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Impact of Out-of-Pocket Spending for Individuals Covered by Health Insurance in Chennai City

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ABSTRACT

One of the important Sustainable Development Goals of the United Nations is Universal Health Coverage (UHC). The Government of India through its sustained policies has initiated many schemes and policies towards achieving Universal Health Coverage. The State of Tamil Nadu is a pioneer in reforms related to mass scale health insurance in India. The programmes of the State of Tamil Nadu are worth emulating and putting into practice as they have proven to be efficient and sustained. The one factor that poses a challenge to the efficiency of the health insurance schemes, be it Government supported, private or corporate supported health insurance policies are Out-of- Pocket (OOP) spending. OOP spending at the point of service surpasses all the other sources of financing suggesting that even more dynamic policies need to be framed to address this Himalayan challenge. The OOP spending in India forms the major part in financing the health care needs. The OOP spending has resulted in impoverishment in Tamil Nadu. Tamil Nadu comparing to other States in India has an edge regarding healthcare and individual per capita income. It is a matter of concern when we extrapolate this to the rest of India. This study aims at analysing the impact of OOP spending on the individuals covered by health insurance in Chennai.

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1.0 INTRODUCTION

Healthcare is one of the most vital needs for a Country and society to thrive. Quality healthcare is what every Government aspires to give its Citizens. The need for quality healthcare has seen families in India migrate from rural and semi-urban areas to urban agglomerations. It can be easily said without batting an eyelid that there is a concentration of quality healthcare in urban areas of India when compared to rural areas. According to the World Health Organization (WHO), quality of care is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with evidence-based professional knowledge. The

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Institute of Medicine (IOM) of the National Academy of Sciences also defined quality health care as "safe, effective, patient-centered, timely, efficient and equitable".

Health spending in India is a very challenging subject to gauge. The reasons are due to its burgeoning population, mixed health care delivery mechanism, varying quality health care, costs and effectiveness of services across providers, underfunding of health care systems, weak regulatory mechanisms especially in private sector, low priority accorded to health by governments till 2004, lack of physical access to and affordability of medicines, vaccines and diagnostic facilities.

Path breaking initiatives such as the National Rural Health Mission/ National Health Mission (NRHM/NHM) were launched to address these challenges. In spite of these programmes quality healthcare services is negligible or nil in peripheral locations and remote areas. In 2018 the Pradhan Mantri Jan Arogya Yojana (PM-JAY) replaced the earlier scheme and integrates health insurance schemes of several state governments under one umbrella. The PM-JAY aims to cover 500 million people with the benefit package of Rs.5,00,000 annually per household. The PM-JAY involves 1500 packages provided free to patients from poor, and economically and socially disadvantaged groups. India's population is 1.4 billion as on date and out of this 900 million still are either not covered by the Government Health Insurance schemes or are dependent on Private and/or Corporate Insurance policies.

Out-of-pocket spending is the money directly paid by households at the point of receiving healthcare. This occurs when healthcare services are not provided free of cost through a government facility, or if the individual or household is not covered under any public or private health insurance, social protection scheme or when the Insurance provider denies certain claims made by the insured patients. This study aims to assess the levels of household out-of-pocket healthcare expenses focusing primarily on Chennai city.

1.1 Review of Literature

In their study, Ambade *et al.,* (2023) found that health insurance coverage remains fragmented, with 60% of families lacking coverage, despite increased eligibility and private companies. The study stressed the need for addressing disparities and implementing place-based interventions for improved health coverage.

Sirag and Mohammad Nor (2021) stated that the World Bank conducted a study on the relationship between out-of-pocket health expenditure and poverty in 145 countries from 2000 to 2017. The study used poverty measures like the poverty headcount ratio, the poverty gap index, and the poverty gap squared index. Results showed that only beyond a 29% threshold did out-of-pocket health spending increase poverty. The study highlights the importance of health spending in poverty reduction.

Sangar *et al.,* (2019) found that out-of-pocket health expenditure in low and middle-income countries like India is primarily concentrated among poorer consumption groups, leading to 8% of the population falling below the poverty line.

1.2 Research Gap

There is a dearth of research post implementation of PM-JAY and its impact across all spheres. This is primarily due to India's mixed healthcare delivery mechanism. Underfunding of the governmental health programmes until 2014 has been a major source of concern, both at the national and state level. State Government's which are constitutionally mandated for public health and hospitals are limited in what they can provide given their limited resources. There is a critical need

in regulating healthcare providers, pharmaceutical industries, diagnostic lab services and other allied systems for proper functioning of the healthcare services ensuring patient welfare. The existing system is lax, and variable as vital legislation remains unimplemented. Due to these factors, there is incompleteness in gaining a full-fledged picture of the healthcare system in the country.

1.3 Objectives of the Study

- To study the factors influencing to out-of-pocket spending for insured individuals in Chennai.
- To identify the relationship between health insurance coverage and individuals out-of-pocket spending in Chennai.

1.4 Statement of the Problem

With rising healthcare costs and increasing prevalence of health insurance coverage, it is important to understand the financial burden faced by insured individuals. The study will assess the out-of- pocket spending incurred by insured individuals, explore the factors influencing these expenses, and examine their consequences on individuals' financial well-being and healthcare-seeking behaviour. In a nation according to rough estimates where the percentage of the population covered under health insurance through private, corporate or government schemes is just 29 % to 35%, the out-of-pocket spending is very high. Imagine the plight of those 65% to 71% of the population who are left with no health insurance coverage. Universal health coverage and/or free health, care for all should be made mandatory and out-of-pocket expenditure should be minimized to ensure individuals and families in India are not ensnared by poverty, be it temporary or permanent.

1.5 Limitation of the Study

The study was restricted to the collection of data from a small population due to the paucity of time. Further the study did not cover the extreme ends of the economic ladder. The study's findings may be specific to the context of Chennai City. The accuracy of self-reported data provided by participants may be subject to recall bias or social desirability bias. The study's scope does not include an analysis of specific health insurance policies or regulatory aspects.

2.0 RESEARCH METHODOLOGY

The study is based on primary data and secondary sources. The study is descriptive and analytical in nature. The primary data was collected from the questionnaire administered to the population and the secondary sources were books, journals, newspaper reports, government surveys and social-media- reports.

2.1 Sample size and Sampling Techniques

The sample size chosen for the study is 120. The respondents are from age groups between 18 to 80 and above. The respondents are from urban areas and belong to both genders. The statistical tool used for the study is correlation test.

2.2 Testing Hypothesis

- **H_1:** There is a significant relationship between the health insurance coverage and out- of-pocket spending.

3.0 ANALYSIS AND DISCUSSION

Table 1

Demographic Indicators

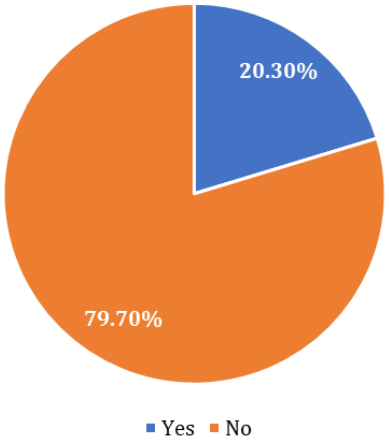
Demographic Indicators	Frequency	Percentage
Age		
18-26 years	35	29.17
27-35 years	18	15.00
36-44 years	21	17.50
45-53 years	29	24.17
54-62 years	13	10.83
63-70 years	3	2.50
71-79 years	0	0.00
More than 80 years	1	0.83
Gender		
Male	44	36.67
Female	76	63.33
Education		
UG	55	45.83
PG	44	36.67
Others	21	17.50
Occupation		
Professionals	42	35.00
Employed	34	28.33
Self-employed	21	17.50
Home Maker	19	15.83
Business	4	3.33
Income		
Up to ₹1 Lakh	33	27.50
₹1 - ₹3 Lakhs	31	25.83
₹3 - ₹5 Lakhs	29	24.17
Above ₹5 Lakhs	27	22.50

Source: Primary data

Table *1* provides information on age, gender, education, occupation, and income distribution among the surveyed population. Regarding age, the majority of respondents fall within the 45-53 years category (24.17%), followed by 18-26 years (29.17%). In terms of gender, there are more females (63.33%) than males (36.67%) in the sample. Regarding education, a significant proportion have an undergraduate (UG) degree (45.83%), followed by postgraduate (PG) qualifications (36.67%). In the occupation category, professionals make up the largest group (35.00%), followed by employed individuals (28.33%). Finally, with regards to income, the majority earn up to ₹1 Lakh (27.50%) or ₹1 - ₹3 Lakhs (25.83%), while 22.50% earn above ₹5 Lakhs, and 24.17% earn between ₹3 - ₹5 Lakhs.

Chart 1

Chronic Illness or Comorbidity among Family Members



Source: Primary data

The chart provides insights into the prevalence of chronic illnesses or comorbidities among the family members of the surveyed individuals. The data shows that the majority, approximately 79.7%, reported that their family members do not have chronic illnesses or comorbid conditions. This indicates that a significant portion of the surveyed population's families are relatively free from such health issues. Conversely, 20.3% of respondents indicated that their family members do have chronic illnesses or comorbidities. This minority percentage suggests that there is a portion of the population whose family members are dealing with long-term health issues or multiple health problems.

Table 2

Health Insurance Basic Data

Health Insurance Basic Data	Frequency	Percentage
Insured		
Yes	100	83.33
No	20	16.67
Utilized Policy		
Yes	52	43.33
No	48	40.00
Not Applicable	20	16.67
Policy type		
Government	24	20.00
Private	54	45.00
Corporate	22	18.33
Not Applicable	20	16.67
Premium Paid		
Below ₹10,000	31	25.83
₹10,000 to ₹20,000	36	30.00
₹20,000 and above	33	27.50
Not applicable	20	16.67

Policy Coverage		
₹3,00,000	45	37.50
₹4,00,000	32	26.67
₹6,00,000	8	6.67
₹10,00,000	15	12.50
Not Applicable	20	16.67
All Family Members Covered		
Yes	81	67.50
No	19	15.83
Not Applicable	20	16.67

Source: Primary data

The data reflects responses from a sample of individuals regarding various aspects of their health insurance coverage. The majority of respondents reported being insured (83.33%), with a minority indicating they are not insured (16.67%). Among those insured, 43.33% have utilized their insurance policy, while 40.00% have not, and 16.67% found it not applicable. The types of policies vary, with 45.00% having private insurance, 20.00% government insurance, 18.33% corporate insurance, and 16.67% finding insurance policies not applicable to them.

Premium payment amounts vary, with 30.00% paying ₹10,000 to ₹20,000, 27.50% paying ₹20,000 and above, 25.83% paying below ₹10,000, and 16.67% reporting premium payments as not applicable. Policy coverage amounts also vary, with 37.50% having coverage of ₹3,00,000, 26.67% having coverage of ₹4,00,000, 12.50% having coverage of ₹10,00,000, 6.67% having coverage of ₹6,00,000, and 16.67% finding policy coverage not applicable to them. Lastly, regarding covering all family members, 67.50% reported that all family members are covered by their insurance policy, 15.83% indicated not all family members are covered, and 16.67% found this aspect not applicable.

Table 3

Health Insurance Claim / Relief / OOP Spending

Health Insurance Claim / Relief / OOP Spending	Frequency	Percentage
Cashless		
Yes	43	35.83
No	9	7.50
Not Used/Not Applicable	68	56.67
No. of claims		
Once	47	39.17
More than once	6	5.00
Not Used/Not Applicable	67	55.83
No. of Hospital Visits		
Monthly	33	27.50
Half yearly	33	27.50
Annually	33	27.50
Not even once	20	17.50

OOP Spending		
Less than ₹50,000	63	52.50
₹50,000 to ₹5 lakhs	22	18.33
More than ₹5lakhs	15	12.50
Not Used/Not Applicable	20	16.67
OOP Funding		
Savings	52	43.33
Loans	13	10.83
Borrowings	18	15.00
Other Sources	17	14.17
Not Used/Not Applicable	20	16.67

Source: Primary data

The data reveals various aspects of respondents' experiences with health insurance and related expenses. Approximately 35.83% of individuals reported utilizing cashless health insurance services, while 7.50% did not use cashless services, and 56.67% found them not applicable. When it comes to the number of claims, 39.17% had made claims once, 5.00% made multiple claims, and 55.83% did not use or found claims not applicable.

Regarding the number of hospital visits, an equal percentage (27.50%) visited hospitals monthly, half-yearly, and annually, while 17.50% did not visit hospitals at all. In terms of OOP spending, 52.50% spent less than ₹50,000, 18.33% spent ₹50,000 to ₹5 lakhs, 12.50% spent more than ₹5 lakhs, and 16.67% found OOP spending not applicable. OOP funding sources varied, with 43.33% utilizing savings, 10.83% resorting to loans, 15.00% relying on borrowings, 14.17% using other sources, and 16.67% indicating that funding sources were not used or not applicable. These findings provide valuable insights into the utilization and financial aspects of health insurance and healthcare expenses within the surveyed population.

Table 4

Impact of OOP Spending

Impact of OOP Spending	Frequency	Percentage
Loss of Income		
Yes	43	35.83
No	57	47.50
Not Applicable	20	16.67
Purpose of Out-of-Pocket Spending		
Accommodation	24	20.00
Transport	24	20.00
Food	27	22.50
Medicine	11	9.17
Tests	8	6.67
Doctor’s Fees	4	3.33

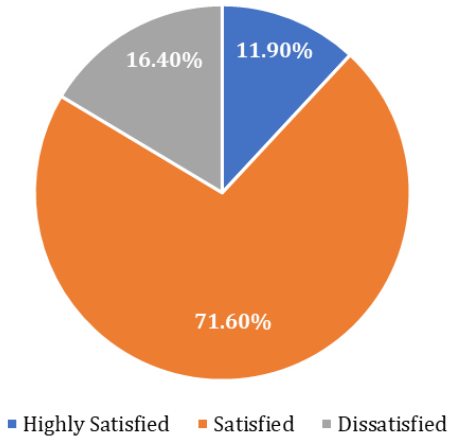
Attender's Expenses	2	1.67
Not Applicable	20	16.67
Impact on Household Budget		
Marginally	33	27.50
Moderately	31	25.83
Extremely	36	30.00
Not Applicable	20	16.67
Impact on Savings		
Marginally	31	25.83
Moderately	32	26.67
Extremely	37	30.83
Not Applicable	20	16.67
Impact on consumption pattern		
Marginally	35	29.17
Moderately	28	23.33
Extremely	37	30.83
Not Applicable	20	16.67
Impact on Quality of Life		
Marginally	33	27.50
Moderately	29	24.17
Extremely	38	31.67
Not Applicable	20	16.67
Impact on Mental Health and well being		
Marginally	35	29.17
Moderately	27	22.50
Extremely	38	31.67
Not Applicable	20	16.67

Source: Primary data

The data provides insights into the consequences of OOP expenses on various aspects of individuals' lives. Regarding the loss of income due to OOP spending, 35.83% reported experiencing such losses, while 47.50% did not, and 16.67% found it not applicable. The purpose of OOP spending varied, with accommodation and transport both at 20.00%, food at 22.50%, and smaller percentages allocated to medicine, tests, doctor's fees, and attender's expenses. In terms of the impact on the household budget, 27.50% experienced a marginal impact, 25.83% were moderately impacted, and 30.00% were extremely impacted, while 16.67% found it not applicable. OOP spending also affected savings, with 25.83% experiencing a marginal impact, 26.67% a moderate impact, and 30.83% an extreme impact, and 16.67% found it not applicable. Similarly, OOP spending affected consumption patterns (29.17% marginally, 23.33% moderately, and 30.83% extremely) and quality of life (27.50% marginally, 24.17% moderately, and 31.67% extremely), as well as mental health and well-being (29.17% marginally, 22.50% moderately, and 31.67% extremely). This data offers comprehensive insights into the multifaceted impact of OOP spending on individuals' lives and well-being.

Chart 2

Satisfaction about the Quality and Accessibility of the Health Care Services

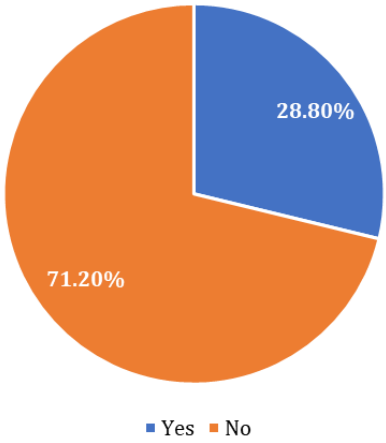


Source: Primary data

The data indicates that a majority of the surveyed individuals, approximately 71.6%, reported being satisfied with the healthcare services they have accessed. This suggests that a significant portion of the population is content with the quality and accessibility of healthcare they receive. In contrast, 16.4% of respondents expressed dissatisfaction with the healthcare services, indicating that there is room for improvement in addressing their healthcare needs. Additionally, 11.9% reported being highly satisfied, which suggests that a noteworthy portion of the population is particularly pleased with the quality and accessibility of healthcare services.

Chart 3

Challenges in Accessing Health Care Service

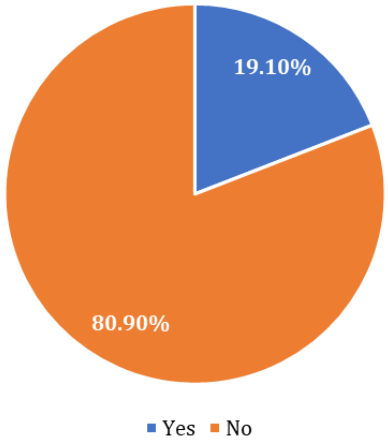


Source: Primary data

The data indicates that a significant majority, approximately 71.2% of respondents, reported that they did not encounter challenges in accessing healthcare services. This suggests that the majority of the surveyed individuals have had relatively smooth and unproblematic access to healthcare when needed. On the other hand, 28.8% of respondents did report facing challenges in accessing healthcare services. These challenges could include issues like long wait times, limited availability of services, geographic barriers, or financial constraints. While this percentage is smaller than the portion not facing challenges, it is still significant, highlighting that a notable portion of the population has experienced difficulties in accessing healthcare.

Chart 4

Lack of Money a Hindrance in Going to Hospital for Health Care



Source: Primary data

The chart provides insight into whether financial constraints are a hindrance for individuals when seeking healthcare services. The data reveals that a majority, approximately 80.9%, of the surveyed individuals do not perceive a lack of money as a significant obstacle to accessing healthcare services. This suggests that the majority of the population does not feel financially constrained when it comes to seeking medical treatment or care. On the other hand, 19.1% of respondents did report that a lack of money is a hindrance when it comes to going to the hospital for healthcare. This minority percentage indicates that there is a portion of the population for whom financial limitations pose a barrier to accessing necessary healthcare services.

3.1 Correlation

Table 5

Correlation between Insurance Coverage and Out of Pocket Expenditure

Variables	Out of Pocket Expenditure	
Insurance Coverage	r value	0.903142
	p value	0.0000**

Source: Primary data

The correlation analysis between the variable's insurance coverage and out of pocket expenditure revealed a strong positive correlation with an r value of 0.903. As insurance coverage increases, out-of-pocket expenditure tends to decrease. The correlation coefficient of 0.903 suggests a very strong association between these two variables. The p-value is less than 0.001 indicates that this correlation is highly statistically significant, further reinforcing the strength and reliability of the observed relationship.

4.0 POLICY RECOMMENDATIONS AND SUGGESTIONS

A set of policy recommendations and suggestions based on the research findings:

- The research findings emphasize the need to expand access to health insurance, particularly for underserved and vulnerable populations. Policymakers should consider initiatives to increase enrolment in public and private insurance programs, making coverage more accessible and affordable.

- Implement financial support mechanisms such as subsidies, tax incentives, or income-based premium adjustments to alleviate the financial burden of healthcare costs. These measures can help ensure that individuals and families are not deterred from seeking necessary medical care due to financial constraints.
- Develop and promote preventive healthcare programs and campaigns to encourage regular check-ups and early disease detection. Investing in preventive care can reduce the long-term healthcare expenditure burden and improve overall health outcomes.
- Establish comprehensive chronic disease management programs to provide support, education, and resources for individuals and families dealing with chronic illnesses. This can help reduce the healthcare costs associated with chronic conditions.
- Recognize the significance of mental health and allocate resources for the expansion of mental health services. Ensuring accessibility and affordability of mental health support is crucial for overall well-being.
- Engage in community outreach and education efforts to raise awareness about available healthcare services, insurance options, and how to navigate the healthcare system effectively. Informed healthcare decisions can lead to more cost-effective and timely care.
- Establish a framework for continuous policy evaluation and adaptation. Regularly assess the effectiveness of healthcare policies in addressing access and affordability issues and make data-driven adjustments as needed.
- Foster collaboration among healthcare providers, government agencies, non-profit organizations, and community groups. Public-private partnerships and community engagement can help bridge gaps in healthcare access and delivery.
- Invest in robust health data collection and analysis to monitor healthcare trends, identify disparities, and guide evidence-based policymaking. Timely and accurate data are essential for informed decision-making.
- Prioritize equity and inclusivity in healthcare policies, ensuring that no one is left behind. Focus on vulnerable populations, including low-income individuals, minorities, and those in remote or underserved areas.

5.0 CONCLUSION

In conclusion, this research has shed light on critical aspects of healthcare access and affordability, drawing attention to the challenges faced by individuals and families. The findings reveal that while a substantial portion of the population struggles with financial constraints and barriers in accessing healthcare, there are policy pathways to address these issues effectively. The strong correlation between insurance coverage and reduced out-of-pocket expenditure underscores the potential impact of expanding health insurance accessibility. Furthermore, preventive care, chronic disease management, mental health services, and community education initiatives have been identified as key areas for intervention. A holistic approach, grounded in collaboration among stakeholders and guided by regular policy evaluation and data-driven decision-making, holds promise in building a healthcare system that is not only accessible and affordable but also equitable for all segments of the population. These insights provide a foundation upon which policymakers can formulate targeted strategies to enhance the healthcare landscape and improve the overall well-being of the population.

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