

AN EMPIRICAL ANALYSIS ON HEALTH SEEKING BEHAVIOUR AND OUT OF POCKET EXPENDITURE PATTERNS IN ANDHRA PRADESH AND TELANGANA

A dissertation submitted to the University of Hyderabad in partial fulfilment of
the degree of

MASTER OF PHILOSOPHY

IN

ECONOMICS

BY

GUMPENA SHASHIDHAR



**School of Economics
University of Hyderabad
(P.O.) Central University, Gachibowli,
Hyderabad –500 046
Telangana
India**

CERTIFICATE

This is to certify that the dissertation entitled “*An Empirical analysis on health seeking behaviour and out of pocket expenditure patterns in Andhra Pradesh and Telangana (2014-20)*” submitted by **Gumpena Shashidhar** bearing Reg. No. **19SEHL09** in partial fulfilment of the requirements for the award of Master of Philosophy in **Economics** is a bonafide work carried out by him/her under my/our supervision and guidance.

The thesis has not been submitted previously in part or in full to this or any other University or Institution for the award of any degree or diploma.

Signature of the Supervisor/s

//Countersigned//

Head of the Department/Centre

Dean of the School

DECLARATION

I **Gumpena Shashidhar** hereby declare that this dissertation entitled “**An Empirical analysis on health seeking behaviour and out of pocket expenditure patterns in Andhra Pradesh and Telangana**” submitted by me under the guidance and supervision of Professor/Dr. **K. Ramachandra rao** is a bonafide research work. I also declare that it has not been submitted previously in part or in full to this University or any other University or Institution for the award of any degree or diploma.

Date: **31-December-2022**

Name: **Gumpena Shashidhar**



Signature of the Student:
Regd. No. **19SEHL09**

ACKNOWLEDGEMENTS

Working on this dissertation has been an enriching journey. This journey would not have been possible without the support of many people. Firstly, I would like to thank my supervisor, Dr.K.Ramchandra rao, for his supervision and guidance at every level of research and writing of this dissertation. The numerous revisions and edits professor have helped me draw a layout of this dissertation, write chapters and conclusions with great care. His knowledge across various fields has been a constant source of excitement and inspiration.

I thank Prof. S.Sandhya for teaching Research Methodology course. This course has helped me understand research from a broader perspective. The course curriculum in itself was an invaluable source of guidance. I also thank Prof. Debashish Acharya for teaching Advanced Macroeconomic Theory. This course was equally important for me to study public finances. To quote my supervisor, ‘one cannot be an expert in public finance without being a good macroeconomist.’ I am grateful to the deans of the School of Economics Prof. K.V.Ramana.Murthy (current dean). I thank Prof. Dr.B.Nagarjuna (Research Advisory Committee) comments and inputs at the pre-submission seminar.

I thank research scholars from our university venna.vijay (PhD in Economics) for his guidance in econometrics for data analysis. I thank Siva Durga Rao (PhD in Economics) for his constant help in economics research. Further, I thank JayPrakash, Maniram and Samanth for his views on various populist schemes in Telangana and Andhra Pradesh. I also thank my batch mates who have helped me in various ways from Day 1.

I am forever grateful to my family for their continuous support and constant encouragement. It would have been impossible for me to enter research without their confidence and patience.

Considering the exigent circumstance, I thank various online web sources for making literature accessible for scholars to continue with the research. I thank the hosts of various online seminars, conferences and talks for organising the online events, they were very helpful for me in my research. Finally, I thank the school office for making the administrative work related to my course and fellowship procedures easy.

Sincerely,

Gumpena Shashidhar

AN EMPIRICAL ANALYSIS on HEALTH
SEEKING BEHAVIOUR AND OUT OF pocket
EXPENDITURE PATTERNS IN ANDHRA
PRADESH AND TELANGANA

Gumpena Shashidhar

19SEHL09

Supervisor

Dr. K. Ramachandra Rao

CONTENTS

Chapter	Title	Page no.
	<i>Acknowledgement</i>	I
		ii
	<i>List of Tables</i>	
	<i>Abbreviations</i>	
1 Introduction		
1.0	Introduction	1
1.1	Out-of-Pocket Expenditures	1
1.2	Public and Private Sector Divide	2
1.3	Health Care Expenditure in India	2
1.4	Indian Health Force	3
1.5	Health insurance in India	3
1.6	Telangana	6
1.7	Andhra Pradesh	7
1.8	Objectives of the Study	8
1.9	Research Problem	8
1.10	Methodology	9
1.11	Hypotheses	9
1.12	Limitations of the Study	10
1.13	Significance of the study	11
1.14	Layout of the Study	11
CHAPTER 2: REVIEW OF LITERATURE		
2.0	Introduction	13
2.1	Out of Pocket Medical Expenditure	13
2.2	Catastrophic Health Expenditure	15
2.3	Concentration Index	18
2.4	Morbidity	19
2.5	Health Inequalities	24
2.6	Conclusion	26
Chapter 3: DATA & METHODOLOGY		
3.0	Introduction	27
3.1	Data source	27
3.2	Limitations of the Data	28
3.3	Household Consumption Expenditure	28
3.4	Incidence of hospitalization: Probit Model	28
3.5	Inequalities in OOPME: Concentration Index	
CHAPTER 4: TRENDS ON HEALTH IN ANDHRA PRADESH AND TELANGANA STATE		
4.1	Public Expenditure in Andhra Pradesh and Telangana State	32
4.2	Out of Pocket Medical Expenditure	33
CHAPTER 5: EMPIRICAL RESULTS		
5.0	Introduction	42
5.1	Probit regression on government insured and hospitalization	43
5.2	Concentration Index Results	45
5.3	CONCLUSION	47
CHAPTER 6 CONCLUSION		48
	<i>Bibliography</i>	53

List of Tables

Table no.	Title	Page no.
3.1	Sample size of NSSO rounds of 71st and 75th.	27
4.1	Public Expenditure Trends in Andhra Pradesh	32
4.2	Public Expenditure Trends in Telangana State	33
4.3	Major Source of finance and Out of Pocket Expenditure in AP	34
4.4	Major Sources of Finance and Out of Pocket Expenditures in TS	35
4.5	Hospitalization Expenditure on various components for AP and TS 71st	38
4.6	Out of pocket expenditures for AP and TS from the NSS rounds of 71st and 75 th	38
4.7	Various insurance coverage for AP and TS	40
5.1	Probit Regression results for Andhra Pradesh for Government Insurance and Hospitalisation	42
5.2	Probit Regression results for Telangana State for Government Insurance and Hospitalisation	43
5.3	Probit Regression results for Telangana State for Government Insurance and Hospitalisation	44
5.4	Concentration Index values for the State of Andhra Pradesh	45
5.5	Concentration Index values for the State of Telangana State	46

Abbreviations

<i>AYUSH</i>	Ayurveda, Yoga and Naturopathy, Unani, Siddha, and Homeopathy
<i>BPL</i>	Below Poverty Line
<i>CGH</i>	Central Government Health Scheme
<i>CHC</i>	Community Health Center
<i>CHE</i>	Catastrophic Health Expenditures
<i>CI</i>	Concentration Index
<i>CCHS</i>	Chief Minister's Comprehensive Health Insurance Scheme
<i>DALYS</i>	Disability Adjusted Life Years
<i>DID</i>	Difference-in-Difference
<i>EAG</i>	Empowered Action Group
<i>ESI</i>	Employee State Insurance
<i>FSU</i>	First Stage Units
<i>GDP</i>	Gross Domestic Product
<i>GOI</i>	Government of India
<i>IFR</i>	Infant Mortality Rate
<i>INR</i>	Indian Rupee
<i>IP</i>	In-Patient
<i>IPD</i>	In-Patient Department
<i>MDG</i>	Millennium Development goals
<i>MHFW</i>	Ministry of Health and Family Welfare
<i>NCD</i>	Non-Communicable Disease
<i>NFHS</i>	National Family Health Survey
<i>NGO</i>	Non-Governmental Organizations
<i>NHA</i>	National Health Accounts
<i>NGO</i>	Non-Governmental Organizations
<i>NHP</i>	National Health Policy
<i>NRHM</i>	NRHM National Rural Health Mission

<i>NSS</i>	National Sample Survey Organization
<i>OECD</i>	Organization for Economic Cooperation and Development
<i>OPD</i>	Out Patient Department
<i>PFH</i>	Publicly Funded Health Insurance
<i>PHC</i>	Primary Health Center
<i>PPP</i>	Public Private Partnership
<i>RACHI</i>	Rajiv Aarogya Sri Community Health Insurance
<i>RSBY</i>	Rashtriya Swasthya Bima Yojana
<i>SDG</i>	Sustainable Development Goals
<i>UFS</i>	Urban Frame Survey
<i>USD</i>	United States Dollar
<i>USU</i>	Ultimate Stage Units
<i>VAS</i>	Vajpayee Aarogya Sri Scheme
<i>WHO</i>	WHO World Health Organization

CHAPTER 1: INTRODUCTION

1.0 Introduction

One of the goals (Goal 3) of the United Nations' Sustainable Development Agenda is dedicated to population health and well-being, and one of the specific targets of the goal is to improve financial risk protection through universal health care (UHC) (UN-DESA, 2015). Everyone should have access to high-quality healthcare as well as safe, cheap medicines and immunizations. All World Health Organization (WHO) member nations should provide universal health coverage to their whole population and protect households from catastrophic health costs, according to World Health Assembly Resolution 58.33 (WHO, Resolutions and Decisions - WHA 58.33, 2005). More than a hundred countries throughout the world have begun or completed changes to obtain universal health coverage (Obama, 2008). Despite the fact that most countries are working to ensure that their citizens have access to quality healthcare without financial constraints, 150 million people are still without it (Kastor & Mohanty, 2018).

While the family continues to be the primary source of health-care funding, excessive out-of-pocket expenses (OOPE) are increasing poverty, destitution, and indebtedness. According to Wagstaff, et al., (2018), Around 808 million people in 133 countries had catastrophic medical costs in 2010 (CHE). CHE is consistently high in low-income, uneducated, uninsured, rural, female-headed, houses with elderly residents and those with chronic illness patients across all nations. (Shahrawat & Rao, 2012). The decrease of CHE is now considered part of the socioeconomic development process.

1.1 Out-of-Pocket Expenditures

When a family member becomes ill and incurs 'out-of-pocket' medical bills, the financial consequences can be devastating. If social welfare programs are insufficient, a family can become impoverished not only from out-of-pocket medical expenses, but also from other sources. Indirectly as a result of missed employment, disability, or untimely death, is resulting in a reduction in income. Insurance lowers the cost of therapy for a family and so lowers the cost of living, the financial burden of out-of-pocket health care costs on the family and the risk of poverty connected with sickness Therefore, having insurance coverage may

make a difference. Health-care consumption (or seeking behaviour) is on the rise, and out-of-pocket health costs are rising high (high payments such as CHE go beyond amounts covered under insurance). As a result, insurance does not always imply a reduction in out-of-pocket medical expenses (Shahrawat & Rao, 2012).

1.2 Public and Private Sector Divide

In India (MoHFW, 2007), 81 percent of doctors and 58 percent of hospitals are under the private sector. Despite the fact that the private sector occupies 29% of available hospital beds in India, and available hospital beds are 62 percent. Private medical care is provided to around 78 percent of the rural population and 81 percent of the urban population. In terms of cases seen in the outpatient department (OPD), 77 percent of incidents occur in remote areas, while 80 percent occur in town areas are undertaken by the private sector (Katyal, Singh, Bergkvist, Samarth, & Rao, 2015). In India, healthcare services are becoming increasingly expensive (Thadani, 2014). The burden of OOPE is also affected by the presence of public and private sector participation and the services provided the two sectors at various levels of healthcare.

1.3 Health Care Expenditure in India

Current National Health Accounts of India 2017-18 (MoHFW, National Health Accounts 2017-18, 2021), Government Health Expenditure in India is at 1.35% as on 2017-18 (where ratio of Centre to State is at 40.8:59.2), and Total Health Expenditure is 3.31% of GDP. The ratio of government expenditure to the Total is 40.8 percent. Per capita Total Health Expenditure is at Rs. 4,297 (wherein current and capital expenditures are 88.5 percent and 11.5 percent respectively). Further, per capita Government Health Expenditure is Rs. 1753. Household Health Expenditure (incl. insu.) is 54.3 as percent of Total Health Expenditure. OOPE as percent of Total Health Expenditure is 48.8 percent, and the same as percent of GDP is 1.62! A rise in pharmaceutical expenditures which are 33.4 percent of Current Health Expenditure (OOPE).

Tertiary and secondary hospitals for approximately three-quarters of all formal curative care spending; these institutions are largely in metropolitan regions, despite the fact that rural India accounts for 70% of the population. The components of good health expenditures are such that a significant portion should be used to cover public recurrent costs. Approximately 70% of the entire health budget is spent on salaries in the healthcare delivery system and just the wages (National Health Accounts 2017-18). With a population of 1.24

billion people. India is a lower middle-income country (World Bank, 2018). India, the world's second-largest country, with a population of over 1.2 billion people. The urban population is growing at a pace of 3.18 percent per year (James, 2011).. Uttar Pradesh has a population of 120 million people, while Lakshadweep has a population of 64,473. As on 2011, in terms of age, is above the age of 65 and 49.8 percent of the population under the age of 18.

1.4 Indian Health Force

The total labour force in India is employed in the health industry, which accounts for about 2.5 percent of the total service sector. About 6.5 percent of the overall workforce is dedicated to community, social, and volunteer work, as well as personal services (Hazarika, 2013). According to India's National Sample Survey, that all practitioners (roughly 2 million) in all fields and forms of medicine excluding the public sector, 1.3 million people work in medical establishments (Karan, Selvaraj, & Mahal, 2014). PHCs (Primary Health Centers) have an 8% success rate. Doctors are in short supply, and Community Health Centers (CHCs) are 65 percent understaffed. (Yadav, Jarhyan, Gupta, & Panday, 2009). Rural areas make up only 24% of the total doctors. In comparison, 88 percent of communities do not have a health centre (Karan, Selvaraj, & Mahal, 2014). In rural areas, practitioners run 90% of the healthcare facilities.

1.5 Health Insurance in India

Around 70% of Indians might be covered by the country's current health insurance programmes, which include public programmes with government subsidies, social programmes, and private voluntary programmes of India's people. There are around 95 crore people who are eligible for health insurance, or 21.5 crore families. The real coverage is lower due to overlaps between several health insurance programmes. But based on the current situation, India could have potential health insurance coverage of 70% since government-subsidized programmes. Based on the financing resource (e.g., employees in the formal sector) and whether they are required to participate or voluntary, they can be broadly divided into three types

1.5.1 Government sponsored health insurance:

An annual coverage amount of Rs. 5.0 lakhs per family is provided by AB-PMJAY for completely subsidised comprehensive secondary and tertiary healthcare packages on a floater basis. It covers 49 million people, or 10.9 crore families, as deserving of fully subsidised

health insurance coverage, as determined by the Socio-Economic Caste Census (SECC) 2011. States and UTs have the programme in place and running.

Approximately 20 crores people are eligible for State extension programmes. State-wide expansion plans increase the population that is covered by health coverage beyond the CSS of AB-PMJAY. For instance, persons who fall below the State's specific income limits or groups like the disabled may be included in State extension programmes. Some State extension programmes may offer a more comprehensive or extensive benefits package.

1.5.2 Social Health Insurance

Working in the organised sector, these contribute-based health insurance programmes are required. Employees and employers (whether public or private entities) both contribute to government mandatory health insurance. With 13.6 crore members (as of 2019), the Employee State Insurance Scheme (ESIS) administered by Employee State Insurance Corporation (ESIC) inside the Ministry of Labour is the largest such programme. For employees of private establishments and their families, ESIS offers full coverage, including in-patient and out-patient benefits. In most industries with 10 or more employees, it applies to workers making less than Rs. 21,000 a month. Employees enrolls about 40 people, is another social health insurance programme. Furthermore, certain government departments offer unique plans to their staff members. These aren't typically insurance plans. Through independently owned and run hospitals and dispensaries, they directly provide healthcare services. For instance, central government agencies that provide both inpatient and outpatient treatments, like the Defence and Railways, have separate programmes for their personnel, veterans, and retirees. Large hospitals operated by the BSF part of the Home Ministry's paramilitary system in border regions.

1.5.3 Health insurance plans offered to the private individuals

Contributory and volunteer programmes make up PVHI. These are retail insurance policies that provide coverage for around 11.5 billion people. Individual/family and group business (excluding government) PVHI are the two main categories. As its name implies, the first category, which includes 4.2 crore people, is targeted by individuals and families. The latter is geared for private businesses and the 7.3 crore people employed by them.

1.5.4 State health insurance scheme in AP and TS

Arogyasri Scheme was launched as the state government's main programme for all health services in accordance with GO 227 dated 9th June 2006. With the goal of achieving "Health for All", to offer all the poor access to high-quality healthcare. The State Government established the Arogyasri Health Care Trust, which is headed by the Chief Minister and run by an IAS officer as Chief Executive Officer, to aid in the efficient implementation of the programme

Andhra Pradesh and Telangana, the Rajiv Arogyasri Community Health Insurance (RACHI) played a crucial role. Arogyasri is one of the most significant health insurance programmes, involving both government and private hospitals that offer free medical care. Arogyasri plan promotes public-private collaboration model to meet the demands of the people.

The scheme's goal is to increase BPL families' access to high-quality medical services for the treatment of known diseases that need hospitalisation, operations, and therapies through a predetermined network of healthcare professionals. On behalf of families who fall below the poverty line, the government pays the premium.

For covered operations, there is no need to use cash. Any hospital can accept BPL card holders and they can leave after receiving services that are covered by the programme without paying the facility anything. The same applies to diagnostic procedures if the patient ultimately decides against having surgery or other treatment. The government requires hospitals to host free health fairs, bringing advanced evaluation to the patient's door. For the benefit of patients who are illiterate, Help Desks are available at all Primary Health Centers (PHCs), which serve as the first point of contact, Area/District Hospitals, and Network Hospitals. These desks are staffed by AAROGYA MITHRAs. The district collectors served as the outsourcing channel for hiring the field employees, including Network Aarogyamithras.

There was no information available to determine the disease burden and morbidity rates in the Andhra Pradesh State prior to the introduction of the Rajiv Arogyasri Scheme, which is unique and unrivalled in the nation. According to government hospitals and the prevalence of specific ailments, it was estimated that 10% of the population is unwell and needs hospitalisation at least once a year. Out of this, 40% would require surgery and 60% would require medical care. 10% of all patients who need surgical care may require one of the surgical operations covered by the plan. Additionally, estimates for the state's massive pre-existing disease load are not available.

1.6 TELANGANA

In, Telangana has a population of 3,50,03,674 crores, or almost 2.90 percent of all Indians. According to the 2011 Census, there are 0.54 crore SC people in the State (15.62%), and there are 0.32 crore ST people. The State's population is divided between the rural and urban is 61.3% and 38.7% .

The State's birth ratio of 901 females to every 1000 men is higher than the average for the country, which are 899 members. An estimate that 10.8% of the population is under the age of 10, 59.2% is between the ages of 20 and 59, and 11% is over the age of 60. . Crude rates of birth and death have decreased from 19.1 and 7.3, respectively, in 2005 to 16.7 and 6.1, in 2019. The Gross Enrolment Rate (GER) for higher education is 36.3%, for senior secondary education it is 61.32%, for secondary education it is 82.53%, for elementary education it is 97.79%, and for primary education it is 103.02%, according to the ESAG 2018 report

1.6.1 Health infrastructure

The number of SCs (State Centres), PHCs (Primary Health Centres), and CHCs (Community Health Centres) has been rising since 2005, according to the most recent RHS data, and there is no shortage of the necessary SCs and PHCs. There are currently 4744 SCs, 636 PHCs, and 85 CHCs in rural areas. In urban areas, there are now 249 PHCs in operation as opposed to the required 343—a 27% shortage. 11 government medical colleges, 6 DHs, and 37 SDHs are located in the state. 100% of DHs, SDHs, and CHCs in the State function as functional FRUs. In tribal catchments, 1,489 SCs, 202 PHCs, and 19 CHCs are now in place,

Under the NRHM and the NUHM, respectively, the State has 89% of the necessary, and there are five public health practitioners (MOs, specialists, staff nurses, and ANMs) for every 10,000 people

1.6.2 Communicable diseases

33 operational IDSP units are currently in use by the State. The percentage of illness[CMNND] accounts for 24.86% of the burden of disease overall. The primary causes of fatalities as a result of are infant preterm delivery, diarrhoeal diseases illnesses, and dietary iron deficiency.

Compared to the national norms of 163% and 79%, The stated prevalence rate for NLEPu, 0.62 per 10,000 people, is lower than the average prevalence rate in the country, 0.61. Seven deaths from dengue have been reported in the state for FY 2019–20

16.3 Non communicable diseases

According to NFHS 5 statistics, 38.4% of the overall illness burden is caused by disability or morbidity, and 61.6% is caused by premature deaths. The three leading causes of DALYs in the state are type 2 diabetes, COPD, and ischemic heart disease. In the State, injuries account for 12.45% of DALYs whereas NCDs account for 62.68% of DALYs.

1.7 ANDHRA PRADESH

Andhra Pradesh is constituted of 13 districts and is projected to have a population of around 8.45 crores, or roughly 6.98% of all of India (RHS 2019-20). According to the 2011 Census, there are 1.38 crores (16.41%) of Scheduled Caste (SC) and Scheduled Tribe (ST) people and 0.59 crores (7%), the rural population is 66.64% of the total population, while the urban population is 33.36%.

State's birth sex ratio is higher than the national average of 899, with 920 females for every 1000 males. According to estimates, 12% of the population is above the age of 60, while 59% of the population is between the ages of 20 and 59. Crude birth and mortality rates have decreased from 19.1 and 7.3 in 2005 to 15.9 and 6.4 in 2019, respectively, the literacy rate increased, According to the ESAG 2018 data, the Gross Enrolment Rate (GER) is 30.8% for higher education and 60.16% for senior secondary.

1.7.1 Health infrastructure: SCs, PHCs, and CHCs has been rising since 2005, according to the latest RHS data. Even though the number of public health facilities has expanded over time, there are still 3.14% PHCs and 52.04% CHCs that are not enough. There are currently 1142 PHCs, 7437 SCs, and opposed to the necessary 7151 SCs, 1178 PHCs, and 295 CHCs in rural regions, there are 141 CHCs in place. Similar disparities exist in urban areas, where only 243 of the necessary 367 PHCs are in operation. There are 13 government medical colleges, 28 SDHs, and 13 DHs in the State. . As opposed to the necessary 752 SCs, 112 PHCs, and 28 CHCs, tribal catchments had 816 SCs, 158 PHCs, and 21 CHCs in the state.

Under the NRHM, MMUs are available in 13 districts throughout the State; under the NUHM, none are. In accordance with the NRHM and the NUHM, the State has practically all of the necessary ASHAs in place (about 100%). Three public health providers (MO,

specialists, staff nurse, and nurse practitioner) are present, with a doctor to staff nurse ratio of 1:2.per 10,000 people (ANM).

1.7.2 Communicable Diseases

There are 13 operational IDSP units in the State. 25.30% of the burden of disease is attributable to communicable, maternal, neonatal, and nutritional diseases (CMNND). The main causes of death are diarrheal illnesses, neonatal preterm delivery, and a lack of iron in the diet.. The stated prevalence rate for NLEPv is 0.55 per 10,000 people, which is lower than the 0.61 national norms. There have been no reported deaths in the State from dengue, malaria, or kala azar in FY 2019–20.

1.7.3Non communicable Diseases

According to RHS reports, up to 64.4% of all deaths in the State are reported to be premature, compared to 35.6% for disability or morbidity. The three leading causes of DALYs in the state are type 2 diabetes, COPD, and ischaemic heart disease. NCDs account for 63.33% of DALYs, whereas injuries account for 11.36% of State's DALYs (GBD 2019). .

1.8 Objectives of the Study

- i. To study the differences in health seeking behaviour in the states of Andhra Pradesh and Telangana State of India.
- ii. To study the impact of government insurance on health seeking behaviour in the states of Andhra Pradesh.
- iii. To study the pattern and analyse OOP medical expenditure on the people across caste, class and region (rural or urban), with government insurance, in the states of Andhra Pradesh and Telangana State in India.
- iv. To study the health inequalities across caste, class and region (rural and urban), with government insurance, in the states of Andhra Pradesh and Telangana State of India

1.9 Research Problem

India is ranked third in Southeast Asia on the “World Health Organization's” of "countries with greatest out-of-pocket (OOP) health spending," account for around 71.1 per cent of overall health expenses in India, making it one of the most expensive countries in the

world (Balarajan, Selvaraj, & Subramanian, 2013). Evidence suggests that having a high OOP is a bad thing. Many families are forced to live in poverty as a result of health-care costs (Hooda S. K., 2017). There has been an uptick in In India, there has been a huge growth in health costs as a result of GOI financing is becoming less important in overall health spending (Hooda S. , 2013). The two states of AP and TS have recently been bifurcated in 2014. There is a general rise in the cost for medical care and increasing penetration of insurance schemes at both the central and state level. Given the new situation after bifurcation, there are no studies on the two states, concerning the health seeking behaviour, insurance coverage, OOP medical expenditure and inequalities. This study is drawn from this particular research gap.

1.10 Methodology

We have used NSS dataset for the 71st and 75th rounds. We have applied two empirical tests Probit Model and Concentration Index to study the health seeking behaviour and inequalities in health. We formed falsifiable hypothesis on which the empirical testing is done. The study uses time series methodology.

1.11 Hypotheses

For the 71st and 75th rounds: same hypotheses apply for the two states.

1.11.1. *On health seeking behaviour among those with government insurance and hospitalisation in public sector and private*

H01: Government insurance schemes have not increased hospitalisation in public sector and private sector.

H11: Government insurance schemes have increased hospitalisation in public sector and private sector.

Explanation: the hypotheses are constructed to study if there is an increase in health seeking behaviour among households with government insurance.

1.11.2. Government insurance programmes have decreased the OOP medical expenditure

H02: Among those with government insurance, there is a decrease in OOP medical expenditure.

H12: Among those with government insurance, there is an increase in OOP medical expenditure.

Explanation: the hypotheses are constructed to study if there is a decrease OOP medical expenditure for people who have government insurance.

1.11.3 Government insurances and health inequalities across social groups, various classes (quintile groups), across the two regions (rural and urban).

H03: Among those with government insurance, there is a decrease in OOP medical expenditure across various social groups, various classes (quintile groups), across the two regions (rural and urban).

H13: Among those with government insurance, there is an increase in OOP medical expenditure across various social groups, various classes (quintile groups), across the two regions (rural and urban).

Explanation: the hypotheses are constructed to study the differences across social groups, various classes (quintile groups), across the two regions (rural and urban) with government insurance. The aim here is to study the difference (if any) and the burden (OOP medical expenditure) over the two periods of study.

1.12 Limitations of the Study

This study's primary limitations result from the use of secondary data of NSS conducted by National Sample Survey Office, Ministry of Statistics and Programme Implementation. Further, the study is sample survey. Therefore, limitations concerning analysing results from sample surveys and extending conclusion to the whole population apply. The study is limited by the information gathered and the methodology adopted for the primary survey. The information and questions in the Surveys are not what a programme evaluation would have done to investigate the particular research issues of this study. The lack of knowledge regarding public health insurance coverage for the poor is among the most significant issues. There are numerous publicly funded health insurance programmes in India. Another instance, medical expenditure data from the NSSO health survey is not collected in

depth and it does not distinguish between expenditures on food and non-food items. Nonetheless, keeping the limitations in mind, we have proceeded with great care in analysing the data and drawing conclusions.

1.13 Significance of the study

India actively moving steps to ensure that its citizens have access to universal health care. The backbone of UHC's mission is to provide financial security. Household expenditures for hospitalisation and inpatient facilities account for a fifth of OOP costs services. Although public health insurance programmes like the Arogyasri and others exist. Out-of-pocket expenses for outpatient treatments and prescription costs are not covered by state insurance plans. Inpatient health services are covered by these programmes. Further, the insurance programmes exist at both Central and state levels. Regardless, the cost of inpatient OOP health care has been rising, prompting concerns about the system i.e., programmes' success in providing economic security. The study adds to the growing body of literature on health seeking behaviour and OOP medical expenditure by studying the two states, AP and TS.

1.14 Layout of the Study

The dissertation studies the health conditions of households in AP and TS. The dissertation has 6 chapters. The introduction gives a brief on various aspects concerning and surrounding health of individuals and households. The study is important as it is the first comprehensive study undertaken after bifurcation of AP into two states.

The second chapter is on review of literature. This chapter explores existing literature on health seeking behaviour, health insurances, inequalities, morbidity across the globe. The study highlights various aspects relevant to the dissertational study.

The third chapter is on Data and Methodology. This chapter highlights the models used and clearly explains the data and variables under study. Further, it explains the formulation of Probit models and concentration indices which are used for our empirical testing.

The fourth chapter is on Trends in expenditure on health. This chapter covers aspects surrounding public health expenditure, OOP medical expenditure among households, insurance coverage in the two states, etc.

The fifth chapter is on empirical test results based on the formulations from chapter 3. This chapter presents in details, the results for various models created to the hypotheses posed by us. For the analysis, we have used STATA software.

The final and sixth chapter is the conclusions drawn from our analysis presenting the current situation of health status in AP and TS, identifying shortfalls and necessary interventions.

CHAPTER 2: REVIEW OF LITERATURE

2.0 Introduction

In India, the majority of health insurance policies only pay for hospital charges. High OOP health care costs and people being forced into poverty are thought to be mostly caused by insufficient health insurance coverage (Shahrawat & Rao, 2012). The present health insurance schemes in India are severely lacking, despite the fact that a portion of the hospitalisation costs for the poor are covered by these programmes. Below is a discussion of the many health insurance plans and other financial safeguards available to India's poor. The various state governments of India various health insurance schemes to reduce OOP health costs. Using concentration indices reveals significant differences in the equality aspect and occurrence of the burden of OOP healthcare spending across districts within a state. This chapter explores the literature review on OOP medical expenditure and catastrophic health expenditure, to review the burden of medical spending on people. Then, it reviews various studies with tests such as Probit model and concentration indices. The research highlighted the consequences of human illness, which is elaborated in the section on morbidity

2.1 Out of Pocket Medical Expenditure

Health care use increases with increased health insurance coverage (Anderson, Dobkin, & Gross, 2012). For instance, as coverage reduced, the inpatient hospitalisation was reduced by 61% in the United States, and 40% emergency department visits (ibid). Literature suggests that there has been an increasing access to health care is improved when people have health insurance, although the benefits are mixed.

Various studies on OOP health cost decisions from the OECD countries may be incomplete in operating/application in the developing countries. Hence India and its states are also the primary focus of this literature review. A framework for this study is provided by earlier research on catastrophic health expenditures and out-of-pocket medical expenses. To find relevant dynamics analysis frameworks, it can be helpful to evaluate prior work.

Financial coverage is underrepresented in health insurance, particularly among the impoverished recipients (Escobar, Griffin, & Shaw, 2010). Health insurance coverage for people get insurance for health care services only. It helps patients go to hospitals, rather than getting checked at the basic primary health care centres in general, patients often go the private/public hospitals. Studies have shown that annually, from 1995 to 2014, the number of

people admitted to hospitals rose from 16.6 per 1000 persons to 37.0 per 1000 persons (Pandey, Kumar, Dandona, & Dandona, 2018). With the health insurance, use of hospitals will increase for families below the poverty line for the poor.

health consequences and loss of life. This is due to the fact that medications, diagnostics, and follow-up care tests that does not come under health insurance increases out of pocket expenditure for patient care. For the people, the insurance program is not clear on the overall OOP medical costs. With health insurance, there may be some increase in health seeking behaviour, inpatient medical cost and health care use, but the number of people who experience it there might be a reduction in the OOP health care costs for patient care.

(Aggarwal, 2010), showed insurance programme in 4109 families in Karnataka on Indicative Score comparison used to identify appropriate control families' access to health care due to a community-based health insurance program have reduced OOP health care costs with services and improved health outcomes. Devadasan et al., (2013) assessed the RSBY in Gujarat and have shown evidence that RSBY scheme has increased protection. However, the authors concluded that the have increased hospitalisation did not guarantee fall in OOP payments, where median OOP payments were US \$80 used to meet medicine and diagnostics expenditure.

Fan, Karan & Mahal (2012) assessed the impact of the Arogyasree, found that the health insurance scheme has significantly reduced OOPME for hospitalization but reducing health expenditure for out-patient has no effect. Another study by (Rao, et al., 2014) found that under the Rajiv Arogyasri Community Health Insurance (RACHI) program, reduction in OOP health care spending for inpatient care. In Karnataka, (Sood, Bendavid, Mukherji, Wagner, Nagpal, & Mullen, 2014), on Vajpayee Arogyasree scheme (VAS) Insurance Program relating to consumption of hospital services and OOP health spending, basic data was collected from 572 villages, the cost shows the households experienced low OOP health costs for hospitalization under the program.

In India, from 2004 to 2014, OOP health care prices climbed by 62 percent, whereas Catastrophic Health Expenditure (CHE) increased by 17 percent, demonstrating that the monetary protection provided to consumers through the healthcare delivery system in India is still insufficient. However, in India states with varied degrees of illness transformation, there is a large variance in the magnitude of OOP and CHE payments (Pandey, Kumar, Dandona,

& Dandona, 2018). Yeshasvini community health financing programme in Karnataka has increased access to health care for insured families, however, there are differences in income categories and medical programs. The opportunity to seek inpatient services and surgical treatment among program participants is enhanced; Low-income participants have greater access to health care now when they fall ill (Aggarwal, 2010). CHI programmes in India can safeguard their members from CHE, only to a certain extent. However, if anything is designed, protection can be further increased. Changes have been made. The benefits package should be expanded. Insurers or the government are expected to keep the cost affordable and to directly subsidise the premium, in particular sections of society who are poor (Devadasan, Sedhadri, Trivedi, & Criel, 2013). Vajpayee Arogyashree Scheme, insurance protection program, that gave free tertiary consideration to families beneath the neediness line in with regards to half of towns in Karnataka from February 2010 to August 2012. The impacts of an insurance protection program covering tertiary healthcare for individuals below the poverty line in Karnataka, (on cash-based uses, clinic use, and mortality), and insuring helpless families for adequate and underused medical care, where proper administration fundamentally further develops population wellbeing.

However, smaller cross-sectional research has been carried out in a number of states in India have showed different results. (Mitchell, Mahal, & Bossert, 2011), Households with insurance plan had greater OOP fees in contrast to households with no insurance plan insurance. (Philip, Kannan, & Sarma, 2016) confirmed that utilization of healthcare was once considerably greater amongst the insured in contrast to the uninsured population important cross-sectional study conducted in Maharashtra by Ghosh (2014) found that insured families used healthservices more frequently than uninsured ones. Katyal, et al. (2015) used a quasi-experimental diagram (Pre and post diagram) with a DID based totally on a significant survey. In an international study by Selvaraj & Karan (2012), the effect of OOP hospital and health insurance the costs show the mixed result.

2.2. Catastrophic Health Expenditure

OOP health expenses go over a predetermined threshold for household expenses, catastrophic health expenditure (CHE) happens. The methodology utilised to select this threshold value varies across investigations. CHE has been used to calculate financial safety in multiple surveys across several nations. The most common way to calculate OOP the cost of health care is a percentage of income [(Berki, 1986); (Skarbinski, Walker, Baker,

Kobaladze, Kirtava, & Raffin, 2002)]. The next strategy is what the WHO refers to as the "capacity to pay approach," (Xu, Evans, Kawabata, Zeramdini, Klavus, & Murray, 2003). Another one is the 'budget sharing method', in which the OOP lives at home spending more than 25% of all housing costs is classified as a disaster (WHO, 2015). Another way is the 'cost of food' method, where the costs are defined as a disaster when OOP home health costs become higher more than 40% of non-household food costs (WHO, 2015). Between 1993 and 1998, in the first scenario, OOP health expenses are not anticipated to exceed the mentioned income percentage. The second approach is founded on the idea that households shouldn't be forced into poverty as a result of OOP health care costs.

Wagstaff & von Doorslaer (2003) have developed indicators for measuring strength as well CHE events and CHE level occurring in all leading groups. They too develop measures to measure the impact of poverty and power. If the home spends most of its health care budget, they will be compelled to pay for more items and services necessary for maintaining their home. Calculating the prevalence of CHE requires clearly defining the threshold value. Families are expected not to spend more than half of the pre-determined amount expenditure/income (Z) within the timeframe for accessing health services.

Accessibility is an important principle under the National Health Policy 2017 (National Health Accounts 2017-18) of India. In the National Health Policy, catastrophic costs having to deal with finances health care, is defined as health costs in excess of 10% of them. (Rajpal & Joe, 2018). The NHP report specifically mentions that families with CHE should drop by 25% by 2025 (GOI, 2017). Disaster health costs affect household economies and earnings or the perpetuation of poor (Garg & Karan, 2009). "Everyone's health through financial security" is the "universal health" that has prevailed over the past decade (Hooda S. K., 2015). Various choices have an impact on OOP and catastrophic medical costs. Depending on whether a country is developed or emerging, different decisions are made. Developed nations spend more on public health than developing nations do for a variety of reasons, including political stability, the effectiveness healthcare system. (Liang & Mirelman, 2014)

(Bhojani, Thriveni, Devadasan, Munegowda, & Devadasan, 2012) Evaluated OOP health costs for chronic illness conditions in the city of Bangalore, Karnataka. 9299 homes and found small homes, below poverty families. OOP payments rise as primary healthcare (primary level) transitions to secondary referral hospitals and tertiary referral hospitals in the

consultation area (tertiary level). To pay for their OOP medical expenses, households borrow money or sell assets. Even when treatment is restricted to outpatient care, OOP expenditures for incurable illnesses people become vulnerable. OOP expenditures for the treatment of chronic illnesses show that private facilities are used more frequently than public hospitals, which is further evidenced by the higher OOP use. OOP expenses for other things, such travel, meals, and illegal payments, were higher when the public sector—which has evolved into a centre of activity for consultation—was involved, according to a study—but OOP fees for medical services were also higher in the private sector. This can be as a result of the fact that public health facilities are frequently dispersed and corrupted.

Mohanty, et al., (2013) analysed the National Sample of Expenditure Cost Data. Compared to houses with non-elderly members, homes with older members have much higher OOP health costs, according to a 2009–2010 study in India looking at OOP healthcare costs for older and non-elderly people. Age, the economic status, the head of the family's educational attainment, and health costs all rise with these factors. Families with elderly members, poor families, and families with regular workers have suffered greatly when health costs are extremely high. Additional in India, Leone, James & Padmadas (2013)), studied the cost of maternal health care. Their findings revealed that rural households paid more for maternal and infant care, regardless of the economic well-being or physical condition of the city. Additionally, compared to public facilities, the price of services for maternal health was 4 times higher in private facilities. OOP health cost estimates among the elderly over 65 years old were evaluated in a study with 1000 participants that were done in Vellore, Tamil Nadu. The presence of diseases like diabetes, infectious diseases, respiratory ailments, intestinal ailments, dementia, depression, and paralysis were identified to be linked with higher OOP health costs, as were male sex, education and poor sanitation. An important conclusion of this study was that older males have larger OOP health care costs as older women. The importance of the result that older males have higher OOP healthcare spending than older women was revealed by this study (Brinda, Rajkumar, Enemark, Prince, & Jacob, 2012). Srivastava, Awasthi & Agarwal's (2009) In comparison to non-government facilities, OOP health care costs for perinatal health care have reduced significantly under primary healthcare facilities, However, OOP health costs were too high for patients admitted to private hospitals.

Research findings of Mondal, et al. (2014), showed, in comparison to non-government facilities, OOP health care costs for perinatal health care have reduced significantly under primary healthcare facilities (Daga, Mhatre, & Dsouza, 2015) examined the cost of non-medical OOP for an outpatient treatment of a child illness in the Pune region of Maharashtra State also discovered that rural households have higher out of pocket expenditures.

2.2.2 Gaps in Catastrophic Expenditure

1. Are insurance schemes effective in reducing OOP cost?
2. Are there any other indicators that make people vulnerable to health costs?
3. What are the incidents and the severity of the life of a disaster costs incurred by individuals?
4. What a catastrophic life costs contribute to poverty in the home?

High OOP health costs that are catastrophic to be obtained once the use of health care, the low purchasing power of families to pay for health care, and the lack of assistance in any methods of combining risk and prepayment (Xu, David B Evans, Carrin, Aguilar-Rivera, & Musgrove, 2007). Thus, identification of various decisions that make people have higher OOP health costs have the potential to be dangerous to push a household into poverty. Disaster health costs can plunge homes into poverty and can be depressing for the families that are poor and deeply embedded in poverty.

2.3 Literature Review of Concentration Index

The Lorenz curve's bivariate analogue is the concentration curve. It plots one variable's cumulative proportion against another variable's continuous proportion of the population. The average proportion of health across persons ranked from lowest to richest can be used to analyse income-related health inequality. The concentration curve, unlike the Lorenz curve, may be above the 45° line if the measure of ill-health is highly concentrated among variables with lower earnings. The area between the concentration curve and the 45° angle, divided by two, is the concentration index. (Wagstaff, van Doorslaer, & Paci, 1989)

The real burden of OOP spending, as assessed by the KI (Kakwani, index), is more important than the distribution of nominal OOP spending. The KI compares the distributions of consumption expenditure and OOP. On In-patient and out-patient, or chronic diseases,

OOP health expenditures included doctor consultations, hospital and market-purchased pharmaceuticals, diagnostic tests, bed costs.

The study done by Gupta, Chowdhary & Ranjan (2020) using concentration indices reveals significant differences in the equality aspect and occurrence of the burden of OOP healthcare spending across districts within a state. This is significant since national surveys, such as the NSSO, are rarely statistically representative of the district. Similarly, Shankar, et al. (2013)) in their study have shown that in the 3 states in north India, the OOP financing system in health care has progressed. Using concentration indices, he confirmed that the wealthy spend more on health services. This outcome necessitates more consideration of the poor's increased unfulfilled need and significant catastrophic spending. Because of the high out-of-pocket costs, the study's findings suggest that impoverished people may be discouraged from seeking critical medical care. Furthermore, poor people spend a higher amount of their income on basic necessities like food, leaving little money for other needs. The study estimates for OOP expenditure as a % of consumption spending for the poorer (richer) quintiles because the NSS data on household consumption do not distinguish between non-food and food expenditure

Assessing the cost of sensitive health care that is sensitive to socio-economic status. The probability measures and robustness of CHE discussed in the previous section they do not care about the socio-economic status of cities so they do not see whether poor or rich families are over the limit. , that is, regardless of the family situation poor or rich (O'Donnell, van Doorslaer, Wagstaff, & Lindelow, 2008). Wagstaff & van Doorslaer (2003) recommends r. However, the concentration curve will not measure the magnitude of the imbalance. The concentration-related indicator can be used to measure this level of inequalities associated with economic well-being in health transformation (Kakwani, Wagstaff, & van Doorslaer, 1997). In the literature, indications of deprivation have been used to measure socio-economic inequalities in a number of public health issues namely child mortality (Wagstaff, et al., 2018) childhood immunizations, child malnutrition, adult health (Doorslaer, Bleichrodt, Calonge, U G, & Gerfi, 1997), health grants and the use of health care (O'Donnell, van Doorslaer, Wagstaff, & Lindelow, 2008).

2.4 Literature Review on Morbidity

Morbidity is a medical condition of suffering from illness. The condition of the diseases suffered by family members separated more on the basis of World Health International Statistics of the Organization Disease Classification [WHO 1992]. Diseases are grouped under four stages, that is,

1. Infectious diseases (including respiratory infections, malaria, fever, intestinal infections, jaundice, TB, measles, chicken pox, skin diseases and urinary tract infections);
2. Contagious diseases (such as food allergies and endocrine, asthma and respiration lemon, diabetes, mind and brain disorders, diseases of the nervous system, diseases of the circulatory system, digestion disorders, kidney disease, pains and problems of old age);
3. Women's issues;
4. Accidents too injury.

This is almost the same as the classification adopted in World Development Report 1993 to calculate DALY (WorldBank, 1993)

In a study (Dilip, 2002) on the prevalence of disease and hospitalization in Kerala was assessed using data from the 52nd Sample National Survey Kerala Health Care Details 1995-6. The study involved 24 401 people from 4928 households. The research highlighted that age of the patients had serious consequences for human illness. Regional differences have been identified, by degrees of illnesses and hospitalization in higher-quality areas in South Kerala than in North Kerala. Features like physical access to health care services and the ability to seek health care services can make a difference and hospital treatment among small groups of people in Kerala.

The poor and the slum dwellers who may be at risk of illness of the positions they occupy, and their low living standards for preventive care. In a study of the cost of healthcare in the Jalgaon region (Ravi & Sucheta, 1989), it was observed that in urban areas, slum populations had a high morbidity. Same conclusions were also given by Nandraj, Khot & Menon (2002) that Slum dwellers suffer greatly. Lack of awareness of preventive care as well health facilities can be very difficult for slum dwellers who are new immigrants in cities from remote and rural areas places. Low-income families live in it slums and/or residential

properties are the most vulnerable to economic panics, they were treated for a serious illness, given their sole source of income is daily wage, and having a low level of savings there is a real risk of borrowing from time to time of illness.

2.4.1 Condition of the morbidity

Research on morbidity only takes personal reports of conditions of illness. All cited samples have asked two simple questions:

- a. Whether they were ill for the past 15 years and if so, what were they sick of?
- b. Whether they were admitted to hospital last 365 days and if so, why?

Their response depending on the type of counselling or sleep deprivation at that time with code using one of the 60 codes and this is the basis for describing both disease levels and patterns. There are many books, especially with accuracy in the diagnosis of such a person's illness cases, have been reported. Independent research on reported diseases is well known, estimated both underlying illnesses as well chronic illness and vision of illness is known to depend on its cultural aspects, health awareness.

2.4.2 Duration of Morbidity Disease

Severe conditions such as typhoid, malaria and diarrhoea last for a few days while chronic conditions such as diabetes, serious illness and epilepsy can last for years. Each disease takes its course of time. This, in turn, depends on the size, the treatment, if any, the strength of the subject itself, and so on. Whenever any fines are calculated, it is always recommended to calculate the SD and include this in the report so that the reader is aware of the magnitude of the variance. The onset of the illness can be the date of the first sign, the date of diagnosis, the date of the positive diagnosis, the reporting date, etc., and should be clearly stated. Discontinuities may be due to the disappearance of complaints, the ability to resume normal activities, poor examination, discharge from hospital, etc. If there are chronic conditions, the disruption of the illness period may be far from normal distribution. Unusual length of time will be more common than unusually short lengths. This causes the distribution to be removed on the right. If so, it means that it may not be a true representative

of the middle value. If the last point is death, such as leukaemia and AIDS, the period of illness is the same as the period of life.

2.4.3 Incidence of morbidity

Incidence of morbidity can be the number of times or the number of people that started over a period of time. This can be the first time a person feels sick or injured for the first time, or it can be the time when a person (or family) is first told that they have a condition they did not know before. Therefore, a child, with diabetes for a long time, is considered to have started when he or she was first diagnosed. Tuberculosis in children is about 1% per year. In Southeast Asia, the incidence of tuberculosis in people over the age of five is 0.7 to 2/1000 per year). Down syndrome (Trisomy 13) is about 2 in 10000 births.

The incidence rate may increase when reporting is improved. So, this may not be a real climb. The increase in the rate of incidence, if any, indicates that the current strategy for controlling the disease has failed. It may be necessary when other strategies are developed or improved. An analysis of the variability of events in different socio-economic, biological and geographical groups can provide useful tips for developing an advanced disease management strategy.

Note the following about the events:

- a. The incidence rate is associated with the duration of the period and can only be determined by a collection or subsequent study;
- b. The incident indicates the causative factors. This is used to construct and test the hypothesis on the etiology of the disease; and
- c. The level of incidence can also be calculated by spells or episodes on behalf of the people affected. This can count twice or more if the same person is repeated several times during the reference period as in the case of diarrhoea and asthma attacks.

2.4.4 Differences between health statistics and morbidity

Decreased mortality is often used to improve health standards (and, one might think, reduction of disease). Yet health research by number in countries that have seen declining mortality suggests that health care has gone up, failed or improved. As (Riley, 1990)reported,

medical research in Japan, the United States and Britain shows that the increase in the disease has led to the opposite side of the death rate for many years and sex groups. Riley considers six valid reasons for this practice:

- a. *Ethical response*: disease rates have risen because people have high hopes for their health and doctors have increased the flexibility in conditions considered to be an illness.
- b. *Economic situation*: people think easily or easily see them as patients due to increased disability pay and other forms of public insurance.
- c. *Diagnostic response*: because diseases, especially chronic ones, exist early detection, the incidence of these diseases has increased.
- d. *Consequences of time*: diseases that were solved in earlier times by death are now often resolved in the management of the disease or in recovery; with most diseases, the solution has moved to the next place in the study of the disease.
- e. *Consequence of formation*: death itself is the cause of the spread of the disease. In each consecutive period in the diminished period, and due to demographic change, people who could have died previously in the previous state of affairs now live longer and continuing to encounter problems for a longer period.
- f. *Effect of replacement*: chronic and degenerative diseases as well sexually transmitted diseases have replaced infections; as for, serious infectious diseases, which occur more frequently in childhood, have declined by events and power. On the other hand, other causes of death due to illness have increased with incidents.

In all, Riley observed, diseases with short studies and high incidence cases have been replaced by diseases with long journeys and low incidents; longer time for these long-study diseases exceed their low incidence in their impact on the course of the illness to people. Riley concludes that there are a variety of things that have worked to improve communities to push the disease levels up, in order to achieve higher levels of illness over and over again in health research they are not as contradictory as they appear preview. Interest in Riley's analysis, in our opinion, is his own potential help in explaining what is happening in Kerala as well.

The National Sample Survey Organization has more than forty years of experience in collecting information on illness in India. The reported information of illness they have collected may be affected by the report of the representative, health care consciousness,

quality of life and remembering the end of time. These are issues related to data collection from Health interviews for all people and many researchers studying pathology are following this method, cheap and effective. Now, we come to the partition of the disease, all the tests done in India show the relationship built between age and illness, an indication that adults and children are at risk of illness (Ghosh & Arokiasamy, 2009).

Disease estimates from interviews in India are biased against women. In the case of reading the KSSP (Kunhikannan & Aravind, 2000) Gender diversity was not important in serious illnesses but chronic illness was more important, women had a longer life expectancy than men. They say this in reporting on women's illnesses since most of the interviewees used in both trials were male (Duraismy, 1995) while reviewing 1986-87 data for Tamil Nadu found that males were reported to be overweight than women.

2.5 Health Inequalities

Health disparities, WHO defines "differences in health between groups of individuals within countries and between countries." These can be prevented because of the unequal socioeconomic situations that exist within societies. The term "social gradient of health" is used in the health discourse to describe this phenomenon of socioeconomic inequalities becoming health inequalities. While socioeconomic disparities are linked to health disparities, researchers like Amartya Sen, Robert Fogel, and Angus Deaton have demonstrated that a nation's health status also affects its economy of the nation. They assert that there is a rise in access disparities to healthcare systems. Inequality in income and wealth exists in the nation.

Negative health outcomes are inversely correlated with economic stability and labour productivity. A lack of health frequently results in lower labour output and higher healthcare costs. On the other side, good health reduces absenteeism and enhances academic performance, improves work output and results in improved life outcomes. Economic growth and inequality reduction may be sparked by good nutrition and health.

One of the results in the public health literature that has received the greatest attention is the persistence of systemic health status disparities between those with low and high SES. These disparities have been demonstrated to exist across a wide range of nations and historical periods, including the UK as well as between European nations (Mackenbach,

2012). It should come as no surprise that many empirical articles focus on mortality trends since death is one of the most objective and straightforwardly observable health outcomes.

There are two different methods for assessing health disparities. The more popular technique of evaluation, measuring social group disparities in health, is characterised by designating specific social groups a priori (for instance, assumption that there are significant social groups that represent the unequal (and frequently unfair) allocation of resources and opportunities throughout society).

According to Murray & Gakidou (1999), "the claim that social group disparities are the best method for evaluating health inequalities confounds a positive issue, the degree of inequality between individuals, and a normative question: which is more important?"

Are inequalities ever just? In response, Braveman (2014) have argued that one must be explicit about the nature of their study question. Normative judgments cannot—and should not—be avoided if a researcher is interested about equity. It is crucial to examine inequalities across social groups. It does not make sense to think about people without their social connections, which is a key argument against solely descriptive techniques.

Any method that groups people from the same demographic together because they have similar health profiles bears the risk of. According to Oxfam India's Inequality report (2021), India's expanding socioeconomic inequality is adversely affecting the healthcare outcomes of marginalized communities because Universal Health Insurance (UHC) is not yet in place. s. Children in Scheduled Castes (SC) homes are more likely to be stunted than children in general category households are, by a factor of 12.6%

The latest research from Oxfam India, according to the survey, men are better off than women, the general population outperforms SCs and STs in terms of health indicators, Hindus outperform Muslims in terms of health indicators, and the rich outperform the poor. These inequalities have been made much worse by the COVID-19 epidemic.

2.6.Conclusion

literature showed more insurance coverage increases the use of health services, Only inpatient services are covered by health insurance in India. In contrast to using health services, which often only cover outpatient treatments, the inpatients to go to hospitals and stay there. According to studies on hospitalisation patterns in India. Studies on how health insurance affects hospitalisation and out-of-pocket medical expenses around the world

provide conflicting results. According to few studies, usage of healthcare, households' failure to afford for healthcare, and a lack of financial planning. Therefore, a significant literature research shows the numerous factors that lead to large OOP health costs in individuals. High OOP health expenses could have catastrophic effects on households. Expenses for catastrophic health care may cause households to fall into poverty or deepen existing poverty in some households. The health outcomes of the various Indian states vary substantially. In this literature, concentration curves were calculated to illustrate direction and various socioeconomic categories. Households were sorted in order to determine the concentration indices on socioeconomic conditions

Chapter 3: DATA & METHODOLOGY

3.0 Introduction

This chapter explains the research methodology, as well as the data set that will be analysed. We have further presented statistical information on the data set. The study used empirical methods to analyse the data such as Probit Models and Concentration Indices to study Health Seeking Behaviour and Inequalities in Out-of-Pocket Medical Expenditure.

3.1 Data Source

The study used NSS (National Sample Survey) data given by the Ministry of Statistics & Programme Implementation of the Government of India. The National Sample Survey Office is a nodal authority to collect data under the Ministry of Statistics and Programme Implementation. NSSO was founded in 1950 to collect data on a regular basis and conduct large scale nation-wide surveys and offer helpful information in the field of socioeconomic status of the population: households, poverty, unemployment, health, education, industry, agriculture, consumer expenditure, etc. The Social Consumption data on health from the NSSO has been used for this study. The most recent nationwide statistics available in India is the NSS 71st Round for 2014, where the survey area was all India. The table below gives regions and sample households' information

3.1 Sample size of NSSO rounds of 71st and 75th.

Region / Sample HHs	71st Round			75th Round		
	Total	Rural	Urban	Total	Rural	Urban
India	17574	9554	8020	555115	325883	229232
AP and TS	1584	960	7624	17142	10784	6358
TS	-	-	-	14442	7709	6733

Data Source: NSSO 71st (2014), NSSO 75th (2018)

3.2 Limitations of the Data

No data were obtained from the floating population (those without a fixed address). Individuals who live in military-controlled residential areas, people in orphanages, rescue homes, and other similar facilities. The data from the NSSO health survey do not include specific expenditures on consumption. Food and non-food expenditures are not separated in the NSSO study. Data is required for one method of estimating catastrophic medical costs. It is also worth noting that the government reports all information. Individuals and homes were polled, and some data required a long period of memory. As a result, the information is vulnerable to strategic, recall, and other types of attacks as discussed in the previous chapter.

3.3 Household Consumption Expenditure

Total household consumption includes both money and in-kind transactions for all goods and services, as well as the monetary worth of handmade product consumption. The 71st round NSSO and NSSO 75th rounds data consists of a single dataset consumption expenditure variable. Non-subsistence consumption has no separate variable or information. The average monthly household consumption expenditure is in Indian Rupees.

3.3.1 Reference period

For institutional spending, a reference period of 365 days is used, while a reference period of one month is used for household spending. The sum that has been paid out by the medical insurance provider for inpatient care over the last 365 days. Reference period is 15 days, including the services and costs. Our investigation used 365 days as the reference period. i.e., monthly per capita expenditure is calculated for a year by multiplying the expenditure component by 12.

3.4 Incidence of hospitalization: Probit Model

Several factors influence hospitalisation. A model of probabilistic regression used to test the impact of after adjusting for other factors, the impact of enrollment in Public Health Insurance plans on the incidence of hospitalizations. Because the dependent variable is binary, a Probit regression model is preferred. "Has the person been in the hospital in the last 365 days?" a dependent variable will be used. A dichotomous hospitalisation variable will be

constructed, with 0 indicating "not hospitalised in the last 365 days" and 1 indicating "hospitalised in the last 365 days." As a result, a dependent variable will be the dichotomous variable defined for hospitalisation. For the regression analysis, there is a variable. Enrolment is one of the independent factors, variables with explanatory power. The unit of analysis is the individual.

In the ten years between 2004 and 2014, health insurance was one of the most significant policy actions in India. Several state-level health insurance plans, including Rajiv Aarogya in combined state of Andhra Pradesh (2007) and the RSBY, have been implemented (2008). The literature contains information on schemes and their coverage (Ravi & Bergkvist, 2015). There are differences in the coverage of these various plans, but they all aim to reduce the burden of hospitalization. As a result, in-patient expenses are the point of emphasis.

In this part, we'll look at whether or not possessing access to any type of health insurance increased the likelihood of someone seeking help. Over the last ten years, hospitalisation has increased in India.

In an approach to measure how insurance affects hospitalisation, we fitted a PROBIT model of the following method.

$$\Pr(y_{it} = 1 \mid hospitalisation_{it}) = \Phi(\alpha + \beta_1 \times insurance_{it} + \beta X_{it}).$$

Where y_{it} is the dummy for the catastrophic expenditure for household in the year t , insurance is a dummy variable. If the individual is insured by health insurance, the value is 1, otherwise it is 0. X_{it} is a type of vector. Φ represents the cumulative distribution function of the standard normal function. a group of controls for numerous confounding variables that affect hospitalisation. These variables are whether the individual is a scheduled caste, scheduled tribe, other backward class or other caste, quintiles, and whether the household is from a rural or urban location.

Total out-of-pocket medical expenses for inpatient care are calculated as out-of-pocket medical costs for inpatient care less any reimbursement from health insurance. The continuous variable is calculated in Indian Rupees (INR). Medical (direct) and non-medical (indirect) expenditures are the two types of hospitalisation expenses.

Package and non-package medical expenditures make up direct medical spending. Further, direct expenses include doctor's fee, medicines, diagnostic tests, hospitalisation fees,

and other medical expenses. Whereas, transportation for the patient, transportation for others, and hotel the cost of escort, meals and other expenses are examples of non-medical expenses, i.e., indirect costs.

Total Inpatient Healthcare Expenditure = (Medical Expenditure, X) + (Direct Non-Medical Expenditure,

3.5 Inequalities in OOPME: Concentration Index

There are many measures of inequality. One such widely used measure is the concentration index which we have used to analyse inequalities in healthcare burden across various groups. Concentration indices assess the disparity between the distributions of two variables (Kakwani 1977). Concentration index is a very good option for assessing socioeconomic disparities in health. The concentration index measures the degree to which people's health differs depending on their socioeconomic position. A general concentration (GC) index is expressed as:

$$GC(h|y) = \frac{1}{n} \sum_{i=1}^n [h_i(2R_i - 1)]$$

where h_i is the health variable, $2R_i - 1$ is the fractional rank and ranges between maximal poor and maximal rich that is, between $\bar{h}\left(\frac{1-n}{n}\right)$ and $\bar{h}\left(\frac{n-1}{n}\right)$ respectively.

An inequity index must meet three essential requirements:

- it must reflect the economic aspect of health inequalities;
- it must depict the perspectives of the entire population;
- it must be responsive to fluctuations in population distribution among socioeconomic categories.

The first criteria are not met by an index like the Gini coefficient. Others, like ranking, work in a similar way do not consider the other two: they only consider the experiences of groups at the extremes of the spectrum. They do not represent the population distribution and the pattern in several categories. In this regard, the concentration indices

have the advantages of meeting basic requirements and being simple to use a method of comparing inequalities between countries.

3.6 Conclusion

.The 71st round NSSO and NSSO 75th rounds data consists of a single dataset consumption expenditure variable Several factors influence hospitalisation. A model of probabilistic regression used to test the impact of after adjusting for other factors, the impact of enrolment in Public Health Insurance plans on the incidence of hospitalizations. One such widely used measure is the concentration index which we have used to analyse inequalities in healthcare burden across various groups.

CHAPTER 4: TRENDS ON HEALTH IN ANDHRA PRADESH AND TELANGANA STATE

4.0 Introduction

This chapter carefully evaluates the public expenditures trends in the states of Andhra Pradesh and Telangana. Further, this chapter analyses in detail the average medical costs per hospitalisation for government/public hospitals, for-private hospitals, and all other hospitals including the charitable/NGO/trust-run organisations. Additionally, OOPME of households under government insured and uninsured, taking the data from NSSO 71st and 75th rounds are also analysed. This chapter then moves towards studying the trends in insurance coverage.

4.1 Public Expenditure in Andhra Pradesh and Telangana State

Table 4.1: Public Expenditure Trends in Andhra Pradesh

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
<i>GHE as % GSDP</i>	0.9	0.8	0.9	0.8	0.8	0.8	0.9
<i>Per capita GHE</i>	942	981	1192	1203	1409	1346	1816
<i>GHE</i>	4805	4945	6044	6140	7229	7352	9426
<i>Population (in crores)</i>	5.01	5.04	5.07	5.10	5.13	5.16	5.19
<i>GSDP</i>	524976	604229	684416	786135	870849	971224	986611

Source: Estimates from various years' states budget reports;

Note: GHE is Government Health Expenditure, TE is Total Expenditure, GSDP is Gross State Domestic Product (current price)

(Table 4.1) As per the national health accounts estimates for India, Government health pending as a share of total GDP increased from 1.15 to 1.35 percent between 2013 and 2018. Over 80% of healthcare funding comes from state budgets, while 12% and 8%, respectively, come from the federal government and local governments (Duggal, 2021). Government health expenditures of Andhra Pradesh and Telangana for the 2014- 15 to 20120- 21, are less than 1%. When it comes to the government expenditures on government health expenditure as % of GSDP Andhra Pradesh for the years 2019-20 and 2020-21 are 0.8% and 0.9% respectively, wherein the spending as a percentage of social services is 10%

and 13% respectively as % of GSDP. Per capita Government health expenditure for AP is Rs.942 in 2014-15 and increased to Rs.1816 in 2020-21. That is, despite higher allocations towards social services by AP, per capita public spending towards health is higher in TS.

Table 4.2: Public Expenditure Trends in Telangana State

Particulars	2014-15	2015-16	2016-17	2017-18	2018-19	19-2020	2020-21
GHE as % GSDP	0.5	0.6	0.80	0.6	0.6	0.6	0.5
Per capita GHE	698	1012	1317	1330	1407	1602	1452
GHE	2559	3758	4939	5030	5375	6181	5665
Population (in crores)	3.67	3.71	3.75	3.78	3.82	3.86	3.90
GSDP	505849	577902	658325	750050	850596	965355	978373

Source: Estimates from state's budget reports

(Table 4.2) In Telangana, government health expenditures as percent of GSDP is less than 1 percent and the government health expenditures have increased from Rs. 2559 crores in 2014-15 to RS. 5665 crore in 2020-21. Per Capita of government health expenditure has increased Rs. 698 in 2014-15 to 5665 Rs in 2020-21. Despite the increase in per capita spending, spending as a percent of GSDP is very low.

4.2 Out of Pocket Medical Expenditure

In AP, out of pocket expenditures of households under government insured and uninsured, taking the data from NSSO 71st and 75th rounds are given in detail in the table below

Table 4.3: Major Source of finance and Out of Pocket Expenditure in AP

Major Source of Finance	AP 71 st			AP 75 th		
	Govt. Insured	Uninsured	Total	Govt. Insured	Uninsured	Total
HH Income/Savings (%)	54.36	56.57	55.45	56.72	59.23	57.49
Borrowings (%)	40.93	37.85	39.41	21.02	21.24	21.09
Physical Assets Sold (%)	0.01	0.01	0.01	0.00	0.00	0.00
Friends & Relatives' contribution (%)	0.02	0.03	0.03	0.10	6.57	8.68
Other sources (%)	0.01	0.01	0.01	12.48	12.69	12.55
Total number of samples	1192 (100%)	1165 (100%)	2357 (100%)	2507 (100%)	1111 (100%)	3618 (100%)
Mean OOP Expenditure (Rs.)	17649.77	16938.83	17298.07	21947.82	19160.32	21092.80
SD OOP Expenditure (Rs.)	35754.59	33372.53	34591.20	39673.85	32351.10	37597.27
Rural (Rs)	14125	15621	14885	21407	17891	20254
URBAN (RS)	21246	18438	19897	22986	22514	22862

Source: author's estimates from NSS datasets.

(Table 4.3: Major Source of finance and Out of Pocket Expenditure in AP) are given detailed in the table. In AP, expenditure from OOPME for people with government insurance schemes have increased from Rs.17649 to Rs. 21947. Similarly, the increase in OOPME in a year for uninsured households is from Rs. 16938 to Rs. 19160. That is, combined OOPME for households has increased by 21.9%. Where in the increase under government schemes and uninsured are 24.35% and 13.11% respectively. In the rural areas, the households insured under government schemes have increased their OOPME from Rs. 14125 to Rs. 21407 and increase for uninsured households is from Rs. 15621 to Rs. 17891. Both the groups have increased their spending towards health in between the two rounds of survey. In the urban areas, the households insured under government schemes have increased their OOPME from Rs. 21246 to Rs. 22986 and the increase for uninsured households is from Rs. 18438 to Rs. 22514. Both the groups have increased their spending towards health in between the two rounds of survey. Further, In urban areas, per capita spending is higher. However, the increase in OOPME in the rural sector is 51% for households with government insurance and

14% for the uninsured households. In the urban sector, for the same groups the increases are 8% and 22% respectively.

Table 4.4: Major Sources of Finance and Out of Pocket Expenditures in TS

Major Source of Finance	TS 71 st			TS 75 th		
	Govt. Insured	Uninsured	Total	Govt. Insured	Uninsured	Total
HH Income or Savings (%)	58.15	54.88	55.73	77.94	74.07	76.58
Borrowings (%)	37.84	42.19	41.06	13.77	14.23	13.95
Physical Assets Sold (%)	0.54	0.60	0.56	0.11	0.40	0.21
Friends & Relatives' contribution (%)	1.62	2.77	1.92	1.22	2.52	1.67
Other sources (%)	0.61	0.7	0.72	6.96	8.72	7.59
Total number of samples	325 (100%)	922 (100%)	1247 (100%)	1881 (100%)	991 (100%)	2872 (100%)
Mean OOPME (Rs.)	23407	27572	24492	25445.24	25154	25344
SD OOPME (Rs.)	47687	54242	49490	44543.17	44365	44474
Rural (Rs.)	21824	25527	22766	21208	22904	21809
Urban (Rs.)	25757	30377	27003	33377	29916	32245

Source: author's estimates from NSS datasets

(Table 4.4: Major Sources of Finance and Out of Pocket Expenditures in TS) are given detailed in the table. In Telangana, OOPME of households under government insured and uninsured, taking the data from NSSO 71st and 75th rounds, the mean OOPME in a year for households under government insurance schemes has increased from Rs.23407 to Rs. 25445 during the two rounds. Similarly, the increase in OOPME in a year for uninsured households is from Rs. 27572 to Rs. 25154. That is, OOPME for households has increased by 3.4%. Wherein the increase under government schemes is 8.7% and the decrease among the uninsured are 9%. In the rural sector, the households insured under government schemes have decreased their OOPME from Rs. 21824 to Rs. 21208 and decrease for uninsured households is from Rs. 25527 to Rs. 22904. Both the groups have decreased their spending towards health in the two rounds of survey. In the urban sector, the households insured under government schemes have increased their OOPME from Rs. 25757 to Rs. 33377 and decrease for uninsured households is from Rs. 30377 to Rs. to Rs. 29916. HHs from the rural and urban areas have decreased their spending towards health in the two rounds of survey, except for households in urban areas under government insurance. Per capita expenditure is

higher in urban areas. However, the decrease in OOPME in the rural areas is 3% for households with government insurance and 10% for the uninsured households. In the urban areas, the households under government insurance increased OOPME by 10%, whereas there is a decrease by 2% for uninsured households

With regard to the sources of finance for meeting health expenditure, the major chunk of spending came from household income or savings followed by borrowings. While, as a whole the share of drawing from savings and incomes has risen, there is a major fall in borrowings to meet the health expenditure. Wherein the government insured households have drawn a higher amount from income/savings and borrowings in comparison to uninsured households. Borrowings have decreased from 38% to 14% in government insured households and for uninsured households 42% to 14%. Selling physical assets for health expenditure are very low in two rounds. However, in comparison to AP selling of physical assets higher to meet medical expenditure.

Health-related variables, in addition to socioeconomic factors, have influenced the occurrence of various sources of funding. If the afflicted family member is receiving private care, distress financing in healthcare facilities seems to be high. When compared to using public healthcare facilities, the cost of using private healthcare is higher. Furthermore, if a member of the household spent many days in a hospital, a household is more likely to experience distress. Borrowings and offerings from relatives are examples of sources, as well as from acquaintances. A longer stay in the hospital will have a negative impact on the mental health with an added financial burden; as borrowings and other sources of distress are likely to distress the households. Households with health insurance are less likely to use distress financing because they are protected from the burden of out-of-pocket medical expenditure.

According to NSSO surveys, more people in rural and urban India received medical care from private hospitals, and medical costs per hospitalisation case (excluding births) were lower in rural areas than in urban areas. In both public and private hospitals, there exist "packages" of care for specific surgical or non-surgical procedures that cover costs for things like OT (operation theatre) fees, medications, doctor's fees, bed fees, and other related costs.

In today's private hospitals, this is a typical occurrence. Typically, packages do not include any diagnostic tests, associated costs, physiotherapy, personal medical equipment, blood tests, oxygen, and so on. Household expenditure per hospitalization, out of pocket

medical expenditure per public hospital is RS. 3555 and private hospitals is RS. 16032 in the rural areas of Andhra Pradesh. In urban areas, the medical expenditure is more than the rural areas. The component packages are higher in the rural and urban areas of Telangana in private hospitals. Doctor surgeon fees are high in the urban areas of Andhra Pradesh and Telangana. In private hospitals bed charges are higher compared to the public hospitals. Medicines are also higher in the private hospitals because doctors prescribe the medical shop known to them.

Table 4.5: Hospitalization Expenditure on various components for AP and TS from 71st round (in Rs.)

ITEMS	AP				TS			
	RURAL		URBAN		RURAL		URBAN	
	PUBLIC	PRIVATE	PUBLIC	PRIVATE	PUBLIC	PRIVATE	PUBLIC	PRIVATE
package component	1136	2164	245	5246	310	13824	764	7083
doc./surgeon's fee	114	3492	703	12640	30	3167	5	5518
diagnostic tests	327	1945	601	5741	333	2190	340	3455
bed charges	48	3022	77	6078	59	2290	4	2609
Other	411	1450	931	1033	309	888	414	1597
Medicines	1518	3959	1072	8211	1947	3994	1617	5059
Total	3555	16032	3629	38949	2987	26353	3144	25320

Source: author's estimates from NSS datasets

Table 4.5: (Hospitalization Expenditure on various components for AP and TS from 71st round) given in the table. According to NSSO surveys, more people in rural and urban India received medical care from private hospitals, and medical costs per hospitalisation case (excluding births) were lower in rural areas than in urban areas. In both public and private hospitals, there exist "packages" of care for specific surgical or non-surgical procedures that cover costs for things like OT (operation theatre) fees, medications, doctor's fees, bed fees, and other related costs.

In today's private hospitals, this is a typical occurrence. Typically, packages do not include any diagnostic tests, associated costs, physiotherapy, personal medical equipment, blood tests, oxygen, and so on. Household expenditure per hospitalization, out of pocket medical expenditure per public hospital is RS. 3555 and private hospitals is RS. 16032 in the rural

areas of Andhra Pradesh. In urban areas, the medical expenditure is more than the rural areas. The component packages are higher in the rural and urban areas of Telangana in private hospitals. Doctor surgeon fees are high in the urban areas of Andhra Pradesh and Telangana. In private hospitals bed charges are higher compared to the public hospitals. Medicines are also higher in the private hospitals because doctors prescribe the medical shop known to the

Table 4.6 Out of pocket expenditures for AP and TS from the NSS rounds of 71st and 75th

Particulars	AP 75 TH Round		AP 71 ST Round		TS 75 th Round		TS 71 ST Round	
	Public hospital	Private hospitals	Public hospitals	Private hospitals	Public hospitals	Private hospitals	Public hospitals	Private hospitals
Rural person	1453	22415	3582	16032	1278	22415	3309	26353
Male	1610	25373	5323	18528	1442	26887	3541	17198
Female	1262	19105	1582	12711	2687	25022	3070	37191
Urban person	1208	32847	3629	38949	6922	35191	2899	20617
Male	1470	37433	4645	54995	2275	36380	4223	25946
Female	923	27019	1959	19462	9574	33586	1727	16350

Source: author's estimates from NSS datasets

(Table 4.6) (Out of pocket expenditures for AP and TS from the NSS rounds of 71st and 75th) are given in the table. During the months of July to June 2018, i.e., 75th Round of NSSO, the average household medical spending in India, excluding childbirth, during hospitalisation at private hospitals was seven times higher than in public hospitals. In rural areas of Andhra Pradesh, the expenditure for a treatment at a public hospital was approximately Rs.1453 whereas in a private hospital it was Rs. 22415. During 71st round, the expenditure in public hospital Rs. 3582 where as in private hospitals Rs.16032. There is a huge difference in the average medical expenditure in public and private hospitals.

During the 75th Round, in rural areas of Andhra Pradesh, the expenditure for a treatment for males at a public hospital was approximately Rs. 1610, whereas in a private hospital it was Rs. 2573. During the 71st round, the expenditure in public hospitals for males was Rs. 5323 whereas in private hospitals Rs.18528. During the 75th Round, in rural areas of Andhra Pradesh, the expenditure for a treatment for females at a public hospital was approximately Rs. 1262, whereas in a private hospital it was Rs. 19105. During the 71st round, the expenditure in public hospitals for females was Rs. 1582 whereas in private hospitals Rs.12711. There is a huge difference in the average medical expenditure in public and private hospitals.

During the 75th Round, in urban areas of Andhra Pradesh, the expenditure for a treatment for males at a public hospital was approximately Rs.1470, whereas in a private hospital it was Rs. 37433. During the 71st round, the expenditure in public hospitals for males was Rs. 4645 whereas in private hospitals Rs.54995. During the 75th Round, in urban areas of Andhra Pradesh, the expenditure for a treatment for females at a public hospital was approximately Rs. 923, whereas in a private hospital it was Rs. 27019. During the 71st round, the expenditure in public hospitals for females was Rs. 1959 whereas in private hospitals Rs.19462. There is a huge difference in the average medical expenditure in public and private hospitals.

In Telangana, the average household medical spending in India, excluding childbirth, during hospitalisation at private hospitals was higher than in public hospitals.

In rural areas of Telangana, the expenditure for a treatment at a public hospital was approximately Rs.1278 whereas in a private hospital it was Rs. 22415. During 71st round, the expenditure in public hospital Rs. 3309 where as in private hospitals Rs. 26353. There is a huge difference in the average medical expenditure in public and private hospitals. During the 75th Round, in rural areas of Telangana, the expenditure for a treatment for males at a public hospital was approximately Rs. 1442, whereas in a private hospital it was Rs. 26887. During the 71st round, the expenditure in public hospitals for males was Rs. 3541 whereas in private hospitals Rs.17198. During the 75th Round, in rural areas of Telangana, the expenditure for a treatment for females at a public hospital was approximately Rs. 2687, whereas in a private hospital it was Rs. 25022. During the 71st round, the expenditure in public hospitals for females was Rs. 3070 whereas in private hospitals Rs.37191. There is a huge difference in the average medical expenditure in public and private hospitals.

During the 75th Round, in urban areas of Telangana, the expenditure for a treatment for males at a public hospital was approximately Rs.2275, whereas in a private hospital it was Rs.36380. During the 71st round, the expenditure in public hospitals for males was Rs. 4223 whereas in private hospitals Rs.25946. During the 75th Round, in urban areas of Andhra Pradesh, the expenditure for a treatment for females at a public hospital was approximately Rs. 9574, whereas in a private hospital it was Rs. 33586. During the 71st round, the expenditure in public hospitals for females was Rs. 1727 whereas in private hospitals Rs.16350. There is a huge difference in the average medical expenditure in public and private hospitals.

Table 4.7. Various insurance coverage for AP and TS

Area	71 st AP	75 th TS	75 th AP	71 st TS
Not covered				
RURAL	30.3	22.9	26.5	29
URBAN	49.5	37	59.5	50.3
Govt funded insurance scheme				
RURAL	39.3	76.1	72.9	70.3
URBAN	47	55.9	33.7	37.3
Arranged by households' insurance				
RURAL	0.2	0.8	0.5	0.3
URBAN	2.0	3.9	5.4	3.5

Source: author's estimates from NSS datasets

(Table 4.7) According to the NSSO data, in AP, during the 71st round, 30.3 percent of rural residents and 49.5 percent of urban residents did not have health-care coverage. In the 75th round, households not covered under health insurance were reduced for 26% rural residents and 59.5% for urban residents who claimed they did not have health insurance.

Of the rural population in AP, during the 71st round, only 70% claimed to be covered by health insurance provided by the government or a public utility as part of employee/employer sponsored health protection plans. Approximately 47 % of the urban people they were protected by health insurance provided by the government or a public utility as part of an employer-sponsored or employer-supported health protection system. During the 75th round, in rural areas insurance has increased to 72.9% and in urban areas, 37% were covered.

In AP, only 2% of urban residents reported having health insurance organised by their homes with private insurance companies, showing a very low prevalence of health insurance programmes. Less than 1% of rural residents have household-arranged health insurance. During the 75th round, about 0.5% in rural areas having health insurance coverage by households and increased in the urban areas about 5.4 %.

In Telangana, according to the NSSO data in 71st round 26.5 percent of rural residents and 49 percent of urban residents do not have health insurance coverage. In the 75th

round, households not covered under health insurance were reduced 22.9% for rural residents and 37% for urban residents who claimed they did not have health insurance.

Of the rural population in Telangana, during the 71st round, only 70.3% claimed to be covered by health insurance provided by the government or a public utility as part of employee/employer sponsored health protection plans. Approximately 37.3% of the urban people they were protected by health protection provided by the government or a public utility as part of an employer-sponsored or employer-supported health protection system. During the 75th round, in rural areas insurance has increased to 76.1 and in urban areas, 55.9 were covered

An exceptionally low percentage of urban residents (4%), who said their health was covered by insurance plans organised by their households with insurance firms, reported having health insurance. In rural areas, less than 1% of households had health insurance set up by households with insurance firms. In the 75th round and about 0.3 % had rural areas in health insurance coverage by households and increased in the urban areas about 3.5 %.

4.8. CONCLUSION

Government health expenditures of Andhra Pradesh and Telangana for the 2014-15 to 20120-21, are less than 1%. In AP, expenditure from OOPME for people with government insurance schemes has increased from Rs.17649 to Rs. 21947. More people in rural and urban received medical care from private hospitals, and costs per hospitalisation case were lower in rural areas than in urban areas. In AP, only 2% of urban residents reported having health insurance organised by their homes with private insurance companies. Less than 1% of rural residents have household-arranged health insurance. During the 75th round, about 0.5% in rural areas had health insurance coverage by households. In Telangana, according to the NSSO data in 71st round 26.5 percent of rural residents and 49 percent of urban residents do not have health insurance coverage. During the 75th round, in rural areas insurance has increased to 76.1 and in urban areas, 55.9 were covered.

CHAPTER 5: EMPIRICAL RESULTS

5.0 Introduction

This study's goal is to calculate how much hospitalizations and OOP inpatient care expenses change as a result of Government Health Insurance for the households. A comparison between the likelihood of hospitalizations and OOP will be used to estimate the govt insured and uninsured. In this study, probit regressions are run to study the health seeking behaviour of the households in the two states. Then, concentration model were calculated to illustrate the size and intensity of out of pocket expenditures in relation to various social groups, classes and region. Further, this chapter shows major results from empirical tests and highlights inequalities across different categories under the study.

5.1 Probit regression on government insured and hospitalization

Table 5.1 Probit Regression results for Andhra Pradesh for Government Insurance and Hospitalisation

Particulars	75 th round			71 st round		
	Hospitalization	Public	Private	hospitalization	Public	Private
<i>Govt insured</i>	.021971	-.0364768	.0364768	.0035338	-.0206115	.0206115
<i>Urban</i>	.0056749	-.0181853	.0181853	-.0019745	-.0324376	.0324376
<i>ST</i>	-.0808287	.1155022	-.1155022	.0302729	.0552001	-.0552001
<i>SC</i>	-.0103166	.0273873	-.0273873	.0290193	-.0361182	.0361182
<i>BC</i>	-.0137702	.0423377	.0423377	.0124157	-.0142783	.0142783

(Table 5.1, Probit Regression results for Andhra Pradesh for Government Insurance and Hospitalisation) are mentioned in the table. In AP, during the 75th Round, households insured under government schemes went to private hospitals when compared with government hospitals. In urban areas too, households went to the private hospitals. Health seeking behaviour is higher in OC groups when compared with ST, SC, and BC groups.

Further, the proportion of ST, SC and BC social groups seeking medical care from public hospitals is found to be higher. During the 71st round, households insured under government health insurance schemes, went to private hospitals in comparison to public hospitals. In urban areas too, households went to the private hospitals. Further, in this round also, the health seeking behaviour among ST, SC and BC social groups are less compared to OC social group. During this round, only ST and BC groups seeked higher medical care in public hospitals

Table 5.2 Probit Regression results for Telangana State for Government Insurance and Hospitalisation

Particulars	75 th round			71 st round		
	Hospitalization	Public	Private	Hospitalization	Public	Private
Govt insured	-.0246062	-.0263019	.0263019	.0318344	.0084712	-.0084712
Urban	.0033366	-.0674801	.0674801	-.0195887	-.1494466	.1494466
ST	.0339216	.0141712	-.0141712	.000046	.0479452	-.0479452
SC	.006111	-.0214818	.0214818	-.0079253	.0175968	-.0175968
BC	.0333883	-.0384359	.0384359	.0025304	.0522978	-.0522978

(Table (5.2) Probit Regression results for Telangana State for Government Insurance and Hospitalisation) has given in the table. In Telangana, during the 75th Round, households insured under government schemes went to private hospitals when compared with government hospitals. In urban areas too, households went to the private hospitals. Health seeking behaviour is higher in OC groups when compared with ST, SC, and BC groups. Further, the proportion of ST, SC and BC social groups seeking medical care from public hospitals is found to be higher. During the 71st round, households insured under government health insurance schemes, went to private hospitals in comparison to public hospitals. In urban areas too, households went to the private hospitals. Further, in this round also, the health seeking behaviour among ST, SC and BC social groups are less compared to OC social group. During this round, only ST and BC groups seeked higher medical care in public hospitals. Most from the government insured group went to the private hospitals in comparison to the public hospitals in the two rounds. In urban area households went to the

private hospitals .ST SC AND BC are going to the hospitalization less comparing to the OC Category. Both, STs & SCs went to the public hospitals more comparing to the private hospitals in the two rounds.

Table 5.3 Probit Regression of Government Insured and OOP Expenditure for AP and TS

<i>Particulars</i>	75th round	71st round	75th round	71st round
<i>Govt insured</i>	0.00000048	0.000000132	-7.00e-09	-3.14e-07
<i>Urban</i>	.0659269	.0410723	.0401537	-.0192303
<i>ST</i>	-.036184	.2143481	-.0039547	-.2216176
<i>SC</i>	.020353	.0073999	.1066396	.1189928
<i>BC</i>	-.006302	.0376405	.0797247	.0152642

Table 5.3 (Probit Regression of Government Insured and OOP Expenditure for AP and TS) are given details in the table. The private system of healthcare in India is largely uncontrolled. By setting pricing for different diagnosis groups, the private sector can be controlled so that households are sufficiently informed of the total hospital cost for their medical condition at the time of admission. In improving health seeking behaviour, this additional step will be beneficial to the people by making hospital charges more transparent. A method of safeguarding households against the unpredictability of healthcare service costs. Government hospitals are a significant provider of healthcare in India. For the poor, this is especially true. Due to a shortage of health care, infrastructure issues, and perceived bad quality, many impoverished individuals do not use government-provided healthcare facilities. Distance travelled may alter how people seek out health care. Infrastructure facilities for government healthcare facilities are being enhanced and improved.

We'll now look at the changes in a household's expenditures in each case. The primary goal is to see if there is any change in individual in-patient circumstances, and healthcare has become more expensive. As a result, by dividing costs into in-patient and health spending per case, we analyse changes in OOPME The overall findings reveal that real OOP, average cost per inpatient case, has not changed significantly over a ten-year period in rural and metropolitan areas. The rural-urban divide, on the other hand, has widened. According to the findings, urban households paid more per outpatient case than rural households. And now, ten years later, the urban scenario has changed dramatically. When we look at the evolution of

OOP across time, we get a very concerning effect for the rural population. When it comes to the social economic groups, ST households out of pocket expenditures have reduced. Among SC's, out of pocket medical expenditures have increased in Andhra Pradesh and Telangana. In BC's out of pocket expenditures were reduced in AP and increased in Telangana.

5.2 Concentration Index Results

Table 5.4: Concentration Index values for the Out of Pocket Expenditures in the State of Andhra Pradesh

Particulars	AP 71 st		AP 75 th	
	CI	SE	CI	SE
<i>Total</i>	-0.0066	0.0047	-0.00803	0.0009
<i>Rural</i>	-0.0165	0.0115	-0.0740	0.1447
<i>Urban</i>	0.0177	0.0123	-0.0385	0.0190
<i>Bottom 20%</i>	-0.0274	0.2230	-0.0385	0.0190
<i>Second 20%</i>	-0.009	0.0223	-0.0739	0.0186
<i>Middle 20%</i>	-0.0671	0.0234	-0.0031	0.0210
<i>Fourth 20%</i>	0.0357	0.0248	0.0768	0.0243
<i>Top 20%</i>	0.0654	0.0248	0.1058	0.0262
<i>ST</i>	-0.0749	0.0481	-0.0877	0.0368
<i>SC</i>	0.0095	0.0251	0.0175	0.0240
<i>OBC</i>	0.0031	0.0131	-0.0181	0.0085
<i>OC</i>	0.0027	0.0175	0.1003	0.0261

Note: CI is Concentration Index; SE is Standard Error

(Table 5.4) (Concentration Index values for the Out of Pocket Expenditures in the State of Andhra Pradesh) are given details in the table. For computing concentration index, we took the dependent variable as the out-of-pocket expenditure and independent variable as ST, SC, OBC, OC, RURAL, URBAN, MPCE is ordered in quintiles as bottom, second bottom, middle, fourth, top etc.

Overall Inequalities are more in the 71st round and the 75th round. Within AP, for the 71st Round, the expenditure burden is unequal i.e., high on households with low MPCE. That is, the inequality is high when we take MPCE as a proxy for wealth. Similarly, in the rural sector, the inequalities are higher in comparison to the urban areas. That is, there are extreme inequalities in the rural sector towards spending on health care whereas the expenditure burden across urban samples is with little inequalities. When we look at the quintiles, the

burden is disproportionately higher for lower 60% of the population. Within social groups, there are inequalities among Scheduled Tribes is higher followed by SC, BC and OC. For the 75th round, the inequalities have further increased compared to the previous round. Similarly, inequalities have increased in rural, urban areas, across all quintile groups and among the social groups. Additionally, extreme inequalities are found within the OBCs.

Within Telangana, for the 71st Round, the expenditure burden is unequally high on households with low MPCE. That is, the inequality is high if we take MPCE as a proxy for wealth. Similar is the case with rural areas where spending for medical expenditure is highly unequal compared to urban areas. When we look at the quintiles, the burden is disproportionately higher for lower 20% of the population and fourth quintile of the population. Within social groups, there are inequalities within among SC and OC groups. However, when we move towards 75th round, the inequalities have risen across broad spectrum, despite marginal decrease in overall inequality. That is, across quintile groups, it is observed that the expenditure burden is higher for the lower 80% of the population, with the top 10% of the spending moving towards another extreme.

Table 5.5 Concentration Index values for Out of pocket expenditures in the State of Telangana State

Particulars	TS 71 st		TS 75 th	
	CI	SE	CI	SE
<i>Total</i>	-0.0089	0.00610	-0.0009	0.0007
<i>Rural</i>	-0.0195	0.0137	-0.0100	0.0066
<i>Urban</i>	0.0284	0.0199	0.0213	0.0141
<i>Bottom 20%</i>	-0.0828	0.0302	-0.0222	0.0186
<i>Second 20%</i>	0.04513	0.0307	-0.0071	0.0188
<i>Middle 20%</i>	0.0311	0.0308	0.0384	0.0176
<i>Fourth 20%</i>	-0.0124	0.0365	-0.0066	0.0205
<i>Top 20%</i>	0.02496	0.03592	0.1058	0.0262
<i>ST</i>	0.0488	0.0660	0.1011	0.0399
<i>SC</i>	-0.0159	0.0363	-0.0016	0.0186
<i>OBC</i>	0.0103	0.0137	-0.0142	0.0103
<i>OC</i>	-0.0020	0.0362	0.0485	0.0156

Note: CI is Concentration Index; SI is Standard Index

(Table (5.5) Concentration Index values for Out of pocket expenditures in the State of Telangana State) are given details in the table. In terms of using medical services, data analysis reveals that significantly more people used medical services in 2014 than in 2004.

The percentage of individuals who did not seek medical attention when they were sick decreased from 15.1 to 12.4 per 1000 people. When reporting being sick, the number of persons seeking medical care has increased by 18 percent. As people's income rises in developed nations, they usually seek more medical attention (Thoa, Thanh, Chuc, & Lindholm, 2013). This does not always mean that people are ill and require medical attention. Examining the characteristics of Indian individuals' health-seeking behaviour, morbidity, and overall health-seeking behaviour. The first point to notice is the 10 percent increase in the share of sick persons in India's population between 2004 and 2019, when the three rounds are taken into account. This information is based on self-reported illness from individuals via household surveys, and it has not been independently validated. These figures, according to the NSSO, are comparable throughout time and are a significant metric to evaluate. So, in India, more people are reporting being sick than they were ten years ago.

The proportion of people who refuse medical treatment because they believe their illnesses are minor. Over the previous ten years, this number has climbed dramatically. We investigate if there is a gender component to this and discover that many more women believe their illness is not serious enough to warrant medical attention. Over the previous ten years, the gender divide has worsened.

Looking into out-patient and in-patient health-seeking behaviour, as there are variances in health decisions and morbidities. Data on whether members of the household had reported being sick and sought inpatient care in the previous 15 days is used to determine health seeking for inpatient care. Given the short recall interval, this is most likely an accurate indicator of inpatient demand in India. However, because there are considerable seasonal changes within Indian states, a simple annualization of the data for the last 15 days must be avoided.

5.3 Conclusion

In AP and Telangana, during the 75th Round, households insured under government schemes went to private hospitals when compared with government hospitals. In urban areas too, households went to the private hospitals. Health seeking behaviour is higher in OC groups when compared with ST, SC, and BC groups. When it comes to the social economic groups, ST households out of pocket expenditures have reduced. Among SC's, out of pocket medical expenditures have increased in Andhra Pradesh and Telangana. In BC's out of pocket expenditures were reduced in AP and increased in Telangana.

CHAPTER 6: Findings and policy implications

The period from 2004 to 2019 was a period in which the country implemented major policy changes regarding healthcare. This study examined Andhra Pradesh and Telangana State's health and morbidity throughout this time period in detail. We compared healthcare in AP and TS over the last few years using NSSO data from rounds 71st (2014) and 75th (2018). We looked at the changes in the AP and TS households' health-seeking behaviour over time, as well as changes in their out-of-pocket health spending and major sources of healthcare financing. We can link several of the government's key healthcare efforts to changes in health-seeking behaviour, out-of-pocket spending, and health finance.

The incidence of hospitalisation and the duration of hospitalisation are two dimensions of hospital utilisation. The occurrence suggests a necessity for and or willingness to enter a hospital. It is not unusual for people to choose to be admitted to a hospital. Patients do not make decisions; in most circumstances, people obey doctors' orders, as well as other health-care professionals. Although being ill is a risk factor, some people may choose not to seek treatment.

Some family members may not be covered by each person's insurance. Five people from the same family may only enrol in certain Indian States, and each of the five must be an adult at the time of enrolment. Therefore, even though the household is covered by the insurance plan, many members of families with more than five people may not be insured. That is, certain members may be prevented from entering and using insurance schemes because there is a lack of insurance service availability. Because non-covered members are unable to access healthcare, they may wind up having fewer hospitalizations as a result of using the system for their health needs. This impediment to using hospitals may have a negative impact on patients' health and overall well-being.

The limits of coverage, the participation of the poor in health insurance schemes is low, and the low coverage limits haven't helped generate any incentive for the patient to extend the length of his or her hospitalisation. Another factor is that doctors may be driven by a desire to provide better care. Patients are treated regardless of whether or not they have health insurance or the financial means to pay. Patients who are normally managed by the hospital's administrative departments, and thus their therapeutic judgments are made regardless of whether or not they are enrolled in health insurance.

6.1 Findings in literature review

Evidence from the literature has showed that more health insurance coverage increases the use of health services, but the impact of health insurance on financial risk protection is less evident, especially for poor beneficiaries. Only inpatient services are covered by health insurance in India. In contrast to using basic primary health care services, which often only cover outpatient health treatments, the inpatients to go to hospitals and stay there. According to studies on hospitalisation patterns in India. Studies on how health insurance affects hospitalisation and out-of-pocket medical expenses around the world provide conflicting results. According to few studies, the main conditions for the occurrence of significant OOP health expenditures, which are catastrophic, are the availability and usage of healthcare, households' failure to afford for healthcare, and a lack of financial planning. Therefore, a significant literature research shows the numerous factors that lead to large OOP health costs in individuals. High OOP health expenses could have catastrophic effects on households. Expenses for catastrophic health care may cause households to fall into poverty or deepen existing poverty in some households. The health outcomes of the various Indian states vary substantially. In this literature, concentration indices were calculated to illustrate the direction and size of the incidence and intensity of CHE in relation to various socioeconomic categories. Households were sorted in order to determine the concentration indices on socioeconomic condition Findings from review of literature

6.2 Findings from trends in Andhra Pradesh and Telangana.

Government health expenditures of Andhra Pradesh and Telangana for the 2014- 15 to 20120- 21, are less than 1%. When it comes to the government expenditures on government health expenditure as % of GSDP Andhra Pradesh for the years 2019-20 and 2020-21 are 0.8% and 0.9% and Telangana are 0.6% and 0.5%

In Telangana and Andhra Pradesh, OOPME of households under government insured and uninsured, taking the data from NSSO 71st and 75th rounds, the mean OOPME in a year for households under government insurance schemes has increased from Rs.23407 to Rs. 25445 in Telangana. Similarly, In AP, expenditure from OOPME for people with government insurance schemes has increased from Rs.17649 to Rs. 21947.

According to NSSO surveys, more people in rural and urban received medical care from private hospitals, and medical costs per hospitalisation case (excluding births) were lower in rural areas than in urban areas. In both public and private hospitals, there exist "packages" of care for specific surgical or non-surgical procedures that cover costs for things like OT (operation theatre) fees, medications, doctor's fees, bed fees, and other related costs.

Most of the insured households are from government sponsored health insurance schemes.

6.3 Findings from empirical analysis and regression model

The findings also show a link between health insurance coverage and hospitalisation in India. It's worth noting that having health insurance is strongly linked to being admitted to the hospital. In terms of out-of-pocket medical expenses, a common indicator of the burden of the disease, we observe that overall OOP spending has increased dramatically, we note that overall OOP spending has increased significantly, owing primarily to an increase in in-patient spending rather than home out-patient expenditures. In both rural and urban India, the number of households with catastrophic healthcare expenditure has significantly increased over time. Once again, urban households saw a significantly bigger increase than rural ones.

Our major findings regarding health-seeking behaviour suggest that households continue to rely heavily on private healthcare providers. However, this reliance is waning, particularly in the case of in-patient treatment. Over the previous ten years, the majority of these gains have been driven by rural women wanting more public healthcare. Our examination of the data reveals that government health insurance scheme resulted in a large rise in hospitalization in the private sector in the two states. Given that the health insurance primary goal was to increase hospitalization and reduce out of pocket expenditures.

In AP and Telangana, during the 75th Round, households insured under government schemes went to private hospitals when compared with government hospitals. In urban areas too, households went to the private hospitals. Health seeking behaviour is higher in OC groups when compared with ST, SC, and BC groups. When it comes to the social economic groups, ST households out of pocket expenditures have reduced. Among SC's, out of pocket medical expenditures have increased in Andhra Pradesh and Telangana. In BC's out of pocket expenditures were reduced in AP and increased in Telangana.

Overall Inequalities are more in the 71st round and the 75th round. Within AP, for the 71st Round, the expenditure burden is unequal i.e., high on households with low MPCE. That is, the inequality is high when we take MPCE as a proxy for wealth. Similarly, in the rural sector, the inequalities are higher in comparison to the urban areas.

Within Telangana, for the 71st Round, the expenditure burden is unequally high on households with low MPCE. That is, the inequality is high if we take MPCE as a proxy for wealth. Similar is the case with rural areas where spending for medical expenditure is highly unequal compared to urban areas. When we look at the quintiles, the burden is disproportionately higher for lower 20% of the population and fourth quintile of the population. Within social groups, there are inequalities within among SC and OC group.

According to our research, in AP and TS, Scheduled Tribes experience shorter hospital stays. Due to their chances for work in the formal sector, inability to access money, and location of habitation, this is primarily found in the mountainous and isolated tribal regions. Due to their remote location, they also have restricted access to healthcare facilities. The percentage of ST who participates in programmes for people with poor health is low, owing to access constraints that make it difficult to reach them and enrol them in programmes, as well as a lack of resources to do so.

According to our research, in AP and TS, Scheduled Tribes experience shorter hospital stays. Due to their chances for work in the formal sector, inability to access money, and location of habitation, which is primarily found in the mountainous and isolated tribal regions,. Due to their remote location, they also have restricted access to healthcare facilities. The percentage of ST who participates in programmes for people with poor health is low, owing to access constraints that make it difficult to reach them and enrol them in programmes, as well as a lack of resources to do

6.4 Policy Suggestions.

Policy-makers can help from the current study by stressing the need for developing solutions to address these drivers, strengthening financial protection systems, and monitoring catastrophe health costs and analysing the mechanisms causing them. This study helps the national and state health insurance programmes' designers create good compensation packages for those population groups by identifying the incidence, intensity, socioeconomic disparities in catastrophic health expenditures, and the impoverishing effects of catastrophic health expenditures. It also helps the central government provide increased proportion budget

allocation for the groups that have higher OOP health expenditures. This analysis will serve as the basis for assessing India's policy options to decrease the financial catastrophe brought on by medical costs.

Bibliography

- Aggarwal, A. (2010). Impact evaluation of India's 'Yeshasvini' community-based health insurance programme. *Health Econ.*
- Anderson, M., Dobkin, C., & Gross, T. (2012). The Effect of Health Insurance Coverage on the Use of Medical Services. *American Economic Journal: Economic Policy*.
- Balarajan, y., Selvaraj, s., & Subramanian, S. V. (2013). Health care and equity in India. *lancet*.
- Berki, S. E. (1986). A look at catastrophic medical expenses and the poor. *Health Aff.*
- Bhojani, U., Thriveni, B. S., Devadasan, R., Munegowda, C. M., & Devadasan, N. (2012). Out-of-pocket healthcare payments on chronic conditions impoverish urban poor in Bangalore, India. *BMC Public Health*.
- Braveman, P. (2014). What Are Health Disparities and Health Equity? We Need to Be Clear. *Public Health Rep.*
- Brinda, E., Rajkumar, A., Enemark, U., Prince, M., & Jacob, K. (2012). Nature and determinants of out-of-pocket health expenditure among older people in a rural Indian community. *International Psychogeriatrics*.
- Daga, S., Mhatre, S., & Dsouza, E. (2015). Out-of-pocket nonmedical expenses associated with out-patient treatment of common childhood illnesses. *Journal of tropical pediatric*.
- Devadasan, N., Sedhadri, T., Trivedi, M., & Criel, B. (2013). Promoting universal financial protection: evidence from the Rashtriya Swasthya Bima Yojana (RSBY) in Gujarat, India. *Health Research Policy and Systems*.
- Dilip, T. (2002). Understanding levels of morbidity and hospitalization in Kerala, India. *Bull World Health Organ*.
- Doorslaer, E. V., Bleichrodt, H., Calonge, S., U G, G., & Gerfi, M. (1997). Income-related inequalities in health: some international comparisons. *J Health Econ*.
- Duggal, R. (2021). Political Economy of Brihamumbai Municipal Corporation Budgets: Trends and consequences for Health and Education. *Economic and Political Weeklu*.
- Duraisamy, P. (1995). Determinants of Investment in Health Of Boys and Girls: Evidence from Rural Households of Tamil Nadu, India. *Indian Economic Review*.
- Escobar, M.-L., Griffin, C. C., & Shaw, P. R. (2010). *The Impact of Health Insurance in Low- and Middle-Income Countries*. Brookings Institution Press Books.
- Fan, V. Y., Karan, A., & Mahal, A. (2012). State health insurance and out-of-pocket health expenditures in Andhra Pradesh, India. *Int J Health Care Finance Econ*.
- Garg, C. C., & Karan, A. K. (2009). Reducing out-of-pocket expenditures to reduce poverty: a disaggregated analysis at rural-urban and state level in India. *Health Policy Plan*.
- Ghosh, S. (2014). Publicly-Financed Health Insurance for the Poor Understanding RSBY in Maharashtra. *Economic and Political Weekly*.

- Ghosh, S., & Arokiasamy, P. (2009). Morbidity in India: Trends, Patterns and Differentials. *Journal of Health Studies*.
- GOI. (2017). *National Health Policy* . Ministry of Health and Family Welfare,GOI.
- Gupta, i., Chowdhury, S., & Ranjan, A. (2020). Health Investment Priorities in India: A New Methodology-based Analysis of State Budgets. *Journal of Health Management*.
- Gwatkin, D. R., Rutstein, S., Johnson, K., Suliman, E., Wagstaff, A., & Amouzou, A. (2007). *SOCIO-ECONOMIC DIFFERENCES IN HEALTH, NUTRITION, AND POPULATION WITHIN DEVELOPING COUNTRIES*. World Bank, Government of Netherlands, Swedish International Development Cooperation Agency.
- Hazarika, I. (2013). Health workforce in India: assessment of availability, production and distribution. *Public Health*.
- Hooda, S. (2013). Changing pattern of health expenditure in India: Issues and challenges working paper. *ISID-PHFI Collaborative Research*.
- Hooda, S. K. (2015). Health insurance, health access and financial risk protection. *Economic and Political Weekly*.
- Hooda, S. K. (2017). Out-of-pocket Payments for Healthcare in India: Who Have Affected . *Journal of Health Management*.
- James, K. S. (2011). India's Demographic Change: Opprtunities and Challenges. *Science*.
- Kakwani, N., Wagstaff, A., & van Doorslaer, E. (1997). Socioeconomic inequalities in health: Measurement, computation, and statistical inference. *Journal of Econometrics*.
- Karan, A., Selvaraj, S., & Mahal, A. (2014). Moving to universal coverage? Trends in the burden of out-of-pocket payments for health care across social groups in India, 1999-2000 to 2011-12. *PLoS One*.
- Kastor, A., & Mohanty, S. K. (2018). Disease-specific out-of-pocket and catastrophic health expenditure on hospitalization in India: Do Indian households face distress health financing? *PLoS One*.
- Katyal, A., Singh, P., Bergkvist, S., Samarth, A., & Rao, M. (2015). Private sector participation in delivering tertiary health care: a dichotomy of access and affordability across two Indian states. *Health Policy and Planning*.
- Ke Xu 1, D. B.-R. (n.d.).
- Kunhikannan, T. P., & Aravind, K. P. (2000). Changes in the Health status of kerala 1987-1997. *kerala research centre , C D S*.
- Leone, T., James, K., & Padmadas, S. (2013). The Burden of Maternal Health Care Expenditure in India: Multilevel Analysis of National Data. *maternal and child Health Journal*.
- Liang, L. L., & Mirelman, A. J. (2014). Why do some countries spend more for health? An assessment of sociopolitical determinants and international aid for government assessment of sociopolitical determinants and international aid for government health expenditures . *Soc Sci Med*.

- Mackenbach, j. p. (2012). The persistence of health inequalities in modern welfare states: the explanation of a paradox. *Soc Sci Med*.
- Mitchell, A., Mahal, A., & Bossert, T. (2011). Healthcare utilisation in rural Andhra Pradesh. *Economic and Political Weekly*.
- Mohanty, S. K., chauhan, R. k., Mazumdar, s., & and srivastava, A. (2013). Out-of-pocket Expenditure on Health Care Among Elderly and Non-elderly Households in India. *springer science + bussiness media Dordecht*.
- Mohanty, S. K., Kim, R., Khan, P. K., & Subramanian, S. V. (2018). Geographic Variation in Household and Catastrophic Health Spending in India: Assessing the RelativeImportance of Villages, Districts, and States. *Milbank Q*, 96(1), 167-206.
- MoHFW. (2007). *Task Force on Medical Education for the National Rural Health Mission*. Government of India.
- MoHFW. (2021). *National Health Accounts 2017-18*. Government of India.
- Mondal, H, L., D, P., & B, K. (2014). Catastrophic out-of-pocket payment for healthcare and implications for household coping strategies: evidencefrom West Bengal, India. *Economics Bulletin* 34:1303-16.
- Murray, C. J., & Gakidou, E. E. (1999). Health inequalities and social group differences: what should we measure? *Bulletin of the World Health Organisation*, 77(7): 537–543.
- Nandraj, s., Khot, A., & Menon, s. (2002). A stakeholder approach towards hospital accreditation in India. *Health Policy and Planning* .
- NSSO. (2014). *Social Consumption: Health 71st Round*. Retrieved from microdata.gov.in: <http://microdata.gov.in/nada43/index.php/catalog/135>
- NSSO. (2018). *Household Social Consumption: 75th Round*. Retrieved from microdata.gov.in: <http://microdata.gov.in/nada43/index.php/catalog/152>
- O'Donnell, O., van Doorslaer, E., Wagstaff, A., & Lindelow, M. (2008). *Analyzing health equity using household survey data: A guide to techniques and their implementation*. Washington DC: World Bank.
- Obama, B. (2008). Affordable health care for all Americans: the Obama-Biden plan. *National Library of MEedicine*.
- Oxfam. (2021). *Inequality Report* . Oxfam India.
- Pal, R. (2012). Measuring incidence of catastrophic out-of-pocket health expenditure: with application to India. *International Journal of Health Care Finance and Economics*.
- Pandey, A., Kumar, A. G., Dandona, R., & Dandona, L. (2018). Variations in catastrophic health expenditure across the states of India: 2004 to 2014. *PLoS ONE*.
- Philip, N. E., Kannan, S., & Sarma, S. P. (2016). Utilization of Comprehensive Health Insurance Scheme, Kerala: A Comparative Study of Insured and Uninsured Below Poverty-Line Households. *Asia Pac J Public Health*.

- Rajpal, S., & Joe, W. (2018). Measuring catastrophic healthcare expenditure . *Economic and Political Weekly*, 53, 22-25.
- Rao, M., Katyal, A., Singh, P. V., Samarth, A., Bergkvist, Kancharla, M., et al. (2014). Changes in addressing inequalities in access to hospital care in Andhra Pradesh and Maharashtra states of India: a difference-in-differences study using repeated cross-sectional surveys. *BMJ Open*.
- Ravi, d., & Sucheta, A. (1989). Cost of Health Care.: A Household Survey in an Indian District, Foundation for Research in CommunitySurvey in an Indian District, Foundation for Research in Community health,Bombay.
- Ravi, S., & Bergkvist, S. (2015). Are Publicly Financed Health Insurance Schemes Working in India? *India Policy Forum*.
- Renu, S., & Krishna, D. (2012). Insured yet vulnerable: out-of-pocket payments and India's poor. *Health Policy Plan*.
- Riley, J. (1990). *life expectancy*. World Bank, WHO.
- Selvaraj, S., & Karan, A. K. (2012). Why publicly-financed health insurance schemes are ineffective in providing financial risk protection. *Economic and Political Weekly*.
- Shahrawat, R., & Rao, K. D. (2012). Insured yet vulnerable: out-of-pocket payments and India's poor. *Health Policy Plan*.
- Shankar, P., Neha, M., Arun Kumar, A., Manmeet, K., Gursimer, J., & Rajesh, K. (2013). Cost & efficiency evaluation of a publicly financed & publicly delivered referral transport service model in three districts of Haryana State, India. *Indian J Med Res*.
- Skarbinski, J., Walker, H. K., Baker, L. c., Kobaladze, A., Kirtava, Z., & Raffin, T. A. (2002). The burden of out-of-pocket payments for health care in Tbilisi, Republic of Georgia. *Jama*, 287(8), 1043-1049.
- Sood, N., Bendavid, E., Mukherji, A., Wagner, Z., Nagpal, S., & Mullen, P. (2014). Government health insurance for people below poverty line in India: quasi-experimental evaluation of insurance and health outcomes. *BMJ*.
- Srivastava, N. M., Awasthi, S., & Agarwal, G. G. (2009). Care-seeking behavior and out-of-pocket expenditure for sick newborns among urban poor in Lucknow, northern India:a prospective follow-up study. *BMC Health Serv Res*.
- Thadani, K. (2014). Public Private Partnership in the Health Sector: Boon or Bane. *Procedia - Social and Behavioral Sciences*.
- Thoa, N. T., Thanh, N. X., Chuc, N. T., & Lindholm, L. (2013). The Impact of Economic Growth on Health Care Utilization: a Longitudinal Study in Rural Vietnam. *International Journal for Equity in Health*.
- UN-DESA. (2015). *Sustainable Development Goals*. United Nations, Department of Economic and Social Affairs, Sustainable Development.
- V.Y.Fan, Karan, A., & Mahal, A. (2012). State health insurance and out-of-pocket health expenditures in Andhra Pradesh, India. *International Journal of Health Care Finance and Economics*.

- Wagstaff, A., & van Doorslaer, E. (2003). Catastrophe and impoverishment in paying for health care: with applications to Vietnam 1993-1998. *Health Econ*, 12(11), 921- 934.
- Wagstaff, A., Flores, G., Hsu, J., Smitz, M.-F., Chepyogna, K., Buisman, L. R., et al. (2018). Progress on catastrophic health spending in 133 countries: a retrospective observational study. *Lancet Global Hjealth*.
- Wagstaff, A., van Doorslaer, E., & Paci. (1989). Equity in the Finance and Delivery of Health Care: Some Tentative Cross-Country Comparisons. *Oxford Review of Economic Policy*.
- WHO. (2005). *Resolutions and Decisions - WHA 58.33*. WHO.
- WHO. (2015). *Tracking universal health coverage: first global monitoring report*. WHO.
- WorldBank. (1993). *world development report*.
- Xu, K., David B Evans, B., Carrin, g., Aguilar-Rivera, A. M., & Musgrove, p. (2007). Protecting households from catastrophic health spending. *Health Aff (Millwood)*.
- Xu, K., Evans, D. B., Kawabata, K., Zeramdini, R., Klavus, J., & Murray, C. J. (2003). Household catastrophic health expenditure: a multicountry analysis. *Lancet*.
- Yadav, K., Jarhyan, P., Gupta, V., & Panday, C. S. (2009). Revitalizing Rural Health Care Delivery: Can Rural Health Practitioners be the Answer? *Indian Journal of Community Medicine*.



Librarian
Indira Gandhi Memorial Library
UNIVERSITY OF HYDERABAD
Central University P.O.
HYDERABAD-500 046.

AN EMPIRICAL ANALYSIS ON HEALTH SEEKING BEHAVIOR AND OUT OF pocket EXPENDITURE PATTERNS IN ANDHRA PRADESH AND TELANGANA.

by Gumpena Shashidhar

Submission date: 30-Dec-2022 04:16PM (UTC+0530)

Submission ID: 1987452688

File name: MPHIL_DESSERTATION_SHASHIDHAR_1.pdf (894.54K)

Word count: 17849

Character count: 94375

AN EMPIRICAL ANALYSIS ON HEALTH SEEKING BEHAVIOR AND OUT OF pocket EXPENDITURE PATTERNS IN ANDHRA PRADESH AND TELANGANA.

ORIGINALITY REPORT

5%

SIMILARITY INDEX

4%

INTERNET SOURCES

3%

PUBLICATIONS

0%

STUDENT PAPERS

PRIMARY SOURCES

1	nhs.uk Internet Source	1%
2	bmchealthservres.biomedcentral.com Internet Source	1%
3	"Muslims in Telangana", Springer Science and Business Media LLC, 2021 Publication	<1%
4	www.think-asia.org Internet Source	<1%
5	Mădălina Gherman. "Does innovation influence the performance of medical care organizations?", Repositório Aberto da Universidade do Porto, 2014. Publication	<1%
6	pt.scribd.com Internet Source	<1%
7	desmanipur.gov.in Internet Source	<1%

8	Shyamkumar Sriram, Muayad Albadrani. "A STUDY OF CATASTROPHIC HEALTH EXPENDITURES IN INDIA - EVIDENCE FROM NATIONALLY REPRESENTATIVE SURVEY DATA: 2014-2018", F1000Research, 2022 Publication	<1 %
9	www.knbs.or.ke Internet Source	<1 %
10	thesis.eur.nl Internet Source	<1 %
11	Submitted to Manchester Metropolitan University Student Paper	<1 %
12	hdl.handle.net Internet Source	<1 %
13	Shyamkumar Sri, Mahmud Khan. "Effect of Health Insurance Program for the Poor on Out-Of-Pocket Inpatient Care Cost in India", Research Square, 2020 Publication	<1 %
14	www.freepressjournal.in Internet Source	<1 %
15	www.successcds.net Internet Source	<1 %
16	Amitava Saha. "An Assessment of Gender Discrimination in Household Expenditure on	<1 %

Education in India", Oxford Development Studies, 2013

Publication

17

www.oxfamindia.org

Internet Source

<1 %

18

Hriday Arora, Alka Gupta, Divya Gupta. "Impact of Coronary Stent Price Regulation Section on the Interventional Cardiology Landscape of India: An Assessment of Health Economics Outcomes", JOURNAL OF CLINICAL AND DIAGNOSTIC RESEARCH, 2022

Publication

<1 %

19

le R Booysen, Frederik. "HIV/AIDS, poverty and risky sexual behaviour in South Africa", African Journal of AIDS Research, 2004.

Publication

<1 %

20

Michael Keane, Ramna Thakur. "Health Care Spending and Hidden Poverty in India", Research in Economics, 2018

Publication

<1 %

21

www.studymode.com

Internet Source

<1 %

22

yourstory.com

Internet Source

<1 %

Exclude quotes On

Exclude bibliography On

Exclude matches

< 14 words



SI No. 19002

Notification No. 2

हैदराबाद विश्वविद्यालय

UNIVERSITY OF HYDERABAD

(A Central University Established by an Act of Parliament)

P.O. CENTRAL UNIVERSITY, GACHIBOWLI, HYDERABAD - 500 046 (INDIA)

SEMESTER GRADE TRANSCRIPT**REGULAR EXAMINATION**

REG. NO. 19SEHL09
NAME OF THE STUDENT GUMPENA SHASHIDHAR
MONTH AND YEAR OF EXAM NOV 2019
COURSE M.Phil. ECONOMICS
PARENT'S NAME G KARNAKAR / G SAVITHRI

**SEMESTER 1**

COURSE NO	TITLE OF THE COURSE	GRADE	CREDITS	RESULTS
EC701	RESEARCH METHODOLOGY	B	4	PASS
EC723	ADVANCED MACROECONOMIC THEORY	C	4	PASS
EC724	ADVANCED HEALTH ECONOMICS	C	4	PASS

SEMESTER GRADE POINT AVERAGE (SGPA) : **6.33**(In words) : **SIX POINT THREE THREE**Date Of Result Notification : **Jan 29, 2020**

Pattern of Evaluation is based on 6 letter grades on a 10 point scale.

LETTER GRADE	A+	A	B+	B	C	F
CREDITS	10	9	8	7	6	0

Date Of Download : **Dec 27, 2022****DEPUTY REGISTRAR
(ACAD & EXAMS)**

This is system generated certificate issued by O/o The Controller of Examinations, University of Hyderabad



SI No. 25355

Notification No. 1

हैदराबाद विश्वविद्यालय

UNIVERSITY OF HYDERABAD

(A Central University Established by an Act of Parliament)

P.O. CENTRAL UNIVERSITY, GACHIBOWLI, HYDERABAD - 500 046 (INDIA)

SEMESTER GRADE TRANSCRIPT**REGULAR EXAMINATION**

REG. NO. 19SEHL09
NAME OF THE STUDENT GUMPENA SHASHIDHAR
MONTH AND YEAR OF EXAM JUN 2020
COURSE M.Phil. ECONOMICS
PARENT'S NAME G KARNAKAR / G SAVITHRI

**SEMESTER 2**

COURSE NO	TITLE OF THE COURSE	GRADE	CREDITS	RESULTS
EC751	STUDY AREA PAPER	B+	4	PASS

SEMESTER GRADE POINT AVERAGE (SGPA) :8.00

(In words) :EIGHT POINT ZERO ZERO

Date Of Result Notification : **Aug 3, 2021**

Pattern of Evaluation is based on 6 letter grades on a 10 point scale.

LETTER GRADE	A+	A	B+	B	C	F
CREDITS	10	9	8	7	6	0

Date Of Download : **Dec 27, 2022**


DEPUTY REGISTRAR
(ACAD & EXAMS)

This is system generated certificate issued by O/o The Controller of Examinations, University of Hyderabad



SIXTH ANNUAL CONFERENCE OF TELANGANA ECONOMIC ASSOCIATION (TEA)

12th and 13th March, 2022

Organised by
Department of Applied Economics
Telangana University, Nizamabad, T. S.

Certificate

This is to certify that Prof./Dr./ Mr. / Mrs.....*Gumpena Shashidhar. UoH*.....College/University
has participated/presented a paper entitled *Inequities in out-of-pocket expenditures in AP & TS*
in the **Sixth Annual Conference of Telangana Economic Association (TEA)** organized by the Department of
Applied Economics, Telangana University, Nizamabad, on 12th and 13th March, 2022.

[Signature]
Dr. A. Punnaiah

Local Organising Secretary

[Signature]
Mr. T. Sampath

Local Secretary

[Signature]
Prof. B. Shiva Reddy

Secretary TEA

[Signature]
Prof. N. Linga Murthy

President TEA