


Out-of-Pocket Expenditures for Health: A Case Study

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Abstract

Background of the Study: Health is a prime component in rural population who uses their muscle power for doing economic activities. Meanwhile according to the Economic Survey of India's 2021 report, India was among the 10 worst performing countries in terms of prioritising health in government budgets, at both state and central levels. India was placed or ranked in 67th in the list of 189 countries in Out of Pocket Expenditure per capita in PPP (in \$) for 2018. World Health Organisation report (March 2022) stated that high of Out-of-Pocket Expenditure (OOPE) on health is impoverishing some 55 million Indians annually, with over 17 percent households incurring catastrophic levels of health expenditures every year. The Economic Survey 2023 reported that the share of government expenditure in Total Health Expenditure (THE) has increased over time from 28.6% in financial year 2014 to 40.6% in Financial Year 2019. However, OOPE is still higher at 48.2% of the total expenditure.

Objectives: To explore the Out of Pocket Expenditure (OOPE) for health in India, Interstate and rural villages of Theni district, Tamil Nadu

Methodology: Purposive non random sampling was used to reach the sample element..Sample elements or respondents were from rural Theni District. Sample size was 300. Data was collected using an interview schedule in the catchment area of Primary Health Centre, taluk hospital and district healthcare hospital. Interview was conducted in Tamil and then the interview output was transcribed and translated into English, followed by a descriptive analysis. Ordinary Least Square estimation was used to find the implications of individual income on pocket out expenditure for health.

Findings of the Study: The secondary data from the website of World Health Organisation and from the reports of National Health Accounts reflects a difference in data information for every concerned period at least two to three percent exist. The interstate data information for the period 2019 to 2020 revealed that the spending from government health care expenditure and out of pocket expenditure is not equal to total health care expenditure. Hence, the researcher made an attempt to explore the out of pocket expenditure among the rural population and their willingness to spend from their pocket. Furthermore, the impact of annual income and annual healthcare expenditure is examined by simple linear regression analysis, for to understand the role of income in shaping healthcare spending behaviour. The R Square value is very poor, and reflects the role of explanatory variable income is not impacting the out of pocket health care expenditure. The Keynesian theory of psychological law of consumption is invalid in out of pocket healthcare expenditure with respect to income of the respondents. 13 percentages of respondents were willing to do out of pocket expenditure for their health ailing. The 39.7percentages of respondents were disagreeing to do out of pocket expenditure for their health.

Conclusion: Overall, this study emphasizes the importance of understanding out-of-pocket health expenditures is increasing in rural (reckless management of public healthcare) with attitude of unwilling to pay from their pocket because of existing zero priced healthcare system, which is available in their near locality. Policy makers needs to concentrate on enhancing the healthcare supply such as medical personals, drugs, lab facility, beds, and in general in all aspects for to cater the demand of rural inhabitants and protect them from pushing into impoverishment.

Keywords: Out of Pocket Health Expenditure (OOPE), Health Costs, Health Policy, Willingness to Pay (WTP), Healthcare

Introduction

Rural health expenditure is a critical component of healthcare systems worldwide, particularly in addressing the healthcare needs of underserved populations in remote areas. This case study focuses on the concept of pocketing

out expenditure on managing rural health, emphasizing the importance of strategic resource allocation to enhance healthcare access and outcomes in rural settings. As highlighted by the World Health Organization (WHO), investing in rural health is essential for achieving universal health coverage and reducing health disparities. By examining the challenges, strategies, and impacts of targeted expenditure on rural health, this study aims to provide valuable insights that can guide policymakers, healthcare providers, and stakeholders in optimizing healthcare delivery for rural communities.

Access to affordable healthcare is a fundamental right, yet in many parts of the world, including India, financial barriers often impede individuals' ability to seek and receive necessary medical care. Within this context, understanding the concept of pocket out health expenditure becomes crucial. Pocket out health expenditure refers to an individual's readiness to allocate financial resources towards healthcare services, medications, or health insurance premiums, reflecting their perceived value of health and ability to afford medical care. Health care financing is an important aspect of ensuring access to quality health services for individuals and communities to face their unexpected health risk. Micro insurance via self-help group or any other prepayment plans are recognized as a way to make healthcare costs more predictable and manageable. However, adoption of such community-based health care financing schemes is not widespread in India and specifically Tamil Nadu.

In recent years, India has undergone significant changes in its healthcare landscape, characterized by the implementation of various government schemes and rapid expansion of the healthcare sector. Despite ranking as the world's third largest economy by gross national income, India continues to face challenges in ensuring equitable access to health services. Notably, recent studies have highlighted a troubling trend: the growing burden of pocket out healthcare costs on individuals and families has led to an increase in Catastrophic Health Expenditure (CHE) and rising poverty levels. The country's move toward a more privatized health care system, coupled with an increased reliance on pocket out health expenditure payments for medical expenses, has fuelled concern

about the financial strain on individuals, particularly during hospitalization. Inadequate public funding for health care, often seen as a historically unproductive social expenditure, has further compounded the problem, with health costs emerging as the primary driver of poverty for millions across India. Also, there has been a significant shift in health utilization dynamics for secondary and tertiary care, which may be influenced by factors such as the dominance of the private sector and the presence of health insurance schemes. This trend has significant implications for the accessibility and affordability of health services, particularly for marginalized populations.

By identifying barriers to affordability and avenues for improving financial access to healthcare, this study aims to inform policy discourse and healthcare planning at both local and national levels. In essence, this study underscores the importance of understanding pocket out health expenditure as a means to enhance healthcare affordability, accessibility, and equity in Theni District and beyond. Against this backdrop, understanding the factors driving the increase in pocket out health expenditure in India is crucial for policymakers and healthcare stakeholders.

Objectives

To explore the out of pocket health expenditure in India, it's interstate and the residents of Theni district of Tamil Nadu.

Methods

This comprehensive study used secondary and primary data to study about the selected research fact. The secondary data was collected from report of National Health Accounts Estimates of India and World Health Organisation website. Primary data collection was done for pocket out health expenditure in Theni district of Tamil Nadu by using interview schedule. The data used for this study was collected for the project entitled Rural Transformation on Health and Sanitation in 2022 August which is sponsored by RUSA. Purposive non random sampling method was used to reach the sample element. The non-random sampling method was used in this study for two reasons: (a) lack of total population who are spending from their pocket for their health

issues and (b) the behaviour pattern of health seeking by paying or demanding by paying is based on personality traits which is differ from person to person. A total of 300 people were selected from 30 PHCs in rural areas in 8 constituencies of Theni district, 10 from each PHC. Eligible participants aged 25 years and older participated. Interview structured and data collected at the primary health center on socio-demographic characteristics, healthcare utilization and pocket out health expenditure. Researchers had done the data analysis through descriptive statistics and simple linear regression with the help of SPSS software.

Results

The secondary data obtained from the website of World Health Organisation regarding Out of Pocket expenditure of current health expenditure in terms of percentage was presented in Table-1 for to know the status of pocket out expenditure in addition with zero priced healthcare supply of public sector in India.

Table 1 Out-of-Pocket Expenditure (OOP) as Percentage of Total Health Expenditure

Year	India's Out-of-Pocket Expenditure as Percentage of Current Total Health Expenditure (CHE)% -WHO	India's Out of Pocket Expenditure as Percentage of Total Health Expenditure National Health Accounts
2015	64.66	62.6
2016	63.21	60.6
2017	55.11	58.7
2018	53.23	48.3
2019	52.0	48.2
2020	49.45	47.1

Source: World Health Organisation & National Health Accounts of India

The table 1 displays the percentage of out-of-pocket expenditure in relation to the current health expenditure for the period from 2015 to 2020. The data indicates a gradual decrease in the percentage of out-of-pocket expenditure over the years, with a peak of 64.66% in 2015s and a decline to 49.45% in 2020. This trend suggests a potential improvement in healthcare supply mechanisms, and further reducing the burden on individuals to

pay for healthcare services directly as out of pocket expenditure in India. The direction of the data obtained about the out of pocket expenditure from WHO website and National Health Accounts are same but their magnitude is varying which is to be notified by planners and policy makers because the total allocation of healthcare expenditure in India is 3.22 percent of GDP in 2023.

Table 2 Out of Pocket Expenditure in India from 2014 to 2020

Year	Total Health Expenditure as Percent of GDP	Out of Pocket Expenditure as Percent of Total Health Expenditure
2014-2015	29.0	62.6
2015-2016	30.6	60.6
2016-2017	32.4	58.7
2017-2018	40.8	48.3
2018-2019	40.6	48.2
2019-2020	41.4	47.1

Source: National Health Accounts Estimates 2019-2020

The Table 2 shows total health expenditure as a percentage of GDP and corresponding percentage of out-of-pocket expenditure as a share of total health expenditure in India from 2014-2015 to 2019-2020. Over the six-year period, total health expenditure as a percentage of GDP in India steadily increased from 29.0% in 2014-2015 to 41.4% in 2019-2020. Concurrently, the proportion of out-of-pocket expenditure relative to total health expenditure declined from 62.6% to 47.1%, indicating potential improvements in healthcare supply and enhancing the affordability.

The table 3 highlights key healthcare expenditure which is available for selected states in India, showcasing significant disparities. Total Health Expenditure varies widely, from 4,042 crores in Jammu and Kashmir to 84,841 crores in Uttar Pradesh. Kerala stands out with notably high Government Health Expenditure (GHE) as a percentage of total expenditure (24.4%), while Gujarat records a low of 0.8%. Out-of-Pocket Expenditure is substantial in states like Uttar Pradesh (71.8%) and Bihar (54.3%). Per capita healthcare expenditure ranges from Rs.951 in Uttar Pradesh to Rs.7, 206 in Kerala. Allocation of Gross State Domestic Product (GSDP)

to healthcare varies from 1.7% in Assam to 5.0% in Uttar Pradesh. Kerala demonstrates the highest percentage of Gross Government Expenditure (GGE) dedicated to healthcare (3.1%). Himachal Pradesh

has the highest per capita out-of-pocket expenditure (Rs.3,397), suggesting potentially higher healthcare costs borne by individuals.

Table 3 Inter States Healthcare Expenditure for 2022 of India

State	Total Health Expenditure			Government Health Expenditure (GHE)					Out of Pocket Expenditure				
	In crores	% of GSDP	Per capita in Rs.	In crores	% of THE	% of GSDP	% of GGE	Per capita in Rs.	In crores	% of THE	% of GSDP	% of GGE	Per capita in Rs.
Assam	10,019	2.9	2,863	5,798	57.9	1.7	73	1,657	3,494	34.9	1.0	4.4	998
Andhra Pradesh	27,105	2.8	5,114	9,005	33.2	0.9	6.0	1,699	17,245	63.6	1.8	11.5	3,254
Bihar	19,218	3.3	1,588	8,477	44.1	1.5	6.2	701	10,444	54.3	1.8	7.7	863
Chhattisgarh	9,906	2.9	3,416	5,190	52.4	1.5	6.3	1,790	3,634	36.7	1.1	4.4	1,253
Gujarat	28,498	1.8	4,130	12,843	45.1	0.8	7.7	1,861	11,640	40.8	0.7	7.0	1,687
Haryana	15,017	2.0	5,178	6,107	40.7	0.8	6.0	2,106	6,837	45.5	0.9	6.7	2,358
J&K	4,042	2.5	3,109	2,020	50	1.2	3.2	1554	1,885	46.6	1.1	3.0	1,450
Jharkhand	11,737	3.8	3,089	3,853	32.8	1.2	5.8	1,014	7,599	64.7	2.4	1.5	2,000
Karnataka	35,761	2.2	5,418	5,418	30.5	0.7	5.2	1,655	11,368	31.8	0.7	5.4	1,722
Kerala	37,124	4.5	10,607	9,066	24.4	1.1	8.0	2,590	25,222	67.9	3.1	22.3	7,206
M.P	23,497	2.5	2,831	10,364	44.1	1.1	5.8	1,249	12,450	53	1.3	6.9	1,500
Maharashtra	77,501	2.8	6,301	20,606	26.6	0.8	6.1	1,675	34,17	44.1	1.2	10.1	2,779
Odisha	16,214	3.0	3,603	6,723	41.5	1.3	5.6	1,494	8,666	53.4	1.6	7.3	1,926
Punjab	15,353	2.9	5,118	4,624	30.1	0.9	4.9	1,541	9,940	64.7	1.9	10.6	3,313
Rajasthan	30,547	3.1	3,916	12,963	42.4	1.3	6.8	1,662	14,476	41.4	1.4	7.6	1,856
Tamil Nadu	35,001	2.0	4,605	15,494	44.3	0.9	6.6	2,039	15,455	44.2	0.9	6.5	2,034
U.P	84,841	5.0	3,721	21,688	25.6	1.3	6.0	951	60,883	71.8	3.6	17	2,670
Uttarakhand	4,046	3.2	3,678	2,500	61.8	1.1	6.5	2,273	1,449	35.8	0.6	3.8	1,137
West Bengal	50,005	4.1	5,103	13,191	26.4	1.1	1.4	1346	33,561	67.1	2.8	8.8	3,425
Telangana	18,908	2.0	5,110	8,374	44.3	0.9	6.7	2,263	7,861	41.6	0.8	6.3	2125
Himachal Pradesh	5,170	3.2	7,386	2,680	51.8	1.7	7.5	3,829	2,378	46	1.5	6.6	3,397

Source: National Health Accounts Estimates 2019-2022 Gross State Domestic Product (GSDP), General Government Expenditure (GGE), Total Health Expenditure (THE), Government Health Expenditure.

Another observation of the table 3 data's sum of the health expenditure is not equal to hundred percent. For example, in case of Kerala the total of pocket out expenditure (67.9%) and government health expenditure (24.4%) is not equal to the total health expenditure (92.3%≠100%). Hence, here is question arise about the left over expenditure of 7.7%. In case of Tamil Nadu, the government expenditure was 44.3% and the out of pocket expenditure was 44.2%.

The study delved into socio-economic disparities and their correlation with healthcare expenditure preferences among rural residents. By examining the interplay between these variables, the research

aimed to uncover nuanced patterns that could inform targeted interventions and tailored healthcare policies for village communities.

Table 4 Socio-Economic Profile of Sample Respondents

(a) Age in Years	N (%)
Above 25	7 (2.3)
26 to 35	98 (32.7)
36 to 45	135 (45.0)
46 to 55	39 (13.0)
Above 56	21 (7.0)
Total	300 (100.0)

(b) Education Qualifications	N (%)
Illiterate	32 (10.7)
Read and write	4 (1.3)
Pre-primary school	22 (7.3)
Upper primary	52 (17.3)
High school	62 (20.7)
Higher Secondary	71 (23.7)
Diploma courses	8 (2.7)
Graduation	22 (7.3)
Technical Degree (medical, engineering, agriculture, etc.)	27 (9.0)
Total	300 (100.0)
(c) Occupation	N (%)
Agriculture Related Works	92 (30.7)
Private Jobs	24 (8.0)
Government Job	32 (10.7)
Self Employed	79 (26.3)
Own Business	29 (9.7)
Unemployed	44 (14.7)
Total	300 (100.0)

Source: Primary Data

The Table 4a illustrates the distribution of respondents based on their age groups. Among the 300 respondents surveyed, the largest age category was individuals above 55 years old, comprising 98 respondents, representing 32.7 percent of the total sample. The next most prevalent age group fell between 25 to 35 years old, with 135 respondents, constituting 45.0 percent of the sample. Meanwhile, the age group between 35 to 45 years old accounted for 39 respondents, comprising 13.0 percent of the total. Notably, respondents aged 45 to 55 years old constituted 21 respondents, representing 7.0 percent of the surveyed population. Surprisingly, only 7 respondents, which are 2.3 percent of the total, were above 25 years old. This breakdown underscores the diverse age distribution of the surveyed population,

with a substantial portion being relatively younger individuals between 25 to 35 years old and a significant representation of individuals above 55 years old.

The table 4b presents the distribution of respondents based on their educational qualifications. It shows that the majority of respondents have attained at least a high school education or higher, with the highest percentage falling under the categories of higher secondary 23.7 percent, high school 20.7 percent, and graduation 7.3 percent. Notably, there are a low proportion of illiterate respondents 10.7 percent and those who can only read and write 1.3 percent. Additionally, there is a modest representation of respondents with technical degrees 9.0 percent, indicating a diverse educational background within the sample. Overall, the distribution suggests a relatively educated respondent pool, with varying levels of educational attainment, which could influence the interpretation of any findings or conclusions drawn from associated research or surveys.

The table 4c provides an overview of how respondents are distributed across different occupations. It reveals that the largest percentage of respondents are engaged in agriculture-related works 30.7 percent, indicating a significant presence of individuals involved in agricultural activities within the surveyed population. Additionally, there is notable representation across other categories, including self-employed 26.3 percent and unemployed 14.7 percent individuals. Government jobs 10.7 percent and private jobs 8.0 percent also show considerable participation, albeit to a lesser extent. The diversity in occupational backgrounds suggests a varied economic landscape within the surveyed community, with implications for factors such as income levels, job stability, and overall socioeconomic dynamics.

Table 5 Gender Classification with Respect to Annual Health Expenditure

Gender	Below Rs.20,000	Rs.20,000-30,000	Rs.30,000-40,000	Rs.40,000-50,000	Above Rs.50,000	Total
Male	6 (2.0)	60 (20.0)	66 (22.0)	34 (11.3)	2 (0.7)	168 (56.0)
Female	6 (2.0)	43 (14.3)	61 (20.3)	19 (6.3)	3 (1.0)	132 (44.0)
Total	12 (4.0)	103 (34.3)	127 (42.7)	53 (17.7)	5 (1.7)	300 (100.0)

Source: Primary Data, Percentage in parentheses

The table 5 shows a gender-wise table of annual health expenditure in the study area. Majority of the respondents 22 percent male and 20.3 percent female reported annual medical expenditure of Rs.30,000-40,000 is spent, and Rs.20,000-30,000

annual medical expenses, 20 percent of men and 14.3 percent of women incur medical expenses. In the study area only 1.7 percent respondents spent Rs.50,000 in medical expenses.

Table 6 Willingness to Pay from Pocket for Health Expenses

Village	Willing to pay from pocket for Health Expenses					Total
	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	
Veerapandi	1 (0.3)	1 (0.3)	7 (2.3)	1 (0.3)	0 (0.0)	10 (3.3)
Jangalapatti	6 (2.0)	2 (0.7)	1 (0.3)	1 (0.3)	0 (0.0)	10 (3.3)
Kottur	3 (1.0)	5 (1.7)	1 (0.3)	1 (0.3)	0 (0.0)	10 (3.3)
Govindanagaram	2 (0.7)	8 (2.3)	0 (0.0)	0 (0.0)	0 (0.0)	10 (3.3)
Dombuchery	1 (0.3)	5 (1.7)	3 (1.0)	1 (0.3)	0 (0.0)	10 (3.3)
Silamarathupatti	1 (0.3)	3 (1.0)	3 (1.0)	3 (1.0)	0 (0.0)	10 (3.3)
Silamalai	4 (1.3)	4 (1.3)	0 (0.0)	2 (0.7)	0 (0.0)	10 (3.3)
Meenatchipuram	0 (0.0)	1 (0.3)	5 (1.7)	3 (1.0)	1 (0.3)	10 (3.3)
Kurangani	2 (0.7)	2 (0.7)	4 (1.3)	2 (0.7)	0 (0.0)	10 (3.3)
Kombai	2 (0.7)	5 (1.7)	2 (0.7)	1 (0.3)	0 (0.0)	10 (3.3)
Chindalacheri.T	6 (2.0)	4 (1.3)	0 (0.0)	0 (0.0)	0 (0.0)	10 (3.3)
Thevaram	1 (0.3)	3 (1.0)	4 (1.3)	2 (0.7)	0 (0.0)	10 (3.3)
Rayapanpatti	4 (1.3)	1 (0.3)	4 (1.3)	1 (0.3)	0 (0.0)	10 (3.3)
Erasakkanaickanoor	2 (0.7)	1 (0.3)	4 (1.3)	3 (1.0)	0 (0.0)	10 (3.3)
Odaipatti	4 (1.3)	5 (1.7)	1 (0.3)	0 (0.0)	0 (0.0)	10 (3.3)
Kuppanasaripatti	1 (0.3)	5 (1.7)	1 (0.3)	3 (1.0)	0 (0.0)	10 (3.3)
Kutchanur	1 (0.3)	8 (2.3)	1 (0.3)	0 (0.0)	0 (0.0)	10 (3.3)
Gudalur	1 (0.3)	8 (2.3)	1 (0.3)	0 (0.0)	0 (0.0)	10 (3.3)
Kamayagoundanpatti	2 (0.7)	5 (1.7)	2 (0.7)	1 (0.3)	0 (0.0)	10 (3.3)
Pudupatti.C	1 (0.3)	7 (2.3)	1 (0.3)	1 (0.3)	0 (0.0)	10 (3.3)
Devadanapatti	1 (0.3)	4 (1.3)	5 (1.7)	0 (0.0)	0 (0.0)	10 (3.3)
Genguvarpatti	3 (1.0)	3 (1.0)	2 (0.7)	2 (0.7)	0 (0.0)	10 (3.3)
Melamangalam	4 (1.3)	0 (0.0)	3 (1.0)	3 (1.0)	0 (0.0)	10 (3.3)
Vadaputpatti	1 (0.3)	7 (2.3)	2 (0.7)	0 (0.0)	0 (0.0)	10 (3.3)
A. Pudupati	2 (0.7)	4 (1.3)	4 (1.3)	0 (0.0)	0 (0.0)	10 (3.3)
P. Tharumathupatti	1 (0.3)	4 (1.3)	4 (1.3)	1 (0.3)	0 (0.0)	10 (3.3)
Subbalapuram. T	2 (0.7)	3 (1.0)	2 (0.7)	3 (1.0)	0 (0.0)	10 (3.3)
Subbalapuram. M	4 (1.3)	5 (1.7)	1 (0.3)	0 (0.0)	0 (0.0)	10 (3.3)
Rajathani	2 (0.7)	0 (0.0)	5 (1.7)	2 (0.7)	1 (0.3)	10 (3.3)
Kumanantholu	4 (1.3)	6 (2.0)	0 (0.0)	0 (0.0)	0 (0.0)	10 (3.3)
Total	69 (23.7)	119 (39.7)	73 (24.3)	37 (12.3)	2 (0.7)	300 (100.0)

Source: Primary Data

The table 6 provides data on the different village's ability to pay health expenses categorized into five levels ranging from 'Strongly Disagree' to 'Strongly

Agree'. Total respondents from each village are tabulated. Overall, out of 300 respondents, 39.7 percent of villages did not express ability to pay

health expenses, 24.3 percent did not report ability to pay health respondents, and 12.3 percent admitted ability to pay health expenses, and only 0.7 percent was strong. They agreed to pay for their ability to pay health care costs. This indicates that a significant proportion of the surveyed villages do not have the capacity to directly pay health costs, highlighting the potential need for external support or alternative health financing mechanisms in these communities.

Simple Linear Regression Analysis

Linear regression model was used to illustrate the coefficient of the total of monthly income variable impacts on annual health care costs. Simple linear regression model is used to find the impact or implications of one variable on another one or more than one variable by using Ordinary Least Square estimation method. The researcher attempted to spell that the income is not only the factor influencing the decision making of spending for health care but some other factors are existing and dominating a person decisions in willingness to pay for health. Here, the obtained result indicates a positive relationship between income and health expenditure, which explains why individuals tend to spend more on health care as income increases, consistent with Keynes's law of psychological consumption. Explains how annual health care costs relate to income Hypothesis. $Y = \alpha + \beta X + U_i$

Where Y is the dependent variable -Out of Pocket expenditure, X is the explanatory t variable stated as income of the respondents, and U_i is unexplained area as stochastic error term.

Linear Regression

Table 7 The result of Annual Out Of Pocket Expenditure (OOPE) on Annual Income of the Respondents

$Y = \alpha + \beta X + U_i$	Coefficient	SE	t	p
1 (Constant) α	2.829	0.109	26.016	0.000
2 Monthly Income β	.062	0.031	-1.978	0.050
F value	3.913	R2	0.026	

Source: Manipulated by the researcher

The model summary indicates that the relationship between annual health expenditure and income is

good, with an R-squared value of 0.026. This means that only 2.6% of the coefficient of determination in annual health expenditure can be explained by income. The t value results show that the regression model is statistically significant, as indicated by the p-value of 0.050.

The intercept (constant) is 2.829, which represents the estimated annual health expenditure when income is zero. However, this value means that health expenditure is exist even at zero income, may be borrowing from others, a significance in this context. The coefficient for monthly income is 0.062, with a p-value of 0.050. This indicates that there is a statistically significant relationship between monthly income and annual health expenditure. However, the beta value of suggests a very weak positive relationship between income and health expenditure. Income is an important determinant of out of pocket health expenditure, highlighting the importance of economic factors in shaping the health expenditure behavior of individuals but the poor explanatory level push the researcher to check the other variables like family size, etc.

Findings and Discussion

The study conducted in Theni District, Tamil Nadu, aimed to explore the factors influencing residents' pocket out health expenditure for health expenses. The demographic analysis revealed interesting insights into how various factors such as age, education, and occupation correlate with pocket out health expenditure. The survey encompassed a diverse age group, with a substantial representation of individuals above 55 years old 32.7 percent and those between 25 to 35 years old 45.0%). Surprisingly, a smaller proportion of respondents were above 25 years old 2.3 percent. This distribution suggests a significant presence of both younger and older individuals in the study, indicating the need to cater to the healthcare needs of different age cohorts. The majority of respondents had attained at least a high school education or higher, with significant percentages in the categories of higher secondary 23.7 percent, high school 20.7 percent, and graduation 7.3 percent. The low proportion of illiterate respondents 10.7 percent and those who could only read and write 1.3 percent

indicates a relatively educated sample population. This educational diversity could influence healthcare decision-making and understanding of health-related financial concepts.

Respondents were engaged in various occupations, with a notable presence in agriculture-related works 30.7 percent, self-employment 26.3 percent, and government jobs 10.7 percent. This diversity reflects the economic landscape of the surveyed community, with implications for income levels and financial capacity to afford healthcare expenses. The data on ability to pay health expenses across different villages revealed varying levels of willingness to bear the ability to pay health expenses. A significant proportion of villages expressed reluctance to pay such expenses directly, with 39.7 percent strongly disagreeing and 24.3 percent undecided. Conversely, only 12.3 percent agreed to pay, and a mere 0.7 percent strongly agreed. This disparity underscores the need for alternative health financing mechanisms or external support to mitigate the financial burden of healthcare expenses in these communities.

The study reveals substantial annual health expenditure between men and women, with spending an annual Rs. 30,000-40,000 which represents a considerable financial burden. The data show challenges in paying health costs directly, requiring external support or alternative financing mechanisms. Linear regression analysis indicates a significant influence between monthly income and annual health expenditure which recall the theory of Keynes psychological law of consumption. The poor goodness of fit represents the influence of stochastic error term or the influence of omitted variables which may be the family size, etc., These findings underline the need for improved medical facility and accessibility in rural areas like Theni district. Insights into demographic and socioeconomic characteristics provide valuable guidance to policymakers in implementing inclusive health financing solutions.

The reluctance of many villages to bear pocket out healthcare costs highlights the rational behaviour of rural population in accessing public healthcare supply. Increasing awareness and uptake of health insurance schemes, particularly among vulnerable populations, could provide financial risk protection and improve

access to healthcare services. Government initiatives to subsidize insurance premiums or expand coverage to include essential health services could alleviate the financial burden on individuals and families. Investing in primary healthcare infrastructure and services is crucial for preventing disease, promoting early intervention, and reducing the need for costly secondary and tertiary care. By bolstering primary care facilities in rural areas, communities can access timely and affordable healthcare services, thereby reducing the incidence of catastrophic Pocket out health expenditure.

Public health insurance schemes like the Ayushman Bharat, Jan Aarogya Yojana are in place to tackle medical expenses in India, which provides Rupees covers up to 5 lakhs or the 15 days expenses like treatment and medicines will be paid.. Similarly in Tamil Nadu the Chief Minister Comprehensive Medical Insurance Scheme, originally known as Kalaingar Insurance Scheme, was launched on 23rd July 2009 to reduce the financial burden of enrolled families and move towards universal status by providing quality medical care to deserving individuals through empaneled government and private hospitals.

Invest in building and improving primary health care facilities in rural communities to ensure people have access to essential medical services close to where they live and reduce barriers to care. Implementation of telemedicine programs to overcome geographic barriers and improve access to specialist consultations and medical advice for rural populations should improve health delivery efficiency. Establish robust monitoring and evaluation mechanisms to assess the effectiveness of expenditure on rural health initiatives, enable data-driven decision-making and continuous improvement in health delivery strategies.

Conclusion

In conclusion, the study conducted in Theni district, Tamil Nadu has provided valuable insights that the need for appropriate interventions to address health financing challenges. The reluctance of many villages to bear direct health costs reflects the dependence nature of public healthcare sector and an need of external support mechanisms to alleviate the

financial burden on individuals and families if there exist pocket out expenditure which push them into impoverishment.

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