

**MORBIDITY AND HEALTHCARE UTILISATION  
AMONG WOMEN: A COMPARATIVE STUDY OF  
KERALA AND UTTAR PRADESH**

*Dissertation submitted to Jawaharlal Nehru University*

*in partial fulfillment of the requirements*

*for the award of the degree of*

**MASTER OF PHILOSOPHY**

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INDIA  
2012**

## Acknowledgement

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This M.Phil Dissertation is a product of contributions made by scholars, people, agencies, institutions known and unknown. I take this opportunity to express my gratitude to Dr. Anuradha Banerjee my teacher, mentor and supervisor who guided me through her unstinted support, diligent efforts, healthy criticism and constructive suggestions throughout the course of my work.

During the process of writing a dissertation we are assisted and helped by a number of people I take this opportunity to thank one and all who in some way or the other has contributed to this work. Apart from my teachers, I am also indebted to the University Grants Commission for providing me the financial assistance (Junior Research Fellowship) for two consecutive years during the research work.

I want to express my gratitude to the staff members of JNU Library and Documentation Unit of the CSRD for continuously helping me in accessing books, maps and documents. Godavari Dhabha has been my savior in terms of providing me the innumerable cups of tea that I gulped slogging through nights working on my dissertation. My scooty was very helpful for running errands time and again during the course of this work and definitely listening to *gaana.com* during the breaks I took lifted up my spirit and used to fill me with a new zeal to start working again.

First and foremost I want to thank Arvind, since the beginning of the dissertation till the completion; he has been my mentor throughout. This work wouldn't have been possible if it was not for my friend Arvind's relentless support and help. His unhindered help has surely made this work take its final shape as intended. It was great to have copious discussions with him over tea from the time my work was in its incipient stage till its maturity and his suggestions, ideas and criticisms has undeniably enriched this work.

I am filled with gratitude towards my friends who have always stood by me whenever needed: Eshita, Pragya, Renu, Rachna, Ritumoni, Anamika, Shalini, Nehu, Farida, Shamim, Arpita, Atul, Baiku, Joseph, Nidhi, Sahana, Mansa, Suaiba, Shiv, Santosh, Amitra, Anuj bhaiya and Rakesh bhaiya. I am indebted for life to Ruchira, Krishna, Chandu, Pooja, Nima, Prabhat and Sandip who have contributed in all possible manners to make this work possible. And I specially thank Akhi for his support and all his bickering which kept me going. My roommate Tripti who was all ears to my emotional and other problems and kept my moral high consistently. With all my heart I want to thank my friends Urvashi and Leena who have always stood by me through thick and thin.

I am short of words to express my gratitude to my family members, specially my parents (Mr. J S P Yadav and Mrs Anita Yadav) who have been patient and have looked up to me. Without their blessings, love, emotional and moral support, this study would not have been possible. I am thankful to my brother Abhishek, sister Smita and Soni, my neice Jiya and Ashi, my nephew Aarav and brother in law Jitendra Kumar and Alok Ranjan for their commendable emotional support. And at last but not the least, I am thankful to the almighty "Sai Baba" for the grace and blessings showered upon me.

Despite taking help from teachers, friends, seniors, juniors, institutes, and many of the persons known and unknown, any error of omissions or commission, if remains, is solely mine. All suggestions and criticisms will be gratefully acknowledged.

JNU, New Delhi

MEENAKSHI

# CONTENTS

	<b>Page No.</b>
Acknowledgements	
List of Tables	
List of Figures	
List of Maps	
Abbreviations	
<b>Chapter-I Introduction</b>	<b>1-29</b>
1.1 Introduction	
1.2 Statement of Problem	
1.3 Review of Literature	
1.3.1 Health Status in India	
1.3.2 Morbidity	
1.3.2(a) Trends and Patterns of Diseases in India	
1.3.2(b) Morbidity among Women in India	
1.3.2(c) Levels and Differentials of Morbidity	
1.3.3 Treatment of Ailments and Healthcare Utilisation	
1.3.4 Public Private Dichotomy in Healthcare Services	
1.4 Conceptual Framework	
1.5 Objectives	
1.6 Hypothesis	
1.7 Database	
1.8 Methodology	
1.9 Limitations	
1.10 Organisation of Dissertation	
<b>CHAPTER-II Trends and Patterns of Morbidity in India</b>	<b>30-49</b>
2.1 Interstate Differentials in Morbidity Prevalence Rate	
2.2 Rural-Urban Differentials in Morbidity Prevalence Rate	
2.3 Prevalence Rate of Morbidity among Women across Sectors in India	
2.4 Comparative Study of Morbidity among Women in Kerala and Uttar Pradesh	
2.5 Comparative study of the type of ailment by background characteristics in Kerala and Uttar Pradesh	
2.6 Logistic Regression Model	
2.6.1 Determinants of Morbidity	
2.6.2 Variables used in the analyses	
2.6.3 Model-I (Dependent Variable is Acute Disease)	
2.6.4 Model-II (Dependent Variable is Chronic Disease)	
2.7 Summary	

<b>CHAPTER-III</b>	<b>Intra-Regional Variations of Morbidity among Women in Kerala and Uttar Pradesh</b>	<b>50-68</b>
	3.1 Introduction	
	3.2 Intra-Regional Variation of Prevalence of Morbidity among Women in Kerala by Background Characteristics	
	3.2.1 Status of Women in Kerala	
	3.2.2 Intra-Regional Variation of Prevalence of Morbidity among Women by Age Group in Kerala	
	3.2.3 Intra-Regional Variation of Prevalence of Morbidity among Women by Social Groups in Kerala	
	3.2.4 Intra-Regional Variation of Prevalence of Morbidity among Women by Marital Status in Kerala	
	3.2.5 Intra-Regional Variation of Prevalence of Morbidity among Women by Educational Status in Kerala	
	3.2.6 Intra-Regional Variation of Prevalence of Morbidity among Women by Religion in Kerala	
	3.3 Intra-Regional Variation of Prevalence of Morbidity among Women in Uttar Pradesh by Background Characteristics	
	3.3.1 Status of Women in Uttar Pradesh	
	3.3.2 Intra-Regional Variation of Prevalence of Morbidity among Women by different Age Groups	
	3.3.3 Intra-Regional Variation of Prevalence of Morbidity among Women by Social Groups in Uttar Pradesh	
	3.3.4 Intra-Regional Variation of Prevalence of Morbidity among Women by Marital Status in Uttar Pradesh	
	3.3.5 Intra-Regional Variation of Prevalence of Morbidity among Women by Educational Status in Uttar Pradesh	
	3.3.6 Intra-Regional Variation of Prevalence of Morbidity among Women by Religion in Uttar Pradesh	
	3.3.7 Intra-Regional Variation of Prevalence of Morbidity among Women by Monthly per Capita Expenditure in Uttar Pradesh	
	3.4 Summary	
<b>CHAPTER-IV</b>	<b>Nature of Ailments among Women and Socio-Economic Correlates in Kerala and Uttar Pradesh</b>	<b>69-86</b>
	4.1 Introduction	
	4.2 Classification of Diseases	
	4.3 Pattern of Nature of Ailments in Kerala	
	4.3.1 Pattern of Diseases among Women by Sectors in Kerala	

4.4	Pattern of Nature of Ailments in Uttar Pradesh	
4.4.1	Pattern of Disease among Women by Sectors in Uttar Pradesh	
4.5	Comparative study by type of Ailments among women in Kerala and Uttar Pradesh	
4.6	Summary	
<b>CHAPTER-V</b>	<b>Utilisation of Healthcare Services and Burden of Health Expenditure</b>	<b>87-110</b>
5.1	Introduction	
5.2	Utilisation of Healthcare Services in Kerala and Uttar Pradesh	
5.2.1	Utilisation of Healthcare Services by Social Groups of Women in Kerala and Uttar Pradesh	
5.2.2	Healthcare Utilisation by Monthly per Capita Consumption Expenditure of Women in Kerala and Uttar Pradesh	
5.3	Treatment of Major Diseases and Utilisation of Health Care Facilities in Kerala and Uttar Pradesh	
5.4	Burden of Health Expenditure among Women in Kerala and Uttar Pradesh	
5.5	Source of Financing Healthcare	
5.6	Summary	
<b>CHAPTER-VI</b>	<b>Conclusion</b>	<b>111-117</b>
	<b>Bibliography and References</b>	<b>i-xii</b>
	<b>Appendices</b>	<b>xiii-xvii</b>

**S.No.****List of Tables**

- 2.1 Comparison of PAP in Kerala and Uttar Pradesh by Age Groups and MPCE
- 2.2 Comparison of PAP in Kerala and Uttar Pradesh by Marital Status and MPCE
- 2.3 Comparison of PAP in Kerala and Uttar Pradesh by Social Groups and MPCE
- 2.4 Prevalence of Ailment by Background Characteristics in Kerala
- 2.5 Prevalence of Ailment by Background Characteristics in Uttar Pradesh
- 2.6 Determinants of Acute Morbidity Logistic regression of Kerala and Uttar Pradesh (1 if it is acute and 0 if no)
- 2.7 Determinants of Chronic Morbidity Logistic regression of Kerala and Uttar Pradesh (1 if it is acute and 0 if no)
- 3.1 Prevalence of Morbidity (PAP) by different Age Groups in the Regions of Kerala by Sectors
- 3.2 Prevalence of Morbidity (PAP) by different Social Groups in the Regions of Kerala by Sectors
- 3.3 Prevalence of Morbidity (PAP) by Marital Status in the Regions of Kerala by Sectors
- 3.4 Prevalence of Morbidity (PAP) by Educational Status in the Regions of Kerala by Sectors
- 3.5 Prevalence of Morbidity (PAP) by Religious Groups in the Regions of Kerala by Sectors
- 3.6 Prevalence of Morbidity (PAP) by Monthly Per Capita Consumption Expenditures in the Regions of Kerala by Sectors
- 3.7 Prevalence of Morbidity (PAP) by different Age Groups in the Regions of Uttar Pradesh by Sectors
- 3.8 Prevalence of Morbidity (PAP) by different Social Groups in the Regions of Uttar Pradesh by Sectors

- 3.9** Prevalence of Morbidity (PAP) by Marital Status in the Regions of Uttar Pradesh by Sectors
- 3.1** Prevalence of Morbidity (PAP) by Educational Status in the Regions of Uttar Pradesh by Sectors
- 3.11** Prevalence of Morbidity (PAP) by Religious Groups in the Regions of Uttar Pradesh by Sectors
- 3.12** Prevalence of Morbidity (PAP) by Monthly per Capita Consumption Expenditures in the Regions of Uttar Pradesh by Sectors
- 4.1** Distribution of Ailments according to ICD-10 Classification in Kerala
- 4.2** Pattern of Diseases by Type of Ailments and Sectors among Women according to ICD-10 in Kerala
- 4.3** Distribution of Ailments according to ICD-10 Classification in Uttar Pradesh
- 4.4** Pattern of Diseases by Type of Ailments and Sectors among Women, according to ICD-10 in Uttar Pradesh
- 4.5** Distribution of Ailments by Type of Diseases and Age Groups
- 4.6** Distribution of Ailments by Type of Diseases and Marital Status
- 4.7** Distribution of Ailments by Type of Diseases and Social Groups
- 4.8** Distribution of Ailments by Type of Diseases and Educational Status
- 4.9** Distribution of Ailments by Type of Diseases and MPCE
- 5.1** Healthcare Utilisation by Social Groups of Women in Kerala
- 5.2** Healthcare Utilisation by Social Group of Women in Uttar Pradesh
- 5.3** Healthcare Utilisation by Monthly Per Capita Consumption Expenditure of Women in Kerala
- 5.4** Healthcare Utilisation by Monthly per Capita Consumption Expenditure of Women in Uttar Pradesh



- 5.5** Utilisation of Health Services by Source of Treatment and Social Groups of Women in Rural Kerala
- 5.6** Utilisation of Health Services by Source of Treatment and Social Groups of Women in Urban Kerala
- 5.7** Utilisation of Health Services by Source of Treatment and Social Groups of Women in Rural Uttar Pradesh
- 5.8** Utilisation of Health Services by Source of Treatment and Social Groups of Women in Urban Uttar Pradesh
- 5.9** Utilisation of Health Services by Source of Treatment and different MPCE classes of Women in Rural Kerala
- 5.10** Utilisation of Health Services by Source of Treatment and different MPCE classes of Women in Urban Kerala
- 5.11** Utilisation of Health Services by Source of Treatment and different MPCE classes of Women in Rural Uttar Pradesh
- 5.12** Utilisation of Health Services by Source of Treatment and different MPCE classes of Women in Urban Uttar Pradesh
- 5.13** Burden of Health Expenditure by Social Groups of Women in Kerala
- 5.14** Burden of Health Expenditure by Social Groups of Women in Uttar Pradesh
- 5.15** Burden of Health Expenditure by Different MPCE Classes of Women in Kerala
- 5.16** Burden of Health Expenditure by Social Groups of Women in Uttar Pradesh
- 5.17** Source of Financing by Social Groups of Women in Rural Kerala
- 5.18** Source of Financing by Social Groups of Women in Urban Kerala
- 5.19** Source of Financing by Social Groups of Women in Rural Uttar Pradesh
- 5.20** Source of Financing by Social Groups of Women in Urban Uttar Pradesh



**S.No.**

**Appendices**

- A** Sample –size of households surveyed in central survey of NSS 60th round
- B** State-Wise Prevalence of Morbidity (PAP)
- C** Concepts and Definitions

## **Abbreviations:**

GDP	Gross Domestic Product
U5MR	Under Five Mortality Rate
DALY	Disability-Adjusted Life Years
PHCs	Primary Health Cares
CHCs	Community Health Cares
RCH	Reproductive and Child Health
ANC	Anti Natal Care
NSSO	National Sample Survey Organisation
BMC	Brihan Mumbai Municiple Corporation
GSDP	Gross State Domestic Product
PHCE	Public Health Care Expenditure
CMIE	Centre for Monitoring Indian Economy
IMR	Infant Mortality Rate
DLHS	District Level Health Survey
MPCE	Monthly Per Capita Consumption Expenditure
IUD	Intrauterine Device
MTP	Medical Termination of Pregnancy
PAP	Proportion of Ailing Persons
ICD	International Classification of Diseases
WHO	World Health Organisation
TB	Tuberculosis
HIV	Human Immunodeficiency Virus
EU	European Union

SC	Scheduled Caste
ST	Scheduled Tribe
AIDS	Acquired Immune Deficiency Syndrome
CMR	Child Mortality Rate
NCDs	Non Communicable Diseases
GBD	Global Burden of Diseases
CHD	Coronary Heart Diseases
CED	Chronic Energy Deficiency
OOP	Out of Pocket

## **CHAPTER- I**

### **Introduction**

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#### **1.1 Introduction:**

Health is considered as the most crucial dimension of human well being. A good health is of intrinsic value to an individual. Health is defined as the most fundamental right of every human being without distinction of race, religion, political belief, economic or social condition (according to the Preamble of the constitution of the World Health Organization). Health for all by the year 2000 AD was the national goal set by the Indian policy makers over 20 years ago in Alam Ata. In 1948, WHO defined health as “Health is the state of complete physical, mental, and social well being and not merely the absence of disease or infirmity”. Though the constitution of India does not recognize health as a fundamental right, but on many occasions judicial explanations have established to provide adequate medical health which is an obligation taken by the government in a welfare state. Constitution of India renders health care in state’s list subject and state governments which play major role in financing and executing plans where as the union government play an important role in financing and executing those plans.

A healthy individual can do wonders to the development of the country while poor health can directly influence individual’s opportunities like an earning capacity, performance at the school, ability to support the family and many more. If we examine the history of health system in India during the British rule, it was seen that the state and the philanthropic intervention played an important role in the healthcare though preference was given to the urban areas while the rural areas were neglected. Later there was development of modern medicines during the colonial rule. The imbalance between the rural and urban areas regarding health services were increasing as the modern medicines gradually undermined the systems of Unani, Ayurveda and those traditional practitioners were restricted only to the areas where the modern medicines had not reached yet. Despite the Bhore Committee’s recommendation (1945), there was no change in the

disparity of health services in the rural and urban areas. Until 1983, India had no formal health planning system. After independence, the state decided as an alternative step to follow the 'western models' which were of curative orientation. Numerous steps were taken during 1980s to improve the situation of health in India but the results were unsatisfactory as many attempts taken were underutilized. The primary approach which were planned to be followed were never implemented fully as the main focus was given on the vertical programmes to ensure for the comprehensive health system development. Later with the onset of globalization- liberation in 1990s aggravated the situation as the neo-liberal policies as it increased the condition of crisis of the public health system in the country. Since 1990s the health system were further constricted to the 'cost effective' preventive promotive services and selective interventions, which led to an increase in the private medical sector. The National Population Policy, 2000 also undermined the importance of the Indian systems of medicine. The concept of a family physician with social accountability, which has traditional roots and acceptance from the rural masses, has diminished with the existing policies and value systems.

India is ranked at 119<sup>th</sup> position in the world in terms of human development, which indicates that the India's health quality is worse than a number of other nations. Less than 1 percent of the GDP is spent on health in India which is dismal as compared to other countries where more emphasis is given to the health sector; public health investment is only 0.9 percent, which is too inadequate to meet the requirements of poor and needy people. Very less budget was allocated in the ten Successive 5-year plans (in terms of per cent of total budget) to health. Family welfare is of grave concern as the major share of the public health budget is spent on it. Though 75 percent of India's population lives in rural areas, less than 10 percent of the total health budget is allocated to this sector. But the chief interest of the primary health care is diverted to family planning and ancillary vertical national programs such as child survival.

The political, economic and social transformation is drawing world attention besides the population explosion which is increasing at the rapid rate in the country second only to China. Some progress has been made since independence in order to improve the health status of the population, which is reflected in the improvement of some health indicators.

Under the cumulative impact of various measures and a host of national programs for livelihood, nutrition and shelter, life expectancy shows an improvement from 33 years at Independence in 1947 to 62 years in 1998 which allows a remarkably double increase. Other important indicator that is Infant mortality declined from 146/1000 live births in 1961 to 72/1000 in 1999. Though there was decline in the rates it is still high as compared to other better of countries and in 2001, it was seen that people continue to die for the same reason as they were dying before independence in 1947 the main causes were the infectious diseases (Srinivasan S et.al 2006; Dummer and Cook, 2008). Under 5 years mortality rate (U5MR) declined from 236/1000 live births in 1960 to 109/1000 in 1993. The historical reality suggests that the health care system was never satisfactory whether taken in absolute or relative terms.

The epidemiological transition in India has occupied centre stage in establishing the relation between mortality and morbidity. With the improving condition of the health status, the focus is shifting from mortality to morbidity. The main reason being, better health conditions in terms of mortality and life expectancy does not depict the whole picture of the population's health. Health status, in general, and morbidity in particular are primarily influenced by the behavioural decisions of the individual or family, besides genetically inherited health endowments and the health environment in which they reside (P Duraisamy, 2001). Health cannot be just seen as a narrow sense or just the state of sheer absence of disease. It should be seen as a broad spectrum where health is viewed as integral well being of the individuals (Mathur and Sharma, 1995).

India accounts for a substantial proportion of the global burden of disease, with 18 percent of deaths and 20 percent of Disability-Adjusted Life-Years (DALYs). Although the burden of chronic disease accounts for 53 percent of deaths (44 percent of DALYs), 36 percent of deaths (42 percent of DALYs) are attributable to communicable diseases, maternal and perinatal disorders, and nutritional deficiencies, which suggests a protracted epidemiological transition. A fifth of maternal deaths and a quarter of child deaths in the world occur in India .Life expectancy at birth is 63 years for boys and 66 years for girls, and the mortality rate for children younger than 5 years is 69 per 1000 live births in India higher than the average for southeast Asia (63 per 1000 live births) (Y Balaranjan et.al.,



2011). Thus evidence derived from earlier studies indicates that due to prevalence of morbidity the existence life years liable to be lost due to incapacitation. The prevalence of morbidity in India is more among women than in compare to men though the mortality is more among men, this condition is similar in all south Asian nations. The global burden of disease for 2001, measured in Disability-Adjusted Life Years (DALYs) lost, reported higher for men than for women, in large part because men have higher mortality rates throughout their lives than women. Although women live longer than men almost everywhere, they suffer from more illness and disabilities throughout their lives.

There is women's health disadvantage in developing countries which is largely due to gender inequalities which are pervasive to Indian society since time immemorial. There is interplay of biology and culture, or nature and nurture which brings about differences in men's and women's health which is overlooked in clinical studies and more importance is given to men as subject. Until now, little attention is paid to difference between the disease pattern of men and women when suffering from the same disease. While little can be done to change the biological determinants of health, improving women's health requires recognizing and addressing gender differences and inequalities affecting women of all ages. There are certain diseases which are specific to women and large number of women dies due to maternal conditions and reproductive cancers, about 6 percent of disease burden is due to the above causes (DALY losses). Women's excess burden of disease varies from one region to another, making it clear that factors other than biology account for the difference. There is variation of disease burden in India across different regions, different population groups, so there is need to study the variation of morbidity across India.

The prevalence of morbidity among women is highest in Kerala, Punjab, Utter Pradesh, and west Bengal while socio-economically poor states are reported lower on morbidity scale. Previous studies have suggested that this type of variations are reporting of ailments, health facilities available in that region and utilisation of services and most important being the socio-economic background of the population or it can be the disease profile arising from varying levels of demographic and epidemiological transition. So it is important to study the variation of the burden of disease and the rate of prevalence of

disease among women as they are most vulnerable section of the society and women face higher risk of disease still they are neglected in terms of health facilities, it is important to look into the reasons of variation of disease pattern across regions of India and the ailments which account for higher burden of diseases. For this study two states are selected firstly, Kerala which is the developed state of India on socio-economic parameters though morbidity is high among women and secondly Uttar Pradesh which is also reported higher on morbidity prevalence rate of women though it is socio-economically a poor state.

### **1.2 Statement of Problem:**

The past decade in India has seen a growing concern with women's health in developing countries as evidenced by the safe motherhood initiatives, and by the adoption of women's health perspectives in strategies like family planning and women in development issues. The burden of disease also falls very unevenly on different sections of the population. In India health inequalities are very sharp compared with many other countries including poor ones. Class differences in health achievements in particular are large by international standards. There is gender based inequalities in health (Drez and Sen, 2002). It is evidenced from earlier studies that morbidity among women is higher than men though life expectancy of women is higher than men, in spite of this less attention is paid to women's health. This problem is even grave as women's health is concerned because of the lack of support for women to visit health services and of the 'culture of silence' among them regarding their health (Dixon-Mueller and Wasserheit 1991; Khattab, 1992).

Here we share the contribution of the rich research experience to our knowledge of the issues surrounding women's health. Women's face excess burden of disease and it varies from one region to another, making it clear that factors other than biology account for the poor health. There are socio-economic determinants which affect the disease pattern among women other than their biological factors. It is also evidenced from the existing literatures that the reporting of diseases is less among women and the treatment of most of the diseases are non-institutional except some of the diseases. Therefore, present study

will bridge in the gap of studying the reasons of less reporting of ailments by women and the variations of the treatment of diseases.

### **1.3 Review of Literature:**

#### **1.3.1 Health Status in India:**

Qadeer Imraan (2000) pointed out that India's grand plan for health sector got distorted in 1980s when the planning process got shifted to the growth centered economic approach which premised trickledown effect and resulted in growth of urban centers and overshadowed the rural area. The reforms during 1990s led to the cuts in the public sector investment, donor driven priorities, privatization of medical care. The focus shifted from the poverty related infectious diseases through comprehensive strategies, to a new priorities identified by experts. There was more focus to control the non communicable disease through education and curative strategies which was added in the name of epidemiological transition though knowing that such disease was due to more hazardous working condition.

P Duraisamy (2001) in his paper 'Health status and curative health care in rural India', has examined the determinants of health status and curative health care of children, adults and the elderly in rural India using the NCAER-HDI (Human Development Indicator) national-level survey data for 1994. He argues that there is considerable variation across the socio-economic and demographic attributes of individuals and households using various measures of morbidity. In his study he uses the household demand framework to specify the reduced-form of health status and curative care functions. In order to estimate these functions he used maximum likelihood Probit and multinomial logit methods. The study found that there is a U shaped relationship found between ages and morbidity while education and income exert a negative impact on morbidity measures used in this study. He also found household income emerged as a key determinant of the health status. As income increases, the chances of being ill and functional limitation due to illness (measured by number of bedridden days and days of work/normal activity being affected) reduce. He also found that the village infrastructure

and the income of the household is the determining factor in choosing private health care over any other services.

In the background paper of NCMH, they focused on a sound epidemiological research which provides the foundation for public policy. They suggest that policy is necessary to have evidence based understanding of the extent of disease burden, the population groups that are the most vulnerable and what interventions are needed to avert premature death or needless suffering. Analysis of the data from the 1995-96 survey round of NSS undertaken by NCMH suggests that out-of-pocket expenditure is one in the case of heart disease. In this paper their main objective was to find the contribution of India's disease burden, to estimate the incidence and prevalence levels of disease/condition at present, they found that TB, Malaria, Diarrhoea, acute respiratory infections, maternal and prenatal account for half of the burden of disease. Malaria, dengue and other vector-borne conditions were estimated to account for 1.6 percent of India's total disease burden. The non-communicable disease contributes the second largest share in the burden of disease. Diabetes is also associated with an increased risk for cardiovascular and is emerging as a serious health challenge in India. It accounts for 0.7 percent of India's disease burden in 1998; there is significant rise from 2.6 crore in 2000 to approximately 4.6 crore by 2015. It is also found accordingly that accidents and injuries account for 9 percent and 12 percent of the global burden of disease are due to injuries, intentional or unintentional. They argue that the data gaps need to be bridged.

Nirupam Bajpayee and Sangeeta Goyal (2004) focus on the health scenario in India on the coverage of primary health care, description of India's health, the status of primary health care and ways to improve the health status in India. From the NFHS data, it was found that 137,006 sub-centers, 23,179 PHCs and 2,913 CHCs in India. There were 665,639 hospital beds or 6.9 hospital beds per 10,000 persons. In terms of population coverage, only 13 percent of rural residents had access to a primary health center, 33 percent had access to a sub-center, 9.6 percent had access to a hospital and 28.3 percent had access to a dispensary or clinic. The coverage varied across states in India where the southern states like Tamil Nadu Kerala topped the result while the northern states like Bihar, Madhya Pradesh lagged in terms of the coverage. Delivery of public health care

services in India is marked by pervasive absenteeism. The satisfaction with care received varied across states of India with Uttar Pradesh, Rajasthan, West Bengal and Orissa ranking consistently lower along different dimensions of patient satisfaction. For the services availed by the people, it was seen according to NFHS II, only 23.5 percent of urban residents and 30.6 percent of rural residents choose to visit a government health facility as their main source of health care services. Household income is one of the most important factors influencing the choice of health care provider. The use of private sector is more than the public sector despite having greater financial burden.

Y Balarajan et. al. (2011) analyse the key challenges for the achievement of equity in health service provision, equity in financing and financial risk protection in India. In order to show the persistent inequities in health care in India the focus is on access to maternal and child health services because the disease burden relating to communicable, maternal, and perinatal disorders can be partly addressed by access to these services. For the immunization and health care it was found that there were significant inequalities seen with respect to the income and the cast. Though there is reduction in the rural urban differentials but then also the coverage is high in the urban area than the rural area. The deliveries of child in the institution were higher for the richest quintile of the section in comparison to the poor. It was also seen that the inpatient and the outpatient health care remains high in the private facilities than in the public facilities and the expenditure is high for the non-communicable disease than the communicable disease.

### **1.3.2 Morbidity:**

The study of morbidity has gained considerable attention in the Indian context. Many studies are conducted on the morbidity levels, disease pattern, and utilisation of health care services and determinants of health. The patterns of reporting of morbidity reveal not only important facets of the health status of various groups, but also points to inequalities in status and autonomy among various groups of individuals.

#### **A. Trends and Patterns of Diseases in India:**

Sundar Ramamani (1992) in his study focused on the health status of the people of India. The study was based on the household survey of medical care conducted by the National

Council of Applied Research (NCAER) in May-July 1990. The sample size of the study was 18102 households, spread over 21 states and union territories of the country. The methodology used in order to select the sample household covering rural and urban areas of the country was the multistage stratified sampling design. The findings of the study revealed remarkable sex differential in the prevalence rate of medically treated illness and in the cost of treatment. Rural urban differentials were found in terms of the health care utilisation. The study also found the disparities in treatment of illness and cost of treatment among the households with different economic status.

Abusleh Shariff (1995) analyzed the economic differentials of morbidity in India where his study was based on the survey of medical care conducted by National Council of Applied Economic Research (NCAER) during 1993. A total of 6354 and 12339 urban household across all the states of India were covered in this survey. The study found that there was J shaped relationship between age and morbidity. The morbidity prevalence rates (MPR) have been lower in urban areas in all ages excepting those less than five and sixty years and above. It was also found that the morbidity prevalence rate were high among the wage labourer than the non worker. In terms of religion, Muslims shown relatively low morbidity prevalence rate both in the rural and urban areas in compare to other religions. Scheduled castes and the scheduled tribe's population have shown more suffrage to the infectious and to the non-infectious diseases. When seen in variation of diseases among all the states of India, the central states Uttar Pradesh, Madhya Pradesh, Orissa, Rajasthan, and Bihar have recorded high incidence of fever. The hospitalization cases were high among the educated groups.

Anil Gumber (1997) studied the burden of ill health and the cost of ill health in India. His study was based on National Council of Applied Economic Research (NCAER) and NSS (1986-87) survey. The study focused on the variation of morbidity among the rural and urban area in different states. The finding of this study is showing that there was no clear pattern in the differences in morbidity rates across states. The survey confirmed that the reported level of morbidity in rural areas was the highest in Kerala and the lowest in Gujarat. The annual hospitalization rates showed a positively sloping or J shaped curve

with age and U shaped pattern for other illness. The study also found the probability of an ill person not seeking treatment is higher among females.

Soumitra Ghosh and P Arokiashamy (2009) in their paper analyses the evidence on levels, differentials and patterns of morbidity prevalence in India and for major states. The study indicates various demographic, social and economic characteristics of ill health in India. Gender inequality was observed in the prevalence of morbidity among women with females at higher risk than their male counterpart in respect of health. There is an interstate variation in the prevalence of morbidity where the state with better socio-economic condition reported higher on the scale of morbidity like Kerala, West Bengal, and Punjab while states lower on the development indicators reported lower prevalence of morbidity. The prevalence of ailment varied with the socio-economic background. The rural-urban differentials indicated that the condition of rural people is poorer than the urban poor.

Gayatri S Desai and Nitin Bhatt (2011) in their paper studied the incidence of malaria, asthma, tuberculosis (TB), jaundice, acute respiratory infection (ARI) and diarrhoea (among children), their trend and differentials in the EAG states of India. They studied the morbidity conditions by focusing on the differentials by socio-economic characteristics and household environmental factors in these states using NFHS data. The study shows that the prevalence of TB has decreased during last few years in India. While all the EAG states recorded a decline in between the 2nd and 3rd round of NFHS, in Orissa it has reduced to half. Looking to the latest data (2005-06), 445 persons (per 100,000) suffered from TB in the country. Out of the eight EAG states, the highest prevalence was in Bihar (797) followed by Jharkhand (659) and the lowest were in Chhattisgarh (310). Wide interstate variations were seen in the case incidence rate of Asthma among both men and women. The incidence among women in Orissa had shown much higher which is much higher than the national average. Bihar was at par with the all India average; all the other states were below that level. The result has shown an increase of 11 percent in the incidence of Malaria in the country. The result suggested that there is an attention needed for Bihar and Madhya Pradesh. From NFHS-III reports it is clear that

9 percent children who are below three years of age had suffered from diarrhoea before two weeks prior to the survey.

Vikram Patel et. al. (2011) in their paper focus on the major chronic diseases and injuries in India and the associated risk factors. They also find out the cost effective interventions for treatment of these disorders. The analysis of the data is based on the three WHO data sources which is supplemented with the relevant micro studies or regional data sources. It was found that in India Cardiovascular diseases, especially coronary heart disease, are major contributors to the higher death rates because Indians are more likely to develop coronary heart disease and have an earlier age of disease onset than are people in high-income. The 60 percent population suffer from the burden of disease in the age group 15 and older age and the chronic disease account to 62 percent while the injuries account to 16 percent to the total burden of disease in India. It was also seen that the expenditure on health among people from all socioeconomic groups was higher for chronic diseases than it was for infectious diseases, and more was spent on private sector services than on public sector services.

### **B. Morbidity among Women in India:**

Women are considered as the vulnerable sections of the society, they are at disadvantage in many respects. Women have low status as compared to men in Indian society. They have little control on the resources and on important decisions related to their lives. Early marriage and childbearing affects women's health adversely in Indian society. According to RCH (Reproductive and Child Health – District level Household Survey 2002-04, August 2006) about 28 per cent of girls in India has been married below the legal age and experience pregnancy. These have serious repercussions on the health of women. Maternal mortality is very high in India. It varies between states and regions, i.e., rural-urban. Prevalence of morbidity is high among women though women experience higher life expectancy than men.

D Nandan and B N Saxena (1997) examined the morbidity among women of Uttar Pradesh. The study was mainly concerned with two districts that are Agra and Farrukhabad covering 206 villages and 51,186 households. To analyze the data Sample



proportion technique was used. The study concluded that over 47.5 percent of women reported excessive vaginal discharge, around 22 to 27 percent of women suffered from general morbidity, predominant being fever; cough, cold, malaria, diarrhoea and anemia. The maternal mortality responded very high where the leading cause of the maternal mortality were hemorrhage, retained placenta, sepsis, anemia, jaundice and tetanus.

Sunil Nadraj et. al. (2001) the study focuses on the morbidity patterns and the constraints women face in accessing health care facilities their utilisation and the expenditure incurred by households on women's health care with special reference to socio-economic differentials. Reproductive illness accounted for 28.2 per cent of all episodes among females; the majority of them were related to menstruation and child bearing. On the other hand morbidity due to aches, pains, injuries and weaknesses also have shown high percentage among women. The morbidity pattern shown that the prevalence of morbidly were higher among females than male. The study found that 91 per cent of the expenditure incurred was on delivery, with pregnancy accounting for 6.56 per cent of the total costs incurred on maternity events.

P Swain et.al.(2004) in their study focused on the health conditions of widow in India. The data used were from the NFHS conducted in the year 1998-99. The four major conditions of morbidity were used they are the following Asthma, Tuberculosis, Jaundice and Malaria. The result shown that as the age were increasing there was consequent increase in the prevalence of disease. It was seen that younger and the older women in the age group 60; the morbidity condition was reported excessively high. In this paper the state wise pattern is showing a higher prevalence of these four diseases among widows than the national average.

K S Mohindra et. al. (2006) examined the social patterning of women's self reported health status in India in their paper. Women from low socio-economic background reported a higher prevalence of poor health than women from forward castes. The multilevel multinomial models used in the study indicates that the associations between socioeconomic indicators and health vary across caste. Among SC/ST and OBC women, the influence of socioeconomic variables led to a "magnifying" effect, whereas it showed "buffering" effect with the women. Among lower caste women, the associations

between socioeconomic factors and self-assessed health are graded; the associations are strongest when comparing the lowest and highest ratings of health.

Vandana Dave and R Talwar (2007) focused on the rural women and the health facilities and their utilisation by them in state of Haryana. Random sample was used in order to select the sample and the populations were selected from the kurukhshetra district of Haryana. It was seen that Giddiness and General weakness accounted for 60 percent morbidity condition among the women in the age group 18 to 35 years. For the health facility availed by the respective women it was seen that the majority of the women from the sample preferred to visit R.M.P of the village while 15 percent women visited sub centre or other government dispensaries while only 13 percent were only going to government hospital of the nearby town. Caste wise availing of services is showing that the general class women preferred to visit private doctors while lower class women visited R.M.P of the village. Anti natal care services were less availed by the poor and lower class women.

### **C. Levels and Differentials of Morbidity:**

Differentials in morbidity and longevity of the population by socioeconomic status and by the nature of social relationships have been found in innumerable studies in the social and medical sciences. Differentials in morbidity by socioeconomic status and by the nature of social relationships have been identified in a myriad of studies.

Shasikant Bhide and Ramamani Sundar (1991) analyzed the health situation of command area of Indira Gandhi Nahar Project (IGNP). Their study was based on a survey of sample households in three district of the command area of the Rajasthan Canal. Among the seventy villages a sample of 893 household was selected. The information on illness and expenditure on treatment was collected for the month of July. A relationship between income and the incidence of the diseases were seen across the three districts. Ganganagar district with the highest level of per capita income also has the highest level of incidence of the diseases. In Ganganagar and Bikaner districts the government facilities account for about 30 and 69 percent of illness episodes treated while in Jaisalmer where the irrigation is the least, the government facilities account for about 90 percent. The bulk of

expenditure is on fees and medicines followed by transport. It was found that the lowest economic group have higher incidence of diseases than the middle income category followed by the higher income.

Ramamani Sundar (1992) in his study focused on the health status of the people of India. The study was based on the household survey of medical care conducted by the National Council of Applied Research (NCAER) in May-July 1990. The sample size of the study was 18102 households, spread over 21 states and union territories of the country. The methodology used in order to select the sample household covering rural and urban areas of the country was the multistage stratified sampling design. The findings of the study revealed remarkable sex differential in the prevalence rate of medically treated illness and in the cost of treatment. Rural urban differentials were found in terms of the health care utilisation. The study also found the disparities in treatment of illness and cost of treatment among the households with different economic status.

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P Duraisamy (1998) focused on the morbidity levels, differentials and its determinants in Tamilnadu. His study was based on the NSS 1986-87 survey data. He analysed age and sex specific distribution of illness by type also presented and the determinants of morbidity at the individual level. In order to select the households in rural and urban areas he used the multistage random sampling method. His study found that the morbidity prevalence rate per thousand populations is 28 in rural areas and 32 in urban areas. The MPR were high for the lower age group that is 0-4. There were gender differentials which shown MPR high among the women than in men. On the other hand the reporting was high in urban areas than in the rural areas.

T R Dilip (2002a) focused on the level of morbidity and the hospitalization in Kerala. The study used data of National Sample Survey Organization (NSSO) 52nd round. The survey has coverage of 24401 people from 4928 households. Sectoral differences were seen in the burden of illness that is rural area having more burden of illness in compare to the urban area. Lifestyles were seen as one of the determining factor for the prevalence of morbidity and hospitalization. It was also found that the developed regions of Kerala reported more hospitalization case than the less developed region that is the northern region.

### **1.3.3 Treatment of Ailments and Healthcare Utilisation:**

P Satya Sekhar (1997) the study was done in Andhra Pradesh. The study used NSSO's 42nd round, which was conducted during 1986-87. From the study it was found that reporting of the ailments under inpatient care indicated, 50 percent of illness in the 0-4 age group in rural areas which is due to waterborne diseases, about 47 percent each in rural and urban areas of 15-39 age group suffered from Gastric ulcer.

Rajaratnam J Abel et. al. (1997) examined the morbidity pattern and utilisation of health care services in Tamil Nadu focusing on the rural population. The study found that 57.3 percent persons did not have any illness during 1990-91. The period prevalence of infective and parasitic disease was found to be 21.9 percent with an average of three episodes. For the services availed it was seen that 59 percent of the households and 79 percent of the households had used allopathic treatment at some time. The average per capita per annum expenditure on health was Rs. 89.9.

Ramamani Sundar and Abhilasha Sharma (2002) their study was based on pattern of morbidity and health care utilisation by the urban poor living in slums and resettlement colonies in Delhi and Chennai. They also compared the health status of the two segments of the population. The case of reported illness was 13 percent Delhi and 8.4 in Chennai and the sample population sought no treatment. Both the cities reported nearly 48 percent of the illness episodes (non hospital) treatment was sought from government hospital which includes municipality dispensary and public hospital.

Abijit Banerjee et. al. (2004) in their report on a recent survey in poor rural areas of Rajasthan focused on the relationship between healthcare and health status. They use a set of interlocking surveys to collect data on health and economic status, as well as the public and private provision of health care. They used the data which was collected during the survey period between January 2002 and August 2003 in 100 hamlets of Udaipur districts. The survey resulted that the condition of health in terms of measures of health among women and men varying a lot e.g. 80 per cent of adult women and 27 per cent of the adult men have hemoglobin levels below 12 grams per deciliters. The public healthcare use is less compare to the private sector as on an average 45 per cent of the medical personnel are absent in sub centers and aid posts, and 36 per cent are absent in the (larger) PHCs and CHCs. He argues that 81 per cent report that their last visit to a private facility made them feel better, and 75 per cent report that their last visit to a public facility made them feel better. Personnel are absent in sub centers and aid posts, and 36 per cent are absent in the (larger) PHCs and CHCs.

Arindam Das and H C Srivastava (2006) studied the factors governing utilisation of maternal health care. The source of data for this study has been taken from the

Reproductive and Child Health (RCH) first round. The study focused on two states that is Karnataka and Uttar Pradesh and a total 8732 women drawn from Karnataka and 37072 women chosen from Uttar Pradesh. Study revealed that, urban women in Uttar Pradesh have taken full Anti Natal Care (ANC) than their counterparts, while the condition was found reverse in the case of Karnataka. Most of the women, who opted for safe delivery, were from the group experienced any problem related with pregnancy, any sort of delivery complications and who received full ANC. There was major difference seen among the two states with respect to safe delivery status as it was seen that the number of women receiving ANC and opting for safe delivery were higher in Karnataka than Uttar Pradesh.

Holendro Chungkham Singh (2009) in his study focuses on the health care system in India and the pattern of utilisation of the services and the cost of treatment in these hospitals. The database used for the study are the National Sample Survey Organization,2004, exploring the data of 6,726 in patients hospitalized for treatment diarrheal diseases, heart disease, tuberculosis, urological diseases and gynecological disorders. For all the five diseases it was seen that the 58 percent of the patients received inpatient treatment from private hospitals, apparently because of quality concerns. The likelihood of utilisation of private services is more among the urban people than the rural people. The utilisation pattern was varying with the educational background as it was seen that more educated patients and those who belong to affluent households are opting for private hospital. It was also found that the better of patients incurred the highest out of pocket costs.

Dhak Biplab and R Mutharayappa (2009) analyses the gender differentials in disease burden: its role to explain gender differentials in mortality. There is gender differentials in morbidity and mortality in terms female experiencing low levels of mortality though confronted with high morbidity. The study supports the existing facts that male use more substance items, alcohol and tobacco as compared to females. Indian females experience higher level of morbidity with regard to more acute or less life threatening disease.

Balarajan Y and S V Subramanian, (2011) in their study argues that India having the improvement in access to health care, though there are inequalities related to related to

socio-economic status, geography, and gender, and these are led by high out-of-pocket expenditures, with more than three-quarters of the increasing financial burden of health care being met by households. There is variation in accessing health services and inequalities varies with caste e.g. in 2005–06, immunization coverage among scheduled tribes and scheduled castes was 31.3 percent and 39.7 percent, respectively, compared with 53.8 percent among other castes, and absolute inequalities between these castes increased with time.

#### **1.3.4 Public Private Dichotomy in Healthcare Services:**

Dilip R T and Ravi Duggal (2004) analyses the utilisation pattern of public health care in Mumbai. The data for the study was collected for a demand assessment survey conducted in December 2001, in relation with the BMC's plan to set up a municipal general hospital in one of its wards with a population of 806,360. The results show that about 40 percent reported that for the health care they prefer to go to the BMC for treatments of ailment involving hospitalization. It was also reported by 65 percent population prefer to go to public sector because of the affordable cost for the inpatient services and it was reported that around 45 percent availed private facilities because of the nearest facility available. The most important reason cited for the use of private services is the lack of public health facilities. It was also found that the poorest section of the population prefers to go to the public health centre.

Bhat Ramesh and Nishant Jain (2006) emphasises the relationship between income and public and private healthcare expenditure. For this study, they use real per capita GSDP to represent income and real per capita state Public Health Care Expenditure (PHCE). The time period used for the study is from 1990 to 2002 and the main sources for the real expenditure were the database maintained by the Centre for Monitoring Indian Economy (CMIE) and different government publications. For the study they have considered 14 states that accounted for more than 90 percent of the total population of the country. The result shows that Private household expenditure is predominant in curative primary care, which is 46 per cent of total health expenditure. Secondary and tertiary (hospital) care accounts for 27 per cent of the total.

Costa De Avesha and Vinod Dewan (2007) focused in their work on the size and composition of the private health care in one of the India's largest province that is Madhya Pradesh. The study is based on the field survey of all the health care providers in Madhya Pradesh which covered around (60.4 million in 52,117 villages and 394 towns). They found that out of 24,807 qualified doctors which were mapped in the survey it was seen that 75.6 percent work in the private sector and most of them in the urban area. The disparity between the rural and urban health indicators mirrors the poor access because of the scant availability of quailed care in rural areas, compounded by poor rural infrastructure, and the poverty situation. IMR in rural areas resulted to 84 versus 56 in urban areas. The overall expenditure was high for the private sector and it was seen that the out of pocket expenditure accounted for 98.4 percent.

Holendro Chungkham Singh (2009) studies the in-patients for different diseases. The study explores the data of 6,726 in-patients hospitalized for treatment of diarrheal diseases, heart disease, tuberculosis, urological diseases and gynecological disorders from a nationally representative survey on health care conducted by the National Sample Survey Organization (NSSO, 2006) in its 60th round in 2004. The analysis revealed that more than 58 percent of the patients have utilized private health care facilities in India. The cost of treatment of heart disease is higher among all other disease. The out of pocket costs are higher for the better of patients. The study reveals that private health facilities are playing better role for the diseases considered above. Among all the ailments chronic ailments were seen to consume more costs and more people opted for the unregulated private facilities.

Kumar Chandan and Ravi Prakash (2011) have analyzed the differences in the utilisation of the health care in the private and public sector in India along with they found the regional pattern in utilisation of health care. The databases used for finding the results are DLHS RCH-II, 2002-04 and 60th round National Sample Survey, 2004. In order to find out the availing of services in the public and the private sources the socio-economic and the demographic variable are taken into the consideration. The paper found that the inclination of the utilisation of services is more towards the private sector. It was found that more than 95 percent of in-patients in rural and urban areas reported receiving



treatment at least once in the year before the survey through private health services (2003-04). Some of the states which recorded solely the public health services in India during the period were not more than 6 percent; the states are Jharkhand, Madhya Pradesh, Assam and Chhattisgarh. The utilisation of private services varies according to the type of disease whether the character of the disease is sensitive or not like the utilization was recorded more for the gynecological disorders or heart diseases, as compared to other ailments. The likelihood of utilisation of public services were more driven by a desire to use government programs that provided free services or distribution of medicines, contraceptives or immunizations.

#### **1.4 Conceptual Framework:**

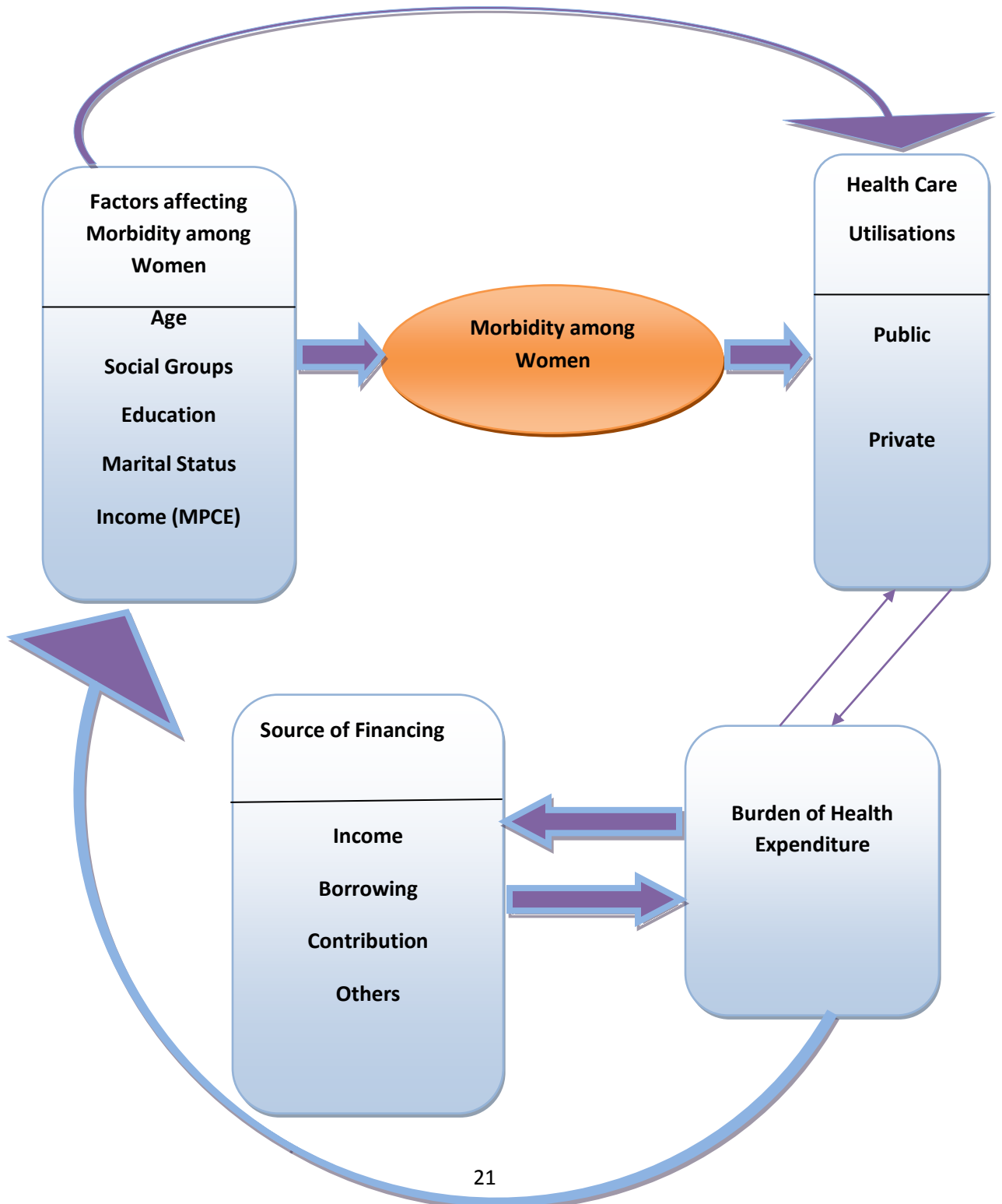
Taking in consideration the existing literature related to women's health and the findings of the empirical works, a conceptual framework has been designed for the present study. The skeleton of the conceptual framework for the morbidity among women and the variables affecting the morbidity has been presented in the diagrammatic form in Figure 1.1.

There are many factors which affect morbidity among women they are basically demographic factors like age, marital status and socio- economic factors like education, social group and monthly per capita consumption expenditure. Evidences from existing literature shows that age is one of the determining factors influencing morbidity. Prevalence of morbidity is high in the lower age group while as we move up in the ladder of age group it decreases and then again there is sharp increase of morbidity in the reproductive age group and older age group of women.

Marital status also affects morbidity among women because when women are unmarried the chances of falling sick are less while when they are married the chances of being morbid increases same is the case for women who are widowed/divorced/separated. Many studies have revealed that there is decline in the prevalence of morbidity among women with increase in the level of education thus can be said that education plays a major role in shaping proper perception on the part of women for better health care needs.

Figure 1.1

Schematic Framework for Analysing the Morbidity among Women, Health Care Utilisation and Expenditure



Social group affects women's health because women of lower social background are unaware about the disease they are suffering as they are isolated from the society in most of the regions of India while the picture can be different in the case of women belonging to higher caste. Monthly Per Capita Consumption Expenditure of the household also affects morbidity because higher the expenditure. Some studies pointed out that the low-income families are considerably more disease prone and have considerable need for medical attention due to their typical living environment and the picture is different for women of higher consumption classes.

Nature of ailment also varies across women groups. Among women non-communicable diseases are more in compare to communicable and other categories of diseases. The type of ailment decides the utilisation of services to be availed by women. There is difference in the utilisation of services by various socio- economic groups of women. Thus the utilisation of services finally decides the burden of expenditure among various socio-economic groups and it is also affected by the factors affecting morbidity among women. The burden of expenditure depends on the source of financing.

### **1.5 Objectives:**

The main objective of this study is to analyse the morbidity among women, healthcare utilisation and burden of health expenditure with special reference to Kerala and Uttar Pradesh so that this study will give proper understanding of the health conditions of women in the concerned states. In particular this study will deal with the following objectives:

- ❖ To determine the pattern of morbidity for the population that reported sickness during the reference period across India.
- ❖ To assess the rural urban differentials in the level of prevailing morbidity among women in Kerala and Uttar Pradesh – A comparative analysis.
- ❖ To analyse the pattern of ailment by background characteristics in Kerala and Uttar Pradesh.

- ❖ To examine the differentials in provisioning of health care utilisation by various socio- economic groups.
- ❖ To explore the various sources of financing of health care and to analyse the overall burden of healthcare expenditure by back ground variables.

### **1.6 Hypothesis:**

In the concern of above objectives following hypothesis have been raised which will be examined by the present study:

- ❖ There are significant variations in the pattern of morbidity among different population groups and across regions of India.
- ❖ Morbidity prevalence is higher in rural areas than in urban areas since there is a strong association of morbidity with background characteristics of women.
- ❖ Health expenditure among women varies across socio-economic groups as well as regions.
- ❖ A significant anomaly exists in utilisation of healthcare between public and private sectors.

### **1.7 Database:**

NSS 60th round which is conducted in 2004 was related to “Household Consumers Expenditure”, “Employment and Unemployment” and “Morbidity and Health Care”. The present study is based on the “Morbidity and Health Care” Schedule in which information related to morbidity, problems of aged persons, utilisation of health care services and expenditure on medical treatment, hospitalization, health schemes, nature of ailment, duration of hospitalization and medical services was collected. The extent and distribution of morbidity is studied under two broad heads:

- A. Cases of Hospitalization (in the 365 days preceding the survey) and;
- B. Cases of Ailments (in the 15 days preceding the survey).

One was considered hospitalized if he/she had availed the medical facility as indoor patients in any hospital in the 365 days preceding the survey. While the Non- hospitalized cases of ailment referred simply as ‘Ailment’ by the NSS, means any deviation from the normal state of physical and mental well being. An ailing member is a normal member of the household who had been suffering from any ailment during the reference period (15 days). For the purpose of survey, the data for ailing members is collected for two reference period i.e. 15 days and 365 days. In this survey, data of following ailment has been collected:

- A. Cases of visual, hearing, speech, locomotors and mental disabilities;
- B. Injuries covering all types of damages, such as cuts, wounds, haemorrhages, fractures and burns caused by an accident, including bites to any part of the body;
- C. Cases of spontaneous abortion – natural or accidental;
- D. Cases of sterilization, insertion of IUD, getting MTP, etc. under family planning programme. Pregnancy and child birth was not treated as ailment. But a spontaneous abortion was treated as a deviation from the normal health and thus considered to be an illness.

For trend analysis the data of morbidity estimates from 52<sup>nd</sup> round of NSS is also used which is comparable to 60<sup>th</sup> round because the sampling design, definition for hospitalization, ailment, treatment etc are same.

### **1.8 Methodology:**

In the present study, unit level data of 60<sup>th</sup> round is processed and converted into SPSS format. Proper weight is given and estimates are verified with the publishing reports. The study is based on the morbidity among women only i.e. the women who are reporting ailment either for the reference period of 15 days and hospitalization for the reference period of 365 days and the whole study is done only for the two states Kerala and Uttar Pradesh. To fulfill the above objectives following Methodologies have been used:

### **(1) Proportion of Ailing Persons (PAP)**

In this study, for analysing the differentials in morbidity across the demographic and socio-economic groups Morbidity Prevalence Rate has been used. Morbidity Prevalence rate is expressed as the proportion of persons ailed in population during specified time period that is 15 days in this survey. According to this survey report, it is termed as PAP ‘**Proportion of Ailing Persons**’ reporting ailment during a 15 day period per 1000 persons. The formula of PAP is explained below:

**Morbidity Prevalence Rate = No of persons reporting ailment in the sample during 15 days prior to survey per 1000 population of this area.**

### **(2) Bivariate Analysis:**

The study of a casual relationship between dependent variable and independent variable becomes more useful when the relationship is defined in terms of a mathematical form. Therefore, Bivariate analysis has been used for the analyses of casual relationship. In the present study, Bivariate relationship has been observed between the factors of ailing and all characteristics of the individuals and households. First it is examined with the help of cross tabulation. A cross tabulation is that, where each row or column has frequency or percentage distribution of one variable in relation to the other variable. It shows the variation of one of the variables in relation to another variable.

### **(3) Logistic Regression:**

To identify the determinants of acute and chronic morbidity two separate logistic model one for acute and another for chronic diseases has been used. In first model, the dependent variable is 1= If ailed from acute diseases 0= otherwise and in second model the dependent variable is 1= If ailed from chronic diseases 0= otherwise. In both model the explanatory variables are age groups, marital status, social groups, educational status and Monthly per capita consumption expenditure (MPCE).

The two models used in this study can be expressed by the following equation form:

$$Li = \left( \frac{P_i}{1 - P_i} \right) = \beta_0 + \beta_1 \text{Age Groups} + \beta_2 \text{Marital Status} + \beta_3 \text{Social Groups} \\ + \beta_4 \text{Educational Status} + \beta_5 \text{MPCE} + u_i$$

Where,  $P_i$  is the probability for acute diseases in first model and chronic diseases in second model.

$1 - P_i$  is otherwise.

$\beta_1$  to  $\beta_5$  is the regression coefficient associated with the independent variables and  $u_i$  is error term.

#### **(4) Classification of Diseases:**

The reported sicknesses do not entirely constitute clinically confirmed diseases. However most of the sickness for which treatment was sought, the patient and other household member would have known the name of the disease from the doctors and Para medical personnel. Thus the reporting of the diseases in fact presents a combination of self perceived and clinically identified sickness. The reporting of the clinically identified morbidity is also a subjected to the recall and reporting errors.

A total of 42 ailments are listed in the survey. For the purpose of the study, some of the ailments will be grouped into categories. For example, heart diseases and hypertension will be grouped as cardiovascular diseases. However, some ailments such as, diseases of skin, goiter, diabetes mellitus, under nutrition, anemia, and sexually transmitted diseases have been only listed. Since some ailments have not been grouped and others have not been grouped into manageable categories, the 42 ailments have been classified so that a meaningful analysis can be conducted.

In order to group the ailments we will use the latest classification of disease by World Health Organization (WHO, 2008). We will use the International Classification of Diseases (ICD), 10th version, to group the ailments and the WHO category and the ailments included in the category are as follows:

- (i) *Infectious and Parasitic Diseases:* Diarrhea/Dysentery, Warm Infection, Amoebiasis, Hepatitis/Jaundice, Skin Disease, Malaria, Mumps, Eruptive, Diphtheria, Tetanus, Filariasis /Elephantiasis, Whooping Cough.
- (ii) *Neoplasm:* Cancer and other Tumors.
- (iii) *Endocrine, Nutritional and Metabolic:* Goiter, Diabetes Mellitus, Under Nutrition, and Anaemia.
- (iv) *Neuro-Psychiatric disorders:* Gynaecological disorder and Psychiatric disorder.
- (v) *Diseases of eye and adnexa:* Conjunctivitis, Glaucoma and Cataract.
- (vi) *Circulatory System Diseases:* Heart Diseases and Hypertension.
- (vii) *Respiratory System Diseases:* Tuberculosis, Bronchial Asthma and Ear/ Nose/ Throat Ailment.
- (viii) *Digestive System Diseases:* Gastritis/Gastric or Peptic Ulcer.
- (ix) *Genitourinary System Disease:* Sexually Transmitted Diseases, Diseases of Kidney/Urinary System, Prostatic Disorder.
- (x) *Accidents and Violence:* Accident/Injuries/Burns/Fractures and Poisoning.
- (xi) *Others:* Locomotors, Blinds, Speech Hearing and Diseases of Mouth/Teeth/Gum, Other Diagnosed ailments and other undiagnosed ailments.

The individual ailments account for only a small proportion of total ailments reported. For the study purpose, these ailments are further clubbed into four broad groups. The ailments are classified on the basis of International Classification of Diseases (ninth revision) developed by the World Health Organization (WHO) in 1977. The classification is one adopted by the World Bank to compute the DALY (Disability Adjusted Life Years) to measure the global burden of diseases. The ailments are broadly classified into three categories; (i) Communicable (ii) Non communicable (iii) Accident and Injuries. The fourth category, namely 'Others' is added in this study to include the NSS items coded as 31(fever of unknown origin), 41(other diagnosed ailments) and 99(other



undiagnosed ailments). Ailments which are distributed in different categories are as follows,

- (i) ***Communicable Diseases-*** Diarrhoea/dysentery, Gastritis or peptic-ulcer, Worm infestation, Amoebiasis, Hepatitis/jaundice, Tuberculosis, Bronchial Asthma, Tetanus, Malaria, Mumps, Diphtheria, Whooping cough, Tetanus, Filariasis/ Elephantiasis, Sexually Transmitted Diseases
- (ii) ***Non Communicable Diseases-*** Heart Disease, Hypertension, Disorder of Joints and Bones, Disease of Kidney/urinary system, Prostatic Disorders, Gynecological disorders, Neurological disorders, Psychiatric disorders, Diabetes mellitus, Under nutrition, Anaemia, Cancer and other tumours, Diseases of mouth/teeth/gum
- (iii) ***Accidents and Injuries-*** Accidents, Injuries, Burns, Fractures, Poisoning
- (iv) ***Others-*** Unknown Fevers, Other Diagnosed ailments and other undiagnosed ailments, Disabilities.

### **1.9 Limitations of the Study:**

The present study is based on the secondary data source of NSS 60<sup>th</sup> round, in which the information on ailments, medical expenditure, health care utilisation and cases of hospitalization is collected on the basis of the self-reporting of respondents. There are no local external or objective records of expenditure or ailments against which the information provided by respondents could be validated. Therefore the recall biases by the respondents could be possible. The present study deals with the morbidity and healthcare utilisation among women in Kerala and Uttar Pradesh, in some variables like social groups and items of health expenditure sample are very less therefore on the basis of small sample the result could not be generalized. In spite of these limitations the present study provides a better picture of morbidity and healthcare utilisation among women in Kerala and Uttar Pradesh and contribute to the existing literature on the health status of women in India. Although every study which is based on the secondary data source has certain limitations like the present one, for in-depth analysis a field level survey is always required which provides a detail picture on the subject.

### **1.10 Organisation of Dissertation:**

The dissertation is divided into six chapters. The introductory chapter contains a brief detail of issues of health and morbidity condition among women in India, review of literatures, conceptual framework, objectives, database, methodology and statement of the problem. Chapter II deals with the trend and pattern of morbidity among women in India. Chapter III examines the intra regional variations of morbidity among women in Kerala and Uttar Pradesh. Chapter IV deals with the comparative study of nature of ailments among women in Kerala and Uttar Pradesh. Chapter V deals with the utilisation of healthcare services and burden of health expenditure by various socio-economic groups of women. Chapter VI concludes the study and provides the summary.

## CHAPTER- II

### Trends and Patterns of Morbidity in India

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#### 2.1 Introduction:

Morbidity is the occurrence of ill-health that is the effects of various diseases on the population or it can be defined as the “disease load”. Morbidity is measured in various ways; one is by the probability that a randomly selected individual in a population, at some time and place, will become seriously ill. Incidence and prevalence are both measures of morbidity. It is derived from the literatures that morbidity patterns are used generally for assessing the burden of disease. Mortality is generally linked with the cause of death i.e. the type of disease. It is seen that the developed countries with low mortality are prone to non-communicable diseases whereas, the developing countries with low mortality are prone to communicable diseases.

India has achieved significant gains in life expectancy in the last few decades but the overall health conditions appear to have worsened as it has very high prevalence of morbidity with considerable inter-state differences. Literatures show that much of the burden of the disease in India comprises of infant and child mortality and morbidity, maternal mortality and morbidity, infectious diseases and nutrition deficiency. There are very high levels of premature mortality and widespread morbidity in the population, mostly among the younger age-groups, women and the older age groups. The morbidity prevalence rate in India by age group shows ‘J’ shaped relationship between age and morbidity, which indicates that the children and the people in the higher age groups are more susceptible to the prevalence of morbidity (Kannan, et. al., 1991; Shariff, 1995; Gumber, 1997). The maternal morbidity i.e. complications due to puerperal causes are the major contributing factors to the increasing levels of mortality in the country. Millions of children and infants die due to infectious diseases; pregnancy and child birth related complications take a toll on many women. In 2000, the infant mortality rate was 68 per 1000 live births and under-five mortality rate was 96 per 1000 live births. The Indian maternal mortality rate of 407 per 100,000 live births was one of the highest in the world,

higher even than many sub-Saharan African countries. Among the burden of diseases it was seen that the cases of tuberculosis and malaria are at the peak. Females in India experience mortality advantage with a higher degree of burden of disease or morbidity, mainly from the age of 30, as compared to males (NSSO, 2006). These high levels of morbidity among women and children are of grave concern that necessitates studying the patterns and levels of morbidity and also the type of morbidity affecting women across India.

**Figure 2.1 Trends in Morbidity Prevalence Rate by Sex in India**

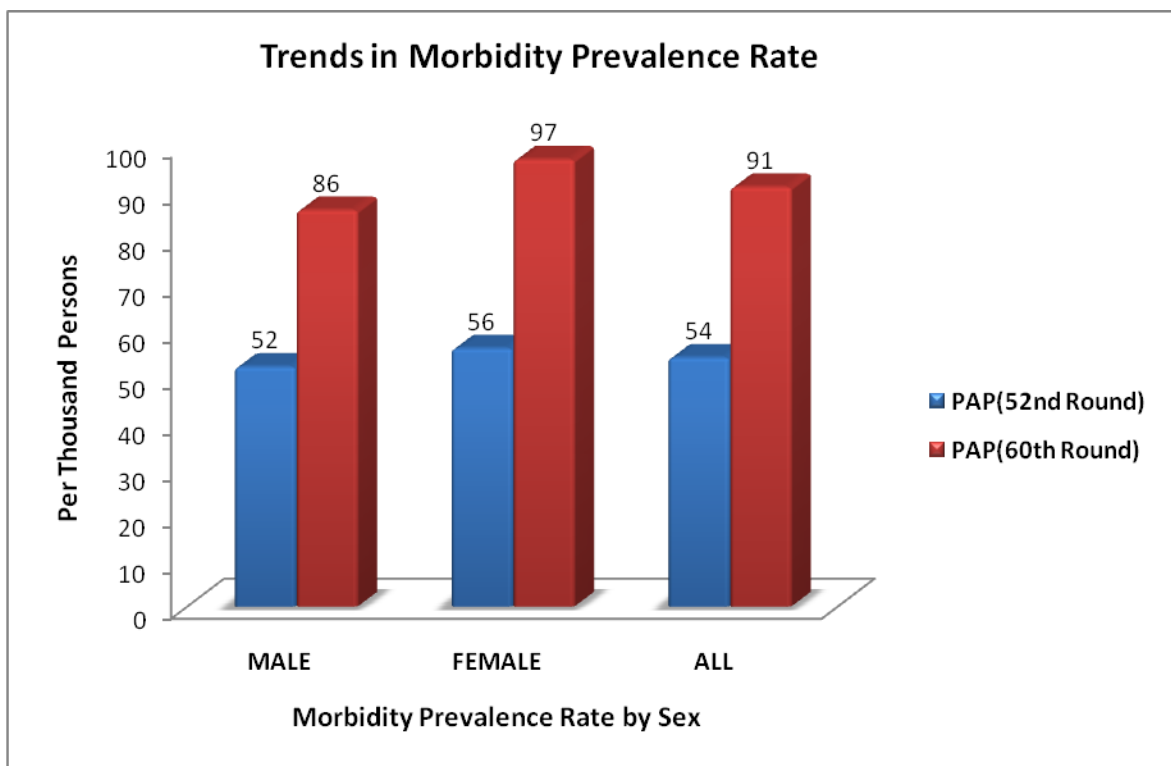
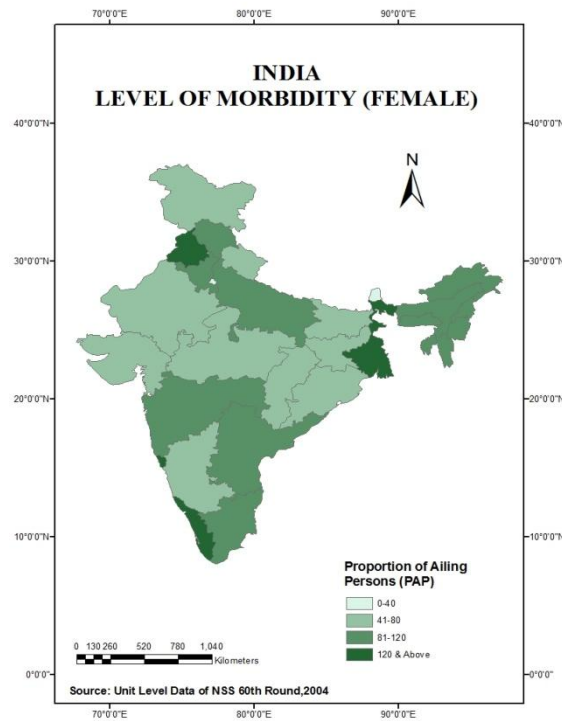
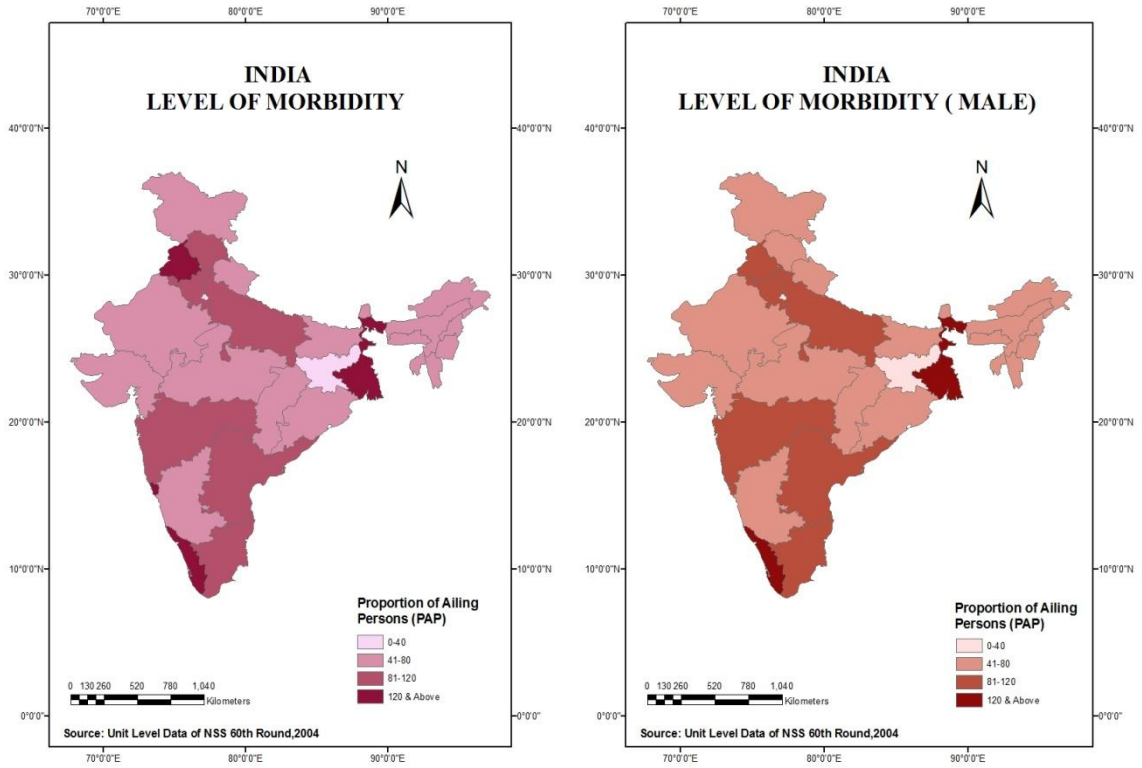


Figure 2.1 presents the trends in sex specific morbidity prevalence rates during the time periods 1995-96 and 2004. The morbidity Prevalence Rate or the PAP (Proportion of Persons Ailed) is showing an increasing trend from 54 during 1995-96 to 91 during 2004 which could be the result of either the increasing health consciousness among the people or the better reporting by the informants. Morbidity Prevalence by sex has also increased from 1995-96 to 2004 but the increase is higher among females than their male counter parts.

**Map 2.1 Spatial Patterns of Levels of Morbidity in India**



Many researchers had found that the lower reporting of ailment is the reason behind the lower morbidity among women in comparison to men (Iyer, 2000; Kannan et. al., 1991; Krishnaswami, 2004).

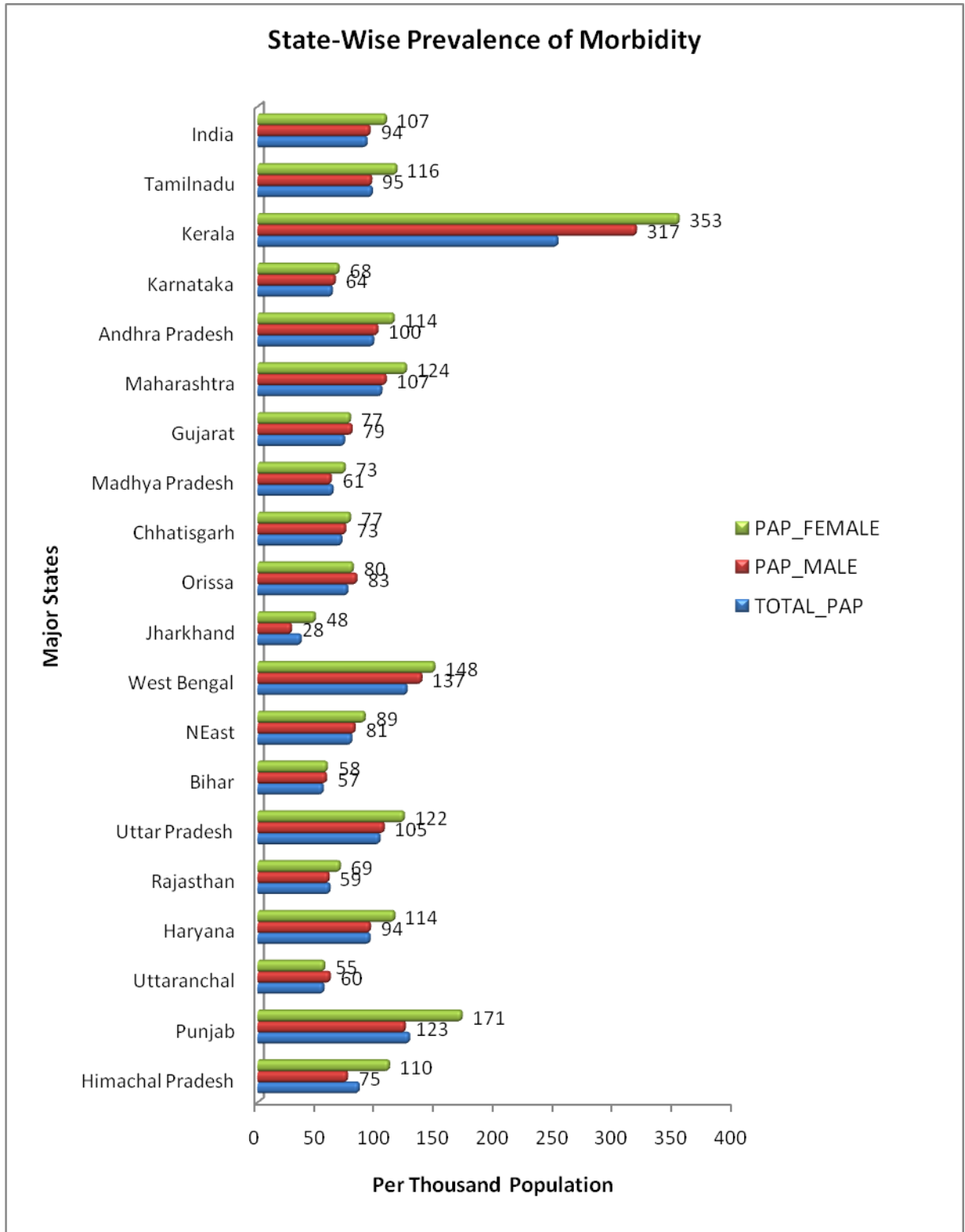
## **2.2 Interstate Differentials in Morbidity Prevalence Rate:**

From figure 2.2, it is seen that the prevalence rate of morbidity is reported relatively higher for both sexes in the states of Kerala, West Bengal, Punjab, Uttar Pradesh, Maharashtra and Andhra Pradesh but sex differentials are considerably higher in the states of Punjab, Himachal Pradesh, Tamil Nadu and Haryana. The higher sex differentials in Punjab and Haryana can be related to the overall status of women in the society as these states have the lowest sex ratios and highest levels of female foeticide in the country. Bihar, Rajasthan, Madhya Pradesh and Karnataka reported relatively low rates of morbidity prevalence. In India, the morbidity prevalence rate is higher for boys compared to girls in the younger age groups, it is mainly because illness of male child is better perceived and reported than the female child which is a clear indication of gender bias, and this can be one of the reasons for higher morbidity prevalence among women.

It is observed that the states with improved status in terms of development indicators like Kerala, West Bengal, and Maharashtra have the highest prevalence rates in the country in comparison to the states which rank low on the development scale. The cause of the high prevalence rates in any state cannot be solely determined by one factor, but many associated factors like the socio-economic background of the population, demographic profile, disease profile, household characteristics etc. play important roles in determining the prevalence rates of morbidity.

The high level of morbidity in Kerala is due to the high proportion of aged population in the state as the literature suggests that morbidity prevalence rate increases with respect to the children depicting a J- shaped pattern (Kannan et. al., 1991; Shariff, 1995; Gumber, 1997). Figure 2.2 shows that female morbidity is highest for Kerala and Uttar Pradesh than any other states. Whereas, low prevalence rates of morbidity can be the result of less reporting and less health awareness among masses.

**Figure 2.2 Interstate Variations in Morbidity Prevalence Rate**

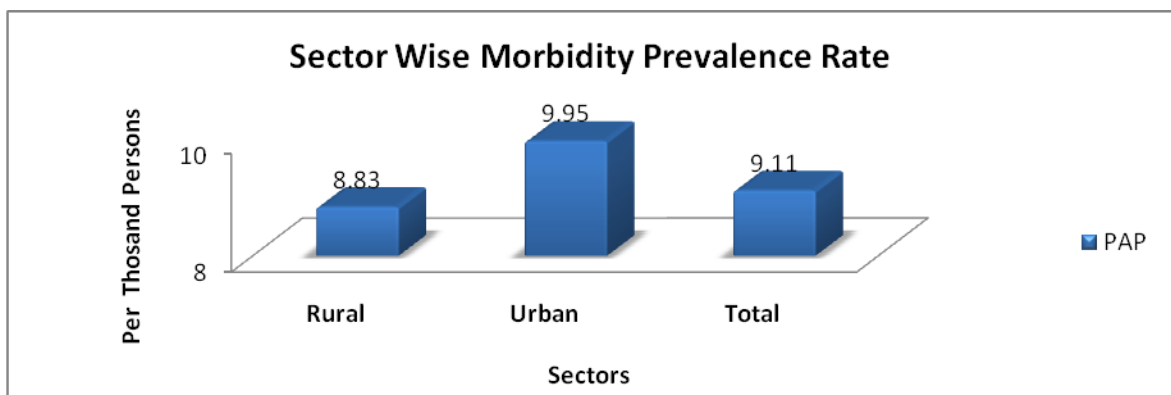


Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.

### 2.2.1 Rural-Urban Differentials in Morbidity Prevalence Rate:

Literature reveals contradictory patterns of rural-urban differentials in Morbidity Prevalence Rates in India. Some scholars argue that the burden of disease is higher among rural population than the urban population with greater reporting (Gumber and Kulkarni, 2000; Dilip, 2002; Duggal R and S Amin, 1989) and other suggests the reverse (Sunder, 1995; Mahiwala et. al., 2000). The rural urban differentials in the morbidity pattern shows an increase in the morbidity prevalence rate when it is compared with the survey estimates of morbidity prevalence rates of the previous NSS round (52nd round: July 1995 – June 1996) that shows an increase of 3 and 4 percentage points in PAP in the rural and urban areas respectively. The increase in PAP over time can be attributed to improved health consciousness over time and the consequent increase in self-reporting of ailments by the informants.

**Figure 2.3 Sector-wise Prevalence of Morbidity in India**



*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.*

Figure 2.3 depicts that urban areas report high morbidity prevalence rate (9.95 percent) in comparison to rural areas (8.83 percent) as urban areas have higher levels of reporting. Other than that, better socio-economic conditions of the population in urban areas and the consequent improvement in terms of development indicators and the availability of the health facilities are also important factors in determining morbidity prevalence rate. The rural-urban differentials in morbidity prevalence rate indicate that the condition of health in rural areas is poor in comparison to their urban counterparts.



### **2.3 Prevalence Rate of Morbidity among Women across Sectors in India**

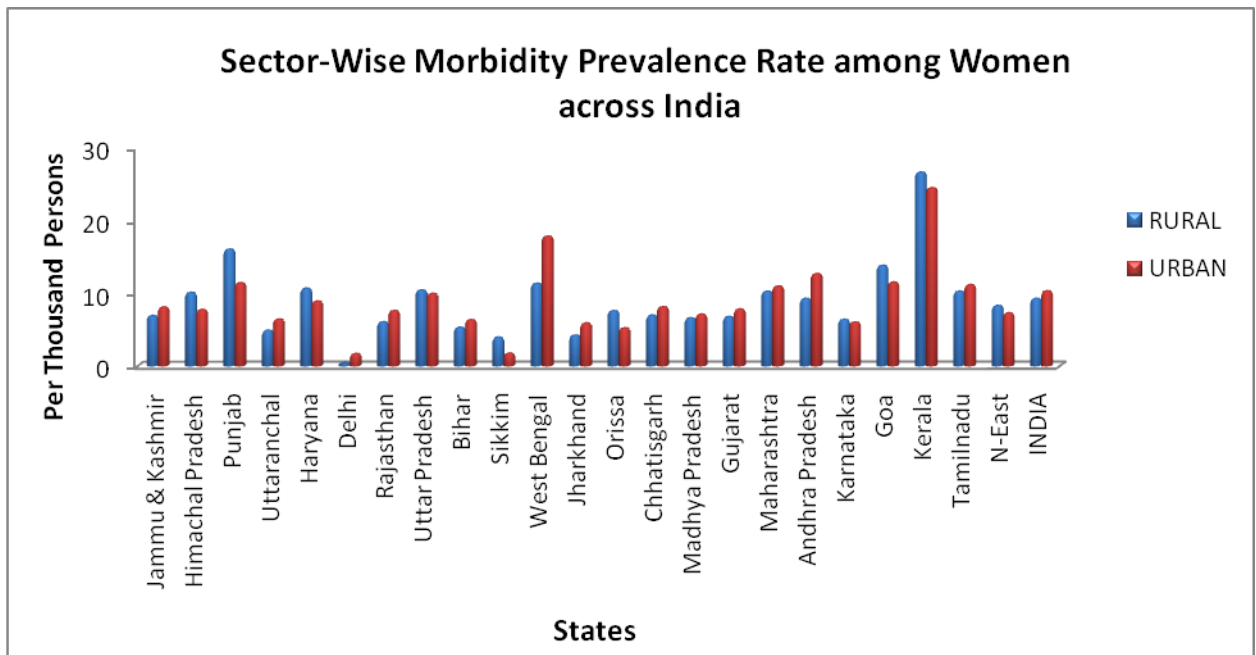
Though improving women's health is one of the prime objectives of India's national family welfare programmes, the situation has worsened over the years. There are stark disparities in terms of availability of health facilities as well as overall health status. Although, gender-based health indicators in India have shown some signs of improvement over time, these developments are still far from optimal. In comparison to European states, the differences in gender related indicators are colossal. For example, among cause-specific mortality rates, maternal mortality rate in India is 16.6 times higher, TB among the HIV positive population is 2.8 times, and age-standardized mortality rate from non-communicable diseases is 1.2 times the comparable rates in Europe. Only the incidence of cancer in India is significantly lower than in the EU (WHO, 2008). The persisting inequality in the society is constraining women to utilize women-centered health services and achieve good health. More pervasive is the reproductive morbidity and the care during delivery and obstetric condition. The morbidity of women varies from rural to urban areas.

There are diversities in terms of cultures, religions and levels of development among states of India. Similarly, women's health also varies greatly from state to state (Chatterjee, 1990; Horowitz & Kishwar, 1985). The utilization of services for the reproductive and child health varies from state to state. Thus it is important to understand the extent of poor and non-poor disparities in urban areas across states irrespective of their urban poverty. As Indian society is traditionally patriarchal, there still exists the preference of son over daughter in most of the Indian states. Many empirical studies have shown that girls tend to suffer more from malnourishment than boys (Patra, 2008).

It can be derived from table 1.1 that sector-wise morbidity prevalence rate for women do not show many differences across states. PAP is high in Punjab, West Bengal and Kerala and it is also high in rural areas than urban areas in the states of Kerala, Punjab, Orissa, Goa and Himachal Pradesh but the differences are prominent in the states of Punjab and Kerala. This can be attributed to the known achievements of these states in terms of social and economic developments; or the variations in morbidity reporting as a result of

health ideals, accessibility of health services and the socio-economic background of the population; or it could be due to the disease profile among the population arising from varying stages of demographic and epidemiological transition (Ghosh, Shoumitra and P Arokiasamy, 2009). On the other hand, less difference is seen in the states of first quartile group, i.e. Bihar, Jharkhand and Rajasthan in both rural and urban areas, the reason for which is less reporting in these states as the cultural settings of the society in these states restrict women's exposure to the outside world. Other important factor may be the literacy rate of the states as Bihar and Jharkhand report very low levels of female literacy which further points towards the lack of awareness about health facilities leading to less reporting of the morbidity conditions.

**Figure 2.4 Prevalence Rate of Morbidity by Sectors among Women in India**



Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.

## **2.4 Comparative Study of Morbidity among Women in Kerala and Uttar Pradesh**

The burden of disease falls very unevenly on different sections of the society in India. The health inequalities are very sharp in India when compared to developed countries including the poor ones. There are close interrelations between the socio-economic status of an individual and the health of the person as pointed out in many studies. Differentials in morbidity by socio-economic status have been identified in countless studies, some dating as far back as the 1800s.

The study of the relationships between the socio economic factors and health has attracted many researchers from many disciplines, including sociology, psychology, economics, demography, epidemiology, biology and medicine. Some of the studies found that, with few exceptions, persons who belong to higher socio-economic status and who are more socially integrated experience lower rates of morbidity and mortality than their counterparts. Some exceptions to these trends are found in some developing countries where higher income is associated with higher rates of self-perceived morbidity (Murray et. al., 1992).

Socio-economic status was found to have definite influence on birth and death rates, where higher socio-economic status results in lower birth and death rates and there is higher risk of mortality among the poor sections of society which could partly be explained by the material deprivation. The higher birth rates could be the result of poorer educational attainments (Kutty V R et. al., 1993).

This section of the study will deal with the comparative study of the morbidity among women in Kerala and Uttar Pradesh. These two states recorded high prevalence rate of morbidity among women irrespective of the stark variations in terms of levels of socio-economic development as well as the overall status of women among the two. Thus, it is necessary to compare these states on different socio-economic parameters in order to find out the factors causing higher morbidity prevalence rate among women. Kerala records high on the morbidity despite better health status of women. Kerala showed that morbidity was higher among people from lower levels of economic and educational

backgrounds than those with higher levels of economic and educational backgrounds. This can be attributed to the epidemiological polarization which is a critical feature of health transition as pointed out in many studies. While Uttar Pradesh also showed higher prevalence of morbidity among women though poor on the development indicators.

**Table 2.1 Comparison of PAP in Kerala and Uttar Pradesh by Age Groups and MPCE**

PAP	Kerala					Uttar Pradesh				
	Monthly Per Capita Expenditure					Monthly Per Capita Expenditure				
Age Groups	Poorest	Poor	Middle	Rich	Richest	Poorest	Poor	Middle	Rich	Richest
<b>0-14</b>	134	197	223	216	186	57	61	88	79	97
<b>15-29</b>	132	157	126	181	185	74	66	87	87	84
<b>30-44</b>	170	217	138	280	227	93	94	118	133	165
<b>45-59</b>	269	376	382	410	425	80	153	178	190	244
<b>Above 60</b>	494	543	586	638	711	207	298	261	302	355

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.*

From the study it is found that age is an important determining factor for the cause of morbidity. Morbidity is higher among very young age groups and very old age groups due to which the nature of morbidity is “U” shaped (Duraismamy, 1998). Here, the above table analyses the prevalence of morbidity by age group and monthly per capita consumption expenditure. It is found that PAP in Kerala for all the economic classes, except middle and rich category, shows an increase with age group.

The prevalence rate of morbidity in Kerala is highest among the age group above age 60 years as the proportion of aged population is higher in Kerala (NSSO, 2006). While in Uttar Pradesh, all the MPCE categories shows an increasing trend with increase in age. The prevalence rate of morbidity is more in the case of women belonging to better

economic status, the reason for this can be that women who are having better economic condition might be having better education and women having better education will have awareness about their health.

**Table 2.2 Comparison of PAP in Kerala and Uttar Pradesh by Marital Status and MPCE**

PAP	Kerala					Uttar Pradesh				
	Monthly Per Capita Expenditure					Monthly Per Capita Expenditure				
Marital Status	Poorest	Poor	Middle	Rich	Richest	Poorest	Poor	Middle	Rich	Richest
Never Married	157	208	196	208	207	55	62	89	76	89
Currently Married	171	236	200	304	300	85	103	118	145	171
W/D/S	401	457	535	587	701	220	254	285	268	339

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. W-Widowed, D-Divorced, S-Separated.*

It can be derived from the above table that women who are widowed, divorced, separated report higher PAP in both the states in comparison to never married and currently married women which may be because women who are alone are more concerned about their health. While in Uttar Pradesh, it is seen that with an increase in income the prevalence of morbidity increases among women and also morbidity is more prevalent among women who are widowed/divorced/separated.

**Table 2.3 Comparison of PAP in Kerala and Uttar Pradesh by Social Groups and MPCE**

PAP	Kerala					Uttar Pradesh				
	Monthly Per Capita Expenditure					Monthly Per Capita Expenditure				
Social Groups	Poorest	Poor	Middle	Rich	Richest	Poorest	Poor	Middle	Rich	Richest
ST	25	231	500	542	909	26	0*	60	24	413
SC	283	276	282	351	326	70	99	100	125	149
OBC	276	245	239	305	313	79	80	113	110	138
Others	221	263	242	286	300	82	99	129	136	156

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. \* Value zero does not mean that there is complete absence of morbidity but it accounts to negligible value when seen in per thousand.*

Economic status of the household is an important factor in determining health status and the extent of utilization of health services. It is seen from table 2.3 that women who are from lower social status or lower castes and who fall in the lowest quintile have lowest prevalence of morbidity whereas, the case gets reverse for the women who are from higher social status or the forward castes and fall in the highest quintile. This can suggest two scenarios; either the poor are less prone to sickness than the rich, which is far less likely; or that the reporting of morbidity improves with improvement in the standard of living which is the far more likely scenario here (NSSO, 2006).

## **2.5 Comparative study of the type of ailment by background characteristics in Kerala and Uttar Pradesh:**

The morbidity prevalence was studied in terms of disease composition- broadly, acute and chronic. Ailments of less than 30 days duration are treated as 'acute' and those of more than 30 days duration as 'chronic' (NSSO, 1998). Chronic diseases are the leading causes of death and disability in India. There is positive correlation between age and chronic disease as the prevalence rate of chronic diseases among women increases with the increase in age in Kerala which shows highest prevalence rate of chronic disease among the age group 60+. Ageing process increases both short duration and long duration diseases.

The scenario is different in terms of diseases that are of less than 30 days duration as in the case of acute ailment where the prevalence rate is higher among the lower age groups and it decreases up to certain age group and then again increases in the case of Kerala women. Both the type of ailments, i.e. acute and chronic, is more prevalent among women who are widowed/divorced/separated whereas, it decreases among women who are in the never married categories in both the states.

The reason for less prevalence of both the type of ailments in the never married category can be less reporting done by the never married category women or the ignorance of diseases when they are not married. Caste differences in the prevalence of acute diseases is highest for scheduled tribe women while other backward castes and others show less prevalence rate of acute diseases. For the chronic diseases, scheduled tribe women have the least prevalence rate which can be associated with the acute lack or non-existence of health services in the areas populated by scheduled tribe population.

**Table 2.4 Prevalence of Ailment by Background Characteristics in Kerala**

Background Characteristics	Type of Ailment	
	Acute	Chronic
<b>Age Group</b>		
0-9	185	73
10-19	135	150
20-49	110	437
50-59	136	677
60+	141	761
<b>Marital Status</b>		
Never Married	155	33
Currently Married	107	133
W/D/S	157	367
<b>Social Group</b>		
ST	214	68
SC	167	119
OBC	131	115
Others	117	150
<b>Educational Status</b>		
Illiterate	179	178
Literate up to Middle	118	128
Secondary and above	140	149
<b>MPCE</b>		
Q1	105	90
Q2	126	119
Q3	119	124
Q4	160	141
Q5	156	153

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. W-Widowed, D-Divorced, S-Separated.*

Therefore, low literacy, limited exposure to media and lack of health care services may lead to under-reporting of ailments among the ST/SC people (Soumitra Ghosh and P Arokiashamy, 2009). The educational status of women in Kerala does not show much difference in the prevalence rate of both the types of diseases. From table 2.4 it is seen that in as monthly consumption expenditure among women increases, there is an increase in the prevalence of both acute and chronic disease and the gap in the differentials of prevalence of both the diseases by MPCE is very less.



**Table 2.5 Prevalence of Ailment by Background Characteristics in Uttar Pradesh**

Background Characteristics	Type of Ailment	
	Acute	Chronic
<b>Age Group</b>		
0-9	87	4
10-19	33	11
20-49	72	38
50-59	118	69
60+	131	153
<b>Marital Status</b>		
Never Married	65	8
Currently Married	78	47
W/D/S	136	130
<b>Social Group</b>		
ST	50	37
SC	75	25
OBC	70	30
Others	83	44
<b>Educational Status</b>		
Illiterate	86	36
Literate up to Middle	60	27
Secondary and above	50	11
<b>MPCE</b>		
Q1	52	22
Q2	68	19
Q3	82	30
Q4	86	32
Q5	87	58

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. W-Widowed, D-Divorced, S-Separated.*

Though, it is seen in Uttar Pradesh that the prevalence rate for both acute and chronic disease is higher in case of illiterate women and the prevalence rate for both the disease decreases with increase in the level of education of women. Thus, it can be derived from the observation that education is an important factor in decreasing the prevalence rate of diseases among women. The analyses indicate that the prevalence rate of both ‘acute’ and ‘chronic’ diseases differ marginally across income groups which points out that income and expenditure have differential impacts on the chronic morbidity prevalence rates. In Uttar Pradesh, both the types of ailments are more prevalent among higher among the

older age groups; i.e. 118 and 131 per thousand in the age group 50-59 and above 60 respectively. Similarly, in the case of chronic diseases, it is 69 and 153 for the age group of women 50-59 and above 60 respectively. The lowest prevalence rate for chronic diseases is seen for women in the age group 0 to 9 while the prevalence rate for acute diseases is lowest for women in the age group 10 to 19 group.

Above table also shows that there are variations in the prevalence of diseases with differences in the marital status of women. These differences are more in case of women suffering from chronic diseases as women who are in the never married category have the lowest prevalence rate of chronic disease and it is highest in the case of women who are divorced/widowed/separated. Prime reason for the high prevalence rate is that women who are in this category often belong to old age groups as pointed out by many studies. The prevalence of disease by type of ailment in Uttar Pradesh shows less difference. When comparing the prevalence of disease between the two types of ailments, it is found that the prevalence is more in the case women suffering from acute diseases than those suffering from chronic diseases.

In both the type of ailments, the 'others' category shows highest prevalence rate in comparison to all other categories. Women belonging to Scheduled castes and other backward castes have comparatively higher prevalence rate of acute diseases; while, it is less prevalent in the case of chronic diseases for all categories of women. From the above table it can be analyzed that with the increase in the educational status of women in Uttar Pradesh, the prevalence rate of acute as well as chronic diseases is decreasing. Women who are economically well-off have higher prevalence of acute diseases and women with less income have less prevalence of acute disease. But there are variations in the prevalence of diseases for all economic groups of women suffering from chronic disease.

## **2.6 Logistic Regression Model:**

The Bi-Variate Analysis is not sufficient to give conclusive information about what are the factors affecting type of ailment, because it depicts only one to one relationship between two variables where as in reality hosts of factors affects morbidity among women, therefore logistic regression has been applied in the analysis of this section. The

selection of explanatory variables varies across regions of India depending on the socio-economic, demographic factors.

### **2.6.1 Determinants of Morbidity:**

This section deals with two separate logistic regression models to identify the determinants of both acute and chronic morbidity. Since the available data is dichotomous, we use separate logistic regression models for acute and chronic ailments.

### **2.6.2 Variables used in the analyses:**

The variables used in the analysis of both acute and chronic morbidity determinants are age groups, marital status, educational status, social groups and monthly per capita expenditure. Here, the significant factors in the probability of a person falling ill (acute) are presented. The predictor values are age groups, marital status, educational status, social group, MPCE.

### **2.6.3 Model-I (Dependent Variable is Acute Disease):**

Taking age group 0-9 as the reference category, it is seen that both in Kerala and Uttar Pradesh, acute morbidity is high for women in the age group 10-19 and 20-49. The table shows that in the case of Kerala it is 47.64, 12.40, 2.72 and 1.42 times higher than 0-9 age group while in the case of Uttar Pradesh it is 34.74, 4.48, 2.05 and 2.006 times higher than 0-9 age group. For the marital status, women who are widowed/divorced/separated in Kerala and Uttar Pradesh, the chance for acute morbidity is 1.004 times higher than never married women in Kerala and it is 1.089 times higher in the case of women of Uttar Pradesh. The chance of acute morbidity lowers with increasing hierarchy in the caste system which is seen both in Kerala and Uttar Pradesh. It is 2.607, 1.928 and 1.39 times lower than scheduled tribe women in Kerala and 0.925, 1.399 and 1.086 times lower than scheduled tribe women in Uttar Pradesh. Taking illiterate as the reference category, the chances of acute morbidity consistently declines with increase in the number of years of schooling. It is 0.746 and 0.952 times higher than illiterate women. While in Uttar Pradesh it is 1.039 and 1.265 times higher than illiterate women. As there is an increase in the quintile group, the acute morbidity decreases. In Kerala, it is 0.961, 0.799, 0.755 and 1.094 times higher than women of lowest quintile group whereas, it is 1.084, 1.927, 1.472 and 1.560 higher than lowest quintile group women.

**Table 2.6 Determinants of Acute Morbidity Logistic regression of Kerala and Uttar Pradesh (1 if it is Acute and 0 if no)**

Predictors Value	Kerala	Uttar Pradesh
	Odds Ratio	Odds Ratio
<b>Age Group</b>		
0-9®		
19-Oct	47.64***	34.742***
20-49	12.403***	4.484***
50-59	2.718***	2.056***
60+	1.357***	2.006***
<b>Marital Status</b>		
Never Married®		
Currently Married	0.905***	0.708***
W/D/S	1.004*	1.089***
<b>Social Group</b>		
ST®		
SC	2.607***	0.925***
OBC	1.928***	1.399***
Others	1.39***	1.086***
<b>Educational Status</b>		
Illiterate®		
Literate up to Middle	0.746***	1.039***
Secondary and above	0.952***	1.265***
<b>MPCE</b>		
Q1®		
Q2	0.961***	1.084***
Q3	0.799***	1.927***
Q4	0.755***	1.472***
Q5	1.094***	1.560***
-2 Log likelihood	3743651	7897828
Chi Square	0.262	0.237
R-Square	0.322	0.262
No. of Observations	7066	27094

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. W-Widowed, D-Divorced, S-Separated.*

*\*\*\* and \* implies the statistical level of significant at 1% and 10% respectively.*

**2.6.5 Model-II (Dependent Variable is Chronic Disease):**

**Table 2.7 Determinants of Chronic Morbidity Logistic regression of Kerala and Uttar Pradesh (1 if it is Chronic and 0 if no)**

Predictors Value	Kerala	Uttar Pradesh
	Odds Ratio	Odds Ratio
<b>Age Group</b>		
0-9		
10-19	0.021***	0.029***
20-49	0.081***	0.223***
50-59	0.368***	0.486***
60+	0.737***	0.499***
<b>Marital Status</b>		
Never Married		
Currently Married	1.105***	1.413***
W/D/S	0.996*	0.918***
<b>Social Group</b>		
ST		
SC	0.384***	1.081***
OBC	0.519***	0.715***
Others	0.719***	0.921***
<b>Educational Status</b>		
Illiterate		
Literate up to Middle	1.341***	0.962***
Secondary and above	1.050***	0.790***
<b>MPCE</b>		
Q1		
Q2	1.041***	0.922***
Q3	1.252***	0.519***
Q4	1.324***	0.679***
Q5	0.914***	0.641***
-2 Log likelihood	3853331	7956828
Chi Square	0.323	0.224
R-Square	0.242	0.157
No. of Observations	7066	27094

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. W-Widowed, D-Divorced, S-Separated.*

*\*\*\* and \* implies the statistical level of significant at 1% and 10% respectively.*

The analysis depicts that education status, work status, socio-economic group and age group are statistically significant predictors of chronic morbidity. One important finding is that the major determinants of both acute and chronic morbidity are not very dissimilar in both Kerala and Uttar Pradesh. Simultaneous observation of the two models of morbidity reveals that the socio-economic status is not a crucial determinant of morbidity in rural Kerala. It also reveals that morbidity distribution is, in general, independent of socio-economic status. In particular, quality and diversified rural public health care services are very essential for the poor and the vulnerable sections of the population.

## **2.7 Summary:**

Prevalence of morbidity among women is an important social issue and a concern for health policy and planning in India as maternal deaths are very high in India in comparison to other developed nations. Existing literatures reveals that life expectancy among women is higher than men even though that prevalence of morbidity is higher among women. It reflects that gender inequalities in terms of availability and utilization of health facilities are very sharp in India than other nations. There are varying patterns of morbidity among different socio-economic groups of women. However, socio-economic status is not a statistically significant determinant of morbidity which reveals the typical cross section of the Kerala and Uttar Pradesh society. Increasing prevalence of morbidity among women requires deeper study of the disease patterns leading to this phenomenon. Existing literature reflects that most of the diseases affecting women are under-diagnosed and under-treated which calls for further gender development studies in the specific social and regional contexts. Against the backdrop of increased morbidity prevalence rates among women, it can be suggested that health policies should be designed to address gender specific issues.

## **CHAPTER-III**

### **Intra-Regional Variations of Morbidity among Women in Kerala and Uttar Pradesh**

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#### **3.1 Introduction:**

Morbidity of a population shows the better picture of the health status/well being of the population compared to the mortality pattern. Recognizing the importance of health, public policy in the new millennium is heading towards a different approach. Poverty eradication has taken a different approach with an explicit recognition that deprivation has multiple dimensions, where health and education are equally important and hence deserve special attention. Thus regarding health, the government of India has proposed in its Union budget increase of expenditure in health as percent of GDP from 1.4 percent to 2.45 percent. However this increase is still very low when compared to other developed nations where United States contributes 7 percent of GDP, the European countries like U.K, Spain, Germany and Italy spend 6.5 percent to 8 percent of their GDP on health care. Thus India occupies bottom line figure in terms of health. There are differentials in the prevalence of morbidity when seen at different levels with varying determining factors influencing it like the socio-economic factors which are among the most influencing factor in any region of India. The prevalence of the disease in any region is directly or indirectly related to the development of the region as a whole.

Morbidity or feeling sick is subjective phenomenon and the relation between morbidity and mortality is lacking, morbidity reported for regions with high mortality is lower than those regions with low mortality. The national level survey conducted by National Sample Survey Organization has shown that Kerala has higher level of reported or perceived morbidity, which is to a large extent based on individual's perception of illness. While other states of India which are least developed are showing higher prevalence rate of morbidity like Uttar Pradesh, Bihar, Orissa, West Bengal while the western states like Maharashtra, Gujarat are on the better scale in prevalence of morbidity. Thus it is important to peep into the major reasons which are causing such

differences in the prevalence of morbidity in the different regions on India. For the study, two Indian states are taken depending on the cases reported on prevalence of morbidity; the two states taken are Kerala which has reported very high level of morbidity cases and is a developed state. On the other hand, Uttar Pradesh is taken which is a less developed state but the prevalence of morbidity is high. The chapter tries to find out the intra-regional variation of prevalence of morbidity among women within the states and the determining factors which is influencing Prevalence of Morbidity.

### **3.2 Intra-Regional Variation of Prevalence of Morbidity among Women in Kerala by Background Characteristics:**

The human development report for Kerala has pointed out that high morbidity is an emerging health issue that matters for human development since it raises issues regarding “quality and affordability of health care”. This is a little contradictory given that Kerala has received wide appreciation in terms of their development and welfare. The NSS survey findings have shown that Kerala stands much better off than all India in terms of per capita expenditure estimates. Per capita consumer expenditures in rural (Rs 746.75) and urban Kerala (Rs 998.06) are higher than the corresponding estimates for rural (Rs 483.36) and urban (Rs 936.27) all India. Though the extent of inequality in the distribution of consumption is higher in rural Kerala than that in rural all-India, incidence of absolute poverty in rural Kerala (17.52 percent) is about half of that in rural all India (32.82 percent). Kerala is chosen for the study purpose because of its unique feature on the health front that is the coexistence of low mortality and the prevalence of high morbidity. There are many reasons which can be cited for the high level of morbidity in the region, one of them probably being the high level of reporting of sickness because of higher concern for health and general awareness because of high literacy in the state. Indeed, this interpretation has been proffered by Amartya Sen (1993), who writes: "It does superficially seem odd that a region with a population that is so plagued by illness and disease, needing so much medical care, should be exactly the one that lives the longest and escapes premature mortality successfully". From the literatures it was found that illnesses in Kerala are reported much more fully than in other regions, and that the figures reported reflect not so much an excess of real illness burdens



as an enhanced perception of morbidity. Prevalence of morbidity among women in any region depends on the status of women in the society.

Kerala is one of the developed states having a high level of literacy rate both for males and females, which directly influences the reporting of health among women. Other factors like social group also affect the health status of women and there are many other socio-economic factors which affect the health status of people. There are variations within the states, thus it is important to find out the intraregional variations by socio-economic status of women.

### **3.2.1 Status of Women in Kerala:**

Kerala has received international recognition for having a high status of women. It reported 87.9 percent of female literacy in 2001. Sex ratio of Kerala is the highest among all states of India. The state is at the top among the states in India in gender development index. The literacy and education levels of women are comparable to that of men and are much higher than their counterparts elsewhere in India. The reason for high status of Kerala women is not attributed only to one specific reason but it include the long history of social reforms and the importance given to women by reformers, matrilineal systems followed by certain sections of the population, early spread of female education, early inception of family planning and the influence of the left movements. Thus there arises a quest to know the health status of women in a state where almost all girls below the age of 14 go to schools.

### **3.2.2 Intra-Regional Variation of Prevalence of Morbidity among Women by Age Group in Kerala:**

Age is vital demographic factor affecting morbidity. An examination of age differentials of morbidity gives an understanding about how morbidity varies across various life cycles. As we move up the age group, morbidity prevalence rates consistently increases. For instance ageing process increases both short duration and long standing diseases. That is acute and chronic morbidity rates are the highest in the 60+ age groups and lowest in the 0-14 age group. Existing literature suggests that type of morbidity varies with

different age- groups for both male and female, as some ailments occurs at lower age strata while some at higher level.

**Table 3.1 Prevalence of Morbidity (PAP) by different Age Groups in the Regions of Kerala by Sectors**

PAP	Kerala			
	Rural		Urban	
Age Groups	Northern	Southern	Northern	Southern
<b>0-14</b>	106	255	76	265
<b>15-29</b>	85	229	64	181
<b>30-45</b>	150	266	115	172
<b>45-59</b>	309	442	276	404
<b>Above 60</b>	544	622	529	631

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

From table 3.1 it is seen that the prevalence of morbidity is higher for the southern region of rural Kerala than the northern region and with the ascending age groups the prevalence rate ascends, the similar picture can be seen in the case of urban Kerala. Both in the rural and urban region it is seen from the above table that the prevalence of morbidity among women is highest in the age group 60 followed by the age group 45-59 while the prevalence rate is lowest for the age group 15-29 in the northern region of rural sector and similarly for the northern region of urban sector. The variation in the prevalence of morbidity is higher in the southern region because that southern region is better off in terms of levels of living in both rural and urban sectors. The extent of inequality is also higher in South Kerala than in the North; still incidence of absolute poverty is higher in the North than in the South, reflecting the relatively lower level of standard of living in the former (M H Suryanarayana,2008). The rural- urban differential in the prevalence of morbidity is minimal. The only notable rural-urban differential across age groups is the relatively low level of illness among people of working age in urban areas compared with those in rural areas.

### 3.2.3 Intra-Regional Variation of Prevalence of Morbidity among Women by Social Groups in Kerala:

In India there are multiple socio-economic disadvantages that members of particular groups experience which limits their access to health and healthcare. The vulnerable groups that face discrimination include women, Scheduled Castes (SC), Scheduled Tribes (ST), children, the aged, the disabled, poor migrants, people living with HIV/AIDS and sexual minorities. These groups face multiple barriers due to multiple identities like in the patriarchal society a disabled women faces double discrimination for being women and for being disabled. In India, members of caste, ethnic, gender experience structural discrimination that impact their health and access to health care. Women have low status as compared to men in Indian society. They have little control on the resources and on important decisions related to their lives. In the multi caste Kerala society the prevalence of morbidity variation across regions and it can be attributed from table 3.2 that the prevalence of morbidity in the southern region is high across the sectors of Kerala, the only exception being the scheduled tribe population of southern region of Kerala where the prevalence rate observed is zero because there is no case of reported morbidity.

**Table 3.2 Prevalence of Morbidity (PAP) by different Social Groups in the Regions of Kerala by Sectors**

PAP	Kerala			
	Rural		Urban	
Social Groups	Northern	Southern	Northern	Southern
ST	108	863	165	-
SC	188	366	78	320
OBC	177	343	160	277
Others	206	292	169	304

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round. Empty cell has no sample.*

The prevalence rate is high for the scheduled tribe population followed by Scheduled Caste, Other Backward Caste and Others in the rural sector for both northern and

southern region while the picture is different in the case of urban sector; prevalence rate in northern Kerala is high among the forward castes followed by scheduled tribe women, other backward caste and it is very less among scheduled caste women. There is a differential gap in the prevalence of morbidity among women of northern and southern regions of Kerala. Prevalence rate of morbidity among women is higher in southern region than the northern region of Kerala. Forward caste women are having higher morbidity than any other caste group while it is less for other backward caste women. The gap in the prevalence of morbidity is less within caste groups in urban Kerala while it is more in the southern region of rural Kerala.

### **3.2.4 Intra-Regional Variation of Prevalence of Morbidity among Women by Marital Status in Kerala:**

Marital status of women affects morbidity as in the case of married women the decision of health of the women are decided by whole family in India, especially if it is joint family and the woman is not educated.

**Table 3.3 Prevalence of Morbidity (PAP) by Marital Status in the Regions of Kerala by Sectors**

PAP	Kerala			
	Rural		Urban	
Marital Status	Northern	Southern	Northern	Southern
Never Married	108	270	86	240
Currently Married	173	296	150	275
Widowed/Divorced/Separated	422	643	412	523

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

Table 3.3 shows that in rural Kerala, prevalence of morbidity is highest in the case of women who are widowed/divorced/separated followed by women who are currently married while it is less in the case of women who are never married which is same in the case of women in southern Kerala. The gap in the prevalence of morbidity is high for women who are currently married and widowed/divorced and separated in rural Kerala.

Urban Kerala is also showing the same picture for prevalence of morbidity among women.

### 3.2.5 Intra-Regional Variation of Prevalence of Morbidity among Women by Educational Status in Kerala:

Education acts as a socio-economic status indicator which has a great influence on the occurrence of illness and utilization of health services. From the above table it is seen that the prevalence rate of morbidity is declining with increase in the level of education. Women with secondary and higher education have comparatively less prevalence rate of morbidity. Thus there is an inverse relation between morbidity and education (P Duraiswamy, 1998). Jeffry (1987) in his study pointed out that one percent increase in the schooling of woman would result in nine percent of reduction in mortality rate.

**Table 3.4 Prevalence of Morbidity (PAP) by Educational Status in the Regions of Kerala by Sectors**

PAP	Kerala			
	Rural		Urban	
Educational Status	Northern	Southern	Northern	Southern
Illiterate	264	467	237	413
Up to Primary	210	382	176	358
Middle	133	286	129	238
Secondary and above	102	231	121	226

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

Table 3.4 shows that among illiterates the prevalence of morbidity is very high and as there is an increase in the level of education among women in Kerala there is declining trend in the prevalence of morbidity. From the above table it is seen that PAP for illiterate women for northern region is 264 per thousand while it is 210, 133, 102 respectively for

up to primary, middle, secondary and above. The picture is the same for other region and for urban region of Kerala.

### **3.2.6 Intra-Regional Variation of Prevalence of Morbidity among Women by Religion in Kerala:**

Variation in prevalence of morbidity is also seen across religion. Women of different religion have different perceptions regarding health and morbidity, so it is important to see variation across religion.

The prevalence of morbidity varies with various religious groups as can be seen from Table 3.5. The prevalence of morbidity is high among the Christian women as they are more educated so more women report conditions of morbidity. Region wise analyses from the table depicts that the prevalence of morbidity is higher in the southern region of Kerala and the same for the rural and urban sector. The prevalence of morbidity is less among Muslim women for both the regions.

**Table 3.5 Prevalence of Morbidity (PAP) by Religious Groups in the Regions of Kerala by Sectors**

PAP	Kerala			
	Rural		Urban	
Religion	Northern	Southern	Northern	Southern
Hindu	178	288	172	326
Muslim	120	279	182	344
Christians	124	310	258	335

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

### **3.2.7 Intra-Regional Variation of Prevalence of Morbidity among Women by Monthly per Capita Expenditure in Kerala:**

There is a proven relationship between socioeconomic position of people and health status as is widely accepted among epidemiologists and public health researchers (Lynch J W and Kaplan G A, 2000). People who are socio-economically better placed tend to be healthier; this relationship has been seen with measures of mortality, morbidity and self-

assessed health (Kosa J and Zola I K, 1969). Women in the highest quintile group are having high prevalence of morbidity both in the southern region of rural and urban sector. It is seen from the table that PAP is less in the northern region of Kerala as compared to the southern region.

**Table 3.6 Prevalence of Morbidity (PAP) by Monthly Per Capita Consumption Expenditures in the Regions of Kerala by Sectors**

PAP	Kerala			
	Rural		Urban	
MPCE	Northern	Southern	Northern	Southern
Poorest	140	276	178	218
Poor	185	362	141	301
Middle	194	254	136	281
Rich	206	368	148	293
Richest	211	373	194	332

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

Thus it can be said that women who are poor in the southern region are exposed to relatively higher morbidity load. This leads to an important policy questions of improving the efficacy of public health care in the region for the poor population.

### **3.3 Intra-Regional Variation of Prevalence of Morbidity among Women in Uttar Pradesh by Background Characteristics:**

Uttar Pradesh is the most populous state in India, ranking almost at the bottom of Indian states on many demographic, health and development indicators. The state of health in Uttar Pradesh is a human development challenge and life expectancy is one of the lowest in the country. Fertility and mortality rates are higher in Uttar Pradesh than in most other Indian states. Uttar Pradesh has one of the highest rates of infant and maternal mortality in the entire country. Maternal mortality, which is 440 per 100000 live births, is highest for any state in India and exceptionally higher than the national average of 254 per 100000 live births. Social status determines access to healthcare. Infant Mortality Rate

(IMR) is two and half times higher amongst the poor. At the same time, a lower proportion of public resources are spent on the bottom 20 percent of the population in comparison to what is spent on the top 20 percent (Human Development Report of Uttar Pradesh, 2003).

The health of women in Uttar Pradesh when seen from the indicators such as IMR, CMR and female life expectancy, was found to be worse than their male counterparts. This is largely the result of lower social status and neglect of women in a patriarchal society. Uttar Pradesh ranks very low among Indian states on almost all indicators of women's status. Only 59.26 percent of women are literate in Uttar Pradesh (Census, 2001). Fewer than half of adult women in Uttar Pradesh are regularly exposed to any form of mass media. Uttar Pradesh also ranks extremely low on female decision-making, freedom of movement and control over money.

### **3.3.1 Status of Women in Uttar Pradesh:**

According to 2001 census it is found that the literacy rate among women is 36.5 million, and a large number of women are still illiterate and maternal mortality rate are very high at 70.7 per thousand. The census 2011 however shows an increase in the literacy rate among women which has marked as 59.26percent, though is still less than their male counterparts that is 79.77 percent. Official statistics reveal that Uttar Pradesh recorded 2059 dowry deaths during 2000 which is the highest and constitute 30 percent of reported cases across the country.

On the positive side in the last decade it is seen that with the increase level of education in the state, issues of domestic violence, livelihoods, caste oppression, and communal divisions have been raised. Increased participation of women in Panchayats has also raised hope in them. Many initiatives were taken to improve the condition of women in the state. One such as an interesting experiment has been that of 'Nari Adalats' (women courts) started by the Mahila Samakhya in Saharanpur in western Uttar Pradesh. The enforcement of 73<sup>rd</sup> amendment has led many illiterate women to come out of the shadow to occupy the position. But these developments of women were confined to only the developed regions of Uttar Pradesh like western and the central regions.



### 3.3.2 Intra-Regional Variation of Prevalence of Morbidity among Women by different Age Groups:

The relation between the age and the prevalence of morbidity generally shows a “J” shaped pattern because the prevalence of morbidity is high in the age group 0 to 1 and it increases till the age of five and again it starts decreasing and the rate again starts increasing in the higher age group after attending age 60. However, in the case of women the prevalence rate starts increasing after women attends amenorrhea as the chance of falling sick increases as the body starts changing.

This study groups the age in the following manner has shown below which is showing the linear increase in the prevalence of morbidity among the following age group.

**Table 3.7 Prevalence of Morbidity (PAP) by different Age Groups in the Regions of Uttar Pradesh by Sectors**

PAP	Uttar Pradesh							
	Rural				Urban			
Age Groups	Western	Central	Eastern	Southern	Western	Central	Eastern	Southern
0-14	98	97	43	73	96	95	49	45
15-29	110	95	53	90	78	69	91	38
30-45	173	160	65	94	171	108	74	208
45-59	232	191	99	197	326	162	170	132
Above 60	384	278	199	228	449	361	257	336

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

As the women’s age increases PAP increases sharply in both the sectors. From the data is found that the eastern region of Uttar Pradesh is showing comparatively lower prevalence rate in comparison to other regions of Uttar Pradesh, the reason for the same can be the low reporting done by the women as the region is economically and socially less developed. Women in the eastern region are less educated and more dependent because

of the existence of the patriarchal set up in the region where the decisions about women's health, education, movement are solely governed by their husband and the male head of the family. PAP is highest in the above 60 age group.

### **3.3.3 Intra-Regional Variation of Prevalence of Morbidity among Women by Social Groups in Uttar Pradesh:**

The Indian society since long is characterized by a highly unwavering system of social stratification based on the caste system. The caste system with its graded, differential, ascribed, and hereditary based unequal rights locates the erstwhile untouchables at the bottom of the caste pyramid. Women, Scheduled Castes (SC), Scheduled Tribes (ST), children, the aged, the disabled, poor migrants, people living with HIV/AIDS and sexual minorities face discrimination in various forms. Sometimes each group faces multiple barriers due to their multiple identities. For example, in a patriarchal society, disabled women face double discrimination of being a woman and being disabled and are often termed as the vulnerable groups in India (Chandrima Chatterjee and Gunjan Sheoran, 2007). However, despite the proliferation of statutory legislations of protective discrimination, equity and social justice for these groups is far from being achieved. When compared to the scheduled tribe population it is seen that the scheduled caste population are at less disadvantaged place in terms of access to the health facilities because ST population are isolated from the mainstream population and are scattered and very sparsely populated and thus they lag behind even for free health services. On the other hand, Scheduled Caste population always lives in the villages settled by the dominant groups of population and thus they do not have any problem in accessing to the health facilities as compared to the Scheduled Tribes population (Vijay Kumar Baraik and P M Kulkarni, 2006).

**Table 3.8 Prevalence of Morbidity (PAP) by different Social Groups in the Regions of Uttar Pradesh by Sectors**

PAP	Uttar Pradesh							
	Rural				Urban			
Social Groups	Western	Central	Eastern	Southern	Western	Central	Eastern	Southern
ST	543	0	11	146	0	440	35	173
SC	136	123	65	132	123	111	32	71
OBC	140	121	65	89	130	80	78	110
Others	161	162	64	111	184	139	143	127

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

But from the Table 3.8 it is seen that in the rural western region of Uttar Pradesh, the prevalence of morbidity is highest among the women while it is negligible in the central region for the Scheduled Tribe women population. For all social groups, eastern region's women report lowest prevalence rate of morbidity in comparison to the other regions in the rural sector of Uttar Pradesh. There is a wide variation seen in PAP of social groups across the regions of urban areas of Uttar Pradesh.

### **3.3.4 Intra-Regional Variation of Prevalence of Morbidity among Women by Marital Status in Uttar Pradesh:**

The relationship between marital status and health has attracted the increasing attention of researchers. For the study the marital status of women is classified into three categories that are never married, currently married, widowed/separated.

**Table 3.9 Prevalence of Morbidity (PAP) by Marital Status in the Regions of Uttar Pradesh by Sectors**

PAP	Uttar Pradesh							
	Rural				Urban			
Marital Status	Western	Central	Eastern	Southern	Western	Central	Eastern	Southern
Never Married	96	97	44	68	81	83	65	49
Currently Married	177	143	73	114	198	125	93	137
Widowed/Divorced/ Separated	326	295	187	308	383	272	316	276

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

The data from the above table shows that women who are widowed/ separated are having higher prevalence rate of morbidity for all the regions while it is lowest in the case of women of never married category. It can be said that the prevalence of morbidity is less among the never married women; it may be because the illness suffered by the never married may not get accurately reported because, irrespective of its severity, any reporting of illness might have an unfavorable impact on the marriage prospects of the person. Widowed and divorced people have extremely higher morbidity rate than other category due to their old age and their dependency on other people. But most of the studies have revealed that never married, divorced and widowed have higher rates of self-reported morbidity than married people (I M A Joung et. al., 1993).

### **3.3.5 Intra-Regional Variation of Prevalence of Morbidity among Women by Educational Status in Uttar Pradesh:**

The last decade has seen a growing concern in developing countries regarding women's health as evidenced by the initiatives taken by the government through safe-motherhood initiatives, adoption of women's health perspectives in strategies addressing child survival, family planning and women-in-development issues. The high prevalence of morbidity among Indian women is due to their poverty, illiteracy, lack of awareness,

powerlessness, low social status, malnutrition, infection, and under utilization of the existing health care services.

**Table 3.10 Prevalence of Morbidity (PAP) by Educational Status in the Regions of Uttar Pradesh by Sectors**

PAP	Uttar Pradesh							
	Rural				Urban			
Educational Status	Western	Central	Eastern	Southern	Western	Central	Eastern	Southern
Illiterate	543	0	11	146	0	440	35	173
Up to Primary	136	123	65	132	123	111	32	71
Middle	140	121	65	89	130	80	78	110
Secondary and above	161	162	64	111	184	139	143	127

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

From the data it is found that no significant relationship can be found between education and prevalence of morbidity as in the western region of rural Uttar Pradesh illiterate women have higher prevalence rate while it is almost negligible in the urban western region. Only central region of urban Uttar Pradesh has a higher prevalence rate than rural central region, while other three regions have higher prevalence rate in rural areas than the urban areas. Thus there is a wide variation in the prevalence of morbidity with the educational status of women.

### **3.3.6 Intra-Regional Variation of Prevalence of Morbidity among Women by Religion in Uttar Pradesh:**

Religion is another important factor that influences various spheres of life including woman's health status. There is not much difference seen in the prevalence of morbidity by religion among women for all regions.

**Table 3.11 Prevalence of Morbidity (PAP) by Religious Groups in the Regions of Uttar Pradesh by Sectors**

PAP	Uttar Pradesh							
	Rural				Urban			
Religion	Western	Central	Eastern	Southern	Western	Central	Eastern	Southern
Hindu	141	136	65	107	160	103	90	110
Muslim	159	101	65	5	129	130	92	91
Others	50	0	0	98	126	308	138	0

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

It is seen that the gap between Hindu's and others is more where PAP reporting is less visa-a vis other regions as seen in the case of central and western Uttar Pradesh for both the sectors. The reporting is more for Hindu women; the reason may be the condition of women in the Hindu family is better off than in the case of Muslim family.

### **3.3.7 Intra-Regional Variation of Prevalence of Morbidity among Women by Monthly per Capita Expenditure in Uttar Pradesh:**

Since western and central Uttar Pradesh are more economically developed the condition of people are better off than their counter regions.

From Table 3.10 it is seen that the prevalence rate of morbidity is more for women in the western and central regions of both the sectors. The prevalence of morbidity among the women in the eastern region is the lowest among all the four regions of Uttar Pradesh as eastern region of Uttar Pradesh is the most backward and less developed region of Uttar Pradesh. In the rural region the gap between the PAP for the quintile groups is very less while there is a large difference seen for PAP for the category poor and rich in the eastern region for both the sector as from the table it is seen that reporting done by poor in the eastern region is 75 per thousand while it is 133 per thousand in the eastern region for urban Uttar Pradesh and 69 per thousand for rich in rural sector and 148 per thousand in urban Uttar Pradesh.

**Table 3.12 Prevalence of Morbidity (PAP) by Monthly per Capita Consumption Expenditures in the Regions of Uttar Pradesh by Sectors**

PAP	Uttar Pradesh							
	Rural				Urban			
MPCE	Western	Central	Eastern	Southern	Western	Central	Eastern	Southern
<b>Poorest</b>	112	104	51	80	109	85	43	110
<b>Poor</b>	103	108	75	143	113	120	133	70
<b>Middle</b>	139	107	67	94	130	158	62	136
<b>Rich</b>	147	157	71	104	173	129	75	59
<b>Richest</b>	174	196	69	96	208	105	148	256

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

Thus it can be said that the prevalence of morbidity is more in the case of poor than the rich. This may be due to a greater occurrence of illness among the poor and also their greater concern for their health.

### **3.4 Summary:**

This chapter deals with the intra regional variations in the prevalence of morbidity in Kerala and Uttar Pradesh. The prevalence of the disease in any reason is directly or indirectly related to the development of the region as a whole. The variation in the prevalence of morbidity is seen across various socio-economic groups of women. Prevalence of morbidity by age group in Kerala shows that in rural and urban regions the prevalence of morbidity among women is highest in the age group 60 followed by the age group 45-59 while the prevalence rate is lowest for the age group 15-29 in the northern region of rural sector, and the case is similar for the northern region of urban sector.

Women of all the social groups have reported higher prevalence of morbidity in southern region of Kerala for both rural and urban regions. From Table 3.2 it can be easily seen that prevalence of morbidity is high among women of lower social group than higher

social group women. Widowed/divorced/separated women have higher prevalence of morbidity in both the northern and southern region of Kerala followed by the currently married population. Never married women have lesser prevalence of morbidity for both the regions.

As there is increase in the level of education among women there is a sharp decline in the prevalence of morbidity in both the sectors and across both the regions of Kerala. The prevalence of morbidity is high among the Christian women as they are more educated so more women are reporting morbidity condition. The prevalence of morbidity is less among Muslim women for both the regions of Kerala and the same is true for the rural and urban sectors.

Women in the highest quintile group are having high prevalence of morbidity both in the southern region of rural and urban sector. It is seen from the table that PAP is less in the northern region of Kerala compared to the southern region. Women who are poor in the southern region are exposed to relatively higher morbidity load. This leads to important policy questions of improving the efficacy of public health care in the region for the poor population.

In Uttar Pradesh, it is seen that age wise prevalence of morbidity among women increases with increase in the age of women for all the regions of Uttar Pradesh in rural areas. While in the case of regions of urban Uttar Pradesh prevalence of morbidity increases in the age group 0- 14 and then again decreases in the age group 15 – 29 and there is sharp increase in the prevalence of morbidity.

In the rural western region of Uttar Pradesh, the prevalence of morbidity among women is the highest while it is negligible in the central region for the scheduled tribe women population. For all social groups, eastern region's women report lowest prevalence rate of morbidity in comparison to the other regions in rural sector of Uttar Pradesh. There is a wide variation seen in PAP of social groups across the regions of urban areas of Uttar Pradesh.

Prevalence of morbidity is less among the never married women; it may be because the illness suffered by the never married may not get accurately reported because,



irrespective of its severity, any reporting of illness might have an unfavorable impact on the marriage prospects of the person. Widow and divorced people have extremely higher morbidity rate than other category due to their old age and their dependency on other people

No significant relationship can be found between education and prevalence of morbidity as in the western region of rural Uttar Pradesh illiterate women have a higher prevalence rate while it is almost negligible in the urban western region. Only central region of urban Uttar Pradesh has a higher prevalence rate than rural central region while other three regions have higher prevalence rate in rural area compared to the urban area. Thus there is a wide variation in the prevalence of morbidity with the educational status of women.

There is not much difference seen in the prevalence of morbidity by religion among women for all regions. It is seen that the gap between Hindus and others is more where PAP reporting is less vis-a-vis other regions as seen in the case of central and western Uttar Pradesh for both the sectors. The prevalence of morbidity is more in the case of poor and the rich which further can be said that poor are more concerned about their health. Infections account for a majority of morbidity and incidence of illness is more for the poor than the rich (Kannan et. al., 1991).

## CHAPTER- IV

# Nature of Ailments among Women and Socio-Economic Correlates in Kerala and Uttar Pradesh

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### 4.1 Introduction:

In India the range and burden of diseases is enormous. In the course of time many developed countries gone through what is known as an ‘epidemiologic transition’, where the initial high burden of diseases i.e. mortality due to infectious diseases and maternal and child mortality are replaced by non-communicable diseases, injuries and geriatric problems as the main burden of disease. To go through ‘epidemiologic transition’, India has to concurrently face three challenges: reducing maternal and infant mortality as well as communicable diseases such as Tuberculosis, vector-borne diseases of malaria, kala-azar and filaria, water-borne diseases such as cholera, diarrhea, leptospirosis, and the vaccine-preventable measles and tetanus. Secondly, India has to contend with the rising epidemic of non-communicable diseases including cancers, diabetes, cardiovascular diseases, chronic obstructive pulmonary diseases and injuries. Finally, India has to develop systems to cope with the new and re-emerging infectious diseases like HIV, avian influenza, SARS, and novel H1N1 influenza (GoI, 2010). Heart disease, stroke, cancer and other chronic Non-Communicable Diseases (NCDs) contributed to 35 of the 58 million deaths (60.3 percent) in the world in 2005 (Strong K et. al., 2005).

In India, NCDs were responsible for 53 per cent of deaths and 44 per cent of disability. India is experiencing a rapid health transition. Globally, Non-Communicable Diseases (NCDs) are the major cause of morbidity and mortality. According to WHO Report 2004, they account for almost 60 percent of deaths and 47 percent of the global burden of disease. In India, estimated deaths due to non-communicable diseases were double than those from communicable diseases. Today Non-Communicable Diseases (NCDs) - namely cancer, cardiovascular diseases, chronic respiratory disease and diabetes—are the leading cause of death among women globally, killing a staggering 18 million women each year (WHO, 2000). No longer diseases of the rich and elderly, NCDs are increasingly impacting on women in developing countries during the prime of their life.

The prevalence of disease by type of ailment varies among women and men in different regions of India and it varies across socio-economic groups. This chapter will focus on the type of ailment among women in Kerala and Uttar Pradesh across socio-economic groups.

## **4.2 Classification of Diseases:**

There are in total 42 ailments reported in the NSS including category 99 which includes other undiagnosed ailments. The sickness reported does not clinically confirm the disease. For most of the diseases, the person is unaware about the disease and does not have any quest to ask from the para-medical officers. Thus, reporting of the diseases in fact presents a combination of self perceived and clinically identified sickness. The reporting of the clinically identified morbidity is also subjected to the recall and reporting errors.

In order to make the study simpler, the ailments are grouped according to the latest classification of diseases by World Health Organization (WHO, 2008). International Classification of Diseases (ICD) has been used here, 10<sup>th</sup> version to group the ailments and the WHO category and the ailments included in the category are as follows:

- I. *Infectious and Parasitic Diseases:*** Diarrhea/Dysentery, Warm Infection, Amoebiosis, Hepatitis/Jaundice, Skin Diseases, Malaria, Mumps, Eruptive, Diphtheria, Tetanus, Filariasis /Elephantiasis, Whooping Cough.
- II. *Neoplasm:*** Cancer and other Tumors.
- III. *Endocrine, Nutritional and Metabolic:*** Goiter, Diabetes Mellitus, Under Nutrition, and Anemia.
- IV. *Neuro-Psychiatric disorders:*** Gynecological disorder, Neurological Disorder and Psychiatric disorder.
- V. *Diseases of Eye and Adnexa:*** Conjunctivitis, Glaucoma and Cataract.
- VI. *Circulatory System Diseases:*** Heart Diseases and Hypertension.
- VII. *Respiratory System Diseases:*** Tuberculosis, Bronchial Asthma and Ear/Nose/Throat Ailment.
- VIII. *Digestive System Diseases:*** Gastritis/Gastric or Peptic Ulcer.

- IX. *Genitourinary System Disease:*** Sexually Transmitted Diseases, Diseases of Kidney/Urinary System, Prostatic Disorder.
- X. *Accidents and Violence:*** Accident/Injuries/Burns/Fractures and Poisoning.
- XI. *Others:*** Locomotors, Blinds, Speech Hearing, fever of unknown origin and Diseases of Mouth/Teeth/Gum, disorder of joints and bones, Other Diagnosed ailments and other un-diagnosed ailments.

The above ailments of women accounts for only a small proportion of total ailments reported. For the purpose of the study, these ailments are clubbed into broad groups. The ailments are classified on the basis of International Classification of Diseases (ninth revision) developed by the World Health Organization (WHO) in 1977. The classification is one adopted by the World Bank to compute the DALY (Disability Adjusted Life Years) to measure the global burden of diseases. The ailments are broadly classified into three categories; (i) Communicable (ii) Non Communicable (iii) Injuries. The fourth one namely 'others' is added in this study to include the NSS items coded as 31 (fever of unknown origin), 41 (other diagnosed ailments) and 99 (other undiagnosed ailments). Ailments which are classified in different categories are as follows:

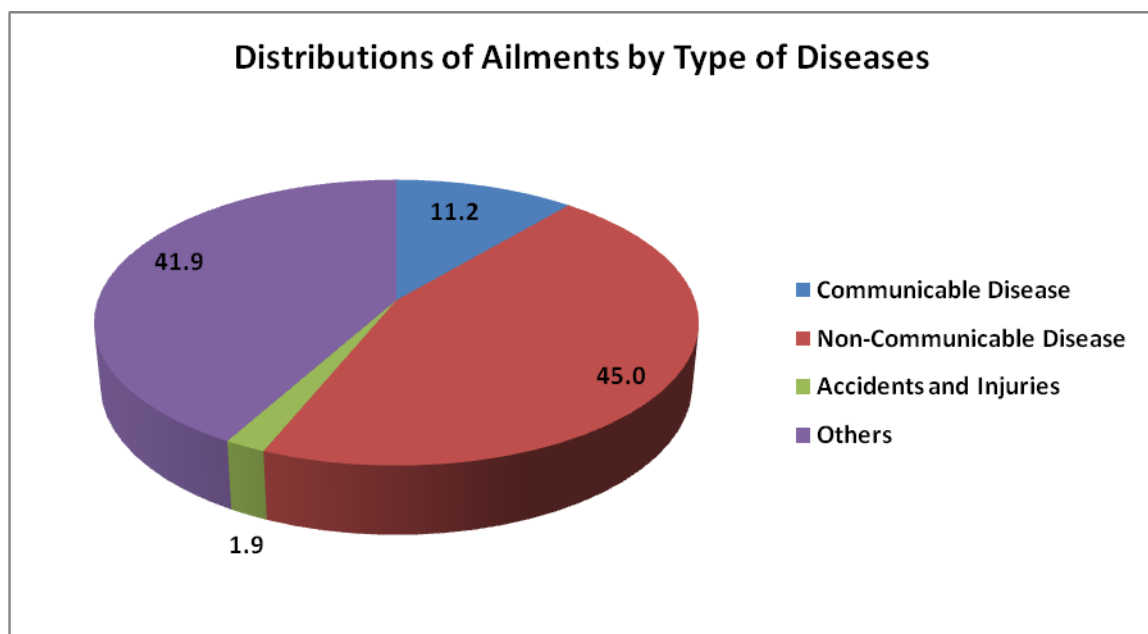
- (i) *Communicable Diseases-*** Diarrhea/dysentery, Gastritis or peptic-ulcer, Worm infestation, Amoebiasis, Hepatitis/jaundice, Tuberculosis, Bronchial Asthma, Tetanus, Malaria, Mumps, Eruptive, Diphtheria, Whooping cough, Tetanus, respiratory including ear/nose/throat ailments, Filariasis/Elephantiasis, Sexually Transmitted Diseases.
- (ii) *Non Communicable Diseases-*** Heart Disease, Hypertension, Disorder of Joints and Bones, Disease of Kidney/urinary system, Prostatic Disorders, Conjunctivitis, Glaucoma, Cataract, Disease of Skin, Goiter, Gynecological disorders, Neurological disorders, Psychiatric disorders, Diabetes mellitus, Under nutrition, Anemia, Cancer and other tumors, Diseases of mouth/teeth/gum.
- (iii) *Accidents and Injuries-*** Accidents, Injuries, Burns, Fractures, Poisoning.

(iv) *Others*- Unknown Fevers, Other Diagnosed ailments and other undiagnosed ailments, Disabilities.

### 4.3 Pattern of Nature of Ailments in Kerala:

Morbidity in Kerala is highest with lowest mortality. There are variations over the nature of ailments among women in Kerala. Each group of illness contained specific kind of ailments. Figure 4.1 presents the picture of diseases by broad categories in Kerala by type of illness. The share of communicable diseases in Kerala is 11.2 per cent. Non communicable diseases accounts for 45 per cent of illness which is the highest among all the four categories of diseases as classified according to World Bank for DALY. About 2 percent of the illnesses are due to injuries and accidents while other kinds of diseases accounts 41.9 per cent of illness in Kerala. Others category included those ailments which are undiagnosed, diagnosed and fever of unknown origin.

**Figure 4.1 Distributions of Ailments by Type of Diseases among Women in Kerala**



*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

Table 4.1 shows that circulatory and respiratory diseases are very common among women in Kerala whereas, respiratory diseases constitute Tuberculosis, Bronchial Asthma and Ear/ Nose/ Throat ailments etc. These two types of ailments are followed by

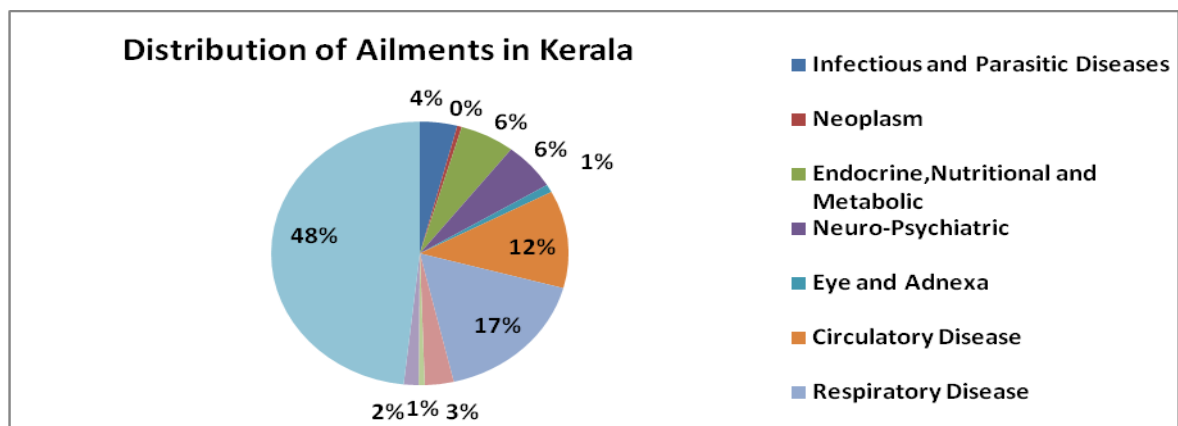
other categories where major contribution in this group is fever of unknown origin. Endocrine, Nutritional and Metabolic contribute 6 per cent of the total type of ailments reported, followed by Neuro-Psychiatric contributing 5.8 per cent. In the Genito-Urinary diseases, diseases of kidney and urinary system accounts for a major share which is 0.7 per cent to total share of ailments.

**Table 4.1 Distribution of Ailments according to ICD-10 Classification in Kerala**

Disease Group	Disease Group Description	Percentage
I	Infectious and Parasitic Diseases	4.1
II	Neoplasm	0.5
III	Endocrine, Nutritional and Metabolic	6.0
IV	Neuro-Psychiatric	5.8
V	Eye and Adnexa	1.0
VI	Circulatory Diseases	12.0
VII	Respiratory Diseases	17.1
VIII	Digestive Diseases	3.1
IX	Genito-Urinary	0.7
X	Accidents and Violence	1.6
XI	Others	48
<b>Total</b>		100

Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.

**Figure 4.2 Distribution of type of Ailments among Women in Kerala**



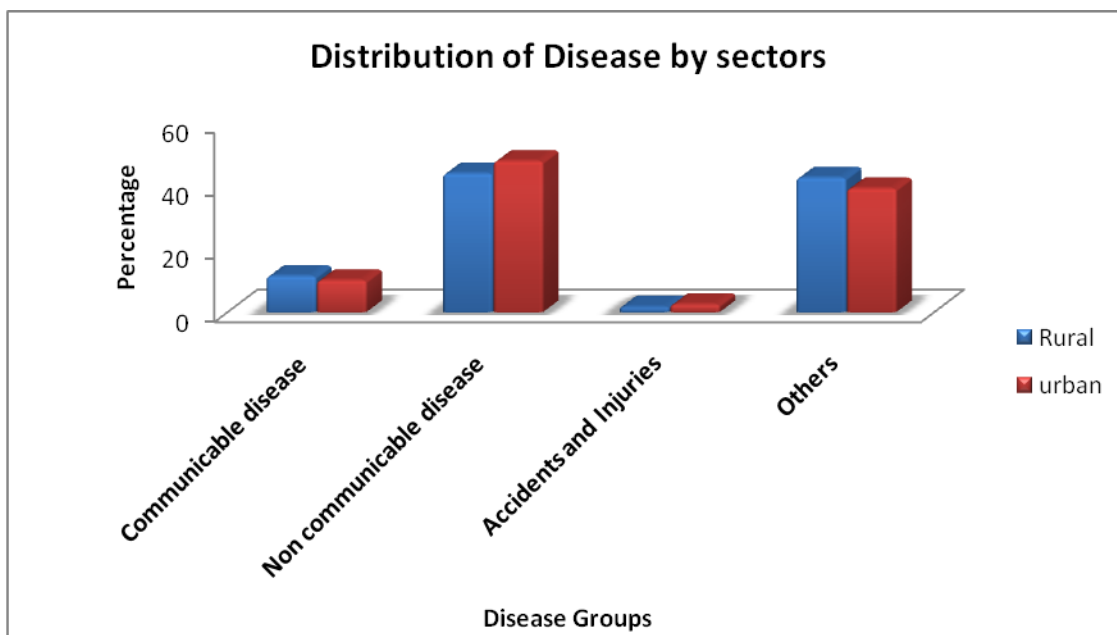
Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.

There is an increase in the proportion of ailments due to cardiovascular diseases in India. The Global Burden of Diseases (GBD) study reported the estimated mortality from Coronary Heart Diseases (CHD) in India as 1.6 million in the year 2000 (Murray, C J L and A D Lopez, 1997). Many studies have attributed the reason for an increase in cardiovascular diseases to (i) increase in the population size due to natural growth, (ii) ageing of the population making people more vulnerable to chronic diseases at older ages, and (iii) increased vulnerability due to lifestyle changes.

#### 4.3.1 Pattern of Diseases among Women by Sectors in Kerala:

It is clear from Figure 4.3 that share of communicable diseases is more in rural areas than urban areas as in rural areas, there are more chances of diarrheal disease, infectious or parasitic diseases due to the poor hygiene and less awareness among people about the consequences of not maintaining healthy environment. Though the gap for communicable diseases in different sectors of Kerala is less, this may be due to the overall development of Kerala and the status of women in Kerala which is the most important factor behind this scenario. Non-communicable diseases are sometimes referred to as the ‘diseases of rich’.

**Figure 4.3 Pattern of Ailments by type of diseases and Sectors in Kerala**



Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.

It can be analyzed from the graph that women in the urban areas report higher percentage of non-communicable diseases which may be due to the fact that women in urban areas in Kerala are mostly working and thus can face tensions at work place, they have changing food habits. Rural-urban variations in accidents and injuries gap in Kerala are also negligible. Diseases of ‘other’ category are comparatively more in rural areas of Kerala than urban areas because most of the diseases in rural areas go undiagnosed and occurrences of fever of unknown origin are high.

Table 4.2 depicts the pattern of diseases by type of ailment in both, rural and urban, sectors of Kerala. It is seen here that women in Kerala suffer more from circulatory and respiratory diseases than any other ailments. Respiratory diseases occur more in rural areas than in urban areas which this may be due to the household environment (such as the type of fuel used for cooking etc.) as household environment is directly linked to the health of women and children who spend most of their time at home. Highest share of others diseases is more in rural areas than urban area.

**Table 4.2 Pattern of Diseases by Type of Ailments and Sectors among Women according to ICD-10 in Kerala**

<b>Disease Groups</b>	<b>Disease Group Description</b>	<b>Rural</b>	<b>Urban</b>
<b>I</b>	Infectious and Parasitic Diseases	3.87	4.62
<b>II</b>	Neoplasm	0.51	0.47
<b>III</b>	Endocrine, Nutritional and Metabolic	5.51	7.35
<b>IV</b>	Neuro-Psychiatric	5.89	5.52
<b>V</b>	Eye and Adnexa	0.90	1.18
<b>VI</b>	Circulatory Diseases	11.26	14.12
<b>VII</b>	Respiratory Diseases	17.33	16.38
<b>VIII</b>	Digestive Diseases	3.49	2.08
<b>IX</b>	Genito-Urinary	0.58	0.89
<b>X</b>	Accidents and Violence	1.44	2.12
<b>XI</b>	Others	49.23	45.26
<b>Total</b>		<b>100</b>	<b>100</b>

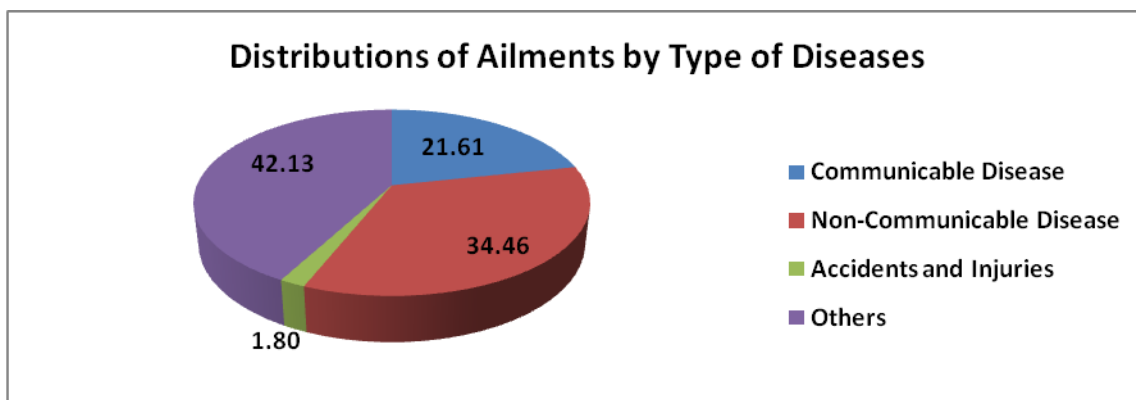
*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*



#### 4.4 Pattern of Nature of Ailments in Uttar Pradesh:

Figure 4.4 shows that among the four categories of disease in Uttar Pradesh, 'Other' category shows the highest share that is 42.13; this is due to the fact that fever of unknown origin is very common among women and this category also includes undiagnosed diseases. It reflects the fact that women related ailments often go undiagnosed and women have fewer quests to know about the type of diseases in Uttar Pradesh. The reason for this may be the low literacy and less awareness about health. It is followed by non-communicable diseases which are altogether replacing communicable diseases as reported by World Health Organization that almost eighty per cent of people are suffering from ailments resulting from non-communicable diseases. Similarly, percentage share of non communicable diseases among women in Uttar Pradesh is 34.46 which are more than the communicable diseases.

**Figure 4.4 Distributions of Ailments by Type of Diseases among Women in Uttar Pradesh**



*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

Table 4.3 presents the distribution of women who are ailed according to ICD-10 classification. Results show that infectious and parasitic diseases are very common among women in Uttar Pradesh and it shares 13.64 per cent in total sickness cases reported. Diarrhea and gastritis accounts more than 70 percent of such ailments. Others category diseases account for the highest per cent share (49.70) in total ailments and fever of unknown origin have major contribution in this category. Respiratory diseases also have high occurrences among women in Uttar Pradesh constituting 10.31 per cent

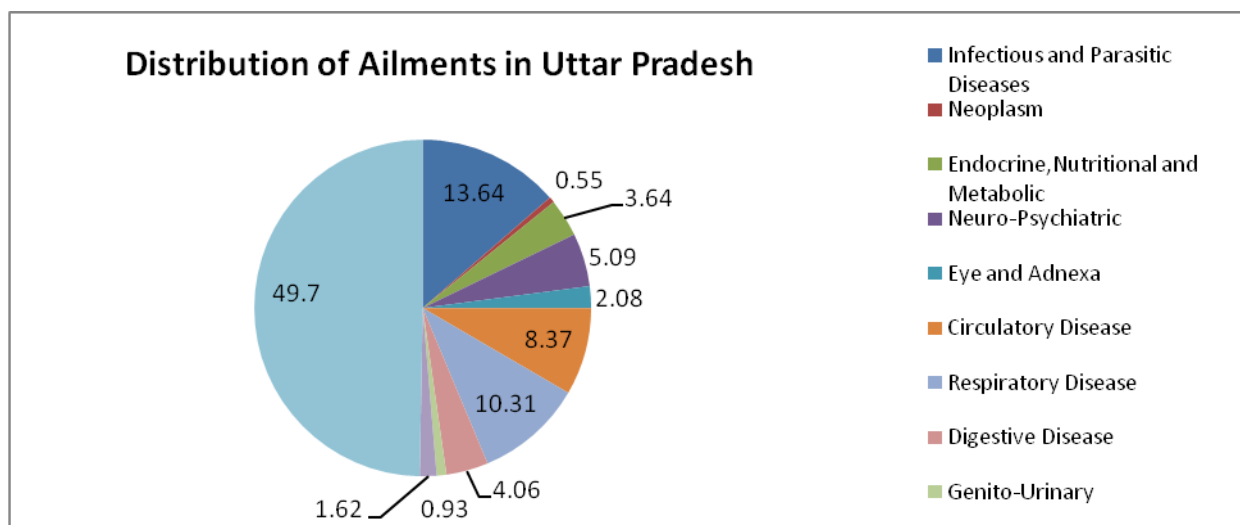
share. The incidences of accidents and injuries are minimal in Uttar Pradesh sharing only 1.62 per cent. Neuro-Psychiatric diseases accounts for 5.09 per cent. Lowest share of diseases among women is neoplasm diseases.

**Table 4.3 Distribution of Ailments according to ICD-10 Classification in Uttar Pradesh**

Disease Group	Disease Group Description	Percentage
I	Infectious and Parasitic Diseases	13.64
II	Neoplasm	0.55
III	Endocrine, Nutritional and Metabolic	3.64
IV	Neuro-Psychiatric	5.09
V	Eye and Adnexa	2.08
VI	Circulatory Diseases	8.37
VII	Respiratory Diseases	10.31
VIII	Digestive Diseases	4.06
IX	Genito-Urinary	0.93
X	Accidents and Violence	1.62
XI	Others	49.70
<b>Total</b>		100

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

**Figure 4.5 Distribution of type of Ailments among Women in Uttar Pradesh**

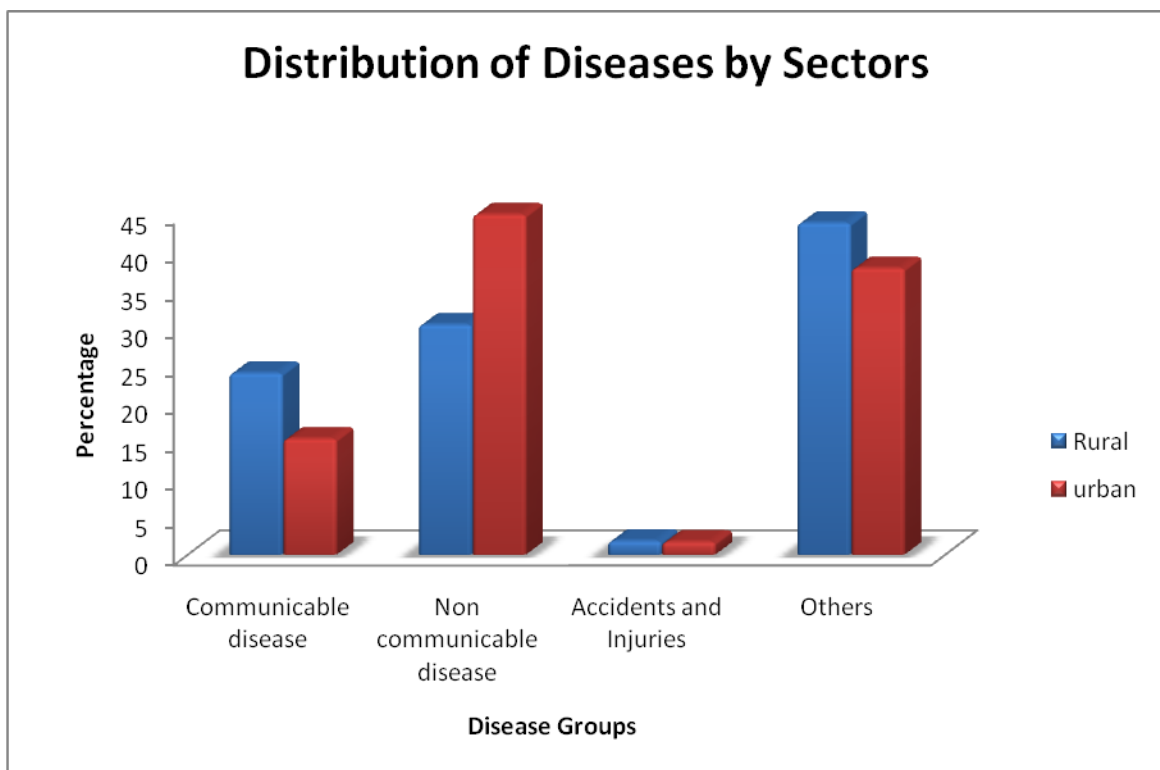


*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

#### 4.4.1 Pattern of Disease among Women by Sectors in Uttar Pradesh:

Figure 4.6 presents the distribution of ailments in broad categories of diseases in Uttar Pradesh by rural and urban sector. Figure shows that there are no huge differences in diseases distribution and all type of diseases show same results as shown in Uttar Pradesh. Communicable diseases occur more in rural areas than in urban areas. Non-communicable diseases share highest percentage of total ailments reported. Accidents and injuries are more in rural areas than urban areas because women in rural areas are not living in hygienic condition so the chances of catching infectious disease.

**Figure 4.6 Pattern of Ailments by type of diseases and Sectors in Uttar Pradesh**



*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

The pattern of diseases according to ICD-10 classification is given in Table 4.4, which presents the share of different ailments groups in the both the sectors in Uttar Pradesh. Table reveals that highest share of illnesses is reported in the 'others' category in which major share is held by fever of unknown origin. Infectious and parasitic diseases accounts

for 15.13 per cent of total reported sicknesses in rural areas while it is 9.82 percentages in urban areas.

**Table 4.4 Pattern of Diseases by Type of Ailments and Sectors among Women, according to ICD-10 in Uttar Pradesh**

<b>Disease Group</b>	<b>Disease Group Description</b>	<b>Rural</b>	<b>Urban</b>
<b>I</b>	Infectious and Parasitic Diseases	15.13	9.82
<b>II</b>	Neoplasm	0.51	0.66
<b>III</b>	Endocrine, Nutritional and Metabolic	2.64	6.22
<b>IV</b>	Neuro-Psychiatric	5.25	4.68
<b>V</b>	Eye and Adnexa	2.04	2.18
<b>VI</b>	Circulatory Diseases	5.84	14.90
<b>VII</b>	Respiratory Diseases	10.51	9.79
<b>VIII</b>	Digestive Diseases	0.88	1.08
<b>IX</b>	Genito-Urinary	4.49	2.96
<b>X</b>	Accidents and Violence	1.64	1.56
<b>XI</b>	Others	51.08	46.15
<b>Total</b>		100	100

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

Respiratory diseases among women are high in rural areas than urban areas. Respiratory diseases accounts for 10.51 per cent in rural areas than urban areas accounting for 9.79 per cent. Circulatory diseases are more in urban areas accounting for almost 15 per cent and it is only 5.84 per cent in rural areas.

#### **4.5 Comparative Study by Type of Ailments among Women in Kerala and Uttar Pradesh:**

In terms of life expectancy, women have an advantage over men. This advantage is partly linked to innate genetic and biological differences between the sexes but to a larger extent relates to risk behavior, such as alcohol and tobacco consumption etc. This advantage starts at birth and continues through the life of the individual, with men having greater vulnerability than women to diseases and injuries leading to death. Under normal circumstances, women can be expected to outlive men by several years. But other factors like cultural, social, economic and/or environmental are detrimental to women and offset this “natural” advantage. However, a longer life does not necessarily ensure a healthy life. The health status of any individual at any given time reflects cumulative exposure to social, physical and psychological factors. Throughout the course of life, culture, biology, personal behaviour and socio-economic factors combine to affect people’s health and emphasize the need to promote health at all stages of the life cycle. “While girls and women are most disadvantaged by gender-disparities, these inequalities reduce the well-being of all people. Societies that discriminate on the basis of gender pay a significant price— in more poverty, weaker governance, and a lower quality of life” (S Younis, 2000). Most of the Non-Communicable diseases occur among women in their later age as reflected in the occurrences of cardiovascular disease which generally affect in old age. Of the 27 million deaths worldwide in women each year, almost 10 million results from cardiovascular diseases and, of these, two third occur in developing countries (WHO, 2000). Women usually have cardiac infarction ten years later than men, because estrogen protects them from coronary heart diseases during their child-bearing years. It is also considered that the heart disease is more harmful than breast cancer where the risk is tenfold (Vierola H, 1998).

**Table 4.5 Distribution of Ailments by Type of Diseases and Age Groups**

Disease Groups	Kerala					Uttar Pradesh				
	0-4	5-14	15-39	40-59	60+	0-4	5-14	15-39	40-59	60+
<b>Communicable</b>	12.96	13.52	10.70	9.94	11.91	33.67	24.75	20.65	19.72	16.36
<b>Non-Communicable</b>	6.95	9.75	28.95	54.26	66.51	4.84	10.54	28.58	44.07	60.23
<b>Accidents and Injuries</b>	1.34	2.96	1.76	2.59	1.17	1.00	2.16	1.92	1.78	1.96
<b>Others</b>	78.75	73.77	58.58	33.22	20.41	60.50	62.55	48.86	34.43	21.46

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

Many studies have revealed the close relations between age and risk of being morbid, due to which, age is considered as the most important demographic variable in the analysis of morbidity. Age is considered as the best indicator showing the best picture of the morbidity condition of the individual. From Table 4.5, it is found that in Kerala the percentage share of ailments in the case of communicable diseases is highest in the age group 5-14, followed by 0-5 age group and then it starts decreasing in the reproductive age and again increases in the older age group. While in Uttar Pradesh communicable diseases are concentrated in the younger age groups, 33.67 per cent of the sick female children aged 0-4 suffer from communicable diseases. As age increases percentage share of communicable diseases decreases at first and then again increases in older ages. The lowest share of communicable diseases is found in 15-39 age groups. The highest percentage of communicable diseases in sick people is found in age 60+.

For both the states, non communicable diseases are highest for the older age groups. Non-communicable diseases account for 66.51 per cent share of total diseases affecting women in the age group 60+ in Kerala whereas, it accounts for 60.23 per cent share in Uttar Pradesh for the same category. Accidents and injuries are unpredictable and the percentages keep on fluctuating across all age groups of women accounting for lowest per cent share among all disease groups. Other category diseases are highest for children for both the states which mostly include fever of unknown origin.

**Table 4.6 Distribution of Ailments by Type of Diseases and Marital Status**

Disease Groups	Kerala			Uttar Pradesh		
	Never Married	Currently Married	W/S/D	Never Married	Currently Married	W/S/D
<b>Communicable</b>	11.4	9.7	13.5	27.63	19.16	18.97
<b>Non-Communicable</b>	16.4	50.7	61.1	10.67	40.69	53.11
<b>Accidents and Injuries</b>	1.8	2.0	1.8	1.69	1.72	2.13
<b>Others</b>	70.4	37.5	23.6	60.01	38.43	25.80

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round. W-Widowed, D-Divorced, S-Separated.*

From Table 4.6, it is seen that communicable diseases are more among women who are widowed/separated/divorced. Communicable diseases accounts for 13.5 per cent share of total diseases affecting widowed/separated/divorced women which higher than other two categories of women. On the other hand, communicable diseases accounts for only 9.7 per cent share of total diseases among women who are currently married in Kerala. Non-Communicable diseases are highest among divorced/separated/widowed women, followed by currently married women. Other categories of diseases are highest for the women who are never married and lowest for women who are widowed/separated/divorced. In Uttar Pradesh, never married women report the highest percentage of communicable diseases which is 27.63 per cent while it is lowest for women in the separated status. From the above table it is evident that accidents and injuries accounts very less among women in both the states.

**Table 4.7 Distribution of Ailments by Type of Diseases and Social Groups**

Disease Groups	Kerala				Uttar Pradesh			
	ST	SC	OBC	Others	ST	SC	OBC	Others
<b>Communicable</b>	16.9	11.7	11.6	10.1	28.36	23.49	20.70	20.63
<b>Non-Communicable</b>	37.3	36.9	41.5	54.4	21.56	26.43	32.92	42.16
<b>Accidents and Injuries</b>	1.5	2.7	2.0	1.6	2.56	1.78	1.99	1.49
<b>Others</b>	45.8	48.6	44.9	34.0	47.51	48.29	44.39	35.72

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

Caste is one of the important social factors to influence health conditions. Schedule Castes and Schedule Tribes usually belong to lower strata of the society, low standard of living, low educational level and high poverty. Castes mentioned in the NSSO Report, 2006 are Schedule Tribes, Schedule Castes, Other Backward Castes and Others (General). Communicable diseases for Scheduled Tribe women are highest for both the states where it is 16.9 per cent in Kerala and 28.36 per cent in Uttar Pradesh which is the result of extreme backwardness of schedules tribe women. According to the NFHS-3 Survey, 47 per cent of tribal women have Chronic Energy Deficiency (CED) compared to 35 per cent among the general population. The most common diseases seen among tribal groups are respiratory tract infections and diarrheal disorders. 21 per cent of children suffer at least two bouts of diarrhea every year and 22 per cent suffer from at least two attacks of respiratory infections. Other reason for higher communicable diseases among women of scheduled tribes is due to poor personal hygiene. It is seen from the table that as the caste hierarchy increases the percentage share of communicable diseases decrease and women of higher castes have relatively less communicable diseases. Non-communicable diseases are highest among women of higher castes where about 54.4 per



cent women in other category of Kerala and 42.16 per cent in Uttar Pradesh while it is lowest for women in scheduled caste women in Uttar Pradesh.

**Table 4.8 Distribution of Ailments by Type of Diseases and Educational Status**

Disease Groups	Kerala			Uttar Pradesh		
	Illiterate	Up to Middle	Secondary and Above	Illiterate	Up to Middle	Secondary and Above
<b>Communicable</b>	16.5	9.2	10.7	24.39	18.71	14.60
<b>Non Communicable</b>	40.9	48.5	44.8	31.11	36.32	48.38
<b>Accidents and Injuries</b>	2.4	1.8	3.2	1.95	1.61	1.50
<b>Others</b>	40.2	40.5	41.3	42.55	43.36	35.52

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

Concentration of communicable diseases in Kerala are more among women who are illiterate than who are literate up to middle and women with higher education. Same is the case for Uttar Pradesh where illiterate women suffer more from communicable diseases. In Kerala non-communicable diseases are concentrated in the women who are literate up to middle and are less for women who are illiterate. In Uttar Pradesh, non-communicable diseases are more common among literate. Other category of diseases, accidents and injuries is showing fewer variations with educational status of women in both the states

**Table 4.9 Distribution of Ailments by Type of Diseases and MPCE**

Disease Groups	Kerala					Uttar Pradesh				
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5
<b>Communicable</b>	11.9	10.4	9.9	12.9	11.0	24.52	24.98	22.46	21.94	21.61
<b>Non-Communicable</b>	34.3	39.3	44.8	46.5	55.2	23.43	26.07	32.29	53.20	34.46
<b>Accidents and Injuries</b>	3.1	3.8	1.4	1.0	1.1	2.10	1.88	2.08	1.58	1.80
<b>Others</b>	50.7	46.5	43.9	39.6	32.7	49.94	47.07	43.17	31.01	42.13

*Source: Computed from the Unit level Data NSSO 60<sup>th</sup> Round.*

Despite many development gains and an effort to reduce the number of poor in the country during the past century, poverty continues to grow and the gap between rich and poor is widening at a rapid rate. Thus, the lopsided share of the burden of poverty rests on the shoulders of women and undermines their condition of well being. WHO estimates that 70 per cent of the 1.2 billion people living in poverty are women (WHO, 2000). Whether it is male or female, when there is sickness in the house, it is catastrophic and leads to economic ruin. From above Table 4.9 it is found that there are fewer variations in the distribution of communicable diseases across MPCE classes and every quintile group has almost the same percentage of women suffering from communicable diseases. While non-communicable diseases are higher for the higher quintile groups for both the states. The reported burden of non-communicable chronic conditions was higher among people who were economically well-off than the poor sections of the population. The lifestyle-related nature of chronic conditions might have contributed to the higher prevalence of chronic ailments, resulting in a higher burden of morbidity and hospitalization among the better-off subgroups (T R Dilip, 2002b).

It is seen from above table that accidents and injuries are more concentrated in the lower quintile groups of women. Though accidents and injuries are independent of age and income groups, the magnitude of injuries varies across age, sex, and region and income groups. Overall, men are more likely to suffer injuries than women. However, there are

some notable exceptions, such as burns caused to women because of the use of open fires for cooking, heating and lighting in India where women are more affected than men. Other category diseases are more common among women of lowest quintile groups for both the states.

#### **4.6 Summary:**

The chapter focused on the distribution of ailments among women across Kerala and Uttar Pradesh by using the ICD classification of diseases and through the broad category of the classification adopted by the World Bank to compute the DALY (Disability Adjusted Life Years) to measure the global burden of diseases. The ailments are broadly classified into three categories; (i) Communicable (ii) Non-Communicable (iii) Injuries. Later, the chapter focused on the comparative study of the distribution of ailments among women of different socio-economic background for Kerala and Uttar Pradesh. It is found that among women, non-communicable diseases are more concentrated in the higher age groups while communicable diseases are concentrated in the lower age groups in both the states. Accidents and injuries are more in the case of women who are less educated; who are low in social strata and who are economically poor.

It is seen that health care needs are still preoccupied with the improvement of mortality and there is less focus on the morbidity conditions and even less focus to the morbid conditions of women. Women's major health improvement lies in the improvement in the conditions of morbidity and not mortality. The condition of morbidity can only be improved when the socio-economic conditions of women is improved. Thus, it is very important to educate women and implement programmes for their health awareness, thus there is a grave need for the proper implementation of the policies and programmes towards improving their health needs. It is seen that Non-Communicable diseases are increasing at an alarming rate among women. Thus there is need to focus on the cause of these diseases. When women's health is in focus, Non-Communicable diseases have been further marginalized due to the overarching focus on reproductive and maternal health and thus most of the other Non-Communicable diseases are overshadowed.

## CHAPTER - V

# Utilisation of Healthcare Services and Burden of Health Expenditure

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### 5.1 Introduction:

The economic reforms adopted in India since 1991 have set a foundation for strong economic growth. The economic reform was encouraging development in many sectors successfully; however many broad areas were left untouched like education and health where the achievement were far from satisfactory. Though there were some signs of improvement in the health indicators and there was an epidemiological transition, India's public health system is still below par, under-funded and non-responsive. Thus the vacuum created in the utilisation of health care services was filled in by the private service providers that operate on a fee for service basis. Hence the health care system in India has a co-existence of both public and private sectors. Private sector has emerged as a dominant constituent of the health care system constituting 77.4 percent of all health expenditure (Ministry of Health and family Welfare, 2005). The share of private sector in the health sector is however increasing while the public sector is facing many structural as well as financial constraints. The main reason for the gap being filled by the private sector is the weak public provision, thus can be said that private provision has emerged as a substitute rather than being complementary. The existing literature suggests that public health care facilities are dysfunctional in many ways. The inequalities in access to health care are worsening (Sen et. al., 2002). Public health care facilities in many states of India are characterized by absenteeism of health care providers and most of them are unqualified (Chaudhary et. al, 2003; Das, 2001). Apart from this there are large inequities in health and access to health persisting in India. Existing literatures suggests that there are largely three forms of inequities that have dominated India's health sector. These are the historical inequities, socio economic inequities and inequities' in the affordability, utilisation and availability of the health care services. Among the three, access to health care services and socio- economic inequities are the most important determining factor.

Inequities in public health services and the availability of these services are uneven across the states of India. There is a large difference in the availability of the services across sectors of the states. The interstate variations are best seen from two states that is Kerala and Uttar Pradesh, where the former is among the best and the latter the worst in terms of indicators of health service development and health outcomes. The access to treatment in any health care services depends on the cost of treatment, households' ability to manage these costs, and its impact on the livelihood of households (Gilson et. al., 2007).

Inequities in health care system are related to socio-economic status, geographical location gender and accessibility to health services; above all it is compounded by high out-of-pocket expenditures. In India, OOP payments form a disproportionately large component of total health expenditure. OOP expenditures include direct payments for consultations, diagnostic testing, medicines and transportation. It is estimated that 80 percent of total health expenditure and 97 percent of private expenditure are borne through OOP payments (NSS, 2006). Existing literatures evidenced that medicines account for higher out of pocket expenditure and is higher in rural areas as compared to urban areas. The burden of health expenditure varies across socio- economic groups also by type of health services utilized.

In this context this chapter will focus on the utilisation of health care services and the burden of health care expenditure among women in Kerala and Uttar Pradesh by social groups and monthly per capita expenditure.

## **5.2 Utilisation of Healthcare Services in Kerala and Uttar Pradesh:**

Morbidity and mortality has reduced in the country and it is partly due to the preventive and curative interventions by public health services. These services are however not up to the mark and there is variation in the delivery of the services across the states of India, largely due to the difference in infrastructure, human resource, and supply of resources and importantly spatial distribution, which is another contributing factor. Inequities in healthcare utilisation is pervasive in India and it is seen from existing literature that overall utilisation of health care services are poor in India and there is variation across

rural and urban areas, states and socio-economic groups. In India, because of the poor condition of public health care services, almost 80 percent of the outpatient care depends on private healthcare services (Rao, 2005). People from rural areas are more dependent on public healthcare services. Almost 21 percent of people in rural and 19 percent in urban areas utilize the public sector for outpatient services. Figures for inpatient care were 42 percent and 38 percent in rural and urban areas respectively (NSSO, 2006). There is interstate variation in the utilisation of health care services for both the inpatient and outpatient care. It is seen that the utilisation of public services are better in the developed states like Kerala and Tamil Nadu while the utilisation is lower in the poorer states like Uttar Pradesh, Madhya Pradesh ,Bihar. While a mixed picture is seen in case for inpatient care, utilisation of services is higher in the private sector for most of the developed states like Punjab, Haryana and Kerala. However, in some other states like Himachal Pradesh, West Bengal, Rajasthan and the North-eastern states, a higher dependence on the public sector is evident. The availability of services, cost of treatment, space and quality of services can be the reason for these variations. Thus this section will analyze the variation in the utilisation of healthcare services in Kerala and Uttar Pradesh where one is the developed state with best health service utilisation and better in the health indicators while Uttar Pradesh has one of the worst indicators of health service development in case of women.

### **5.2.1 Utilisation of Healthcare Services by Social Groups of Women in Kerala and Uttar Pradesh:**

From Table 5.1 it is seen that there is a variation in the utilisation of healthcare services among different social groups of women, where the percentages for utilisation of private services are higher among women who belong to higher castes that is OBC and General Castes. It is 61.8 percent and 76.4 percent for OBC and Forward Castes respectively in rural areas while it is 69.2 percent and 60.1 percent for OBC and General Caste respectively in urban areas.

**Table 5.1 Healthcare Utilisation by Social Groups of Women in Kerala**

Social Groups	Rural		Urban	
	Public	Private	Public	Private
<b>ST</b>	43.0	57.0	71.8	28.2
<b>SC</b>	62.1	39.9	40.2	59.8
<b>OBC</b>	38.2	61.8	30.8	69.2
<b>Others</b>	23.6	76.4	39.9	60.1

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.*

Utilisation of Public services is higher among lower caste women (SC and STs), the exception being seen in the case of rural scheduled tribe women where the utilisation of private services are higher than the public services. The main reason for the differential in the utilisation of services in Kerala may be due to better condition of women of higher caste, that is the women of higher caste may be more educated and more aware about their health so they are choosing private health care facilities over public services where the medical facilities are far better.

**Table 5.2 Healthcare Utilisation by Social Group of Women in Uttar Pradesh**

Social Groups	Rural		Urban	
	Public	Private	Public	Private
<b>ST</b>	67.1	32.9	48.7	51.3
<b>SC</b>	36.1	63.9	35.7	64.3
<b>OBC</b>	19.4	80.6	31.9	68.1
<b>Others</b>	34.5	65.5	23.5	76.5

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.*

Considerable variation is seen for the utilisation of health care services across social groups of women in Uttar Pradesh. The differential in the utilisation of healthcare services are high for the lower and the forward castes. It is seen from Table 5.2 that women who belong to Scheduled Castes, Other Backward Castes and forward castes have a higher percentage of private health care utilisation in both the rural and urban areas of Uttar Pradesh while it is reverse in the case of women who belong to Scheduled Tribes. Among them the percentage of public service utilisation is higher in rural area and the differential gap is not very high in urban area. It is mainly because scheduled

tribe women are backward in most of the development indicators and their seclusion from the rest of the society is more. Most of the literature has also pointed out that distance from the health care facilities and the awareness about the healthcare facilities are among the determining factors for the utilisation of the services among the scheduled tribe women.

### **5.2.2 Healthcare Utilisation by Monthly per Capita Consumption Expenditure of Women in Kerala and Uttar Pradesh:**

In myriad studies it is found that there is a close relationship between the utilisation of health services and monthly per capita expenditure. From table 5.3 it is seen that in rural areas women of all quintile group are availing private services while in urban areas there is variation in the utilisation of services across the quintile groups.

**Table 5.3 Healthcare Utilisation by Monthly Per Capita Consumption Expenditure of Women in Kerala**

MPCE	Rural		Urban	
	Public	Private	Public	Private
Q1	49.6	50.4	66.6	33.4
Q2	32.4	67.6	54.0	46.0
Q3	30.5	69.5	44.6	55.4
Q4	42.1	57.9	26.7	73.3
Q5	24.5	75.5	3.5	96.5

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.*

Above table shows that women from highest quintile group are availing private health services largely while women from lowest quintile group are still utilizing public health care facilities both in rural and urban areas. The differences in the utilisation of health care facilities is very high in the highest quintile, where in urban areas, only 3.5 percent women are availing public services while 96.5 percentage women are availing private facilities. Women belonging to fourth quintile class in urban area are also following the same in which only 26.7 percent are availing public services while rest are using private services.

Reverse picture has been found in the case of rural area where utilisation of private health care facilities are more in lower quintile group in comparison to public health facilities



but the gap is not very much, whereas in urban area this gap becomes broad. The reason for not availing public health care services in the rural areas of Kerala by any MPCE quintile group women may be the poor health care provided by the public health facilities or the dysfunctional status of the services, while in urban Kerala women from the lowest quintile not taking private services may be due to high cost of treatment or the availability or the condition of the public services may be better in comparison to the rural areas.

**Table 5.4 Healthcare Utilisation by Monthly per Capita Consumption Expenditure of Women in Uttar Pradesh**

MPCE	Rural		Urban	
	Public	Private	Public	Private
Q1	36.8	63.2	51.2	48.8
Q2	30.4	69.6	34.9	65.1
Q3	25.2	74.8	25.4	74.6
Q4	17.8	82.2	12.8	87.2
Q5	25.0	75.0	20.6	79.4

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.*

The gap in the utilisation of health services in rural Uttar Pradesh increases with increasing MPCE quintiles of women. Only 36.8 percent of women in the first quintile group are availing public services and 63.2 percentage are taking private services that is the gap is almost 27 percent while this gap is increasing in the higher quintiles which means that women even in the lower quintile group are more concerned about their health or the public health services are dismal. Even in urban Uttar Pradesh the gap in the utilisation of health care services for both public and private is high for all MPCE quintile women except the first quintile group women where the gap is narrow and women from this class are preferring public hospitals in comparison to private which may be because of unaffordable cost of treatment in private hospitals.

### **5.3 Treatment of Major Diseases and Utilisation of Health Care Facilities in Kerala and Uttar Pradesh:**

Utilisation of health care services varies with the type of ailment that is whether it is Communicable, Non-Communicable, Accidents or Injuries or Any Other Category. The treatment of diseases varies across socio-economic groups, so this section will examine

the utilisation of health facilities by women of different social groups and MPCE quintile groups in Kerala and Uttar Pradesh. For the study purpose the diseases are classified into broad category using DALY's classification.

**Table 5.5 Utilisation of Health Services by Source of Treatment and Social Groups of Women in Rural Kerala**

Nature of Ailment	ST		SC		OBC		OTHERS	
	PUB	PRI	PUB	PRI	PUB	PRI	PUB	PRI
<b>Communicable</b>	-	-	38.26	61.74	32.87	67.13	34.43	65.57
<b>Non-Communicable</b>	47.96	52.04	73.25	26.75	43.68	56.32	16.03	83.97
<b>Accidents and Injuries</b>	33.40	66.60	100	-	24.61	75.39	11.43	88.57
<b>Others</b>	-	-	66.09	33.91	37.41	62.59	26.29	73.71

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. In some cells no sample has been found therefore no analysis can be done for these categories. PUB-Public, PRI-Private*

From Table 5.5 it is seen that in rural areas of Kerala, the health care utilisation services are higher for Non-Communicable and Other Category of diseases among women for all the social groups. For the treatment of Non-Communicable diseases the differences in the utilisation of services are less. The gap in the utilisation of services among scheduled caste women is very high as seen from above table; they are utilizing more of public services than private services for the treatment of Non-Communicable diseases. This may be because of the cost of treatment of Non-Communicable disease in private services are very high. The treatment of disease in private services increases as one moves from the lower castes to the higher castes, which can be due to awareness among women about the disease or better economic conditions of higher caste women. In accidents and injuries the women of higher caste as well as OBC and Others are using private health services while SCs are going to Public Hospitals more.

**Table 5.6 Utilisation of Health Services by Source of Treatment and Social Groups of Women in Urban Kerala**

Nature of Ailment	ST		SC		OBC		OTHERS	
	PUB	PRI	PUB	PRI	PUB	PRI	PUB	PRI
Communicable	-	-	83	16.99	49.35	50.64	30.91	69.08
Non - Communicable	-	-	100	-	42.96	57.03	23.04	76.96
Accidents and Injuries	-	-	-	100	95.43	4.57	-	100
Others	-	-	71.84	28.16	27.78	72.21	55.35	44.65

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. In some cells no sample has been found therefore no analysis can be done for these categories. PUB-Public, PRI-Private*

Above table shows that in Urban Kerala, the Scheduled Caste women utilize more of public services for all type of diseases. The percentage of treatment of communicable disease in public services is 83 percent while it is only 16.99 percent in private services, 100 percent treatment of Non-Communicable disease is done in public services, the main reason being the cost of treatment of Non-Communicable disease like heart disease, disease of kidney which is very costly in private health care. While for accidents and injuries women are utilising private services only, this may be because the higher cost of treatment results in better and fast recovery and the quality of service is also often better. Other Backward Castes women are utilizing more of public services than private services for the treatment of both Communicable and Non-Communicable diseases. It is seen that as the caste hierarchy goes up, women of higher caste prefer to utilize private services for the treatment of disease, especially major ones.

**Table 5.7 Utilisation of Health Services by Source of Treatment and Social Groups of Women in Rural Uttar Pradesh**

Nature of Ailment	ST		SC		OBC		OTHERS	
	PUB	PRI	PUB	PRI	PUB	PRI	PUB	PRI
Communicable	100	-	31.60	68.40	22.69	77.31	53.90	46.10
Non - Communicable	74.28	25.72	30.72	69.28	16.51	83.49	22.43	77.57
Accidents and Injuries	-	-	70.62	20.38	38.55	61.45	28.31	71.69
Others	67.11	32.89	28.39	71.61	16.45	83.05	28.30	71.70

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. In some cells no sample has been found therefore no analysis can be done for these categories. PUB-Public, PRI-Private*

Table 5.7 shows that in Rural Uttar Pradesh, for treatment of all diseases, Scheduled Tribe women are utilizing more of public services in comparison to private services. Overall, private services are utilized more for the treatment of Communicable, Non Communicable diseases among SC, OBC and forward caste women. Scheduled Caste women in rural Uttar Pradesh are utilizing public services for treatment of accidents and injuries while 71.61 percent of SC women using private services for other type of diseases. Accidents and injuries and even other type of diseases are treated more in the private services by women of forward castes.

**Table 5.8 Utilisation of Health Services by Source of Treatment and Social Groups of Women in Urban Uttar Pradesh**

Nature of Ailment	ST		SC		OBC		OTHERS	
	PUB	PRI	PUB	PRI	PUB	PRI	PUB	PRI
<b>Communicable</b>	-	100	38.16	61.84	33.49	66.51	32.30	67.70
<b>Non - Communicable</b>	86.49	13.51	21.83	78.17	25.24	74.76	20.23	79.77
<b>Accidents and Injuries</b>	-		-	100	70.62	29.38	16.05	83.95
<b>Others</b>	-	100	56.25	43.75	33.39	66.01	24.22	75.78

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. In some cells no sample has been found therefore no analysis can be done for these categories. PUB-Public, PRI-Private*

In urban Uttar Pradesh it is seen from above table that Communicable and Non-Communicable diseases are treated mainly in private services among all social group women. But among Scheduled Tribe women the treatment for Non-Communicable disease is more in public healthcare facilities and this may be due to the higher cost of treatment in private services. For treatment of accidents and injuries, women of other backward caste utilize 70.62 percent of public services while Scheduled Caste women and forward caste women are utilizing 100 and 83.95 percent respectively.

**Table 5.9 Utilisation of Health Services by Source of Treatment and different MPCE classes of Women in Rural Kerala**

Nature of Ailment	Q1		Q2		Q3		Q4		Q5	
	PUB	PRI	PUB	PRI	PUB	PRI	PUB	PRI	PUB	PRI
<b>Communicable</b>	45.74	54.26	20.52	79.48	29.8	70.2	30.38	69.92	43.32	56.68
<b>Non - Communicable</b>	65.44	34.56	49.68	50.32	27.9	72.1	42.10	57.9	28.34	71.66
<b>Accidents and Injuries</b>	54.23	45.77	100	-	-	100	21.16	78.84	15.97	84.03
<b>Others</b>	67.54	32.46	51.86	48.14	40.21	59.79	23.92	76.08	35.89	64.11

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. In some cells no sample has been found therefore no analysis can be done for these categories. PUB-Public, PRI-Private*

Income of the household is one of the deciding factors in the utilisation of services because cost of treatment puts a heavy burden on the household. From the above table it is clear that in rural Kerala, for Non-Communicable and Communicable diseases, women of all MPCE quintile classes prefer to utilize private services. Even for the treatment of non communicable diseases in rural Kerala it is seen that women of all consumption classes are utilizing private services more, except women of the lowest quintile classes. For accidents and injuries women of higher quintile classes utilize private services more than public services while lowest MPCE quintile group women utilize public services more.

**Table 5.10 Utilisation of Health Services by Source of Treatment and different MPCE classes of Women in Urban Kerala**

Nature of Ailment	Q1		Q2		Q3		Q4		Q5	
	PUB	PRI	PUB	PRI	PUB	PRI	PUB	PRI	PUB	PRI
<b>Communicable</b>	59.83	40.17	63.10	36.89	57.18	42.82	25.54	74.46	-	100
<b>Non - Communicable</b>	54.83	45.16	59.76	40.24	51.07	48.92	25.18	74.81	8.9	91.08
<b>Accidents and Injuries</b>	48.84	51.15	-		-	100	-	100	-	100
<b>Others</b>	76.89	23.10	49.78	50.21	21.71	78.28	22.42	77.57	-	100

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. In some cells no sample has been found therefore no analysis can be done for these categories. PUB-Public, PRI-Private*

In urban Kerala women of lowest quintile group are utilizing more of public services for the treatment of Communicable and Non-Communicable diseases. While highest quintile

group women prefer to utilize private services more as they can afford the cost of treatment in private services. For the treatment of accidents and injuries women of all MPCE quintile utilize more of private services, same is the case for other disease group while the lowest quintile has to utilize public services because of economic constraints.

**Table 5.11 Utilisation of Health Services by Source of Treatment and different MPCE classes of Women in Rural Uttar Pradesh**

Nature of Ailment	Q1		Q2		Q3		Q4		Q5	
	PUB	PRI	PUB	PRI	PUB	PRI	PUB	PRI	PUB	PRI
<b>Communicable</b>	45.42	54.58	44.59	55.41	16.47	83.53	24.22	75.78	44.50	55.50
<b>Non - Communicable</b>	32.13	67.87	20.00	80.00	18.60	81.40	22.09	77.91	7.54	92.46
<b>Accidents and Injuries</b>	58.74	41.26	65.76	34.24	52.46	47.54	20.86	79.14	7.97	92.03
<b>Others</b>	28.55	71.44	17.29	82.71	23.82	76.18	5.40	94.60	42.02	57.98

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. In some cells no sample has been found therefore no analysis can be done for these categories. PUB-Public, PRI-Private*

Utilisation of private health care facilities being more in all categories in the above table indicate the lack of trained health staff and lack of medical infrastructure in public services in rural Uttar Pradesh. Above table shows that for treatment of Communicable and Non-Communicable diseases in rural Uttar Pradesh, women of all social groups are utilizing private services more than public service. Lowest quintile group women utilize more of public services for the treatment of accidents and injuries while highest quintile group utilize private services more. Treatment of other category of disease among all quintile classes is more in private health care services than public services.

**Table 5.12 Utilisation of Health Services by Source of Treatment and different MPCE classes of Women in Urban Uttar Pradesh**

Nature of Ailment	Q1		Q2		Q3		Q4		Q5	
	PUB	PRI	PUB	PRI	PUB	PRI	PUB	PRI	PUB	PRI
<b>Communicable</b>	39.99	60.01	-	-	44.99	55.01	15.27	84.73	18.44	81.56
<b>Non - Communicable</b>	40.83	59.17	-	-	8.09	91.95	11.57	88.43	36.34	63.66
<b>Accidents and Injuries</b>	79.19	20.81	-	-	-	100	-	100	-	100
<b>Others</b>	42.53	57.47	-	-	17.15	73.95	10.41	89.59	20.33	79.66

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. In some cells no sample has been found therefore no analysis can be done for these categories. PUB-Public, PRI-Private*

Existing literature says that public health care services are better in urban areas than rural areas though from the above table it is seen that in urban Uttar Pradesh, women of all quintile group are utilizing more private services for the treatment of Communicable and Non-Communicable diseases. For the treatment of accidents and injuries, only lowest quintile group women are utilizing more of public health care facilities while other highest consumption classes are utilizing private services. Other category of diseases is also treated more in private health care facilities than public health care facilities for all consumption classes of women.

#### **5.4 Burden of Health Expenditure among Women in Kerala and Uttar Pradesh:**

Health expenditure in India comprises of the following: 1) government and private sector expenditure 2) household expenditure. In India, the government provides major allocation of funds to provide health services to the people irrespective of their capacity to pay for the services. Irrespective of these, the private sector also contributes a substantial investment on health. At the same time, households and individuals spend a certain amount of money from their pocket for their treatment known as out of pocket health expenditure. Out of pocket health expenditure refers to the payments made by households at the point they receive health services. It includes doctor's consultation fees, purchase of medicines and hospital bills etc. Although spending on alternative/traditional medicine is included in out of pocket payments, expenditure on health related transportation and special nutrition are excluded. Expenditure on health is more in rural areas than urban areas because people living in towns and cities have better access to public and private services compared with those in rural areas, and therefore experience a higher financial burden when they access healthcare. Out of pocket payments are net of any insurance reimbursement. This section will deal with total expenditure incurred on health that is medicine, transportation, consultation fee etc by women in Kerala and Uttar Pradesh across different social groups and MPCE classes and the source of financing is also calculated.

**Table 5.13 Burden of Health Expenditure by Social Groups of Women in Kerala**

Social Groups	Rural		Urban	
	Public	Private	Public	Private
<b>ST</b>	43.0	57.0	71.8	28.2
<b>SC</b>	62.1	39.9	40.2	59.8
<b>OBC</b>	38.2	61.8	30.8	69.2
<b>Others</b>	23.6	76.4	39.9	60.1

*Source; Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.*

From above table it is seen that women of scheduled tribe in rural Kerala spend more in private health care facilities while in urban Kerala women spend more in public health care facilities rather than private health care facilities. This may be due to better condition of public health facilities in urban areas of Kerala because of more allocation of fund for public health facilities in urban area by government of Kerala. Scheduled Caste women of rural areas are spending 62.1 percent in public health care facilities while in urban areas spending is more in the private health care facilities. It is seen from the table that with increase in the caste hierarchy, the differential gap in the expenditure is high especially for those who are using private health care services. It is seen that Other Backward Caste women and forward caste women both in the rural and urban areas are spending more in the private services because they are economically and socially at better condition in the society.

**Table 5.14 Burden of Health Expenditure by Social Groups of Women in Uttar Pradesh**

Social Groups	Rural		Urban	
	Public	Private	Public	Private
<b>ST</b>	5.59	22.06	2.92	11.98
<b>SC</b>	22.08	31.84	6.26	20.45
<b>OBC</b>	24.19	23.92	11.11	13.26
<b>Others</b>	13.63	22.41	12.09	21.46

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.*

Table 5.14 shows that burden of health expenditure among all social groups women of Uttar Pradesh in rural areas is more when they are utilizing private services than public services except other backward caste women. Burden of health expenditure is more among other backward caste women for utilizing public services i.e. 24.19 percent and 23.92 percent for public and private services respectively. While in the case of urban



Uttar Pradesh, women of all social groups are experiencing high burden of health expenditure for utilizing private services. The reason for high burden for utilizing private health care facilities is mainly because of the cost of treatment in private health facilities and its un-affordability for the lower social group. From the table it can be easily analysed that the gap in the burden of health expenditure is increasing with the use of public and private health care facilities.

**Table 5.15 Burden of Health Expenditure by Different MPCE Classes of Women in Kerala**

MPCE	Rural		Urban	
	Public	Private	Public	Private
Q1	13.50	14.06	13.87	39.40
Q2	17.78	22.78	7.61	12.20
Q3	11.07	21.57	15.00	12.83
Q4	11.98	16.44	34.05	20.62
Q5	11.66	10.76	5.79	13.95

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.*

From table it is seen that in rural Kerala women of lower quintile have higher burden of expenditure than women of higher quintile group. For the private services in rural areas also the burden of expenditure is high for the lower quintile groups than the higher income quintile groups. The burden of health expenditure among the women of urban Kerala are also showing almost the same picture. Thus it is evident from the table that the burden of direct health expenditure is higher for the poor class than the better off classes.

**Table 5.16 Burden of Health Expenditure by Social Groups of Women in Uttar Pradesh**

MPCE	Rural		Urban	
	Public	Private	Public	Private
Q1	19.89	26.53	9.45	21.68
Q2	13.55	29.70	9.07	17.93
Q3	16.11	28.35	13.57	16.73
Q4	38.14	28.22	8.88	15.06
Q5	13.31	17.84	11.63	21.37

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.*

Burden of health expenditure in rural areas of Uttar Pradesh is high for the women in the lower income quintile group while it is lowest in the case of women of highest quintile group and the burden is even high for the remaining consumption classes. Among both

the services provided in the rural areas the expenditure incurred is high for the private services than public services because private services are considered as “for profit” by the service provider as drawn from the existing literatures. The gap in the burden of health expenditure for utilizing public and private services is high for all MPCE quintile classes except women of highest quintile class in rural Uttar Pradesh. For MPCE quintile Q1, Q2, Q3 and Q5 the burden of health expenditure is high for utilizing private services while for Q4 it is seen from above table that burden of health expenditure is high for utilizing public services than private services. In urban Uttar Pradesh, for all the MPCE quintile classes the burden of health expenditure is high for utilizing private services. From above table a declining trend in the burden of health expenditure has been found in the case of private services in urban Uttar Pradesh for Q1, Q2, Q3, and Q4 while there is again sharp increase for MPCE quintile Q5.

### **5.5 Source of Financing Healthcare:**

Analysis of data from the NSS shows that the high burden of expenditure on healthcare is mainly financed through two major sources: (a) household’s own resources, and (b) borrowings. In rural areas, almost fifth of the health expenses for outpatient care is financed through borrowing; the corresponding percentage for hospitalization is much higher at around 40 percent (NSSO, 2006). The option of borrowing is there in the urban areas but it is of lower order than the rural areas. The reliance on borrowing is significantly higher for the poorer sections of the population compared to the better-off with sharp differentials, especially in urban areas (NSSO, 2006). Poorer sections of the society are more under the pressure of borrowing and the health care expenditure is more among them, they even cut their household consumption to meet the expenditure on healthcare. Faced with the reality that healthcare costs to the households have been rising, the poor often finance such expenditure by cutting down consumption levels of other members of the household (Iyer et. al., 2007).

For this section, data of source of financing is calculated from NSS and the source of borrowings are income, borrowing, contribution from friends and relatives, others.

**Table 5.17 Source of Financing by Social Groups of Women in Rural Kerala**

Source of Financing	Public				Private			
	Social Groups				Social groups			
	ST	SC	OBC	Others	ST	SC	OBC	Others
<b>Income</b>	0.3	18.7	37.7	44.7	14.8	45.0	45.3	55.3
<b>Borrowing</b>	-	34.8	44.4	41.4	63.5	37.9	38.1	31.9
<b>Contribution</b>	6.0	42.6	12.8	10.7	21.7	12.4	13	9.3
<b>Others</b>	93.7	4.0	5.0	3.4	-	4.7	3.5	3.5
<b>Total</b>	100	100	100	100	100	100	100	100

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. In some cells no sample has been found therefore no analysis can be done for these categories.*

Table shows the contributions of different sources towards financing the total expenditure on hospitalization by different social groups of women. In rural Kerala the source of financing for public sectors among scheduled tribe population is other sources. Scheduled Caste women mainly borrow money and get the contribution from friends and relatives for meeting health expenditure in public services. In other backward caste and forward caste, there source of financing is mainly from their income and borrowings.

For availing private services the expenditures among Scheduled Tribe women are met through borrowing as the cost of expenditure in private services are higher than public services as their income is often insufficient to take the burden of expenditure. From the table it is seen that source of financing is mainly income and borrowing among women from scheduled caste group, other backward caste and forward caste women. Scheduled Tribe women get 63.5 percent of their expenditure on health through borrowing and only 14.8 percent of financing coming from their sources of income. But the picture is different for the upper caste women as their main source of health care expenditure is coming from income, the reason for the same may be that women of upper caste may be in better paying jobs, as there is high literacy among women in Kerala.

**Table 5.18 Source of Financing by Social Groups of Women in Urban Kerala**

Source of Expenditure	Public				Private			
	Social Groups				Social groups			
	ST*	SC	OBC	Others	ST*	SC	OBC	Others
<b>Income</b>	-	65.2	27.3	25.6	-	16.3	41.2	69.8
<b>Borrowing</b>	-	34.3	43.4	69.9	-	83.7	39.7	13.8
<b>Contribution</b>	-	0.5	20.7	4.5	-	0	7.1	10.7
<b>Others</b>	-	0	8.6	0	-	0	12.1	5.7
<b>Total</b>	-	100	100	100	-	100	100	100

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.*

*\*There is no information related to ST category for source of financing as no sample is found in this category.*

In urban Kerala, for availing public services, the main source of financing among Scheduled Caste women is income while for other backward caste and forward caste women main source of financing is borrowing. For availing private services the source of financing is borrowing in the case of Scheduled Caste women, 83.7 percent is financed through borrowing for the Scheduled Caste women and only 16.3 percent of the total health expenditure comes from income sources while for the other backward caste women and forward caste women the major source of financing is income. Borrowing and other sources contribute less in this case.

**Table 5.19 Source of Financing by Social Groups of Women in Rural Uttar Pradesh**

Source of Expenditure	Public				Private			
	Social Groups				Social groups			
	ST	SC	OBC	Others	ST	SC	OBC	Others
<b>Income</b>	21.5	38.5	42.5	58.2	9.3	46.1	51.5	45.1
<b>Borrowing</b>	78.5	51.8	31.8	23.8	23.5	35.7	39.9	24.4
<b>Contribution</b>	-	7.3	14.4	8.7	22.5	15.2	11.6	18.8
<b>Others</b>	-	2.5	11.2	9.2	44.7	2.9	6.9	5.3
<b>Total</b>	100	100	100	100	100	100	100	100

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. . In some cells no sample has been found therefore no analysis can be done for these categories.*

Table 5.19 shows that source of financing in rural Uttar Pradesh is mainly borrowing among the women of lower caste for the utilisation of public services followed by income while Other Backward Caste women and forward caste women depend mainly on income followed by borrowing, contribution and other sources of finance. Out of total source of finance Scheduled Tribe women are financing only from income for utilizing public

services. This may be because of less burden of health care expenditure. Scheduled Caste women mainly utilize their income and the contribution from their friends and relatives but also borrow to meet the health care expenditure. Other Backward Caste women mainly finance through their income and a very less share of borrowing and contribution is used, while for forward caste burden of spending in public services are less so they are able to finance mainly from their income. Borrowing and a very small share of contribution has been used by the forward caste women. The source of financing for utilisation of private services is income for SC, OBC and Other category followed by borrowing, while in schedule tribe category the main source of financing is other sources. In ST category the contribution of income in utilizing private service are very less (9.3 percent) which show that their condition are so poor in urban area that they are forced to borrow or take money for their health expenditure.

Over all it can be concluded that income is the major factor in utilizing public sources for all the social groups of women in rural Uttar Pradesh, as the hierarchy in caste increases the percentage of the source of income increases which suggests that women of higher castes can afford the expenditure incurred on public services by their family income alone. Source of finance through borrowing and contribution is even higher in the case of scheduled caste women as they can't take the burden solely through their income hence they need to borrow. On the other hand, the source of finance to meet the expenditure for utilizing private services is mainly income for the forward caste, other backward caste and scheduled tribe.

**Table 5.20 Source of Financing by Social Groups of Women in Urban Uttar Pradesh**

Source of Expenditure	Public				Private			
	Social Groups				Social groups			
	ST	SC	OBC	Others	ST	SC	OBC	Others
<b>Income</b>	100	45.6	75.2	63.1	74.0	38.4	68.8	72.2
<b>Borrowing</b>	-	24.7	8.9	27	11.9	45.7	20	3.9
<b>Contribution</b>	-	29.7	15.3	9.8	45.7	14.8	9.4	16.5
<b>Others</b>	-	-	0.6	0.1	14.8	-	1.8	14.5
<b>Total</b>	100	100	100	100	100	100	100	100

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. . In some cells no sample has been found therefore no analysis can be done for these categories.*

From Table 5.20 it can be easily identify that for utilizing private services in urban Uttar Pradesh, the source of financing among Scheduled Tribe women is income followed by contribution from friends and relatives, while borrowing and other sources accounts less share to total source of financing. Scheduled Caste women mainly meet the burden for health expenditure for treating in private services through borrowing followed by income while contribution and other sources of finance accounts to very less share to total share of finance. It is also seen that source of finance for utilizing private services is income among forward caste women in Urban Uttar Pradesh. Income as the source of financing for Other Backward Caste and forward caste women contributes 68.8 percent and 72.2 percent respectively while for borrowing the share is less that is only 20 percent and 3.9 percent respectively.

For utilizing public services the main financing source is family income for all categories which show that in public services the expenditure is still in small amount so they are able to pay from their income. For SC and OBC second most important source for utilizing public services is contribution while for others it is borrowing.

Thus it can be concluded that major source of finance for utilizing private healthcare is income among Scheduled Tribe women in urban Uttar Pradesh and this may be because women from ST category are working as a household worker in the urban areas. Borrowing is high for the women of Scheduled Caste and Other Backward Caste women, reflecting their poor economic conditions so they have to depend on other sources of finance. Contribution as a source of finance is highest for the Scheduled Tribe followed by forward caste and Scheduled Caste women while it is less in the case of scheduled caste women because from the table it is clear that scheduled caste women have already been financed through income and borrowing. In the case of utilizing public health care services income is the major source of finance followed by borrowing and contribution for all categories.

**Table 5.21 Source of Financing by different MPCE Classes of Women in Rural Kerala**

Source of Expenditure	Public					Private				
	MPCE					MPCE				
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5
<b>Income</b>	18.4	37.7	30.2	32	65.5	29.9	41.1	39.2	49.4	72.7
<b>Borrowing</b>	38.0	55.0	48.6	45.4	20.9	38.0	55.0	48.6	45.4	20.9
<b>Contribution</b>	36.4	5.3	17.5	13.8	10.3	15.8	27	21.8	6.6	4.4
<b>Others</b>	7.3	1.9	3.7	8.7	3.3	7.3	1.9	3.7	8.7	3.3
<b>Total</b>	100	100	100	100	100	100	100	100	100	100

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.*

Table 5.21 shows that borrowing is the major source of financing for the expenditure incurred for utilizing public services. Within lowest MPCE quintile, major source of financing health care is borrowing followed by contribution from friends and relatives. Similar is the case with other consumption classes where income is not the only source to meet the health expanses of public services. The picture is same for utilizing private services in rural Kerala. An interesting finding is that with increase in the quintile classes there is decrease in the borrowing both for public and private health care utilisation, even contribution and finances from other sources also decreases. It can easily be seen from the above table that for utilizing public services, borrowing is 55 percent and 48.6 percent, 45.4 percent and 20.9 percent for Q3, Q4, and Q5 respectively. Similarly in the case of utilizing private services it is 55 percent, 48.6 percent, 45.4 percent and 20.9 percent for Q2, Q3, Q4 and Q5 respectively.

**Table 5.22 Source of Financing by different MPCE Classes of Women in Urban Kerala**

Source of Expenditure	Public				Private			
	Social Groups				Social groups			
	ST*	SC	OBC	Others	ST*	SC	OBC	Others
<b>Income</b>	-	65.2	27.3	25.6	-	16.3	41.2	69.8
<b>Borrowing</b>	-	34.3	43.4	69.9	-	83.7	39.7	13.8
<b>Contribution</b>	-	0.5	20.7	4.5	-	0	7.1	10.7
<b>Others</b>	-	0	8.6	0	-	0	12.1	5.7
<b>Total</b>	-	100	100	100	-	100	100	100

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.*

*\*There is no information related to ST category for source of financing as no sample is found in this category.*

Among Scheduled Caste women of urban Kerala, income is the major source of financing for health care for utilizing public services is income followed by borrowing which

accounts for 65.2 percent out of total financing, this may be because women of Scheduled Caste women are more into jobs and thus are able to meet the large part of the expenses through their income. For Other Backward Caste women, the major source of finance for utilizing public services is borrowing; accounting 43.4 percent of the total expenditure followed by income (27.3 percent), contribution from friends and relatives (20.7 percent) and other sources which account for very less percent to total finance among OBC women. Even forward caste women in urban areas are not able to meet the expenses from their income for utilizing public services and the percent of borrowing is very high, which is almost 70 percent of the total source of finance among forward group of women.

For utilizing private services in urban areas of Kerala, Scheduled Caste women are not able to meet the expenses only through their income alone as the cost of treatment in private healthcare services are very high as discussed in existing literatures thus they need to borrow large sum of money to meet the expenses. While in the case of other backward caste and forward caste women the major part of expenses are met through their income and rest over through borrowing, contribution and other sources which suggests that women in OBC and forward caste are capable enough to bear their expenditure from their income.

**Table 5.23 Source of Financing by different MPCE Classes of Women in Rural Uttar Pradesh**

Source of Expenditure	Public					Private				
	MPCE					MPCE				
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5
<b>Income</b>	45.9	59.3	46.3	46.5	38.9	40.1	57.1	45.7	42.7	45.1
<b>Borrowing</b>	38.0	30.1	28.4	25.6	48.5	28.8	33.7	35.6	37.1	34.8
<b>Contribution</b>	14.7	4.9	10.5	13.8	7.5	16.8	7.8	13.6	16.4	14.3
<b>Others</b>	1.4	5.6	14.8	14.1	5.1	14.2	1.4	5.1	3.8	5.8
<b>Total</b>	100	100	100	100	100	100	100	100	100	100

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004.*

In rural Uttar Pradesh, women of each quintile group are financing the expenditure incurred on public services mainly through their income which suggests that cost of treatment in public services is less so they are able to meet the large part of expenses through their income. At the same time borrowing is high among women of low quintile groups and even for the highest quintile in the case of utilizing public services.



Contribution as a source of financing is high in the case of low MPCE quintile group women and is less in the case of highest MPCE quintile. Other sources of finance accounts for a low share in all the MPCE quintile groups.

For utilizing private services, first quintile group women are meeting large part of the expenditure through income, borrowing accounts 28.8 percent, contribution and other sources accounting for 16.8 and 14.2 percent respectively. Second quintile group women are less dependent on contribution and other sources as income and borrowing contribute large part of the source of finance. For third and fourth quintile group women the main source of financing is income and borrowing and contribution and other source of finance account less. While for the women of highest quintile group their major sources of finance are income and borrowing.

**Table 5.24 Source of Financing by Different MPCE Classes of Women in Urban Uttar Pradesh**

Source of Expenditure	Public					Private				
	MPCE					MPCE				
	Q1	Q2	Q3	Q4	Q5	Q1	Q2	Q3	Q4	Q5
<b>Income</b>	65.7	58.0	72.0	97.0	59.4	45.9	58.1	69.2	83.7	66.6
<b>Borrowing</b>	13.5	20.8	11.4	0.3	31.5	29.8	27.7	3.3	3.9	13.8
<b>Contribution</b>	20.8	19.6	16.6	2.8	9.1	22.8	10.2	16.3	10.9	14.5
<b>Others</b>	-	1.6	0	0	0.3	1.5	4.0	11.2	1.5	5.1
<b>Total</b>	100	100	100	100	100	100	100	100	100	100

*Source: Calculated from Unit level data of NSSO 60<sup>th</sup> Round, 2004. In some cells no sample has been found therefore no analysis can be done for these categories.*

From above table it is seen that women of all quintile using public and private services are meeting their expenses mainly through their income. For lowest quintile group women contribution from friends and relatives accounts for 20.8 percent for financing in public services while it is 22.8 percent for financing private services which suggests that they are not able to take the burden of financing alone through income. It is also seen from the above table that borrowing is high in the case of utilizing private services in urban area which suggests that burden of health expenditure is more for the treatment in private services. As there is increase in the MPCE quintile classes, income as a source of financing is increasing and there is decrease in the share of borrowing except in Q5 where in utilizing public services it is 31.5 percent.

## **5.6 Summary:**

The present chapter has focused on the utilisation of health care facilities and also the treatment of diseases in Kerala and Uttar Pradesh and it also give detailed accounts on the source of financing and burden of health expenditure. The analysis of the chapter reveals that utilisation of services varies across socio- economic groups and also across different sectors. Utilisation of health care services by social group reveals that women of lower caste are using public services more in rural Kerala while women from other backward caste women and forward caste are utilizing private services more. On the other hand, in urban Kerala except scheduled tribe women, the percentage of utilisation of private services is more among SCs. The main reason for the differential in the utilisation of services among different social groups may be due to better condition of women of higher caste. In Uttar Pradesh, women who belong to Scheduled Castes, Other Backward Castes and forward castes have a higher percentage of private health care utilisation in both the rural and urban areas.

Health care utilisation by MPCE classes in both the states shows that women from lowest quintile classes utilize public services more than private services and as there is rise in the MPCE quintile classes, utilisation of private services increases among women. Health care utilisation of services is higher for Non-Communicable and other category of diseases among women for all the social groups. For the treatment of Communicable and Non-Communicable diseases women of lower caste prefer public health care facilities while higher caste women prefer private services. The reason for not utilizing private services for the treatment of Non-Communicable disease is the higher cost of treatment of such diseases in private hospitals.

Treatment by nature of ailment and MPCE classes shows that lowest quintile group is utilizing more of public services for the treatment of Communicable and Non-Communicable diseases. On the other hand highest quintile group women prefer to utilize private services more as they can afford the cost of treatment in private services. For the treatment of accidents and injuries women of all MPCE quintile utilize more of private services, same is the case for other disease group.

Burden of health expenditure is more in rural areas than urban areas and this apparent anomaly is probably because people living in towns and cities have better access to public and private services compared with those in rural areas, and therefore, people from rural areas experience a higher financial burden when they access healthcare. Social group wise burden of health expenditure shows that increase in the caste hierarchy, the differential gap in the expenditure is high. The burden is high among the women of lower quintile group than women of higher quintile group.

The chapter also focuses on the source of finance for hospitalization among women. It is seen from the above analyses that among women of lower caste and lower quintile groups, the source of finance for the expenditure incurred on utilizing public services is mainly income and to some extent borrowing and contribution from friends and other relatives because the cost of treatment is less in public services than private services. However the source of income is not enough for them for utilizing private services as the burden of health expenditure increases with increase in the cost of treatment in private services. For women of higher caste and higher MPCE quintile group women in Kerala, their source of finance is mainly income and borrowing as they can easily afford the cost of treatment in any health care facilities both in rural areas and urban areas as in Kerala women are more literate and can seek job easily while the picture is different in the case of Uttar Pradesh where along with income, borrowing is also very high this may be because women are not as literate as in Kerala, so there might be difference in the category of job and payment.

## **CHAPTER- VI**

### **Conclusion**

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The objective of this research is to explore the problems of morbidity among women in India in detail. To bring out the various facets of the problem – how households and individual characteristics affect morbidity prevalence and how prevalence of morbidity in turn has its toll on household's welfare. This perspective of looking at morbidity is not just an outcome of social and economic underdevelopment but also as a reason causing the same makes sense as for a socially inclusive and effective policy making a holistic understanding of the problem a necessity. The research has been broadly classified under four chapters looking at the pattern of morbidity in first two chapters, factors affecting morbidity in the next chapter and utilisation and burden of health expenditure in the last chapter. The states chosen are Kerala and Uttar Pradesh both of which respectively have very high prevalence of female morbidity and also are completely different in their social and economic conditions which is also reflected in the condition of women in these states.

Women's health, empowerment and reproductive rights in India has assumed greater importance only of late, mainly after two conferences that is International Conference on Population and Development held at Cairo, Egypt and the Fourth World Conference on Women, held in Beijing. Not discounting the importance of health needs and health status of men, the fact remains that over a lifetime the health of women is usually worse than that of men. Moreover, certain health problems are more prevalent among women than among men and certain health problems are unique to women which affect women differently than men. Not only are maternal mortality levels in India among the highest in the world (437 to 568 per 100,000 live births), but neonatal mortality is also high at 52.7 per 1000 live births, which is a direct consequence of women's poor health status prior to and during pregnancy. In addition to the suffering of women, yet another cause of concern is their almost apathetic attitude towards their own health and its management during illness. Women were found to seek treatment only when their health problems

caused greater physical discomfort or when it affected their work performance (Kapadia et. al., 1997). Such a scenario therefore draws the attention of policymakers and programme managers to address women's health needs on an urgent basis. The current focus on reproductive health in India is a result of the global recognition that these health needs have long been neglected and that the consequences of this neglect are devastating, particularly on the lives of women.

The analysis of the pattern of ailments by background characteristics of women in Kerala and Uttar Pradesh shows that the two states recorded high prevalence rate of morbidity among women irrespective of the stark variations in terms of levels of socio-economic development as well as the overall status of women. It is found that proportion of persons ailed in Kerala for all the economic classes, except middle and rich category shows an increase with age group. The prevalence rate of morbidity in Kerala is highest among the age group above age 60 years as the proportion of aged population is higher in Kerala (NSSO, 2006). While in Uttar Pradesh, all the MPCE categories shows an increasing trend within increase in age. The prevalence rate of morbidity is more in the case of women belonging to better economic status. Women, who are widowed, divorced, separated report higher PAP in both the states in comparison to never married and currently married women which may be because women who are alone are more conscious about their health. While in Uttar Pradesh, it is seen that with an increase in income the prevalence of morbidity increases among women and also morbidity is more prevalent among women who are Widowed/Divorced/Separated.

Economic status of the household is an important factor in determining health status and the extent of utilisation of health services. Women coming from the lower strata or lower castes and who fall in the lowest quintile have lowest prevalence of morbidity whereas, the case gets reverse for the women who are from higher strata or the so called upper castes and fall in the highest quintile.

The morbidity prevalence was studied in terms of disease composition- broadly, Acute and Chronic. It is observed that there is positive correlation between age and chronic diseases as the prevalence rate of chronic diseases increase with the increase in age among women in Kerala which shows highest prevalence rate of chronic diseases among

the age group 60+. Both the type of ailments, i.e. Acute and Chronic, is more prevalent among women who are Widowed/Divorced/Separated whereas, it decreases among women who are in the Never Married categories in both the states. Caste differences in the prevalence of acute diseases is highest for Scheduled Tribe women while other backward castes and others depict less prevalence rate of acute diseases. For the chronic diseases, scheduled tribe women have the least prevalence rate which can be associated with the acute lack or non-existence of health services in the areas populated by Scheduled Tribe population.

The prevalence rate for both acute and chronic disease is higher in case of illiterate women and the prevalence rate for both the disease decreases with increase in the level of education of women in Uttar Pradesh. Women belonging to Scheduled Castes and Other Backward Castes have comparatively higher prevalence rate of acute diseases; while it is less prevalent in the case of chronic diseases for all categories of women. Women who are economically well-off have higher prevalence of acute diseases and women with less income have less prevalence of acute disease. But there are variations in the prevalence of diseases for all economic groups of women suffering from chronic disease.

The analysis depicts that educational status, work status; socio-economic and age groups are statistically significant predictors of chronic morbidity. One important finding is that the major determinants of both acute and chronic morbidity are not strikingly dissimilar in both Kerala and Uttar Pradesh. Simultaneous observation of the two models of morbidity reveals that the socio-economic status is not a crucial determinant of morbidity in rural Kerala. It also reveals that morbidity distribution is, in general, independent of socio-economic status. In particular, quality and diversified rural public health care services are very essential for the poor and the vulnerable sections of the population.

The study on the intra regional variations in the prevalence of morbidity in Kerala and Uttar Pradesh brings out that the prevalence of the disease in any region is directly or indirectly related to the development of the region as a whole. The variation in the prevalence of morbidity is seen across various socio- economic groups of women.

A study was also attempted on the distribution of ailments among women across Kerala and Uttar Pradesh with the help of the ICD classification of disease by using the broad categories. The classification is the one adopted by the World Bank to compute the DALY (Disability Adjusted Life Years) to measure the global burden of diseases. The ailments are broadly classified into three categories; (i) Communicable (ii) Non-Communicable (iii) Injuries. The focus was on the comparative study of the distribution of different types of ailment among women by different socio-economic backgrounds for Kerala and Uttar Pradesh. It is found that among women, Non-Communicable diseases are more concentrated in the higher age groups while communicable diseases are concentrated in the lower age groups in both the states. Accidents and injuries are more in the case of women who are less educated; who are low in social strata and who are economically poor, burns are caused to women because of the use of open fires for cooking, heating and lighting in India, where women are more prone as compared to men.

It is seen that health care needs are still preoccupied with the improvement of mortality there is less focus on the morbidity condition of women. Morbidity among women can be improved by improving the socio-economic conditions of women in the society. Thus it is essential to educate women and implement programmes for their health awareness, thus there is a grave need for the proper implementation of the policies and programmes towards improving the health needs. It is seen that Non-Communicable diseases are increasing at an alarming rate among women. Thus it is necessary to focus on the cause of these diseases. When women's health are in focus, Non-Communicable diseases have been further marginalised due to the overarching focus on reproductive and maternal health and thus most of the other Non-Communicable diseases are overshadowed.

The analysis on the utilisation of health care facilities and also the treatment of diseases, source of financing and burden of health expenditure in Kerala and Uttar Pradesh reveals that utilisation of services vary across socio- economic groups and also across different sectors. Utilisation of health care services by social group reveals that women of lower caste are using public services more in rural Kerala while women from Other Backward Caste Women and forward caste are mostly utilising private services. On the other hand,

in urban Kerala the percentage of utilisation of private services is more among SC. The main reason for the differential in the utilisation of services by different social groups may be due to better economic conditions of women of higher caste. The higher caste women attend private health services mainly because of their better capability. In Uttar Pradesh, women who belong to Scheduled Castes, Other Backward Castes and forward castes utilise more of health care facilities be it private or public.

Health care utilisation by MPCE classes in both the states shows that women from lowest quintile classes utilizes public services more than private services in the upper MPCE quintile classes the utilisation of private services increases among women. Health care utilisation of services is higher for Non-Communicable and other category of diseases among women for all the social groups. For the treatment of communicable and non communicable diseases women of lower caste prefer public health care facilities while higher caste women prefer private services. The reason for not utilising private services for the treatment of non communicable disease is the higher cost of treatment of such disease in private hospitals.

Treatment by nature of ailment and MPCE classes shows that lowest quintile group is utilising more of public services for the treatment of communicable diseases and non communicable diseases. While highest quintile group women prefer to utilize private services more as they can afford the cost of treatment in private services. For the treatment of accidents and injuries women of all MPCE quintile utilize more of private services, same is the case for other disease group.

Burden of health expenditure is more in rural areas than urban areas. This apparent anomaly is probably because people living in towns and cities have better access to public and private services compared to those in rural areas. Therefore rural areas experience a higher financial burden when they access healthcare and it is found in both states. Social group wise burden of health expenditure in both states shows that with increase in caste hierarchy, the differential gap in the expenditure is high. The burden is high among the women of lower quintile group than women of higher quintile group.



The study on the source of finance for hospitalisation among women shows that women of lower caste and lower quintile groups, the source of finance for the expenditure incurred on utilising public services is mainly income and to some extent borrowing and contribution from friend and other relatives because the cost of treatment is less in public services than private services. The source of income is not enough for them for utilising private services as the burden of health expenditure increases with increase in the cost of treatment in private services. For women of higher caste and higher MPCE quintile group in Kerala, the source of finance is mainly income and borrowing as they can easily afford the cost of treatment in any health care facilities both in rural areas and urban areas. In Kerala women are more literate and can seek jobs easily while the scenario is different in case of Uttar Pradesh where along with income, borrowing is also very high this may be because women are not as literate as in Kerala, so there might be differences in the categories of jobs and payments.

The study depicts that morbidity among women in India is more a social than an economic problem. Caste and education come out to be more important factor than MPCE in most cases. The reason why Kerala inspite of being in better position than Uttar Pradesh in terms of education among women have higher morbidity due to higher reporting of the same. The study on healthcare utilisation also shows how the poor especially from lower social strata are more prone to go to government health care services which are often ill equipped. The burden of health expenditure is also higher on the people of lower social strata, they being more dependent on borrowing which creates a vicious cycle of poverty and related problem of ill health. If a wholesome removal of the problem of morbidity is to be the goal of any policy then an overall socio-economic development especially targeted at women of lower castes and from lower MPCE groups has to be done.

Kerala has better healthcare facilities while Uttar Pradesh needs specific attention in improving the condition of women and reporting of diseases. The health condition of women in Uttar Pradesh is far worse and it needs a very strong policy intervention both from demand side by awareness generation and supply side by improved health infrastructure and proper reporting. Since borrowing is taking a huge part in health

expenditure and waning household income. Thus there is an urgent need of good insurance policy from government. Apart from this the rural-urban gap in the utilisation of health services needs to be reduced by providing efficient healthcare facilities in rural areas.

In reviewing the evidence and setting an agenda for the future, this research emphasises the need for actions towards the betterment of health of girls and women. Addressing women's health is a crucial and effective approach to strengthen health systems; overall this action will benefit one and all. It is also important to note that women are not a homogenous group and differences persist among women based on their socio-economic status, living and working environment etc. Therefore the state should bring out strategies specific to particular groups of women who are vulnerable in terms of health. Upgrading the health of women will not only improve the condition of women but will also work towards the betterment of families, communities and societies at large. Although studies based on surveys like the present one has certain limitation but within these limitations this study is an attempt to demonstrate the poor health status of women in India.

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## Appendices

### A- Sample –size of households surveyed in central survey of NSS 60<sup>th</sup> round

States	Rural	Urban	Total
Jammu & Kashmir	821	380	1201
Himachal Pradesh	1239	200	1439
Punjab	816	676	1492
Chandigarh	80	333	413
Uttaranchal	346	200	546
Haryana	851	549	1400
Delhi	78	961	1039
Rajasthan	2311	1072	3383
Uttar Pradesh	6682	2627	9309
Bihar	3536	638	4174
Sikkim	440	80	520
Arunachal Pradesh	732	320	1052
Nagaland	240	120	360
Manipur	1070	520	1590
Mizoram	394	631	1025
Tripura	820	240	1060
Meghalaya	536	239	775
Assam	2150	480	2630
West Bengal	3170	1879	5049
Jharkhand	1398	598	1996
Odisha	2094	560	2654
Chhatisgarh	1070	400	1470
Madhya Pradesh	2254	1280	3534
Gujarat	1497	1309	2806
Daman & Diu	80	79	159
Dadra & Nagar Haveli	80	80	160
Maharashtra	2650	2664	5314
Andhra Pradesh	3235	1824	5059
Karnataka	1847	1518	3365
Goa	79	120	199
Lakshadweep	80	80	160
Kerala	1839	990	2829
Tamil Nadu	2540	2599	5139
Pondicherry	80	200	280
Andaman & Nicobar	140	120	260
Total	47275	26566	73841

Source: Calculated from Unit Level data of NSS 60<sup>th</sup> round.

**B- State-Wise Prevalence of Morbidity (PAP)**

<b>States</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Jammu & Kashmir	71	72	71
Himachal Pradesh	70	99	85
Punjab	110	146	127
Uttaranchal	57	53	55
Haryana	86	103	94
Delhi	13	15	14
Rajasthan	56	64	60
Uttar Pradesh	95	109	102
Bihar	54	55	54
Sikkim	61	37	50
Arunachal Pradesh	75	82	78
Nagaland	75	82	78
Manipur	75	82	78
Mizoram	75	82	78
Tripura	75	82	78
Meghalaya	75	82	78
Assam	75	82	78
West Bengal	121	129	125
Jharkhand	27	45	36
Odiisha	76	74	75
Chhattisgarh	68	72	70
Madhya Pradesh	58	68	62
Gujarat	73	72	72
Maharashtra	97	111	104
Andhra Pradesh	91	102	97
Karnataka	60	63	62
Goa	117	131	124
Kerala	241	261	251
Tamil Nadu	87	104	95

Source: Calculated from Unit Level data of NSS 60<sup>th</sup> round.



## **C- Concepts and Definitions:**

**Ailment - illness or injury:** Ailment, i.e. illness or injury, mean any deviation from the state of physical and mental well-being. An ailment may not cause any necessity of hospitalisation, confinement to bed or restricted activity. An ailing member is a normal member of the household who was suffering from any ailment during the reference period. For the purpose of survey, one will be treated as sick if one feels sick. This will also include among other things:

- I. Cases of visual, hearing, speech, locomotor and mental disabilities;
- II. Injuries will cover all types of damages, such as cuts, wounds, haemorrhage, fractures
- III. and burns caused by an accident, including bites to any part of the body;
- IV. Cases of spontaneous abortion - natural or accidental;

This will not include:

- A. Cases of sterilisation, insertion of IUD, getting MTP, etc.,
- B. Cases of pregnancy and childbirth.
- C. Cases of sterilisation, insertion of IUD, getting MTP, etc., under family planning programme, pregnancy and child birth are not treated as ailment. But a spontaneous abortion, is treated as a deviation from the state of normal health and thus considered to be illness.

For ascertaining whether an individual had suffered from any ailment during the reference period and whether she/he had received any medical treatment on that account, the following set of probing questions was put, in the survey, to the informant:

During the reference period, did the member feel anything wrong relating to skin, head, eyes, ears, nose, throat, arms, hands, chest, heart, stomach, liver, kidney, legs, feet or any other organ of the body?

- I. Does the member suffer from any disease of a chronic nature relating to stomach, lungs, nervous system, circulation system, bones and joints, eye, ear, mouth or any other organ of the body?
- II. Does the member have any kind of hearing, visual, speech or locomotors disability?

III. Did the member take, during the reference period, any medicine or medical advice for his/her own ailment or injury?

**Acute and Chronic Ailments:** The nature of ailment, i.e. acute or chronic, was determined on the basis of the type of ailment (i.e. the disease reported by the patient). The type of ailment, as reported by the respondent, was recorded for every spell of ailment in form of codes, so structured as to make the distinction between short-duration (less than 30 days) and long-duration (30 days or more) ailments possible. In this schedule, the 'short-duration' ailments are referred to as acute ailments and the 'long-duration' ailments as the chronic ailments.

**Prevalence of Morbidity:** It is measured by the PAP i.e. Proportion of Ailing Persons. The PAP is calculated as the number of persons reporting ailment during a 15-day period per 1000 persons.

**Hospitalisation:** One was considered hospitalised if one had availed of medical services as an indoor patient in any hospital. Hospital, for the purpose of survey, referred to any medical institution having provision for admission of sick persons as indoor patients (inpatients) for treatment. Hospitals covered public hospitals, community health centres and primary health centres (if provided with beds), ESI hospitals, private hospitals, nursing homes, etc. In this context it may be noted that admission for treatment of ailment and discharge thereof from the hospital was considered as case of hospitalisation irrespective of the duration of stay in the hospital. It may also be noted that hospitalisation in the cases of normal pregnancy and childbirth were treated as hospitalisation cases.

**Duration of Ailment:** Duration of ailment is the period between the commencement of the ailment and termination of it by recovery. For ascertaining the period of ailment during the reference period, commencement was taken as on the first day of the reference period if it was on a day beyond the reference period. Similarly, if the ailment was found

to be continuing on the date of enquiry, the day of termination of the ailment was taken as the last day of the reference period.

**Expenditure for Medical Treatment:** Total expenditure incurred for medical treatment received during the reference period (15 days for non-hospitalised treatment and 365 days for hospitalised treatment) included expenditure on items like:

- a. Bed charges (with charges for food included in it)
  - b. Medicines (including drips)
  - c. Materials for bandage, plaster, etc.
  - d. Fees for the services of medical and para-medical personnel
  - e. Charges - for diagnostic tests
  - f. Operations and therapies
  - g. Charges of ambulance
  - h. Costs of oxygen, blood, etc.
- ❖ All other types of expenditure incurred for treatment, such as lodging charges of escort, attendant charges, cost of transport other than ambulance, and cost of personal medical appliances, were excluded from medical expenditure.