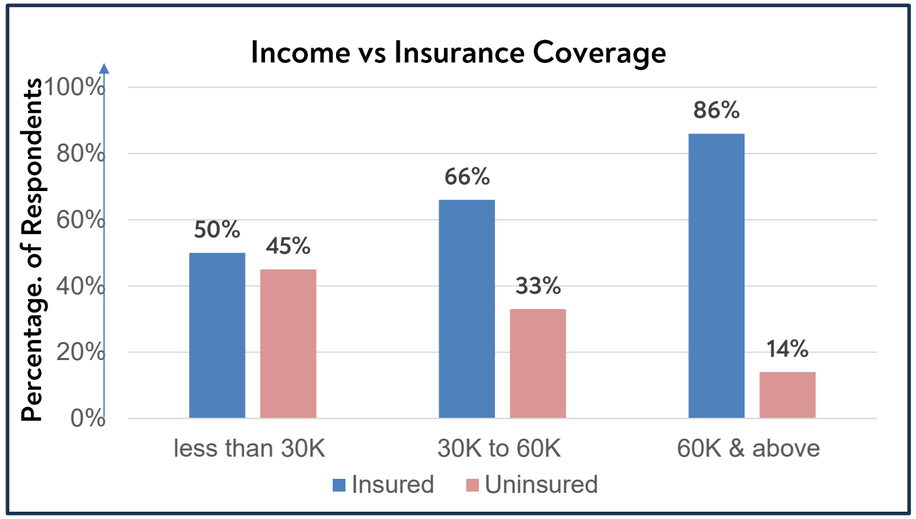
Majority of the respondents belongs to the higher income category

Insurance Coverage among the Respondents

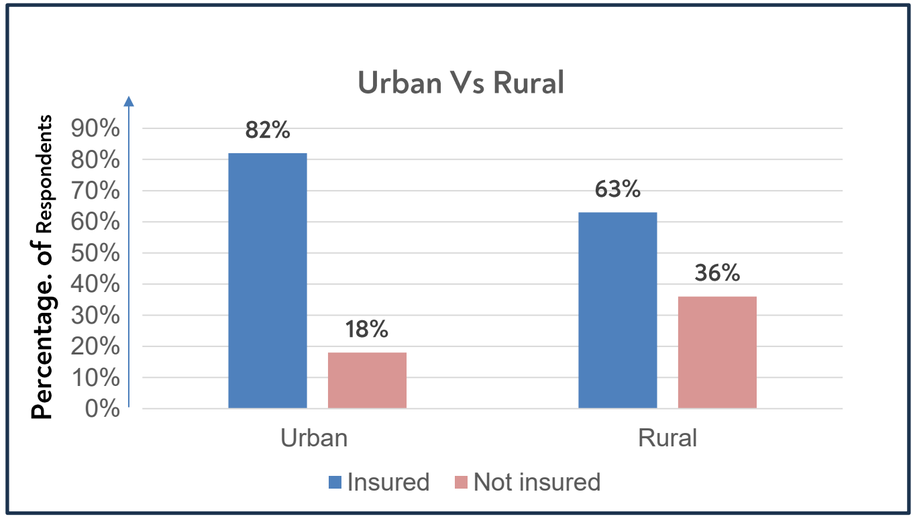


Over half the population is either self-insured (34%) or not covered (24%), indicating high out-of-pocket healthcare expenses. Government (26%) and corporate (16%) insurance together cover less than half the surveyed individuals.

Percentage Insurance coverage among household income category respondents

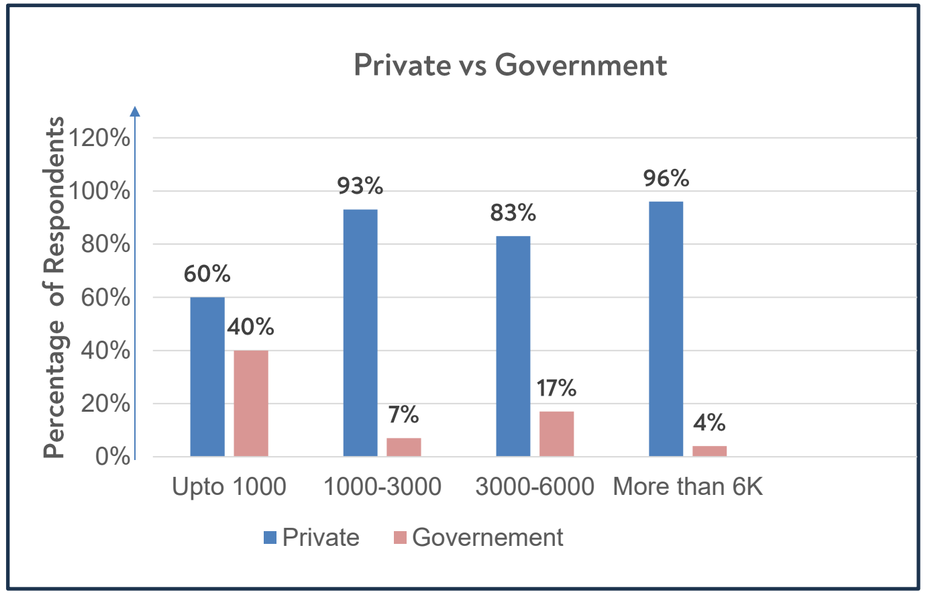


Percentage Insurance Coverage among respondents living in rural and urban areas



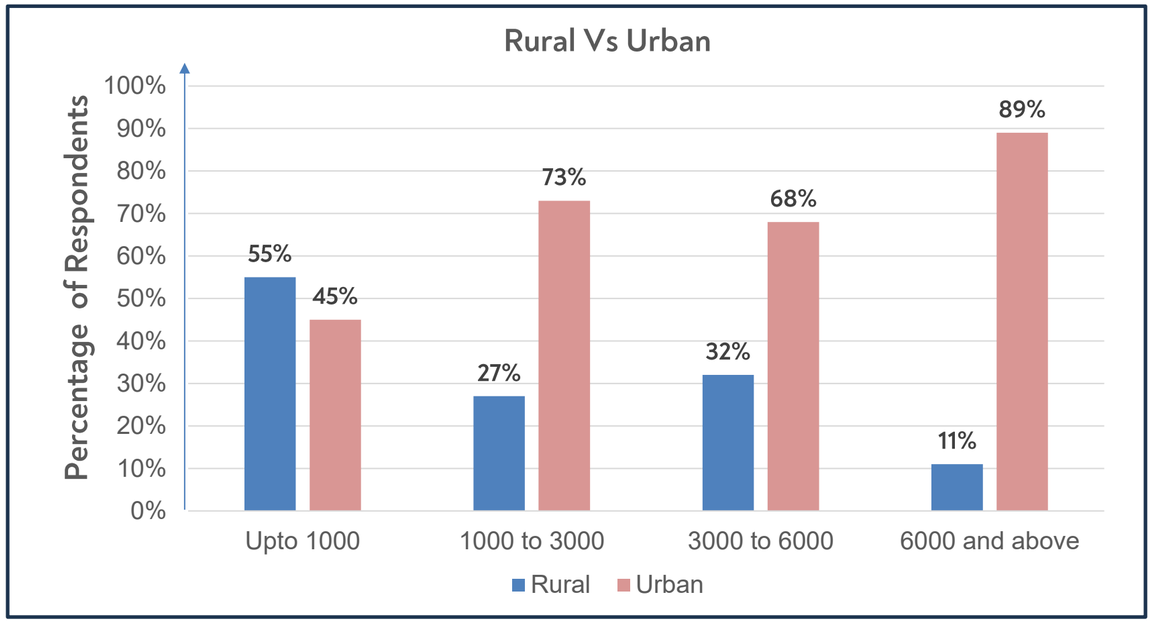
Behavior of Healthcare Spending among the Respondents (n=193)

Percentage of Healthcare Spending and Type of Healthcare Facility Utilized



Most respondents prefer private healthcare, especially at higher spending levels (96% for ₹6K+). Government facilities are mainly used by those spending less than ₹1,000.

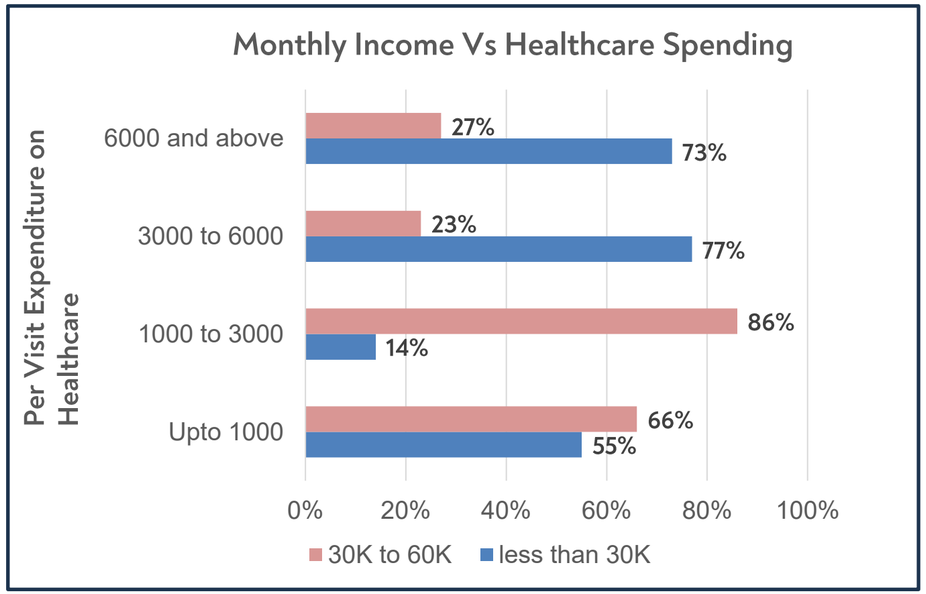
Percentage of Healthcare spending based on Residential Location of the Respondents



Urban residents spend significantly more on healthcare than rural ones, indicating disparities in access and service usage.

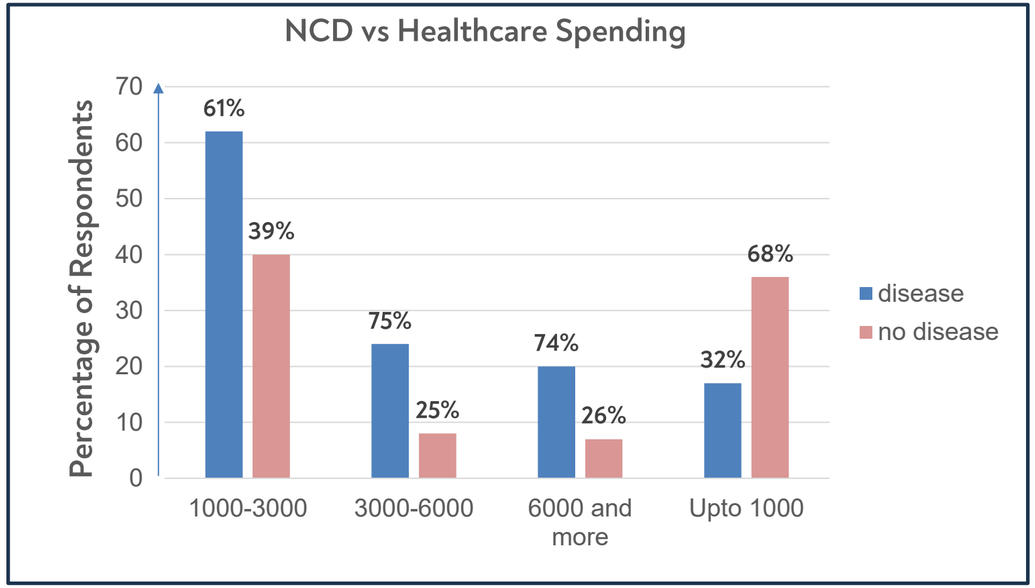
Behavior of Healthcare Spending among the Respondents (n=193)

Relationship between Monthly income and Healthcare Spending



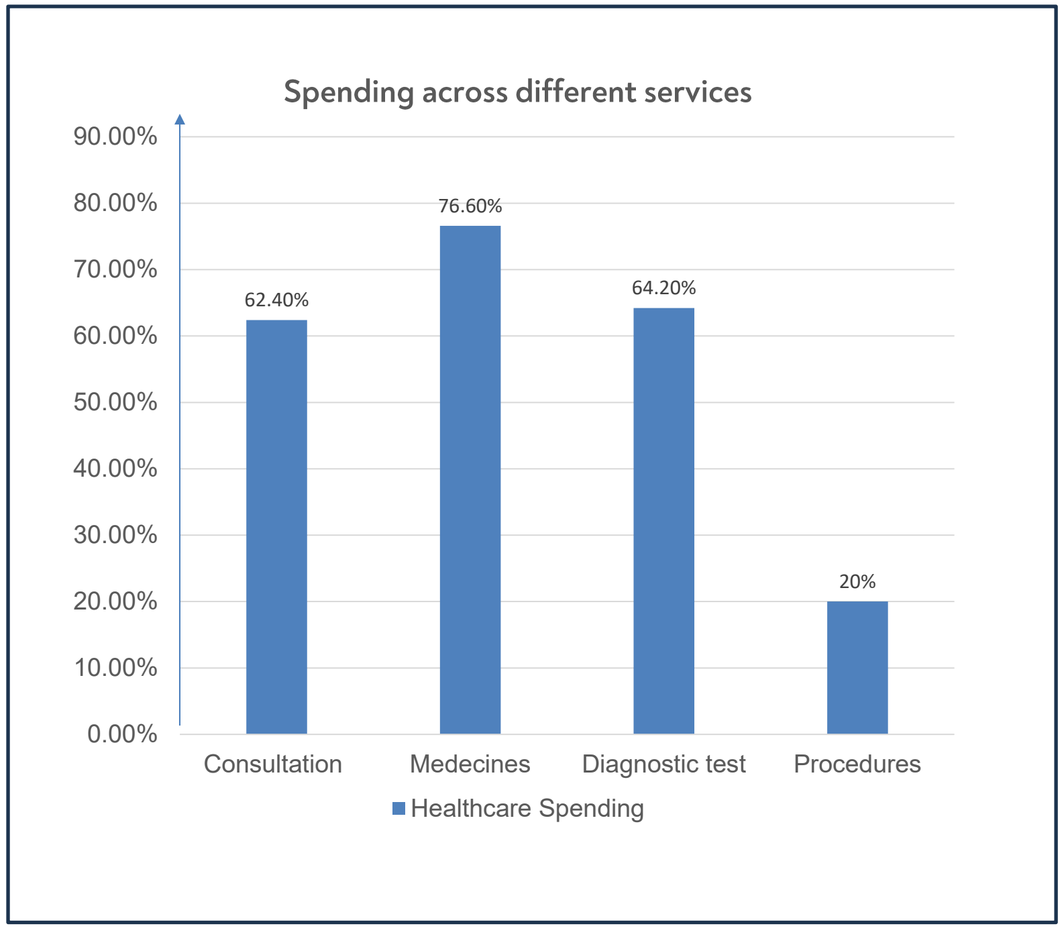
Respondents earning less than ₹30K tend to spend more on healthcare, indicating a higher financial burden relative to their income.

Effect of NCD on Healthcare spending



Individuals with NCDs incur significantly higher healthcare expenses compared to those without chronic conditions.

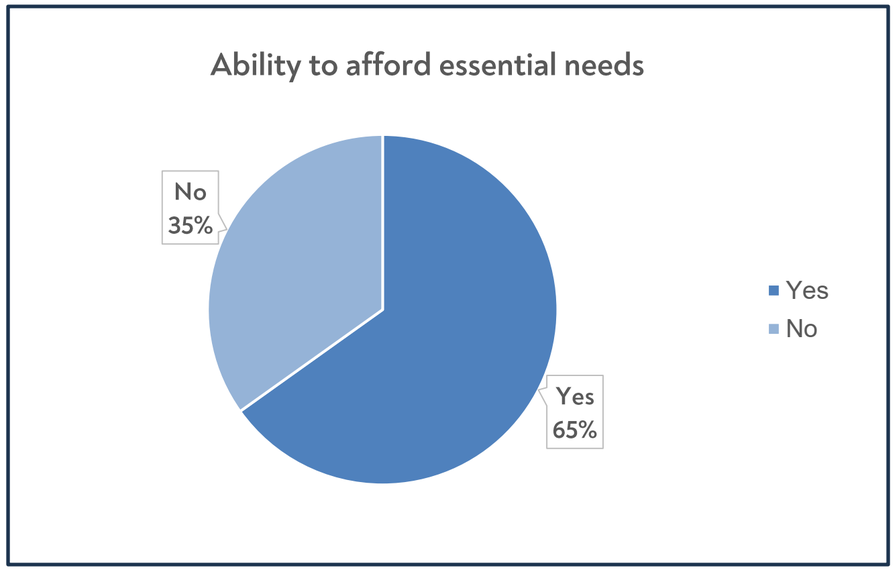
Healthcare Spending across different services



The major share of healthcare expenditure is on medicines (76.6%), followed by diagnostic tests (64.2%) and consultations (62.4%), indicating high recurring costs in outpatient care. Spending on procedures is relatively low (20%), suggesting limited access or use of advanced interventions.

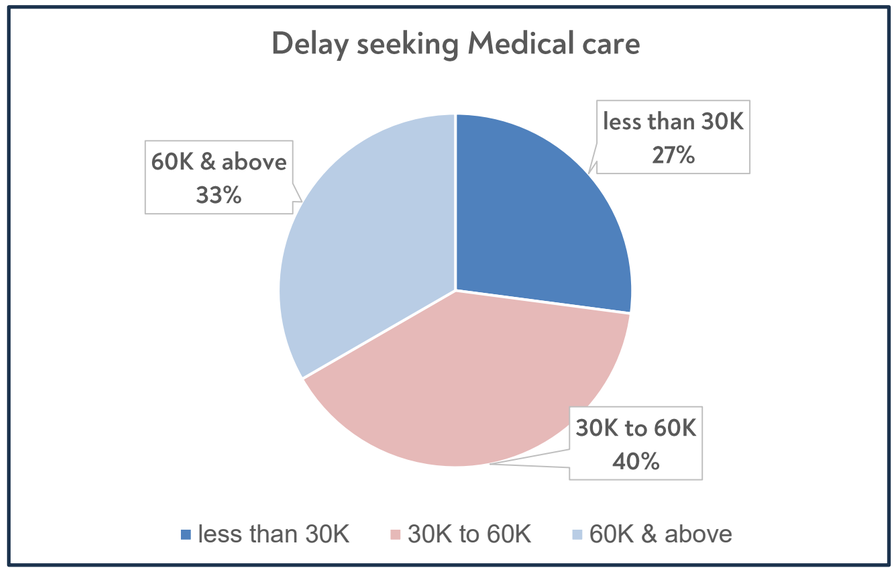
Burden of OOPE affecting the Households (n=193)

Household affected due to OOPE



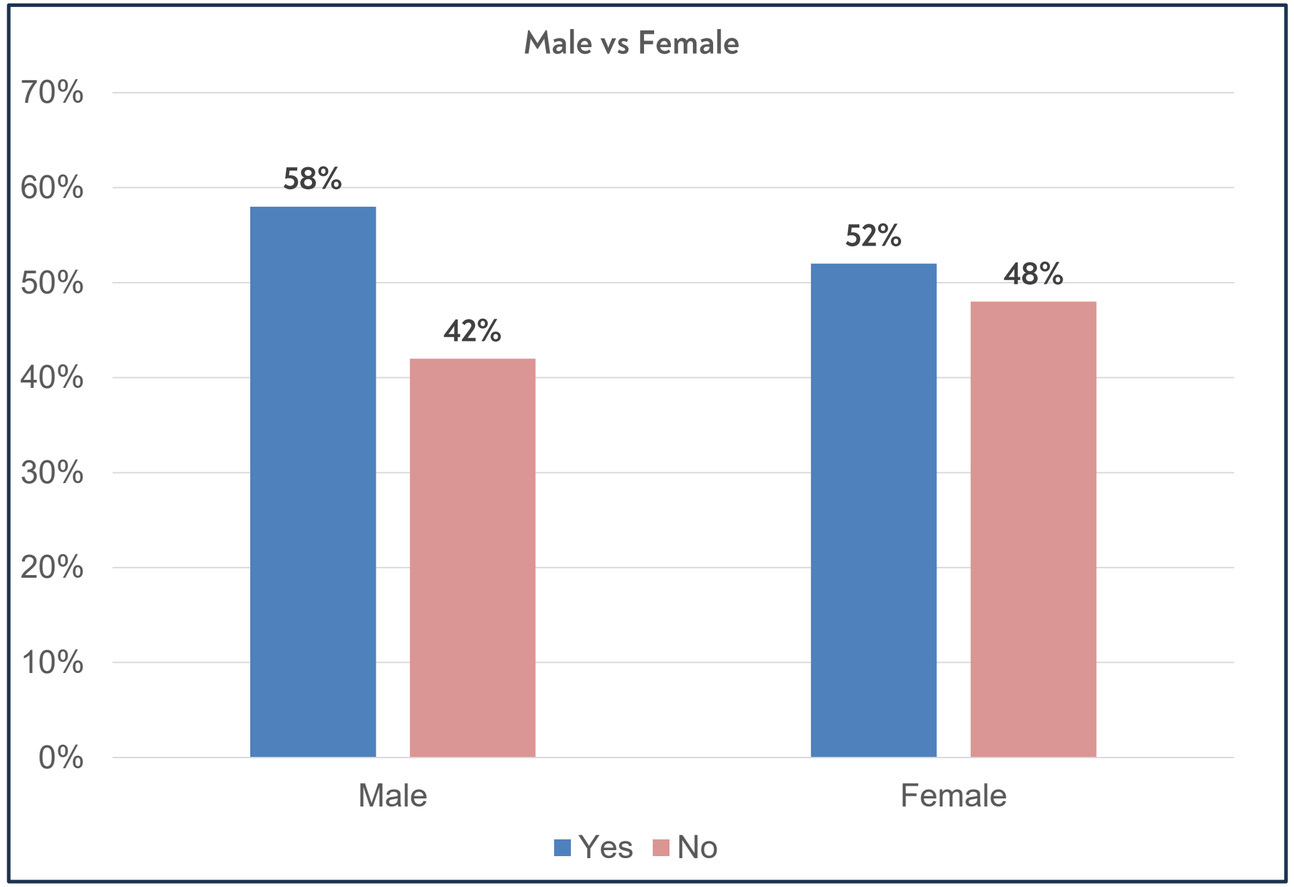
About 65% of households reported that OOPE affected their ability to afford essential needs, highlighting the financial strain imposed by healthcare costs.

Financial Barriers to Seeking Medical Care



Among those delaying medical care due to financial reasons, 40% belonged to the ₹30K–60K income group, followed by 33% in ₹60K+ and 27% in <₹30K, indicating that financial barriers impact all income groups, not just the poorest.

Financial Barriers to Seeking Medical Care among different Gender Categories



The graph represent the delay in seeking medical condition based on the gender, In this the percentage of females is more in delaying seeking medical condition as compared to the males.

CONCLUSION

Conclusion

Out-of-pocket expenditure remains high, especially for medicines which is also seen in many studies, creating a pressing point for policy makers to emphasize on these two factors of OOPE.

Low insurance coverage, especially for outpatient care, leaves many families vulnerable to financial hardship.

Lower-income and rural households had low insurance coverage and are disproportionately affected by the cost of care.

A significant number of people are forced to delay or avoid treatment, or to compromise on other essential needs, due to financial constraints.

RECOMMENDATION

Recommendation

Promote Community-Based Health Insurance or Micro-Insurance

01

Introduce simple, affordable health insurance options for informal workers and rural families that cover outpatient services. These can be implemented through SHGs, panchayats, or cooperatives.

Integration of Outpatient coverage in Health Insurance

02

Outpatient services like consultations, diagnostics, and medicines should be included in health insurance to reduce recurring expenses. This will improve continuity of care for NCD patients and protect families from financial stress.

Standardizing Service Quality to ensure Enhanced Healthcare Utilization

03

Standardizing service quality across public and private facilities can build trust and improve healthcare-seeking behavior. Consistent care delivery ensures better patient outcomes and increases utilization, especially for chronic conditions.

THANK YOU