HEALTH STATUS OF WOMEN AMONG THE SCHEDULED CASTES AND SCHEDULED TRIBES IN INDIA: A CASE STUDY OF MADHYA PRADESH

A Thesis Submitted to the University of Hyderabad in Partial Fulfillment of the Requirements for the Award of the Degree of

DOCTOR OF PHILOSOPHY
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DECLARATION

I, Mamta Waiker, hereby declare that the research report embodied in the present dissertation entitled ***"Health Status of Women Among the Scheduled Castes and Scheduled Tribes in India: A Case Study of Madhya Pradesh"*** is an original research work carried out by me under the guidance and supervision of **Dr. Ramachandra Rao**, School of Economics for the award of Doctor of Philosophy from University of Hyderabad. I also declare to the best of my knowledge that no part of this dissertation is earlier submitted for the award of any research degree or diploma in full or partial fulfillment in any other university or institution.

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CERTIFICATE

This is to certify that this dissertation entitled ***"Health Status of Women Among the Scheduled Castes and Scheduled Tribes in India: A Case Study of Madhya Pradesh"*** submitted by **Mamta Waiker** bearing registration number 14SEPH14 in partial fulfillment of the requirements for award of Doctor of Philosophy in the School of Economics is a bonafide work carried out by him under my supervision and guidance. This thesis is free from plagiarism and has not been submitted previously in part or in full to this or any other university or institution for award of any degree or diploma.

Further, the student has the following presentation and publication before submission of the thesis:

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Further, the student has passed the following courses towards the fulfilment of coursework requirement for Ph.D.

S. No.	Course Title	Credits	Results
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02	Contemporary theoretical views of sociology,	4	Pass
03	Critical Feminist Issues	4	Pass

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. *BY*

Mamta Waiker

LIST OF ABBREVIATION

ANM	**Auxiliary Nurse Midwife**
APL	Above Poverty Line
ANC	Antenatal Care
BPL	Below Poverty Line
CHC	Community Health Centre
CGHS	Central Government Health Scheme
CKD	Chronic Kidney Disease
CMH	Commission on Macroeconomics and Health
CSO	Central Statistical Organization
CMP	Common Minimum Programme
CHS	Catastrophic Health Spending
CAGR	Compound Annual Growth rate
CBHI	Community Based Health Insurance.
DHA	Domestic Health Accounts
DoHFW	Department of Health and Family Welfare
DH	District Hospital
ESIS	Employee State Insurance Scheme
ECHS	Ex-Serviceman Contributory Health Scheme.
FC	Finance Commission
GHE	Government Health Expenditure
GHISs	Government Sponsored Health Insurance Scheme
GDP	Gross Domestic Product
GOI	Government Of India
GSDP	Gross State Domestic Production
HIV	Human Immunodeficiency Virus
IMR	Infant Mortality Rate
IRS	Insurance Repository System
MHCS	Maternal Health Care Services
MDGs	Millennium Development Goals
MPs	Members of parliament
NICL	National Insurance Company Limited

NPISH	Non-Profit institutions serving households
NHA	National Health Account
NFHS	National Family Health Survey
NAS	National Accounting Statistics
NUHM	National Urban Health Mission
NHM	National Health Mission
NIACL	New India Assurance company Limited
OOPE	Out of Pocket Expenditure
OICL	Oriental Insurance company limited
OCMs	Other central Ministries
PHC	Primary Health Centre
PNC	Postnatal Care
PTHE	Per Capita Total Health Expenditure
PSUs	Primary Sampling Units
PPS	Probability Proportional to Size
PMSSY	Pradhan Mantri Swasthya Suraksha Yojana
PMJAY	Pradhan Mantri Jan Arogya Yojana
PGHE	Percapita Government Health Expenditure
RSBY	Rashtriya Swathya Bima Yojana
RLB	Rural Local Bodies
SAD	Skilled Assistance at Delivery
SDH	Sub District Hospital
SC	Sub Centre
SC	Scheduled Caste
ST	Scheduled Tribe
SDG	Sustainable Development Goal
THE	Total Health Expenditure
TGHE	Total Government Health Expenditure
U5MR	Under-Five Mortality Rate
UNICEF	United Nations Children's Fund
UIP	Universal Immunization Programme
UDAY	Ujwal Discom Assurance Yojana

ULB	Urban Local Bodies
UIICL	United India insurance company limited
WHO	World Health Origination
WHO's	World Health Statistics.

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Chapter 1: Introduction

"It is health that is the true wealth, not pieces of gold and silver."

Mahatma Gandhi

1.1 Introduction

Health is one of the fundamental human rights. It is necessary for achieving basic human needs and also for improving the quality of human life. So, getting a quality of life and long life is a highly valued goal for people. Healthy people are essential to build an economically and socially viable society, and they can form the basis of a nation's social infrastructure. If the people of unhealthy can hardly be expected to build any effective support to the social and economic development. Thus, health has been considered to be one of the highly valuable assets. It is truly said that Health is wealth.

Indian women's health and social status are intricately linked. The contributions Indian women provide to their families are usually overlooked and are instead seen as financial burdens, according to study on women's standing. Boys are chosen in India because they are expected to take care of their ageing parents. The desire for boys combined with the high dowry costs for women may result in the mistreatment of daughters. Additionally, there is a low level of formal labour force participation and education among Indian women. They often have a restricted amount of independence because their fathers govern them first, followed by their spouses and eventually their sons (Chatterjee, 1990; Desai, 1994; Horowitz and Kishwar, 1985; The World Bank, 1996). The health of Indian women is negatively impacted by each of these variables.

Not only do poor health's affect women, but also, it affects their families. Low-birth-weight babies are more likely to be born to women who are sick. They are also less likely to be able to feed and care for their kids suitably. Finally, health of the women has an impact on the household's financial well-being since a sick woman is less effective in the workplace. Despite the fact that India's women face several serious health issues, this profile focuses primarily on five of them: AIDS, nutritional status, gender-based violence, discriminatory treatment of boys and girls, and reproductive health. It's not unexpected that women's health varies greatly throughout India's 28 states and eight union territories due to differences in cultures, religions,

and degrees of development. Because India's 28 states and eight union territories have such a diverse range of cultures, faiths, and degrees of development, it's not unexpected that women's health differs dramatically from one state to the next.

High levels of fertility are linked to or exacerbated by many of the health issues that Indian women face. Overall, India's fertility has been falling; the total fertility rate was 3.4 in 1992-93 (International Institute for Population Science (IIPS), 1995). However, there are significant disparities in fertility rates by state, education, religion, caste, and location. Uttar Pradesh, India's most populous state, with a total fertility rate of more than five children per woman. Kerala, on the other hand, has a fairly high degree of female education and autonomy together with a total fertility rate of less than two.

High infant mortality rates, along with a strong predilection for sons, encourage women to have a large number of children in the hopes of having one or two sons live to maturity. Multiple pregnancies and births over a short period of time have been found to deplete a mother's nutritional status, which can have a detrimental impact on the pregnancy result (e.g., preterm deliveries, low birth weight kids) as well as increasing the health risk for mothers (Jejeebhoy and Rao, 1995). Unsafe abortions that end unwanted pregnancies have detrimental effects on women's health. Reducing fertility is a crucial component of raising the general health of Indian women. One strategy to lower fertility is to use more contraception.

Even though family planning is widely recognised in India, only 36% of married women between the ages of 13 and 49 utilise modern contraception (IIPS, 1995). Over two-thirds of married women who use contraception have had sterilisation, making it the most popular method of contraception.

While there are many serious health issues that India's women face, this profile focuses solely on five: AIDS, nutritional status, gender-based violence, discriminatory treatment of boys and girls, and reproductive health. It is not surprising that there are significant differences in women's health between the 28 states and 8 union territories of India due to the country's wide variety of cultures, religions, and levels of development. To give a more comprehensive picture, data for the important states will be provided wherever it is possible.

Both fertility and contraceptive usage are highly linked to where you live, your education, and your faith. Contraception is used by more than half of married women with a high school degree or higher, compared to only one-third of illiterate women. Unsurprisingly, the overall fertility

rates for these two categories differ significantly: uneducated women have 4.0 children, whereas women with a high school degree or more have 2.2 children. Differences across religious groups are also noticeable; for example, Muslims have the greatest overall fertility rate and the lowest usage of contraception (IIPS, 1995).

India still has a need for contraceptives despite a large increase in the number of women using contraception and lowering their fertility. In India, about a quarter of married women choose to delay having children or decide against having any more (IIPS, 1995). Instead of fewer births, spacing demands are more commonly unmet among younger women. This means that techniques other than female sterilisation, which India's family planning policy aggressively promotes, must be studied.

Maternal mortality and morbidity are two health issues linked to high fertility levels. In 1993, India had a high maternal mortality rate of 453 deaths per 100,000 births. In comparison, the ratio in the United States is 57 times higher. According to the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), maternal death rate in India is lower than Bangladesh and Nepal, but it is higher than Pakistan's and Sri Lanka's (WHO, 1996). Maternal death rates vary widely by state, with Kerala having the lowest rate (87) and two states (Madhya Pradesh and Orissa) having rates of over 700. (UNICEF, 1995). Maternal death rates vary widely by state, with Kerala having the lowest rate (87) and two states (Madhya Pradesh and Orissa) having rates of over 700. (UNICEF, 1995). This disparity in maternal mortality is most likely due to disparities in women's socioeconomic position and health-care access between states.

Because the great majority of these fatalities might be prevented if women had access to adequate health services (either excellent prenatal care or referrals to appropriate healthcare institutions), the high rates of maternal mortality are especially alarming (Jejeebhoy and Rao, 1995). In truth, India's high maternal mortality rates are mostly caused by a lack of access to healthcare (The World Bank, 1996).

The rate of complete vaccination against major paediatric illnesses is low, and it has to be increased to above 80%. Rural children under the age of five had a higher mortality rate than state and national averages, with rural and female new-born mortality rates being higher.

According to NFHS-3 (2005-06), around 60% of children under the age of five are underweight, with 50 percent suffering from chronic malnutrition (stunting). A staggering 12.6

percent of children aged 0 to 59 months (about 1 million youngsters) are extremely malnourished. While institutional deliveries account for more than 80% of childbirths in MP, only 66.8% of mothers start breastfeeding (AHS-11-12), and only 41.5% of mothers exclusively breastfeed for the first six months.

While maintaining consistent access to water remains a difficulty, assuring the quality of that water is much more difficult. Furthermore, due to the increased usage of hand pumps and tube wells, the over-exploitation of groundwater is frequent in many sections of the state. In MP, 24 blocks are over-exploited, five of which are severely over-exploited, and 19 of which are semi-critically over-exploited (Source: Dynamic groundwater resources of MP, 2009, CGWB MP). Water coverage statistics per district indicate that in certain blocks, fewer than half of the residences have access to 40 litres per capita per day (LPCD) of water supply (Source: Children in Madhya Pradesh, UNICEF report, 2013).

Madhya Pradesh is one of India's most populous states, with approximately equal life expectancy for women and men at birth. Women's health is a systemic problem as evidenced by the fact that India lacks the conventional female edge in life expectancy. Indian women experience a high mortality rate, particularly during pregnancy and early childhood.

1.2 Concept of Health

"The word "health," which is now used to refer to a state of being, comes from the Old English word "hale," which meaning "wholeness, being whole, sound, or healthy." The Proto-Indo-European root kailo, which meaning "hale," is whence the word "hale" originates "intact, entire, and of good omen." As we all know, a person's health is one of their most valuable assets, allowing them to live a socially and economically fulfilling and productive life. Everyone understands that health is a source of everyday life, and that it is a positive term that emphasizes personal, social, and physical resources. It is true that having a healthy body and mind allows a person to live a more fulfilling and productive life. When people talk of health, they typically mean physical and mental well-being. In India, some individuals take their health for granted and often overlook the need of following a healthy diet, exercising regularly, and attempting to live a stress-free lifestyle.

1.3 Definition of Health

Everything and anything that impacts one's health condition appears to be included in the notion of health. The Preamble to the World Health Organization's Constitution, which was

ratified during the International Health Conference in New York in 1946, was where the current definition of health was developed. Since 1948, the WHO has maintained its definition of health as "a condition of full physical, mental, and social well-being, rather than only the absence of disease or disability.” Health is a resource for everyday life, not the goal of living," WHO stated in the Ottawa Charter for Health Promotion in 1986. "Health is a positive term that emphasises both social and personal resources as well as physical capabilities." Health is more than just the absence of sickness or infirmity; it also contributes to a healthy society and freedom from illness and allows persons to reach their entire potential. A healthy life is a key predictor of human resources, and it is significant for enhancing productivity, economic development, and improving quality of life. One of the most important aspects of human resource development is health. If you give appropriate health facilities and services, you will generate healthy individuals who will be able to successfully contribute to the society's social and economic development. A healthier population implies a better and more productive workforce, which will lead to better economic growth.

Both health and education are essential factors of a person's life advancement, and they are interconnected. The health and productivity of a country's citizens determine its economic progress. As a result, indicators such as infant mortality rate, maternal mortality rate, health-care availability and access, and women's and children's nutritional status take on increasing importance. It can help to reduce Maternal Mortality Rate (MMR), Infant Mortality Rate (IMR), and Children under-five Mortality Rate, which are basic indicators for calculating Human Development Index, by increasing the number of physicians and other health care professionals, medical facilities such as equipment and infrastructure, and free medicines for low-income and poor people (HDI).

Health is a concurrent issue in India, and Article 47 of the Indian Constitution emphasises that the provision of health care - both preventative and curative treatments - is primarily the duty of state governments. As a state topic, health is the responsibility of the states, and the ability of state governments to devote more fiscal assistance to the health sector determines how well laws and policies are implemented. As part of its fundamental tasks, which are important to development, the Indian Constitution has required the States to boost the level of nutrition, to standardise people's living, and to improve public health facilities. As a result, the states' evaluation of public health spending becomes more important.

1.4 Research Aim

Effectively addressing the issue of women's health necessitates an understanding of the context-specific factors that lead to the problems. Various legislative initiatives are required to address women's health problems and enhance their general well-being. The state and central government have various policy and program specially women health but most of the policy and programs is not implemented properly in rural Madhya Pradesh. We noticed that in the rural area, there is lack of health facility, and most of the district there is only one government hospital. Because the government hospital is far distant from the hamlet, most people seek care from the 'Jholachhap' Doctor, who treats them for a variety of ailments. As we all know, the majority of ST and SC people in Madhya Pradesh are impoverished, and they often spend half of their income on health-related concerns. There is a popular belief that the government provides free health screenings and distributes free medicine to the underprivileged. However, it only happens once every five years around election time. Villager women are known to suffer from a variety of general and chronic diseases due to a variety of factors. To better understand the problem of women's health and the nature of causalities and determinants, micro-level evidence is required. Why are some women suffering from a variety of health problems? Why are some women capable of recovering from illness? What is the current state of women's health? As a result, the primary goal of this research is to better understand the issue of women's health in rural Madhya Pradesh among various socioeconomic groups, particularly SCs and STs.

1.5 Research Questions

Using mostly household survey data from three districts in Madhya Pradesh, this study attempts to diagnose the wide nature of the problem of Women's Health and its trend among socioeconomic categories. Given that India is one of the fastest-growing countries, the question arises as to why women's health concerns are not being addressed more quickly in emerging countries. It is essential to examine and determine whether the problem of women's health exists in various civilizations. These are some of the questions based on a perusal of the vast literature;

1. Why the health-related issues are much higher among the SCs and STs Women’s across the states in India?
2. Why there is a significant gap between rural and urban health facilities provided to SCs and STs Women’s?

3. Why there is substantial increase in chronic and general disease among SCs and STs Women's over the period in rural Madhya Pradesh?
4. Why the health care financing system in Madhya Pradesh is much regressive compare to other states of India?
5. What are the major determinants of utilization of health care services in Madhya Pradesh?

1.6 The Context and Justification of the Study

Madhya Pradesh is India's second-most populated state. In many places in India, health difficulties remain a serious issue. Madhya Pradesh is India's biggest state, as well as one of its poorest. Despite recent signs of progress, Madhya Pradesh still has a long way to go in terms of addressing health concerns and increasing security and well-being for its inhabitants. Women are denied not just in terms of monetary resources but also in terms of human growth, and they live in an insecure and occasionally dangerous environment. Women and people from lower castes face significant challenges. Health issues are not the only issue that women encounter in society; there are a variety of issues that women confront in general. This micro-level study is trying to understand and analyse the problem of women's health among the ST and SC in three districts of Madhya Pradesh.

1.7 Research Gap and Contribution of the Study

This study examined secondary data from the NFHS-3 and NFHS-4 databases and discovered that none of the publications discussed women's health in SCs and STs. In compared to other categories like general and OBC, the health of scheduled castes and scheduled tribes is quite poor. Secondary data is scarce, particularly for women's health in ST and SC, and the sample size of secondary data is small. Few studies discuss health discrimination, child mortality, infant mortality, and maternal mortality among SCs and STs at the village level. We also discovered that there was very little comparison research done on women's health status when comparing the two groups, SCs and STs.

1.8 Objectives of the Study

The specific objectives of the study are as follows;

1. To examine the women health status among the social groups in India and its major states.
2. To examine the health care finance system in India and Madhya Pradesh.

3. To examine the health status of SCs and STs Women in Madhya Pradesh.
4. To analysis the Utilization of Maternal Health Care Services (MHCs) among SC and ST women in Madhya Pradesh.

1.9 An Outline of the Thesis

Eight chapters make up the thesis. The study's history, research goals, research questions, and research gap are all covered in the first chapter's introduction. Literature review is the second chapter. The third chapter, "Research Technique," includes a detailed discussion of research methodology, as well as information on main and secondary data sources and sample design. Fourth chapter; women's health status among the social groups in India and its major states: A special focus on Madhya Pradesh. Fifth chapter: health care financing in India: a special focus on Madhya Pradesh. Sixth Chapter; women health status of SCs and STs in Madhya Pradesh: A Primary data analysis. The seventh chapter includes an empirical investigation to comprehend how maternal health care services are used in the Indian state of Madhya Pradesh (M.P). The eighth chapter, which serves as the study's conclusion, focuses on the study's primary conclusions, its implications for policy, and its limitations. It also makes suggestions for other study topics.

Chapter 2: Literature Review

This Chapter covers a brief review of the earlier studies related to women's health, health care facilities, mode of financing and state of available health insurance in India. Specifically, the health status of Scheduled Casts (SCs) and Scheduled Tribes (STs) women in Madhya Pradesh. Reviewing past studies and understanding the problem is considered the beginning of any research. Putting differently main objective of reviewing past studies is to understand the research activities that have done so far in a particular discipline. Health is considered as a major problem in marginal communities, especially the people belongs to Scheduled Casts (SCs) and Scheduled Tribes (STs) and that too among the women in India (in India, the contributions of women to families are often overlooked, and instead they are viewed as economic burdens). Women's health in India is intrinsically associated with their economic and social status in society. Due to backwardness and low economic status, the concept of integration of these communities with the rest of the population failed to explain equality in society. It is fact that in India the income of the SCs and STs Population is very low, and the lower-earning repercussions not only the levels of expenditure but also the level of savings. As a consequence of low consumption expenditure, the level of nutritional intake among the SCs and STs Communities is very low and considered as major reason to prone to diseases and malnutrition.

Madhya Pradesh is one of densely populated state in India, where a large number of people live without access to the basic health facilities. The situation is more complex in rural Madhya Pradesh than in urban places. In rural areas majority of SCs and STs Women failed to receive even basic emergency facilities at the time of delivery, as a result, in many cases, either mother or child lost their life. Indian women have high mortality rates, particularly during childhood and in their reproductive years. This is just one example of the story. For a better understanding, the review of the literature has been divided into three heads

- Global studies on women's health status
- Women's health status among the social groups in India
- Women's health status among the Scheduled Cast (SCs) and Scheduled Tribes (STs) in Madhya Pradesh

2.1 Global Studies on Women Health Status

Taylor, A. K., Larson, S., and Correa-de-Araujo, R. (2006): The study looks at how women utilise and spend money on health care in connection to their social, demographic, and health factors. The authors also look at concerns that governments and health-care professionals are concerned about while designing specialised services. The authors claim that obstacles to each patient's treatment requirements and choices can have an impact on health-care usage and spending. This study looks at how white women are more likely than black and Hispanic women to visit an ambulatory care centre to obtain prescription medicines and use preventative health care services. White and Hispanic women pay a larger share of out-of-pocket medical expenditures than black women. Nearly a third of older women in fair or poor health spent 10% or more of their income on medical care, according to the study. in order to minimise health inequities and increase health quality.

Sacker, A., Firth, D.et al (2000): Women had considerably less health disparity than males, according to this study, which employs social inequality metrics based on their own work. This study reveals that the relative relevance of these dimensions differs between men and women, and that the choice of measure affects the level of health inequity in women compared to men. When the social position was measured according to the overall social advantage in the home, however, large disparities in the risk of death in women were discovered. Classifications based on features of the job position may result in a significant underestimation of women, even those in paid labour. The new measure of socioeconomic status developed by Statistics can be used to assess health disparities in men. Inequality in the household's overall socioeconomic advantage, however, is a more relevant predictor of death among women.

Celik, Y., et al (2000) examine the utilization pattern of maternal health care services in Turkey. They used information from 6519 individual women based on four characteristics such as her reproductive health, maternal use, women's fertility levels, and taking new-born health conditions. They applied logistic regression models to capture the effect of individual and community level characteristics on rural and urban women's maternal health. The authors concluded that level of education, health insurance coverage; ethnicity, household wealth, and geographic region are the important factors that influence the usage of healthcare services.

Manzi, et al (2014) examine the factors that are responsible for the delay in the utilization of all the three antenatal care visits such as ANC in the first, second, and third trimester in Rwanda. Where they find several socio-demographic factors are major reasons for the delay of

ANC visits in Rwanda, such as factors like geographical distance to reach the nearest health centers, unwanted pregnancy, and having more children. However, factors like ANC in private hospitals and public health insurance coverage are the best indicators that control the delay in ANC during her pregnancy.

Faye, A., Tal- Dia, A., and Faye, D. (2017) empirically analysed the delivery system in Senegal and its effect on women's health care. Interview methods are used to collect data on attitudes, knowledge, and delivery practices of women who gave birth in the last 12 months in the Kolda region (Senegal). Their findings suggest that less than 43.5 percent of deliveries were performed under the institutional delivery system. This is due to social-economic, cultural, ethical, and structural factors of the women and lack of knowledge, awareness, and lower capacity of practicing. Furthermore, a low level of autonomy in decision-making and husband carelessness are the strong reasons for proper delivery planning.

Tiruneh, F. N., et al (2017) assess the women's autonomy and utilization of maternal health care service MHCS) in Ethiopia. They measured women's autonomy to acquire maternal health care services based on individual and community levels. Applying both bivariate and multivariate logistic analyses, the estimated results suggest that more than 50 percent of women oppose the attitude of wife-beating at the community level, where this attitude makes them release the importance of maternal health care services. Furthermore, women's autonomy in decision-making is more likely to attend four or more antenatal care visits. Hence, they concluded a positive and significant association between women's autonomy and the utilization of maternal health care services (MHCS) in Ethiopia over the period.

Schaaf, M., and Topp, S. M. (2019examined how informal payments affected the provision of maternity healthcare. All payments that are not allowed can be categorised as informal payments; some of these payments may not be harmful to patients or the result of physician avarice. These payments are comparable to paying bribes, pricey gifts, and other similar things. They reviewed a number of heterogeneous articles to capture reason behind this strong relationship informal payment and maternal health care. They employed "critical interpretative synthesis methodology" and find, the informal health payments undermine the health system; health services can be considered to be commodity rather than an entitlement. Informal payments are dysfunction of health system; it negatively impacts on vulnerable sections of the people.

2.2 Women's Health Status among the Social Groups in India

Saito, K., Korzenik, J. R et al, (1997) The goal of this study was to look at mother awareness of malnutrition's causes, health-care seeking attitudes, and socioeconomic risk factors in connection to children's nutritional status in rural south India. The goal of this study was to give information that will help guide future initiatives and studies aimed at reducing malnutrition in the Kaniyambadi block of Tamil Nadu, India. In a rural area of Tamil Nadu, India, a case-control study was done. From a population of roughly 97,000 people, 34 cases and 34 controls were chosen from the local hospital's new-born list. The findings show that knowing the gender of the child, the father's occupation, and the nutritional causes of mild mixed malnutrition are more important risk factors for malnutrition than medical availability and a desire for medical treatment. This study demonstrates that including social factors in medical practise is critical for nutritional intervention programmes. Because girls are significantly more disadvantaged than boys, it is critical that community health and development continue to prioritise women's and children's health.

Velkoff, V. A. and Adlakha, A.et al,(1998) Although there are many serious health issues that women in India face, this profile solely focuses on five of them: HIV/AIDS, violence against women, nutritional status, unequal treatment of girls and boys, and reproductive health. According to this survey, Indian women commonly have their contributions to their families overlooked and are instead seen as a financial burden. Numerous pregnancies and closely spaced births have been demonstrated to deplete a mother's nutritional state, which might have a detrimental impact on the pregnancy result. According to this study, anaemia affects between 50 and 90 percent of all pregnant women in India. The study found that dowry-related violence against women occurred across all socioeconomic levels, with rates being greater among the poor and lower castes. According to the NFHS, the vast majority of Indian women had never heard of AIDS. In India, high maternal death rates are due to a lack of access to health care (The World Bank, 1996). Unwanted pregnancies that are terminated through unsafe abortions have serious health repercussions for women.

Ravindran, T. S., and Mishra, U. S. (2001) Using information from the 'National Family Health Survey of 1992-93,' as well as the reproductive histories of 70 women from rural Tamil Nadu. This study examines the limited extent to which Indian women have been able to realise their reproductive goals, as well as the health-care system's inability to address their significant reproductive health requirements. Out of the 70 women, 69 were unable to carry out their

reproductive goals, including both non-users and regular users of contraception, and all 69 were unable to meet their requirements for reproductive health care.

Pallikadavath, S. and Stones, R. W. (2003) According to this report, the prevalence of HIV infection among women has been rising. This has serious ramifications for Indian women's reproductive health. Women, particularly the impoverished, have limited access to health care, putting HIV-positive women at an even greater disadvantage. The ineffectiveness of India's HIV control campaign would be hampered by the lack of readily available voluntary counselling and testing (VCT) facilities. HIV-positive women in India confront significant challenges in terms of sexuality, marriage, and pregnancy, and if the epidemic expands, this will have an impact on society as a whole. While societal benefits such as women's empowerment are crucial for women's reproductive health security, there is an immediate need for a comprehensive, confidential volunteer counselling and testing programme.

Roy, T. K., Kulkarni, S, and Vaidehi, Y. (2004) According to this study on "social disparities in health and nutrition in selected states," health services either do not reach or are not used by poor people. With an emphasis on caste and tribe, this article analyses the magnitude of inequality in health care and nutritional status among states. It investigates whether these discrepancies are caused by caste/tribe per se or by differences in the economic and educational circumstances of people belonging to various caste/tribe groups. In Indian society, this research investigates health and nutrition disparities across four large caste/tribe groupings. Inequality by caste and tribe is investigated using the following deprivation indicators: poor standard of living, illiteracy, and lack of media exposure, lack of a health facility in the area, no antenatal care, hazardous birth, low BMI, and prevalence of anaemia. It clearly shows that disparities between SCs, STs, OBCs, and women in the 'other' group are mainly related to socioeconomic inequalities, although differentials continue in some states even after correcting for the influence of a socioeconomic component. When it comes to socioeconomic features, SCs and STs are more likely to have better nutrition and use the programme services than women from other categories.

Gupta, M. D. (2005) Public health services are a crucial component of a nation's development infrastructure because they reduce a population's susceptibility to disease through practises like sanitation and vector control. According to this study, medical services have received a lot of attention in India's policy. Public health services have been neglected, as has the enforcement of fundamental public health legislation. The sensible deployment of staff and funding for

disease management is also hampered by a number of organisational challenges. There is a significant ability to deal with interruptions when they occur, but not to prevent them. There is also impressive ability for undertaking aggressive campaigns, but not for maintaining these gains on a long-term basis. The near-eradication of malaria in the 1950s due to well-organized efforts, then its comeback when focus switched to other concerns such as family planning, exemplifies this. This report examines the basic barriers to successful disease control in India, which must be addressed immediately.

Amrith, S. (2007) this study offers a historical perspective on India's public health political culture. It analyses the origins of the state's promise to provide for people's health, but contends that there are several inconsistencies and fractures in the initial commitment that assist to explain the state's relative ineffectiveness lack the field of public health. It claims that the nationalist movement's early commitment to state-provided welfare sprang from a complicated mix of causes, including worries about democracy and justice, as well as population quality and quantity. Infrastructure and resources could not match the depth of ambition for public health; as a result, the state depended primarily on narrowly targeted, techno-centric projects aided by foreign funding. The report also looks at the malaria eradication campaign as a case study, revealing the limitations and flaws in that strategy, as well as the program's final failure, which shattered the state's commitment to public health.

Bose, A. (2007) This article concludes that, in order to accelerate the decrease of maternal mortality, the Indian government should focus more on building health facilities and providing road connection in rural regions rather than just handing out money to impoverished families. He also examined the scheme's many components attentively. Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh, and other high-focus states are included in the NRHM paper Maternal Mortality Ratio in India and States, (1997-2003). To guarantee that pregnant women receive enough nourishment, 50% of the incentive money should be paid to BPL households at least three months prior to birth, however there is currently no such provision. Some states have continuing maternal benefit plans, such as Madhya Pradesh's Janani Kalyan Bima Yojana, Haryana's Delivery Hut Scheme, and numerous other states' schemes.

Radkar, A and Parasuraman, S (2007) This study aims to uncover additional information about the lives and causes of death of the deceased women. A list of signs and symptoms linked to maternal deaths is created. Data for the entire country were gathered from 2002 to 2004 as part of the Reproductive and Child Health Survey-2 (RCH-2; Ministry of Health and Family

Welfare, 2004) using a large sample. In India, two-thirds of pregnant women and almost half of women of reproductive age are anaemic. Such women have a hard time sustaining haemorrhages, whether intrapartum or afterwards. Similarly, anaemia lowers general immunity, making these women more vulnerable to illnesses - When home deliveries are made in an unsanitary manner - and the patient is unable to recuperate quickly. Anemia in women of reproductive age and problems with their socioeconomic standing must be addressed in the context of maternal mortality. Addressing this mortality is challenging since a significant portion of home deliveries are carried out by unskilled workers. It is now clear that women who reside in rural areas, are members of lower castes, and have a low standard of living are most at risk when it comes to maternal mortality. For a large number of women who must walk outdoors to get water and use the restroom, excessive physical activity is a leading cause of maternal death. This is particularly true if the ladies have poor nutritional health. Rural locations and low living conditions are closely linked to maternal mortality. For these women, access to quality healthcare services is difficult. In general, effective prenatal care would aid in identifying high-risk mothers and directing them to appropriate resources.

Hulton, L. A. and Matthews, Z et al, (2007) this research attempts to utilise a framework for evaluating the quality of institutional maternity care in an Indian slum. The difficulties noticed included a lack of essential drugs, women being left alone, signs of physical and verbal abuse, and deliveries occurring in hospitals without a medical practitioner present. According to this paper, many nations have stated goals of increasing institutional births, but few have concrete goals or even a commitment to track and enhance the calibre of institutional birthing services. The results highlight the risks of methods designed to boost hospital births while sacrificing quality. It was not until the 1990s that the world as a whole realised that professional assistance makes deliveries safer and that a pregnant woman should have access to a well-prepared medical institution in case of a serious emergency. It is now commonly understood that maternal mortality assessments need to be complemented by data on various forms of care that women get and experience after years of relying solely on the maternal mortality ratio as a sign of safe parenthood.

Sethuraman, K. (2008) Women's empowerment, domestic violence, mothers' nutritional state, and the link between nutritional status and growth are all discussed in this research. The results presented here are part of a wider research and include qualitative findings as well as cross-sections. This essay is concerned with the incidence of malnutrition at the community level in this Karnataka, India region. Furthermore, these data appear to indicate that gender disparity

has an impact on future child nutrition outcomes. In order to prevent long-term malnutrition, these results can help children develop good eating habits, increase health-seeking behaviour, offer health services, and address family food poverty. It clearly demonstrates that it is still vital to health and nutrition initiatives. States and districts will need to enhance not just their capacity to employ resources for health-related purposes, but they will also need to pay closer attention to their own expenditures.

Rajan, S. I., and James, K. S. (2008) The National Family Health Survey is examined in this article in order to obtain high-quality data on demographics and health outcomes. Some NFHS-3 data, such as fertility and infant mortality, is still of reasonable quality, while data on nutrition, vaccination, and gender violence is vulnerable. According to the authors, the NFHS failed to continue the cause of capacity-building among Indian researchers and institutions. The quality of data obtained in NFHS-2 and NFHS-3 is directly related to this shortcoming. Pre-marital sex is highlighted in this research as having major implications since most women lack the power of self-determination and are hesitant to speak about it. In the instance of domestic violence, this is also true. The NFHS -3 data has raised concerns about the contradiction of dropping fertility and rising malnutrition, despite the fact that the Indian economy is growing at roughly 8% per year. The NFHS -3 data shows worsening nutritional levels. Despite a large increase in budget allocation for health in recent years, notably for the reproductive and child health programme and the National Rural Health Mission, it also reports a fall in child vaccination. In several states, the data reveals a definite trend in fertility. This report also mentions a variety of ways to use the NFHS data to better understand the relationship between India's recession and mortality.

Mavalankar, D. V. and Vora, K. S et al. (2009) The difference between Chiranjeevi plan participants and potential beneficiaries who did not use the scheme is seen in the research. The Gujarat government has taken a number of steps to improve maternal health services, including partnering with private obstetricians to provide delivery care to low-income women, providing medical officers and nurses with relatively short training to provide emergency obstetric care, and improving the emergency transport system. Gujarat's public-health system faces the same infrastructural, human-resources, and managerial issues as the rest of the country.

Berman, P., and Ahuja, R. et al. (2010) The study's goal is to raise government overall health-care expenses from current levels of around 1% of GDP to a target of 2-3% of GDP during the following five years (2012 marks the end of the Eleventh Five-Year Plan), but it was clear that

even with optimistic assumptions, the target goal would not be realised. This research, which examines recent patterns in government health expenditure by the Center states, also observes that appropriate fiscal targets for health spending, which should be based on goals for outcomes and the resources required to accomplish them, were mostly absent. It argues that significant and long-term increases in government health expenditure will necessitate a greater focus on state spending as well as improved state and district capacity to employ health-benefit resources.

Jose, S. and Navaneethan, K. (2010) This research investigate whether access to social infrastructures, such as bathroom facilities, on-site drinking water, and clean cooking fuels, contributes to a reduction in the high rate of under-nutrition among women in India. We investigate whether and to what degree access to bathroom facilities, on-premises drinking water, and clean cooking flues are associated with a substantial reduction in under-nutrition among Indian women. We hope to analyse the influence of public policy in lowering women's under-nutrition in India as a result of this. The three dimensions of social infrastructure, which are linked to a variety of communicable and non-communicable illnesses, as well as women's malnutrition, are also linked to public health issues. The inabilities to provide clean cooking fuels and access to drinking water within or adjacent to the premises also contributes to the perpetuation of gender-biased regressive roles and duties that limit women's independence and well-being. These various, interconnected elements highlight the need of public policy that ensures poor people in general, and poor women in particular, have access to social infrastructure.

Rai, R. K. and Kumar, C.et al. (2012) to analyse the coverage gap in MNCH care across the Indian district, researchers employed the Robust Total Coverage Gap Index (CGI) created by the Equity Analysis Group in 2008. They used data from the third wave to create a CGI for surveying 2007–2008 (DLHS-3) district level housing facilities in this study. The north-south divide in MNCH coverage is obvious. The findings of this study highlight the necessity for active action in 210 districts where there is a 50% coverage gap. Recollections of underestimation or social desirability bias, both often reported evidence concerning MNCH care for survey datasets, might be considered limitations of this study. One of India's 28 states and seven union territories is DLHS-3. It is not implemented in Nagaland. The reason for this study's coverage is because the gap has remained unexplainable.

Sanneving, L., Trygg, N., et al, (2013) Economic position, gender, education, social status, and age were identified as the five primary structural characteristics that emerged from the investigation as significant in understanding equity in India. These five factors were discovered to be highly interconnected, a finding that was echoed in the literature. The outcomes of this study indicate that there is an unmet demand for contraception among low-income couples. When it comes to the usage of and access to maternal and reproductive health care in India, economic position, gender, and social standing are all intertwined. When planning policies and initiatives to achieve equitable progress toward improved maternal and reproductive health, careful consideration should be paid to how these socioeconomic variables interact to generate and maintain disparity.

Kushwah, V. (2013) This article discusses some of India's most pressing concerns for women, as well as possible solutions. According to this study, many women in most areas of India have closely spaced deliveries, which puts the mothers' health at danger. Some think that high maternal death rates might be avoided. Many women also encounter significant social, economic, and cultural hurdles to maintaining good health throughout their lives. Several factors have been identified as contributing to health issues across the country. Children born to illiterate moms are twice as likely to be malnourished as children born to literate mothers. Women's morbidity and mortality are influenced by their educational level and where they live. Some say that high maternal death rates might be avoided if women had access to proper health services, as lack of access to health care is the major cause of high maternal mortality rates in India. India's maternal mortality rates are still among the highest in the world in rural regions. India is home to 19% of all live births and 27% of all maternal deaths worldwide. In India, rural people in general and tribal people in particular have their unique beliefs and traditions when it comes to illness prevention and treatment. Some tribal communities still think that sickness is invariably brought about by malevolent spirits or a violation of some taboo. To lessen the burden of respiratory disorders such as asthma, bronchitis, emphysema, and chest discomfort, smoky environments and smoking habits should be avoided. Women should exercise daily to preserve flexibility; they should walk, swim, jog, dance, and garden to burn calories and spend time with friends who make them happy to reduce stress. A healthy mind lives in a healthy body; therefore, a healthy woman may make a greater contribution in all areas of life, including science and technology.

Kamalapur, S. M., and Reddy, S. (2013) The report examines India's diet and women's health. Women's lived experiences as gendered beings result in a variety of interconnected health

requirements. Gender identities, on the other hand, are shaped by a variety of social situations, such as caste and class. The numerous responsibilities of production and reproduction stem from a disadvantageous position, which has far-reaching implications for women's well-being. Lack of autonomy in many areas that impact progress hinders women's empowerment. Due to their institutionalised incapacity, they are illiterate, have limited access to the media, little money, and limited mobility, which limits their domains of competence and control.

Sundararaman, T., Vaidyanathan, G. et al (2014) This study presents a method for measuring the progress toward universal health coverage on a regular basis using a set of indicators that encapsulate the substance of the elements that must be examined. Based on a primary home survey conducted at the district level, it gives the rationale for the technique and shows its use. It discusses the approach's benefits and drawbacks, as well as how these metrics may be improved. The goal is to develop a measuring system that can be applied to any of the multiple approaches to universal health coverage, regardless of how they are defined and executed.

Dhak, B. (2015) examine the demographic transition, catastrophic spending and out of pocket expenditure on health since inception of the health reforms in India. In addition, demographic transition or health reforms impact on the various socio-economic strata households and also rural and urban settings. The data has taken from the 52^{nd} and 60^{th} rounds of NSSO between 1995-96 and 2004. By obtaining results, employed interview methods and stratified random sampling. Results reveal that, OOP and catastrophic spending on health increasing since introduction of health reforms in India. Demographic transitions and health reforms adversely impact on the poor people and they become marginalized. Rich household OOP is higher than poor household.

Laxmi Kant Prem Prakash (2015) The age of the mother, birth order, stillbirth and spontaneous abortion, education, economic position, caste, and religion are all important determinants, according to this study. Although the use of complete prenatal care is higher in cities than in rural regions, there is a huge difference across distinct demographic categories in metropolitan society. Younger women are more accepting of contemporary medicine and health-care services than moms in the older age groups. Older women, on the other hand, have more experience and understanding of pregnancy and labour. They have more self-assurance and assurance. As a result, they place a lower value on modern antenatal care and childbirth. Educated women have more autonomy within and outside the household. Educated women easily accept modern health care services than an uneducated woman. The use of antenatal care

is also lower among low-income, illiterate, scheduled caste and scheduled tribe, and minority population groups. Interventions should target younger age groups as well as urban poor, illiterate, or less educated women. Maternal health policies should take socially disadvantaged Scheduled Castes, Tribes, and minority population groups into account as well.

Sinha, D. (2015) This article examines some of the most important mother and child health indicators, as well as nutrition. This study also discovered that some indicators connected to access to services are improving, while others are taking longer. Overall, the findings imply that much more needs to be done to improve access to comprehensive care for pregnant and breastfeeding women in terms of maternal health indices. Although there have been some gains in access to care in terms of women giving birth in institutions and/or having a health professional help them during delivery, there are still significant gaps in prenatal and postnatal care. Preliminary evidence suggests that some improvements were evident in places where significant efforts were made, such as enhancing institutional delivery and expanding vaccination coverage. This necessitates more investments in health and nutrition, as well as a more holistic strategy that addresses all areas at once. Inequities in terms of wealth/income and caste groupings persist, according to the report.

Sahoo, J. and Singh, S. V. et al (2015) The purpose of this study is to assess the prevalence of home birth and the socio-demographic parameters that influence it. This research is a community-based cross-sectional study. Women who had given birth in the previous year were included in this research. A total of 300 women (93.2%) answered and consented to take part in the research. Home delivery accounts for 37.7% of all deliveries. Religion, caste, education of women and their partners, spouse occupation, monthly family income, and other variables are included in bivariate analysis. The choice of birthplace is strongly linked to socioeconomic level. The only major criteria that affect the site of birth, according to multiple regression study, are religion, caste, spouse education, and monthly income. This suggests that Muslim women and women of other faiths are interested about maternal health and maternal use knowledge. One of the study's shortcomings was its lack of generalizability throughout India. The findings of this study suggest that individual nations should develop interventions for excluded or disadvantaged groups based on caste, religion, and low-income quintile wealth. Furthermore, by focusing on the first three Millennium Development Goals, namely eradication, we may make considerable progress toward the fifth Millennium Development Goal, namely poverty eradication, universal education, and women empowerment.

Loganathan K and Deshmukh P R et al. (2017) studied the out-of-pocket expenditure on health and catastrophic health expenditure and socio-demographic determinants in a rural area of Maharashtra, India. The primary survey conducted in Wardha district in Maharashtra by using simple random sampling method. The results obtained from the survey is that 15 per cent of households catastrophic health spending on health care and 83 percent from their pocket expenditure, and rest of them borrowing money from land lords and sold their assets.

NFHS-4 Research Collaborators (2016) According to the author, the proportion of moms receiving full ANC has grown significantly since NFHS–3. Children aged 12–23 months were deemed completely immunised according to World Health Organization criteria. According to this report, fertility in most states has continued to drop, reaching replacement levels or lower. Surprisingly, during the previous decade, the adoption of contemporary contraceptive techniques has fallen in most states. Full vaccination coverage among youngsters was 54 percent in Madhya Pradesh and -88 percent in Goa, according to the findings. Despite the significant drop in violence against women over the years, worries about child nutrition and vaccine coverage continue in rural regions, particularly in relation to obesity and high blood glucose levels, nicotine and alcohol use, and violence against women.

Khanam, S.(2016) The research looks at the reproductive health of women living in Indian slums in terms of overall fertility rate, contraception, prenatal care, and infant birth habits, among other things. The fertility rate of slum inhabitants is greater than that of non-slum dwellers, according to this study. However, fertility patterns in slums across the country range significantly. Contraception usage is greater in non-slum regions than in slum areas, and female sterilisation is the most common among users, which is not surprising given the national trend of female sterilisation and its dominance in family planning dynamics. Slums in larger cities have substantially higher reproductive health indices than slums in smaller towns and cities.

Sinha, D., Nehra, S., Matharu, S., Khanuja, J., and Falcao, V. L. (2016) The conditionality of the Indira Gandhi Matritva Sahyog Yojana initiative, according to the authors, is the fundamental cause for its failure. Due to restricted access to AWCs and health clinics, the study found that vaccination of the mother and child, a requirement for receiving IGMSY payments, is frequently not met. This report identifies the adjustments that must be made to the IGMSY's design and execution if the government plans to use it to implement the maternal entitlement. Primary data (from 16 villages in eight districts across Bihar, Chhattisgarh, Jharkhand, and Madhya Pradesh) and secondary data (from national-level sources such as MWCD

administrative data, Census 2011, and the Rapid Survey on Children 2013–14) were used in this study. This paper focuses on the NFSA's maternity allowances, which is an important problem that should be considered in both the proposed revisions to the Maternity Payments Act (MBA) and the formulation of future (conditional and unconditional) cash benefits.

Mohanty, S. K. and Ladusingh,L. et al (2016) investigate the trends and growth factors affecting household health spending in India. The impact of hospitalisation and rising medical costs on health spending was also examined, in addition to age structure. the information gathered between 1993 and 2012 from the NSSO, Census of India, Reserve Bank of India, and consumption and expenditure survey. They employed the 50^{th} (1993-94) and 61st (2004-05) waves of the Consumption and Expenditure Survey. They concluded that household per capita spending is rising twice as fast as household per capita consumption. Health-related household spending is rising more quickly than per-capita consumption. Spending on health is positively correlated with income.

Fledderjohann, J. and Vellakkal, S. et al (2016) This study employed the most current National Family and Health Survey (n = 20,764) to apply multilevel linear regression models to analyse dietary correlates for breastfeeding moms (2005–2006). The amount of pulses, eggs, meat, fish, dairy, fruit, and vegetables that a group of 3,409 nursing, non-breastfeeding, and pregnant women (n=3,409) who were matched within households and five-year age bands ingested was then examined. They investigated whether nursing moms had an advantage in the 18 states where the National Rural Health Mission of India placed a high priority. Moms who breastfeed their children do not have a nutritional advantage over mothers who do not. A concentrated effort is needed to evaluate and enhance the nutritional sufficiency for breastfeeding among Indian mothers. In conclusion, maintaining a healthy diet while lactating is important for the health of both the mother and the child, but programmes to boost breastfeeding have not looked into whether women are getting enough nourishment to meet their greater calorie and nutrient requirements than NBP women.

Mohanty, S. K., and Kastor, A. (2017) compare the expenditures on maternal health care of pre and post period of National health mission. They also observed that expenditures from out of pocket (OOP) and catastrophic health (CH) on maternal health care in public and private health centres in India. The data collected from the National sample survey of 60^{th} and 71^{st} round by using methodology of log-linear and logit regression. The results are shows that the maternal health care's spending out of pocket and catastrophic health spending has been decreasing since

implementation of NHM. In addition to, NHM regulate the private health centres. Public health centres service using increasing more than private health centres for antenatal, natal and post-natal care.

Hooda, S. K. (2017) examines the health care spending out of pocket and catastrophic health spending impact on various economic stratum of households among urban and rural and states. The data has been collected from the unit-level records of consumer expenditure survey 68th round (2011-12) conducted by NSSO between July 2011 and June 2012. He used methodology of poverty head count ratio and poverty gap ratio for obtaining results. The results show that households who spending from their pocket their health better off but they pushed into poverty deepening and economic welfare loss. Below the poverty line, people who spend out of pocket for health, their consumption level falls down and lowers than APL households. In addition to, the poverty head count quartile increasing in urban areas than villages. Low-income states such as U.P and Bihar their rural poverty head count ration higher than urban.

Behera, D. K., and Dash, U. (2018) Analyze the connection between macroeconomic issues and their effect on the rise in public health spending in the important Indian state. In order to determine the long-term short and long-term effects of macroeconomic variables on public health spending, the study used the panel dynamic bias adjusted least squares dummy variable approach. The findings indicate that, rather than having a short-term influence on health expenditures, centre tax devaluation, state tax revenue, and indirect tax have a longer-term effect. In a similar vein, domestic debt, per capita GSDP, and fiscal balance have modest short-term effects and significant long-term effects on the increase of public expenditure.

Mohanty, R. K. and Bhanumurthy, N. R. (2018) examined the efficiency of public expenditure among the various states in India in particularly on education and health sectors. The data collected from the sources of GSDP (Gross State Domestic Production), NAS (National Accounting Statistics) and CSO (Central Statistical Organization) from 2002 to 2015. They employed The DEA (Data Envelopment Analysis) methodology. The result shows that the wider variations in efficiency spending of public expenditure among the Indian states. In particular, states spending more education than health. There is a positive significance between good governance and economic growth, but good governance has played more role than economic growth of efficiency of public spending.

Mohanty, S. K., and Kim, R., (2018) Analyze the regional differences in India's household expenditure and catastrophic health costs. The data gathered from the 68th round of the NSSO

(2011-12). The four variables they utilised were per capita health spending (PHS), per capita institutional health spending (PIHS), per capita non-institutional health spending (PNHS), and per capita catastrophic health spending (CHS).To get findings, they used stratified and multistage sampling techniques. The findings indicate that economically developed states spend more on health care than developing ones do, and that within states, PHS is greater among households with higher incomes than in those with lower incomes. Spending on catastrophic health accounts for one-fourth of Indian households, and it was high in both economically developed and underdeveloped states.

Pandey, A., Clarke, L., et al (2018) study the inequity (Horizontal and vertical) in OOPP (out of pocket payment) for hospitalization of the older population (above 60 years old) and under 60 years old in India. The data collected from the NSSO rounds of 52nd (1995-96) and 2004 (60th round) and 2014 (71st round). Generalized list square methodology applied for the results. Results reveal that The OOPH is higher in above 60 years old then below. OOPP is higher in poorer household than richer and the share of OOPP higher in private hospital for non-communicable diseases.

Saikia, N. (2019) examines the health expenditure financing for inpatient disparities among men and women in India. The study chooses the data from the 25th schedule of 71st round of NSSO 2014. They applied multinomial logit regression models to capture the effect. Results indicate that health care financing such as borrowing, sale of assets and contribution from the relatives for men is higher than women. Increasing the household income along with health care expenditure also increasing and gender disparities reducing while spending on health.

Paul, P., and Chouhan, P. (2019) examine the relationship between child marriages and utilization of maternal health care centres in India. They collected data from NFHS-4 and employed stratified two stage sampling methodology for urban and rural clusters. The results exhibit that there is negative relationship between child marriages and utilization of maternal health care services. On the other hand, as the marriage age increases the use of maternal healthcare service increase. The similar study conducted by Paul, P., and Chouhan, P. (2020) where they examined the used three socio-demographic factors: less than 4 ANC visits, Institutional deliveries and PNC within 42 days of delivery. The findings show there is a difference in utilization of maternal health care services among the socio-economic groups, rich and poor and urban and rural. Moreover, literate and wealthy status households are significantly utilizing of maternal health services. This suggests improving the health

infrastructure in rural and urban areas, providing easy access health services will reduce the health disparities among the vulnerable sections in rural and urban India.

Kumar, G., and Choudhary, T. S, et al (2019) analyse the regional variance in family spending as well as the equality and coverage of the entire antenatal care usage in India across the states and at the federal level. Four or more prenatal visits, at least one tetanus toxoid shot, and documented ingestion of iron folic acid pills or syrup for at least 100 days are considered to be comprehensive antenatal care. data from the fourth cycle of the NSSO, which was held between 2015 and 2016. The outcome shows that only half of the family fully utilised prenatal care during the pregnancy. It is insufficient and unfair to provide full prenatal care.

Youkta, K.,and Paramanik, R. N. (2020) study the political factors impact on the public health expenditure across states in India. Political factors such as political parties and their continuum, federal structure such as centre state relationship and unanimity determines public health expenditure. The data collected from the reserve bank of India and election commission of India from 1980 to 2016. For obtaining results they employed Phillips and Sul asymptotic co-integration methodology. Result shows that there is lack of converging pattern on public health expenditure among the states but found in group of states. There is a positive significance between public health expenditure and party continuum and center state relationship.

Barman, B., Saha, J.,et al (2020) study the importance of women's education levels in response to the understanding of the utilization of maternal health services (MHCS) in India. Their study is based on secondary data extracted from the National Family Health Survey (NFHS-4) of India for 2015-16. They employed logistic regression models and confirmed the positive and significant association between mother education and utilization of maternal health care services (MHCS). It implies higher education for women greater the probability of utilizing maternal health care services (MHCS) in comparison to women with no education. Uneducated women have a lack of knowledge about the availability, accessibility and utilization of MHCS. Hence, education is one of the best ways to eliminate socio-economic backwardness among women and make them aware of the important benefits of maternal health care services.

However, the previous studies in India were either focused on state-wise or a set of states, or with the state area wise ie; urban area/ rural area, or regional-wise, or based on social categories. A study by Bhatia and Cleland (1995) used cross-sectional survey data to examine the difference in utilization of maternal health care based on two segments, the well-developed urban places and backward areas of rural Karnataka state. A study by Govindasamy and

Ramesh (1997) and Barman, Saha, and Chouhan (2020) examined the importance of mothers' education in the utilization of maternal health care services in south India (region) while the later one has conducted India as a whole. Navaneetham and Dharmalingam (2002) examined the pattern of utilization of maternal health care services across different social settings in four southern states of India. Their findings are not much clear about the state-level variations in the utilisation of maternal health care services (MHCS). Study the maternal health care services based on different social settings may limit the behavioral aspects of the society and gender domination under social boundaries. The past research lagged in the clear understanding of the individual, household characteristics, broadly socio-economic-cultural influence on the utilization of maternal health services.

Panda, B. K., et al (2020) Examine the regional dependence and variation of the old population, as well as the per capita health spending in 640 districts across India. The data from the 66th and 68th consumption and expenditure rounds of the NSSO, as well as the Census of India 2011 (2009-10 and 2011-12).Using univariate and bivariate LISA (Local Indicator of Geographical Association) technique and the OLS (Ordinary least Square) approach for per capita expenditure, researchers were able to determine the spatial relationship of the heterogeneity of the elderly population and per capita health spending. Results indicate that in Indian districts, per capita spending is positively correlated with elderly individuals (above 60). On the same line, positive associated with districts who have higher aged population their health spending is higher than the other districts.

Srivastava S. et al.(2022) see the gender differently in spending on health care from the out of pocket among the older adults in India. They collected data from the NSSO 71st (2014) and 75th (2017-18) by seeing the differences in among older adults spending from the pocket. By obtaining result, they applied Univariate, descriptive and OLS methodology. They found that older men adults spend more than female on health care from their out of their pocket.

Mishra, P. S., Veerapandian, K., and Choudhary, P. K. et al (2021) study the difference in access of maternal health care benefits between SC, ST women's and OBC's and general category women's. In addition to examine determinants of access to maternal health benefits in India. They used non-linear Fairlie decomposition method to compare the advantage and dis-advantage sections in access of maternal health services. The authors confirmed a strong difference in accessing maternal health care services among the SC, ST communities and OBC's and general category women. They also witnessed a huge gap in access of "*Janani*

Suraksha Yojana" among the states and across these communities, which shows clearly north south divide. Finally concluded, marginalised sections women are less ability to access available medical health facilities, than compare to their counterparts.

2.3 Women's Health Status among the SCs and STs in Madhya Pradesh

Nyblade, L. and Edmeades, J. et al. (2010) This study looked at morbidity at the population level, particularly in developing nations. The data came from a representative 2002 survey of married women aged 15 to 39 who had at least one child in Madhya Pradesh, India; the research looked at 966 abortion attempts and 737 pregnancies. The study discovered rather significant levels of abortion-related morbidity: symptoms were documented in 58 percent and 46 percent of abortion attempts in rural and urban regions, respectively, and bed-rest was recorded in 38 percent and 29 percent of these attempts.

Das Megha (2010) The goal of this study is to compile all pertinent data on the nutritional and health condition of the Korku tribes in the Betul district of Madhya Pradesh. Due to insufficient intake of pulses, milk and milk products, green leafy vegetables, fruits, fats and oils, sugar, and jaggery, this study found that both male and female Korku tribes are nutritionally deficient. According to this study, Korku tribes must modify their dietary habits in order to improve their nutritional status. The data also shows that the proportions of male and female Korku residents who consume enough fat are rather low. The major explanation for this might be that the Korku tribe does not cook with oil on a regular basis, preferring instead to eat boiled veggies with salt and chilli pepper. The study also showed that the majority of Korku tribes in Betul district are illiterate and hence have little knowledge of dietary nutrition and good health.

Allendorf, K. (2010) The Women's Reproductive Histories Survey is being used in this study to determine if women in Madhya Pradesh, India, with stronger family relationships are more likely to use maternal health-care services. The results show that women in nuclear families with stronger marital bonds are more likely than other women to use prenatal care and give birth in a medical facility. In mixed families, women who have closer relationships with their in-laws are more likely to seek prenatal care. Under the symptoms measure, a significant number of efforts resulted in moderate or severe morbidity, while the bed-rest measure revealed no morbidity (16-20 percent), and a considerable number were classified as causing severe morbidity in the first measure but little or moderate morbidity in the second (6-17 percent).

Edmeades, J., Lee-Rife, S. M., and Malhotra, A. (2010) This article discusses the drivers of contraceptive and abortion behaviour, as well as how one of these impacts the other, and focuses on the importance of women's life course stages and experiences. We take a life course approach, which states that present circumstances and life course experience impact behaviour. We evaluated the use of temporary contraception (both contemporary and traditional) and sterilisation, as well as the rise in abortion attempts, using data gathered for all pregnancies experienced by 2,444 women in Madhya Pradesh, India. In both the abortion and contraceptive analyses, logistic regression is used to predict whether a woman has performed these activities at a certain pregnancy interval, incorporating prior contraception experiences in the abortion analysis and contraception in the contraceptive study. The findings show that life events have a role in behavioural development. Furthermore, previous contraceptive use had a major influence on abortion attempts, as well as the other way around. Finally, it turns out that as women get older and more experienced, their relationship alters.

Jat, T. R., Ng, N., and San Sebastian, M. (2011) investigated how maternal health care services (MHCS) were affected by individual characters, community, and district-level factors. The study used household surveys conducted at the district level in 2007-08 of Madhya Pradesh, where about 15782 ever-married women aged 15-49 are taken. They employed multilevel logistic regression models and found that women in urban residents are more likely to use maternal health care services than women in rural villages. Other factors like socio-economic condition and mother level of education are strongly linked with better utilization of ANC and assistance provided by skilled labour during the delivery. It implies a rise in women empowerment, and mothers' level of education will enhance the utilization of maternal health services.

Joshi, K.P and kushwah. S.S (2013) According to the authors, the maternal death rate in Madhya Pradesh's rural districts is believed to be 3 to 4 times higher than in urban areas. The study found that out of 303 female fatalities over the age of ten years, 36.3 percent of the deaths were in the reproductive age (15 to 49 years) group. Infectious disorders accounted for 28.2 percent of female deaths, followed by maternity reasons (24.50 percent), 21.80 percent accidents, and 20.90 percent of deaths related to non-communicable diseases. Many of these fatalities, particularly those caused by pregnancy-related factors, might have been avoided. Reproductive health education should be included in high school and college curricula to help women better understand their reproductive needs and make informed decisions about their reproductive health.

Jat, T. R., and Deo, P. R. et al., (2013) According to this study, the convergence of several initiatives and developments at the federal and state levels led to maternal health being a political priority. Maternal health became a top focus in Madhya Pradesh as a result of both international and domestic factors and events. This study also emphasised the significance of improving state maternal health care while addressing socioeconomic factors that affect maternal health from a human rights perspective. Maternal health became a political priority at the state level as a result of the convergence of streams and the interaction of processes at many levels. This information may be useful to decision makers and advocacy groups operating in different subnational settings. This resulted in a number of chances for improving maternal health through legislation, recommendations, and programmes. Although these initiatives were somewhat effective in improving maternal health in the state, significant implementation problems still need to be addressed.

Dehury, R. K., and Samal, J. (2016). The authors claim that in states like Bihar and MP, enhancing the health system, as well as strong political will and community involvement, are some of the most critical methods. According to several sources, the median age of marriage in Bihar and MP is lower than the legal marriage age in India, resulting in early births and a variety of maternal health issues. In addition to other measures, community awareness plays a larger role in improving the health status in these two states. All areas of mother health, pregnancy, delivery, and post-partum care must be improved.

2.4 Conclusion

For the above review, it is observed that women's health is directly associated with her social and economic status, gender inequality in taking any decision and employment status. Majority of the studies in India examine the effect of social and economic factors on women health across the selected states irrespective of cast and class. Some studies analysed status women health clubbing both rural and urban bodies and some worked on the outcome of women health policies. However, very little research is available in case of Madhya Pradesh (MP) state. This study attempts to fill these gaps by examining the women health status among the Scheduled Cast (SCs) and Scheduled Tribes (STs) taking in to consideration of social and economic factors.

Chapter 3: Research Methodology and Health Profile of the Study Area

"Communities and countries and ultimately the world are only as strong as the health of their women." – Michelle Obama

3.1 Introduction

The research methodology and data sources serve as a guide and motivation for answering the research questions that have been posed. This chapter describes the methodology, data sources, household survey sample design, primary data collecting instrument, and empirical analysis methodologies, as well as the rationale behind the research area selection of three districts in rural Madhya Pradesh: Hoshangabad, Betul and Harda. It also gives a quick overview of the study's target area (villages and districts).

This study used an essential 'Schedule' on Health Expenditure, Consumption Expenditure, Profile, and other household Details. The data is collected through schedule from 552 households.

3.2 Sources of Data

The research is based on both primary and secondary data. In addition to quantitative data, qualitative data was collected using a perception survey.

3.2.1 Primary Sources

With the use of planned schedules, primary data is obtained from the randomly selected household of the women age group from 15-49 married women and unmarried girls. The Schedule was used in this research. During 2018-19, a household and individual survey was devised and carried out.

3.2.2 Secondary Sources

Secondary data was obtained from several sources for this study, such as NFHS-3 and NFHS-4, Census 2011 and NSSO. This unit-level data from two rounds were used. The 'NFHS-3 and NFSH-4 on health, nutrition, health insurance, health finance, etc., are other crucial sources of secondary data to understand the health, education, and social and economic conditions of Madhya Pradesh's women. In addition, the district Census Handbooks for Hoshangabad, Betul,

and Harda were employed in this study (Census of India 2011).NFHS is one of India's big information resources. However, it bears the same constraints in terms of the current study's goal. NFHS has been collecting various health-related data at the national level in several cycles. In order to comprehend the problem of women's health and other critical qualities for this study to accomplish the study's purpose, further information and a thorough grasp of the communities are necessary. Thus, in order to gain insights from the field and satisfy the study's objectives, a complete home survey using organised 'Schedules' and rigorous field work was required.

3.3 Selection of Study Area

The researcher faces a difficult problem in determining the study region, yet it is critical in primary data research. The insights gathered from the enormous accessible literature on 'health ' as well as secondary data sources must be considered while choosing a study area. The available literature underlines the continuation of women's health-related issues in Madhya Pradesh, all of which are considered as important barriers to impoverished people's development, particularly SCs and STs.

Knowing the local language as well as the availability of economic, political, cultural, and social information and an understanding of local issues aided in the selection of Hoshangabad, Betul and Harda districts for the current study.

3.4 Design, Sample Size and Primary Data Collection

Based on the information acquired at the state, regional, and district levels, the study chose Hoshangabad, Betul and Harda, the most backward district in Madhya Pradesh, with high women's health issues in the case of ST and SC communities. The samples are estimated using the sample size determination formula, i.e.

$$\mathbf{n} = \frac{\boldsymbol{Z^2}.\mathbf{p}\ \mathbf{(1-p)}}{\boldsymbol{e^2}}$$

Where, Z is z-value for 95% confidence level (or 5% significance level); p =proportion of ailing women in rural Madhya Pradesh (2014-15 NSS 71st round report); and e = acceptable margin of error. Z-value = 1.96; and for the purpose of determining minimum sample size. We take an approximate value of p = 0.11 and e = 0.05. Thus, we have

$$\mathbf{n = \frac{1.96^2 x\ 0.11\ x\ 0.89}{(0.05)^2} = 150\ (rounded)}$$

The sample size and a number of households selected from each village is presented in Table 3.1 and 3.2 in detail.

3.5 Selection of Villages

There are 52 districts in Madhya Pradesh. Out of these three districts are selected for the present study, namely Hoshangabad, Betul and Harda. The data is collected during the period of January 2018 to January 2019, with a total sample size is 552 households. The households are chosen based on a multi-stage sampling technique (first communities, then households, and within villages using stratified random sampling. The following are the names of the villages that were chosen and the sample size:

Table 3. 1: Sample size of the household by the social group of three districts of MP.

District	ST	SC	Total
Hoshangabad	148	100	248
Betul	74	102	176
Harda	68	60	128
Total	290	262	552

Source: Author's own estimate from the primary survey (2019)

Total sample size is 552 households, in which Hoshangabad -248, Betul-176 and Harda-128

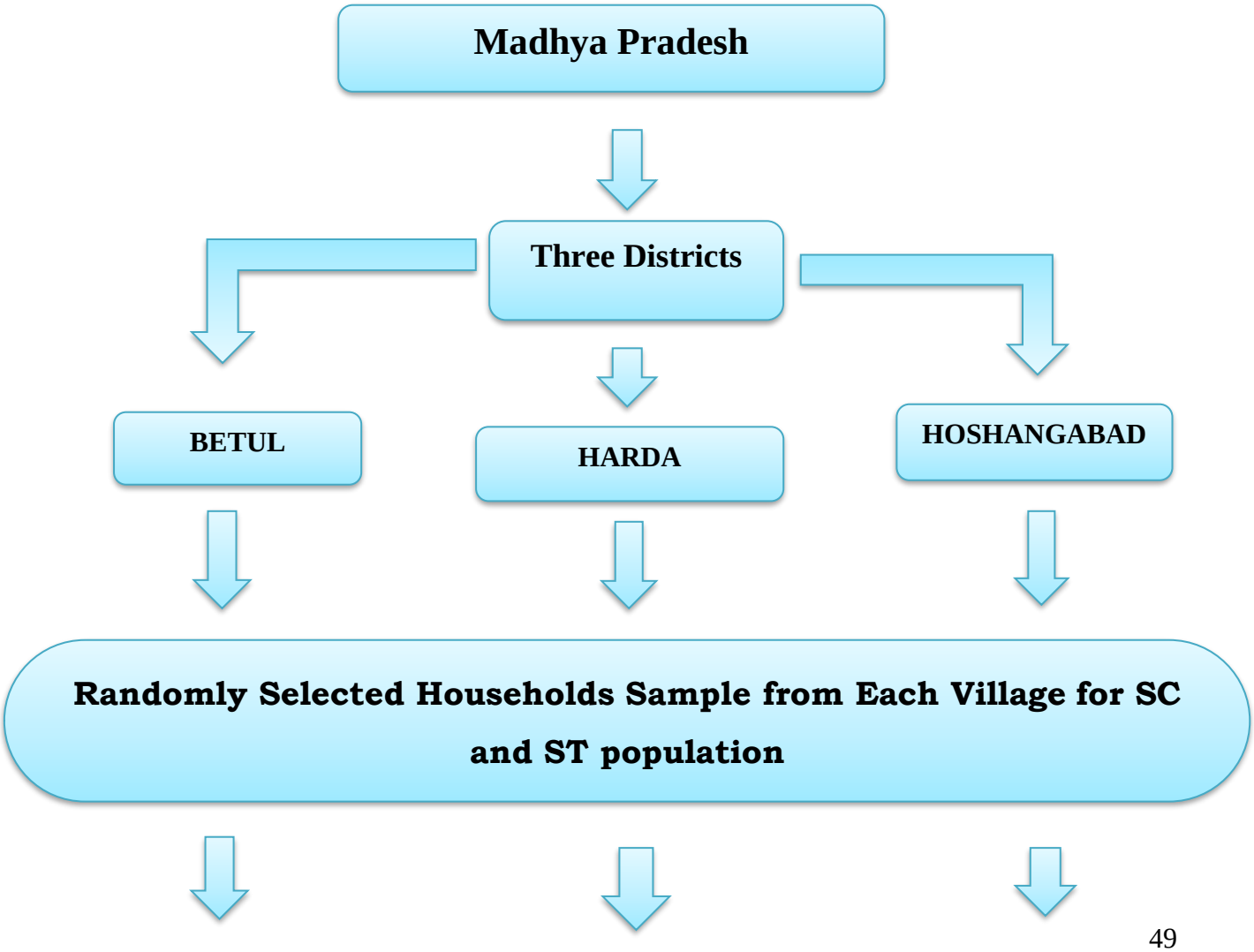
Table 3. 2: List of Sample Village and Number of Households Selected

Districts	Block	No	Village	Sample Size
BETUL	Bhainsdehi	1	Kabra Malgujar	52
		2	Sihar	30
		3	Chopani Bujurg	18
	Bhimpur	4	Kekadiya Khurd	32
		5	Pali	30
		6	Goberbel	14
	TIMARNI	7	Borpani	34
		8	Didamda	21

HARDA	HARDA(HANDIYA)	9	Uda	53
		10	Ranahi Kalan	20
HOSHANGABAD	Dolariya	11	Sawal Kheda	12
		12	Rohna	14
		13	Andhiyari	12
		14	Khedla	16
	KESALA	15	Naya Chicha	64
		16	Pipariya Kalan	46
		17	Ghogarnala	17
		18	Athaesh Chicha	27
		19	Purana Chicha	14
		20	Tavanagar	26

Source: Author's own estimate from the primary survey (2019)

Figure: 3.1 Sample Design for the Primary Data Collection



Kabra Malgujar
Sihar
Chopani Bujurg
Kekadiya Khurd
Pali
Goberbel

Borpani
Didamda
Uda
Ranahi Kalan

Sawal Kheda
Rohna
Andhiyari
Khedla
Naya Chicha
Pipariya Kalan
Ghogarnala
Athaesh Chicha
Purana Chicha
Tavanagar

Table 3.3 Total SC and ST Population of Village Census 2011 Details

Districts	BLOCK	No	Village	Total Population	Total SC Population	Total ST Population
BETUL	Bhainsdehi	1	Kabra Malgujar	359	321 (89.42)	17 (4.74)
		2	Sihar	1,213	203 (16.74)	994 (81.95)
		3	Chopani Bujurg	657	172 (26.18)	469 (71.3)
	Bhimpur	4	Kekadiya Khurd	729	7 (0.96)	715 (98.08)
		5	Pali	554	19 (3.43)	504 (90.97)
		6	Goberbel	333	0 (0.00)	308 (92.49)
HARDA	Timarni	7	Borpani	776	2 (0.26)	760 (97.94)
		8	Didamda	611	0 (0.00)	606 (99.18)
	Harda(Handiya)	9	Uda	3,499	1,108 (31.67)	567 (16.20)
		10	Ranahi Kalan	2,515	740 (29.42)	118 (4.69)
	Dolariya	11	Sawal Kheda	1,092	225 (20.60)	219 (20.05)
		12	Rohna	1,886	130 (6.89)	35 (1.86)
		13	Andhiyari	445	225	74

HOSHANGABAD	H. (Dolariya)				(50.54)	(16.63)
		14	Khedla	718	132 (18.38)	6 (0.84)
	Kesala	15	Naya Chicha	884	25 (2.83)	842 (95.25)
		16	Pipariya Kalan	434	106 (24.42)	318 (73.27)
		17	Ghogarnala	847	79 (9.33)	667 (78.75)

Source: Census 2011

Table 3.3 shows the total population of the SC and ST of the selected villages for the primary survey.

3.6 Data Collection Tools

The data-gathering process began in February 2018 and ended in December 2019 with participants completing out well-designed, pre-tested organised 'Schedules.' The pilot survey was conducted on 50 homes from Harnya and Bordehi village (which was not one of the sample villages), and was completed in the last week of February 2018 to assess the validity of the Schedule. The pilot survey assisted in resolving certain unnecessary and irrelevant questions relating to household personal information. To reduce mistakes and subjective biasness in this study, crosschecks and rechecks were performed.

To acquire household-level data, the study used the 'Personal Interview Method.' The head of the home and women was questioned. The "Unstructured Interview Method" and the "Focused Group Discussion Method" with Gram Pradhan, the former Gram Pradhan, and other senior and young male and female members of the villages who have an understanding and awareness of village affairs were important additional methods for gathering qualitative and quantitative (Mixed Method) information. The structural interview (data collection), informal conversation, and participant observation times were all properly arranged throughout the field survey.

3.7 Problems Faced in the Study Villages

Data collecting from a field survey is a very difficult process especially for the girl. This researcher encountered several difficulties when gathering data. The interview took a long time, and the respondent took a long time to answer several questions (50-75 minutes). Getting data from wealthier individuals was not always simple during the field survey, as many

respondents refused to answer, and some were hostile. The poor and low-income respondents expressed a strong willingness to take part in the poll.

3.8 Research Methodology

Cross tabulation, regression analysis, graphs, charts, and other descriptive statistics are utilised as analytical tools. For estimate and tabulation, the statistical software SPSS, STATA, and Excel were utilised.

3.8.1 Simple Frequency Tables Figures and Charts

Simple frequency tables, bar graphs, a pie chart, and cross-tabulation were employed in this investigation. Using NSSO unit-level secondary data and primary data, the study looked at the amount, features, and status of women's health among socioeconomic categories, religions, and throughout Madhya Pradesh.

3.9 Binary Logistic Regression Model

The study used Binary logistic regression models are employed to capture the effect of all the predicted variables on the utilisation of maternal health care services (MHCS). Logistic regression models are used because they are thought to be one of the finest methods for handling categorical data. The dependent variables used in this work include categorical and dichotomous, and the current work is based on primary data that includes qualitative responses in categorical form (Alison, 1984; Hosmer & Lemeshow, 2000).

3.10 Madhya Pradesh Some Observations

With more than 72 million inhabitants, Madhya Pradesh (MP), a state in central India, is the fifth-largest state in terms of both population and land. Uttar Pradesh, Chhattisgarh, Maharashtra, Gujarat, and Rajasthan are its neighbours to the northeast, southeast, south, west, and northwest, respectively.

With a gross state domestic product (GSDP) of $9.17 trillion (US$120 billion) and the 26th-highest per capita income in the nation (109372), Madhya Pradesh is India's tenth-largest economy (MOSPI 2021). In terms of human development, Madhya Pradesh is ranked 23rd among Indian states. Madhya Pradesh, which is abundant in minerals, contains India's greatest diamond and copper deposits. More than 30% of its land is covered by forests. Its tourist business has experienced significant growth, and in 2010–11, the state won the National

Tourism Awards. The state's GDP growth has recently outpaced the national average.The state's GSDP for 2019–20 was 9.07, according to data.

Madhya Pradesh's population is made up of members of several castes, tribes, ethnic groups, and communities. The state's population is made up of 15.6 and 21.1 percent of the scheduled castes and scheduled tribes, respectively. Gond, Bhil, Baiga, Korku, Bhadia (or Bhariya), Halba, Kaul, Mariya, Malto, and Sahariya are some of the major tribal communities of Madhya Pradesh. In the districts of Mandla, Dhar, Dindori, Barwani, Jhabua, and Alirajpur, tribal people account for more than half of the population, with Jhabua and Alirajpur having a tribal population of about 90%. Between thirty and fifty percent of the population is tribal in the districts of Khargone, Khandwa, Burhanpur, Betul, Chhindwara, Seoni, Anuppur, Umaria, Shahdol, and Singrauli. 15.34 million people, or 21.1 percent of Madhya Pradesh's total population, are classified as tribal, according to the 2011 census. There were three "Special Primitive Tribal Groups" in the state out of the 46 recognised Scheduled Tribes.

In a Human Development Index (0.606), Madhya Pradesh is ranked 33rd (2018). According to the NITI AAYOG's SDG India Index 2020–21, Madhya Pradesh is ranked 21st in terms of Sustainable Development Goals. In the 2018–19 fiscal year, the state's per-capita gross state domestic product (nominal GDP) ranks 26th in the country. According to the NITI Aayog SDGs India ranking, the state ranks ninth for gender equality and tenth for access to clean water and sanitation.

Madhya Pradesh has a literacy rate of 70.6%, according to the 2011 census. The state has 105,592 elementary schools, 6,352 high schools, and 5,161 upper secondary schools, according to data from 2009–2010. There are 12 medical colleges, 208 management institutes, 208 institutions for engineering and architecture, and more in the state.

Hinduism is practised by 90.9% of the population, according to the 2011 census, with minorities including Muslims (6.6%), Jain (0.8%), Buddhists (0.3%), Christians (0.3%), and Sikhs (0.3%). (0.2 percent).

3.11 Brief Profiles of Hoshangabad, Betul and Harda

Women's health has an influence not only on their personal well-being but also on the well-being of their children and the entire family. The current field study was done on the health condition of SC and ST women in Madhya Pradesh (considered one of India's BIMARU states) in three districts, six blocks, and twenty villages, where SC and ST populations are higher in

Madhya Pradesh districts. This study focuses primarily on rural SC and ST women's health in terms of food intake, particularly nutritious food, socio-economic factors such as access to health services and infrastructure, and educational level.

A field survey was conducted in the Narmadahpuram division. This division is recently formed in 2008 from the Bhopal division, and It has three districts, namely Hoshangabad, Harda, and Betul. Geographically, the division is located on the bank of the river Narmada. This division is predominantly based on agriculture and also co-exists with agriculture-related small-scale industries. The reason behind conducted field survey in this reason is that the division was formed recently, and also the highest SC and ST population reside in this division, among others.

3.11.1 Betul District

Betul is one of Madhya Pradesh's slightly placed southern districts, sitting almost entirely on the Satpura plateau. Between the Narmada valley in the north and the bearer lowlands in the south, it spans practically the whole breadth of the Satpura range. It is located in the Bhopal Division's most southern region. With a small eastward and westward projection between 21-22 and 22-24 degrees North Latitude and 77-10 and 78-33 degrees East Longitude, the District has a compact, nearly square shape. 10,043 km2 is the entire area of Betul. The distance to the capital of Madhya Pradesh is 180 kilometres. Betul district has 1575362 total population, of whom 50% are from the SC and ST groups, according to the 2011 Census.

The ministry of panchayat, Government of India, named Betul as one of the backwards districts in 2006. The primary survey was conducted in two blocks; Bhainsdeshi and Bhimpur. In Bhainsdeshi, three villages selected are Kabramalagugar, Sihar and Chopani Bujurg and Bhimpur selected four villages Kekadiya, Khurd, Pali and Goberbel.

The predominant occupation of the residents of Betul is agriculture. Due to the lack of sufficient rain, people migrate to the nearest towns. Women are engaging in agriculture. Health infrastructure is low. Women's education level is also low, and there are conventional deliveries happened. Male preference than female.

People travel 50 k.m for access of health facilities. Neonatal mortality rate is high. Women's education is low primary and upper primary level. They practised conventional methods of delivery system. Lack of nutrition food, during the pregnancy time they get pregnancy related problems. Children’s born with underweight. There is no family planning and strong son

preference. Female dropout rates are higher than male dropouts. Firewood and kerosene are using for cooking, and they do not have money to buy gas cylinders. Government schemes are applicable in papers and are not reach to the people. High migration due to lack of employment in surrounding areas.

Table 3. 3 Betul Census 2011 Details

Census Parameter	Census data
Total Population	1,575,362
Male population	799,236
Female Population	776,126
Total No of town	10
Total No of village	1,399
Total number of Houses	329,832
Total Literacy rate %	68.90% (639,769)
Male Literacy rate %	76.65% (529,783)
Female Literacy rate%	60.94% (409,986)
STs Population%	42.3% (667,018)
SCs Population %	10.11% (159,296)
Working Population %	49.96% (786,980)

Source: Census 2011

Betul District got its name from the small town of Betul Bazar. This district is south side of Madhya Pradesh. It lies between 2122 and 2223 of North latitude and 770 and 7833 of East side longitude. Total area of the district is 10043 Sq.km, and fourth rank in terms of area and population 1575247. This district lies on Satpura plateau. Betul is predominantly an agriculture-based economy. The main crops are paddy, wheat, and sugar cane. The prominent rivers Tapti, Tawa, Wardha etc… flowing through the Betul District. On the other hand, Betul has rich in deposit of coal, special Dulhara coal mines. Satpura power station the biggest power project of the state in the country.

3.11.2 Harda District

It is located south western part of Madhya Pradesh, between 21053-22036 longitude and 76047-77020 latitude. The total area is 998.41sq.km. It is 180 k.m distance from the capital of Madhya Pradesh.

This district is located geographically lies 2154 North and 2236 North latitudes and 7645 East and 7730 East latitude. This district is on south western part of Madhya Pradesh. It has 47th in size of among the district of Madhya Pradesh. North face of Harda district Narmada river and south part to the Satpura hills are boundaries. According to the 2011 census, Harda poplualtion 570302 and geographical area 998.41 sq.km. This district has 2/3 of the tribal population such as Korku and Gond are prominent tribal out of the total population. Harda's economy is based on agriculture. Here the rich black soil is highly fertile and cultivable. Rivers such as Narmada, Gunjal, and Ajnal are the main rivers. Major crops are wheat, gram, tuar etc… The bamboo market exists.

Two third of population belongs to the tribal in particular "Gond" and "Korku". Total population is 570465. People are mostly engaging with farming. Data collected from the two blocks; Timarni and Handiya. In timarni two village are selected Borpani and Didamda and in Handiya two villages are Uda and Ranahi kalan.

In this area they still practicing the conventional delivery. Pregnant women underweight and their food intake is very low in particular nutrition. Migration is common. PHC's (primary health centres) are far away. There is transportation facilities and transportation infrastructure is very low.

Table 3. 4 Harda Census 2011 details

Census Parameter	Census data
Total Population	570,465
Male population	294,838
Female Population	275,627
Total No of town	3
Total No of village	567
Total Number of Houses	112,545
Total Literacy rate %	72.50% (352,550)
Male Literacy rate %	81.14% (203,807)
Female Literacy rate%	63.27% (148,743)
STs Population%	27.99% (159,678)
SCs Population %	16.28% (92.865)
Working Population %	40.49% (230,979)

Source: Census 2011

3.11.3 Hoshangabad District

It is situated at 22.75 N 77.72 E in central India. The distance to Madhya Pradesh's capital city is 77 kilometres. The district has a total population of 1241350. Due to the district's location on the Narmada River's south bank, agriculture is the main source of income. The primary survey conducted in three blocks; Dolariya, H. Dolariya and Kesala. In Dolariya, selected sawal kheda village and H..Dolariya selected three villages Rohana, Andhiyari and Khelda and last one Kesala selected naya chicha, Papriya kalan , Ghogarnala , Athaesh chicha, Purna chicha and Tavanagar The data reveals that SC and ST women are educational status are low just finished primary and upper primary. Child marriages are happening this place. There is lack of Medical facilities; they have to travel nearly 20 k.m for treatment. Open defecation is still practicing and there is no drainage system. Chronic and general diseases find in this place.

The Hoshangabad name got from the Sultan Hoshan Shah Gori. Geographically, The Hoshangabad district located at 22.75 N and 77.72 E. It occupied 6703sq.km and 18th largest district in the Madhya Pradesh. According to the 2011 census of India, Hoshangabad district population is 1240975. Hoshangabad district is very rich in agriculture because it lies in the south side of river Narmada. This district is agriculture-based economy. This valley rich in black soil and sandy alluvium famous for cotton production. Narmada river touches northern boundary of Hoshnagabad district. In additions to, Tawa reservoir helps in agriculture production surrounding areas. A wild life sanctuary known as " Bori sanctuary " is there.

Predominantly agriculture rich area, in particular rabi crop known as locally "Unhari" and karif know as "Sihari". Wheat is main crop followed by gram, masoor and etc. Karif crops such as paddy, jowar, maize etc…

Table 3. 5:Hoshangabad Census 2011 details

Census Parameter	**Census data**
Total Population	1,241,350
Male population	648,725
Female Population	592,625
Total No of town	12
Total No of village	961
Total Number of Houses	257,199
Total Literacy rate %	75.3% (810,644)

Male Literacy rate %	83.35% (469,199)
Female Literacy rate%	66.45% (341,445)
STs Population%	15.89% (197,300)
SCs Population %	16.51% (205,007)
Working Population %	38.51% (478,082)

Source: Census 2011

The main source of irrigation is canals, tanks, and tube wells. The total irrigated area is 42.68 percent of total area. Agriculture based industries such as plywood factories, security paper mills, Narmada wood products etc… are existing has well transporting facilities, Itarsi is a town and well-known railway junction of the central railway junction. This junction joints four corners of the country.

Village Profile and Observations

This study selected eight villages (Kabra Malgujar, Sihar, Chopani Bujurg, Kekadiya Khurd, Pali, Goberbel, Borpani, Didamda) for primary survey (see Table 3.2). We noticed that there is no health facility available in all the study villages. The lack of health facilities is a big problem for the villagers. The availability of primary health facilities is away from the village, and the distance is more than five km.

We noticed that most of the ST and SC households are poor. Most of the households have only hut and Kuccha houses. The socio-economic condition of poor people is very bad. Very few people have pakka houses. The economic condition of the ST people is very bad in comparison to SC people. We found that most of the village is away from the district.

3.12 Conclusion: This chapter is based on the researcher's fieldwork observation of the study village of three districts. In this chapter, during the fieldwork, we discussed with the villagers, and we asked cross-questions regarding the socio-economic and health-related issues. We find that the selected's socio-economic, education and health condition is not good. We find that there are no appropriate primary health facilities. In some, we find that primary health facilities are available in the village, but no doctors and medicines are available.

Chapter 4: Women Health Status among the Social Groups in India and Its Major States: A Special Focus on Madhya Pradesh

"Healthy citizens are the greatest asset any country can have."

Winston Churchill

4.1 Introduction

Madhya Pradesh is one of the most neglected states with low budgetary allocations for health and non-functioning awareness programs. Malnutrition has been a crucial factor for the infant's death, especially among the SCs and STs. Child and maternal malnutrition is an important risk factor leading to death and disability in Madhya Pradesh. Lack of nutritional food for pregnant women affects women itself, and it affects the healthy growth of the new-born as well. Thus, one of the major causes of death is preterm birth complications in India.

Robert Park (1928) was the first who introduce the concept of "marginalise", which is referred as processes in which individuals or groups of people kept at or pushed beyond the edges of society. In George Ritzer (2007) terms "*the outsiders"* as marginalised are those individuals or groups of people who are kept outside of the common society. According to the encyclopaedia of Public Health explained marginalisation as "to be marginalised is to be placed in the margins and thus excluded from the privilege and power found at the center". One of the best works by Ghana S. Gurung and Michael Kollmair conclude that the disadvantaged or the marginalised people are unable to access the society resources freely and no equal participation in social life. In other words, the marginalised group are always ignored for their socio-economic and political participation.

Marginalisation in the form of groups or classes of people is more pronounced in underdeveloped countries, and it is also noticed in societies, including developed world as well. When it comes to India caste may be considered, as a basis for marginalisation, broadly by their occupation, socio-economic status. The marginalised groups in India are known as Scheduled Caste (SC), Scheduled Tribes (ST), and Other Backward Castes (OBC), and these groups are classified as depressed or deprived sectors of society living in unfavourable conditions and with extreme poverty. The standard of living, health status and utilisation

patterns of such groups are more vulnerable in present society. In India, Schedule Castes and Scheduled Tribes are the most backward and depressed sections in the society compared to other sections. These groups had a long history of exploitation in the spheres of economic, social, political and psychological of life. They have traditionally ranked towards the bottom in terms of socioeconomic metrics including employment, education, and health. For their advancement, the Indian government has implemented a number of affirmative action programmes and constitutional protections, but still, the result is not significant enough for their empowerment. Some of the policies and actions adopted by the government benefited to these groups in certain spheres and led them to access the minimum standard of living in some cases. However, they are still lagging of other sections in society, especially the so-called general category in every term, such as educational attainment, access of better health services and access to other basic resources in daily life due to socio-cultural restrictions imposed by social institutions like caste and religion. The following research will explore how deprived groups such as STs and SCs lagging in the various indicators of health and accessing levels to health services provided to them by the government of India

David Firth in (2000) attempts to explain how health inequity differs between men and women in a groundbreaking work by Amanda Sacker. For this, they used a novel method of gauging social disparity based on two factors: the influence of job relations and circumstances (their own line of work), and the overall social advantage of the family. They discovered that the dimensions utilised to assess the health disparities between men and women are insufficient, maybe as a result of the selection of measurements that mirror the opposite picture in women compared to males. When the social position was determined based on the overall social advantage in the home, the mortality risk was higher for women. The scenario is the same for individuals who are employed, where classifications are made based on factors related to the job setting and the outcomes understate the health disparity between men and women. Because of this, it's possible that the statistical analysis of health disparities among women based on social status (work relationships or circumstances) understates the magnitude of the risk associated with this phenomena. It may be more beneficial to make decisions when the complexity of the social imbalance between men and women is measured.

Article by T K Roy, Sumati Kulkarni, Y Vaidehi (2004) tried to assess the inequalities in health care and nutritional status across states and among the four major groups SC, ST, OBC and other than this. Their finding explains that the woman’s health care in SC, ST and OBC categories are strongly affected by the socio-economic conditions of the people. Their

investigation especially in four categories that examines inequality based on the first, deprivation indicators, which are selected for analysing low standard of living, second, the level of education (literacy) and no exposure to media, third, lack of health facility within the society are no antenatal care, fourth, unsafe delivery system and low Body Mass Index and prevalence of any anaemia. The result shows that Uttar Pradesh, Bihar, Madhya Pradesh followed by Rajasthan, are the major states that ranked with the highest health care and nutritional inequality among these four social groups (ST, SC, OBC and Others), and there is also huge gender biases. In case of Madhya Pradesh, it is noticed that among the four social groups, scheduled tribes (ST women) are a highly disadvantaged group in the society, with evidence of very low standard of living and high health inequality for all time.

Laxmi Kant Prem Prakash (2015) their study focuses on utilisation patterns of antenatal care service in the society with reference to urban and rural bodies, and their findings suggest that huge difference in using the services in urban areas than rural areas. The younger women especially the present generation, are ready to accept modern health care services and new generic medicine than the older-aged group mother. The traditional methods of the delivery system is still exited in the present society where the older-aged women (especially our grannies) claims that they have a better experience and good knowledge of handling the delivery neglect the modern health system and give less importance to modern antenatal care, due to which the lady has to follows the old fashion of delivery system. Here the points are that education matters a lot, where educated women have more autonomy within and outside of the household to take their own decisions and also, educated helps the women to understand the importance of modern health care services and make them use better services for their new-born. When it comes to utilisation, the marginalised group especially scheduled caste and scheduled tribe, are the lowest utilisation of these services due to lack of accessibility, proper education, and information asymmetry.

Linda Sanneving, Nadja Trygg et al., (2013) their analysis came with five major structural determinants which are important factors in understanding equity in present Indian society and these are Economic status, social status, educational status, gender, and age. Whereas all these five determinants are interrelated each other, which means each of these factors is related to others in explaining the inequality in society or we can a strong correlation between them. Their findings begin with gender inequality, where the result indicates that society experiences a greater inequality among couples with low economic status. These findings support the social groups such as scheduled caste and scheduled tribe, where their economic status is very low

compared with the other groups. The access and utilisation of maternal and reproductive health care differ in India among the social groups (ST, SC, OBC and Others) due to the factors like economic status, gender, and social status, which was strongly followed by the society. For these, they recommended some of the suggestions to control inequality; special attention should be given to the social determinants at the time of designing policies and programs toward improved maternal and reproductive health in society.

The objective of the chapter are to examine the health status of women with reference to their place of delivery among the social groups, especially Scheduled Caste and Scheduled Tribes. And also study demography and literacy trends among women and men within the groups.

The present study is based on the cross-sectional data, were taken from NFHS-3 and NFHS-4, which is a large-scale survey on demography and health, conducted in India every ten years. The NFHS-3 conducted in year 2005-06 collected from a nationally representative sample of 109041 households in which 124385 women between age 15-49 and men are 74369 age between 15-54 for all the states. Similarly, the NFHS-4 conducted year 2015-16 represented sample total 628900 households in which 723875 women eligible between age 15-49 and 122051 eligible age 15-54 all states. The survey provides information on the country as a whole, including its states. The survey collected information on various aspects and provided data on sex ratio, literacy rate, fertility rate, data on family planning practice followed by current society, mortality, under five-year mortality rate, data on utilisation of maternal and child health care services, and men and women nutrition status. Apart from this, it also provided basic information on the socio-economic characteristics of households and their consumption pattern and expenditure levels. The survey provided the same above information based on four categories/ caste/tribe groups, namely, scheduled castes (SC), scheduled tribes (ST), other backward classes (OBC) and ‘others’. Those do not belong to the above groups.

4.2 Women's Health Conditions among the Social Groups

The present section on women’s health in India organises existing evidence in a brief manner. Women's health in India is inherently linked with their status in society. Many researchers tried to find a consequence for this backwardness, and they have found that women are exploited in the male-dominated society by forcefully objectifying them as reproductive machines and burdened them with household work. Women are treated like slaves to produce and raise their children due to the patriarchal society. As we know there is a strong son preference in India, with a blind expectation on son as a future caretaker for their parents. This son preference is

also the reason that they can charge high dowry from the daughters of poor parents. This results sometimes in ill-treatment of girl child in their family. Women in India have little autonomy in their family from her birth to death that women live, during their childhood, under control of her father, then after marriage, under the control of their husbands, and finally end of the life under the control of their lovely sons. The health condition of women is negatively impacted by all of these current variables. The state of one's health depends on many different things. In the current hierarchical and controlled society, the dynamic connection between social and environmental elements plays a vital role in the manifestation of women's health issues. Lives of the women in India experience huge gender inequality in every dimension beginning to end in their life. The gender identities play key role in every section, class and caste in horizontal way.

4.2.1 Total Fertility Rate

This part analyses the total fertility in women at reproductive age (15-49) to provide complete information about the number of women given birth to many children, those who are currently living with them, those who died and those were living away. The data is collected from National Family Health Survey (NFHS) 3rd and 4th rounds which provide information on important emerging health and family welfare issues. It includes data on general fertility, age-specific fertility, total fertility, and state-wise fertility, selected background characteristics and educational wise. Therefore, it gives brief information on adolescent fertility, which has become a critical issue of women's fertility transition, mainly in the wake of new policies modelled on women's productivity health. The discussion is presented below.

Table 4. 1: Total Fertility Rate (children per woman)

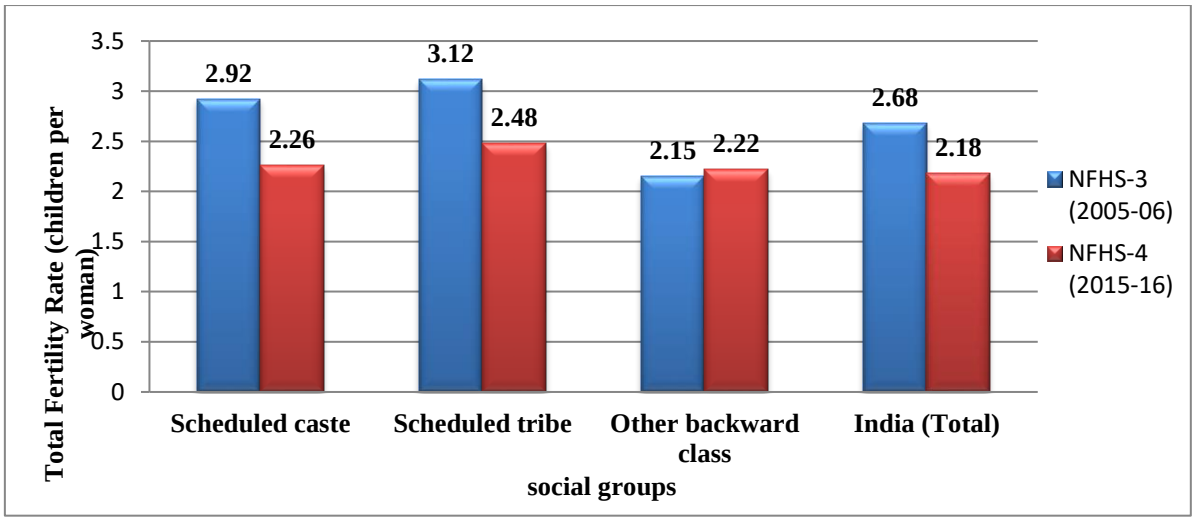
S.no	Caste	NFHS-3 (2005-06)	NFHS-4 (2015-16)	Per cent of change
01	Scheduled caste	2.92	2.26	-22.6
02	Scheduled tribe	3.12	2.48	-20.5
03	Other backward class	2.15	2.22	3.3
04	India (Total)	2.68	2.18	-18.7

Source:-NFHS-3 (2005-06) NFHS –4 (2015-16)

The total fertility rate for a certain age. TFR, or total fertility rate, is a measure of fertility that is determined at the conclusion of the reproductive age. This fertility is the average number of children that may be expected to be born to each woman throughout the course of her whole

reproductive cycle, assuming that age-specific fertility rates remain constant and that there is no death.

Figure 4.1: Total Fertility Rate (children per woman)



Women from scheduled castes (SC), scheduled tribes (ST), and other backward classes (OBC) continue to experience reproductive disparities. Based on the information of NFHS 3 and 4, Table 4.1 shows a total fertility rate is considerably higher in scheduled tribe (3.1 children per women) than followed by scheduled caste (2.9 children per women) and Other backward class (2.1 children per women).

Moreover, more or less the same pattern is experienced in fourth round of NFHS (2015-16) where the scheduled caste and Other backward class are observed a decimal change in there total fertility rate (around 0.5 children per women) whereas scheduled tribe have somehow better figures compares to other two categories in these ten years. The Differentials in total fertility level for all the three categories (ST, SC, and OBC) are recorded higher than the national average of 2.1 children per women in 2015-16. However, a very negligible change in the total fertility rate is experienced among the scheduled caste (SC), scheduled tribe (ST) and other backward class (OBC) women over the last two decades. The table also mentioned the percentage change in the average level women total fertility. Over a period of ten years the total fertility decreased by 22.6 per cent in Scheduled caste and 20.5 per cent in Scheduled tribe. On other side a positive growth of 3 per cent in total fertility rate is recorded in case of other backward class. Figure 4.1 also evidence of the same observation what the above explained.

Table 4. 2: Total Fertility Rate among the Social groups from 2005 to 2015 for India and its Major States

S.N	Name of State	2005-06				2015-16			
		SC	ST	OBC	Total	SC	ST	OBC	Total
01	**India**	**2.92**	**3.12**	**2.15**	**2.68**	**2.3**	**2.5**	**2.2**	**2.2**
02	Madhya Pradesh	3.19	3.82	3.17	3.12	2.44	2.73	2.74	2.32
03	Uttar Pradesh	4.46	5.34	3.83	3.82	3.09	3.61	2.76	2.74
04	Andhra Pradesh	1.75	*	1.82	1.79	1.91	2.05	1.83	1.83
05	Himachal Pradesh	2.21	*	2.00	1.94	2.06	1.75	1.74	1.88
06	Haryana	2.88	Na	2.97	2.69	2.21	3.70	2.09	2.05
07	Bihar	4.78	Na	4.03	4.00	3.92	3.81	3.38	3.41
08	Punjab	2.35	Na	*	1.99	1.84	*	1.58	1.62
09	Assam	2.45	2.49	1.61	2.42	2.83	2.14	1.85	2.21
10	Nagaland	*	3.48	5.20	3.74	2.40	2.75	0.72	2.74
11	Manipur	2.16	3.75	2.70	2.83	2.67	3.19	2.13	2.61
12	Tamil Nadu	2.8	*	1.68	1.80	1.75	1.87	1.67	1.70
13	Kerala	1.32	*	1.74	1.93	1.50	2.31	1.58	1.56
14	Maharashtra	2.14	2.43	1.98	2.11	1.88	2.19	1.72	1.87
15	Karnataka	2.45	2.53	1.99	2.07	1.66	1.81	1.85	1.81
16	Rajasthan	3.60	3.65	3.13	3.21	2.61	2.86	2.37	2.40

Source: -NFHS-3 (2005-06) NFHS –4 (2015-16): Note: * Not shown, based on fewer than 125 weighted women-years of exposure for fertility rate: NA: not available (Missing information on ST).

Based on the NFHS 3 and 4 report, the figures presented in table 4.1 given above is tell about the fertility level among the three castes, Scheduled caste, Scheduled tribes and other backward class for India and its major states. Table 4.2 shows that total fertility rate (TFR) at the national level indicates an average of 2 children per women for all the three categories (SC, ST and OBC) over the two different periods of time 2005-06 and 2015-16. Comparing the total fertility by state wise according to the data given by NFHS-3 (2005-06), for Scheduled caste (SC) category Bihar is the state with considerably highest fertility of 4.7 children per women then followed by Uttar Pradesh (4.4), Rajasthan (3.6), and Madhya Pradesh (3.1) on other side Kerala noted as low fertility rate of 1.3 children per women. In case of Scheduled Tribes (ST)

fertility rates are not available for all states except a few in which Uttar Pradesh observed as highest fertility 5.3 children per women and lowest is ranked by Maharashtra (2.4) and for the Other backward class (OBC) more than half states having average fertility rate of 2 children per women and in which Nagaland is in the top at 5.2 children per women. Over the last ten years from 2005 to 2015 the fertility rates do not show much improvement. According to NFHS-4th, round the total fertility rate (TFR) in India continued on an average 2 children per women for all the three categories. During this period, it is noticed the there is no change in total fertility rate in Scheduled caste the same Bihar stands with highest fertility of 3.9 children per women and Kerala (1.5) with lowest fertility. Then comes to Scheduled tribe the figures vary Haryana is at top with total fertility of 3.7 children per women, and Himachal Pradesh is the lowest 1.7 children per women (the information is not comparable with a past period because of unavailability of data for the past decade). When we observed other backward class, it is the one category which shows much improvement in controlling fertility over the period. An average of 0.6 children per women comes down in one decade for all the fifteen major states. Still Bihar is in the highest position in total fertility with 3.3 children per women, and on other side Kerala maintains the total fertility below 2 children per women.

4.2.2 Infant and Under-Five Mortality Rate

Infant, child mortality and Under-five mortality rates are well considered as one of the important indicators to express the country general medical health facilities and public health conditions that result in identifying the country socio-economic development and living standards of the people. During last three decades international organisation including different national governments showing more interest to child and women health by putting more effort to decrease the infant mortality and improve the child survival period. As a result, there has been a significant improvement in child and new-born mortality worldwide. Infant Mortality Rate (IMR) is defined as "the likelihood of dying before the age of one expressed per 1000 live births" in general. The likelihood of dying between birth and age five expressed per 1000 live births, or the "under-five mortality rate" (U5MR), has long been used as a gauge of children's welfare.

It is witnessed in India that huge inequalities exist in child health care in numerous dimensions. There are huge gaps in health outcomes across the states and various social-economic groups, such as well facilitated health services and free utilisation of these health services. Differentials in total health outcome depend not only on the health services which we are receiving or

comfortable utilisation of those services but also the economic conditions and social status of the people. We can also add inadequate public health care centers and their unwell to provide equitable health facilities to the peoples as a reason for the level of health outcome.

4.2.3 Alma Ata Declaration

The first international conference on Primary Health Care which was jointly organised by World Health Organized (WHO) and United Nations children's fund (UNICEF) held in Alma Ata (presently called Almaty), capital of Kazakhstan between 6th to 12th September 1978 with a major goal to improve the primary health care in all the countries across the world.

"The conference defined primary health care as essential healthcare that is universally accessible to individuals and families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. Primary health care is based on partial, scientifically sound, and socially acceptable methods and technology. ".

The conference considers the close check and direct intervention in the primary health system through improving nutritional level for both mother and child can help to reduce the child and infant mortality in the country. Since then most nations are actively working to reduce their Infant mortality rate (IMR) and Under-five mortality rate (U5MR).

4.2.4 Millennium Development Goals

The millennium development goals (MDGs) that are adopted by the millennium summit held in United Nations in the year 2000. The MDGs consists of eight goals which addressed major challenges related health and myriad development issues. The fourth-millennium Development Goal adopted by the United Nations millennium declaration is to reduce child mortality (MDG 4). The United Nations, national governments, civil society, international community, private agencies and donors come together with a challenge to reduce under five-year mortality rate by two-third between 1990 to 2015. In India the MDG model was based on National development Group (UNDG) MDG 2003 contextualised the same number of eight goals, 12 targets out of 18 included based to relevance in India and 35 related indicators. India witnessed considerable improvement in universal primary education, gender equality and faster economic growth but very marginal changes are noticed in health-related indicators like mortality, morbidity, materiality problems and local endemic disease due to environmental factors.

4.2.5 The Role Played By the Government of India to Reduce Infant and Child Mortality Rates

From 1968 to 70, India experienced a huge infant mortality rate about 130 deaths per 1000 live births. After the Alma Ata declaration in 1978 the government of India took a challenge to achieve infant mortality rate to 60 by the end of the year 2000. Since then, the government implemented various child survival programs to control the child mortality rate by providing substantial resources to them. National Health Policy 1983, which was India's first health policy after 36 years of independence and the policy plan to reduce infant mortality rate (IMR), maternal mortality rate (MMR) and under-five mortality rate (U5MR) by the end of 2000. Globally suggested IMR 60, MMR 2 and U5MR 10, the policy achieved 70 in IMR, 4 in MMR and 9.4 in U5MR to the end of 2000. Universal Immunization Program (UIP) was introduced in 1985 in a phased manner, to eradicate the six epidemic diseases namely diphtheria, pertussis, measles, polio, tuberculosis and tetanus which were a most cost-effective intervention for the government. There is significant improvement seen in India under the program, where 90 per cent of coverage in all the six-immunisation attended. During the eighth plan Universal Immunization Programme (UIP) of1992, and Reproductive and Child Health (1997) came to reduce IMR and CMR. A significant improvement is seen in infant mortality rate and child mortality rate.

4.2.6 Level and Trends in Infant Mortality Rate and Under Five Mortality Rate

Mortality is considered as one of the significant components to measure the population change. To analysis the level and trends in IMR and U5MR, we used the NFHS data statistics as a source. NFHS survey considered as an important data source provided reliable information on demographics, health and nutritional statistics for India. The data information provided in below tables based on NFHS-3 (2005-06) and NFHS-4 (2015-16) survey statistics.

Table 4. 3: Infant mortality rate (IMR per 1,000 live births) among the Social groups

S.N	Name of State	NFHS-3 (2005-06)				NFHS-4 (2015-16)			
		SC	ST	OBC	Total	SC	ST	OBC	Total
01	**India**	**66.4**	**62.1**	**56.6**	**57.0**	**45.2**	**44.4**	**42.1**	**40.7**
02	Madhya Pradesh	81.9	95.6	79.0	81.9	54.3	58.9	51.7	51.4
03	Uttar Pradesh	90.7	Na	84.1	83.0	67.7	40.8	63.5	63.6
04	Andhra Pradesh	88.1	94.1	62.8	68.4	33.1	Na	29.2	34.9

05	Himachal Pradesh	56.4	*	36.9	38.3	43.9	49.6	29.6	34.3
06	Haryana	53.3	Na	52.1	44.2	31.3	Na	35.9	32.8
07	Bihar	71.0	Na	57.2	65.0	60.2	47.1	46.8	48.2
08	Punjab	46.2	Na	*	44.9	39.6	Na	20.5	29.2
09	Assam	81.7	59.0	59.6	70.9	41.3	41.6	46.0	47.7
10	Nagaland	*	45.8	58.1	48.3	Na	Na	Na	Na
11	Manipur	*	51.2	45.9	35.9	26.1	27.8	18.0	21.7
12	Tamil Nadu	37.4	*	38.2	37.7	23.6	Na	18.4	20.3
13	Kerala	*	*	11.5	17.7	Na	Na	7.1	5.6
14	Maharashtra	45.2	51.4	50.6	45.3	31.1	32.8	21.8	23.9
15	Karnataka	57.2	45.8	53.0	53.0	33.0	37.7	26.4	27.7
16	Rajasthan	96.4	73.2	66.9	72.7	50.2	59.5	41.0	41.3

Source: -NFHS-3 (2005-06) NFHS –4 (2015-16)

Analysing Infant Mortality Rate (IMR) base on social groups scheduled caste (SC), scheduled tribe (ST) and other backward class (OBC) that varies at national level and across the states Based on the NFHS 3 and 4, statistics table 4.3 represents in India at national level the infant mortality rate is significantly higher in scheduled castes (66.4 Per 1000 live births) than followed by scheduled tribes (62.1 per 1000 live births) and other backward class (56.6 per 1000 live births). According to the new data realised by NFHS 4 in India on an average IMR were reduced by 17 deaths per 1000 live births in all the three groups SC, ST and OBC in these past ten years.

Across the states during the period of 2005-06, in scheduled caste (SC) Rajasthan shows the highest infant mortality rate of 96.4 new-born died before the age of one year followed by Uttar Pradesh (90.7 Per 1000 live births), Andhra Pradesh (88.1 Per 1000 live births) and Madhya Pradesh (81.9 Per 1000 live births) and Tamil Nadu noted as low infant mortality rate of 37.4 deaths per 1000 live births. For scheduled tribe (ST) data are not available for all states based on the available data Madhya Pradesh observed as highest IMR of 95.6 deaths per 1000 live births and Nagaland and Karnataka were lowest IMR of 45.8 deaths per 1000 live births. For the case of other backward class (OBC), Uttar Pradesh has identified as highest infant mortality rates 79.0 deaths per 1000 live births and Kerala with lowest IMR, 11.5 deaths per 1000 live births.

According to NFHS-4th, round the infant mortality rates (IMR) in India are reduced in all the three categories SC, ST and OBC. Uttar Pradesh (67.7 per 1000 live births), Bihar (60.2 per 1000 live births), Madhya Pradesh (54.3 per 1000 live births) and Rajasthan (50.2 per 1000 live births) are the four states where the IMR is more than the national average and Tamil Nadu has lowest infant mortality rate of 23.6 death per 1000 live births for SC category. In case of Scheduled Tribe (ST) Rajasthan (59.5) Madhya Pradesh (58.9), Himachal Pradesh (49.6) and Bihar (47.1) have the highest number of deaths per 1000 live births. Manipur stands at lowest IMR of 27.8 deaths per 1000 live births. For other backward class (OBC) category Uttar Pradesh stands at highest infant mortality rate of 63.5 per 1000 live births followed by Madhya Pradesh (51.7), Punjab (46.8) and Assam (46) deaths and Kerala at lowest, (7.1) deaths per 1000 live births.

Table 4.4 Under-five mortality rate (U5MR, per 1,000 live births) among the Social groups

S.N		NFHS-3 (2005-06)				NFHS-4 (2015-16)			
	Name of State	**SC**	**ST**	**OBC**	**Total**	**SC**	**ST**	**OBC**	**Total**
01	**India**	**88.1**	**95.7**	**72.8**	**74.3**	**55.8**	**57.2**	**50.8**	**49.7**
02	Madhya Pradesh	110.1	140.7	97.6	108.2	69.6	78.5	62.6	64.9
03	Uttar Pradesh	135.1	Na	111.0	112.3	85.5	60.7	77.4	78.1
04	Andhra Pradesh	96.1	112.0	73.1	78.7	44.1	Na	33.3	40.8
05	Himachal Pradesh	63.4	*	36.9	42.7	46.5	56.9	29.6	37.6
06	Haryana	73.9	Na	62.3	58.8	42.0	Na	43.0	41.1
07	Bihar	113.1	Na	84.7	95.0	73.0	52.5	56.1	58.1
08	Punjab	61.5	Na	*	54.6	45.9	Na	23.7	33.2
09	Assam	110.7	83.2	76.4	95.2	50.2	51.0	56.1	56.6
10	Nagaland	*	65.8	91.0	70.1	Na	Na	Na	Na
11	Manipur	*	71.4	60.7	50.1	26.1	33.5	21.7	25.9
12	Tamil Nadu	48.3	*	44.6	45.0	31.0	Na	24.8	26.9
13	Kerala	*	*	12.9	19.5	Na	Na	7.5	7.1
14	Maharashtra	50.2	69.8	57.8	53.4	35.3	41.4	25.6	29.1
15	Karnataka	65.4	77.9	63.8	66.2	39.3	42.3	31.2	32.2
16	Rajasthan	123.1	113.8	80.8	93.3	61.8	57.8	48.1	50.7

Source:-NFHS-3 (2005-06) NFHS –4 (2015-16)

Under-Five mortality defined as the probability of death of a new-born before reaching the age of five years and it is expressed in rate per thousand live births. Analysing the under-five mortality rate (U5MR) among the social groups according to the estimates of NFHS-3 and NFHS-4, it is observed that in 2005-06 table 4.4, the country noticed highest U5MR in scheduled tribe (96 per 1000 live births) followed by scheduled castes (88.1 per 1000 live births) and other backward class (72.8 per 1000 live births). However, the trend is changed according to the estimates of 2015-16 a sharp decline under-five mortality rate (U5MR) for all the three groups, scheduled tribes category stands at same at the top place with 57.2 deaths per 1000 live births followed by scheduled castes (55.8 per 1000 live birth) and then Other backward class (50.8 per 1000 live births). Interesting a huge differential in U5MR is observed for scheduled tribe where 39 deaths per 1000 births decline approximately in 10 years. This implies average reduction of 4 under-five mortality in year. Like the same in scheduled castes, it is reduced to 32.3 deaths per 1000 live births, and in other backward class it decreased to 22 deaths per 1000 live births.

Comparison across the state level is a little bit problematic because of insufficient data across the state. Based on limited estimates of NFHS 3, in India the under-5 mortality shows clear disparities among the social groups for scheduled castes (SC) Uttar Pradesh as highest number of Under-five mortality around 135 deaths per 1000 live births followed by Rajasthan (123 per 1000 live births), Bihar (113 per 1000 live births) followed by Madhya Pradesh and Assam almost with same number of deaths, 110 per 1000 live births. From the lower side it is not clear due to insufficient data. In case of scheduled tribes (ST) U5MR for Madhya Pradesh stands at highest number of deaths around 141per thousand births, followed by Rajasthan, (113), Andhra Pradesh (112) child deaths per 1000 live births. For other backward class (OBC), Uttar Pradesh is observed highest under-five mortality of (111 per 1000 births) followed by Madhya Pradesh, (97.6 per 1000 births), Nagaland (91 per 1000 births).

The variations in U5MR decline during the ten years. Based on the estimates of NFHS-4^{th,} round it is noticed that for scheduled castes (SC) the U5MR range from a high of 86 per 1000 live births in Uttar Pradesh to low of 26 per 1000 live births in Manipur like the same for scheduled tribes (ST) its range from a high of 79 deaths per 1000 live births and low of 34 deaths per 1000 live births in Manipur and for Other backward class its range from a high of 77 deaths per 1000 live births and low of 8 per 1000 live births in Kerala. This scenario explains a transformation in the Under-five mortality in the country during from last ten years. In which for scheduled castes (SC) category highest number of deaths decline in Assam and Rajasthan

on average 60 deaths per 1000 live births. Then comes to a scheduled tribe (ST) Rajasthan was the state with highest number of deaths on average of 56 per 1000 live births, and in case of Other backward class 39 deaths per 1000 births are decline in Andhra Pradesh.

Comparing the under-five mortality (U5MR) between India and Madhya Pradesh during the last two decades the U5MR in Madhya Pradesh is above compare to whole India. Estimates of NFHS-3 shows that for all the group (ST, SC and OBC) the number of under-five mortality is large in Madhya Pradesh compare with the whole India figures. Comparison of these estimates with NFHS-4 the under-five mortality reduced in all the three categories but still, the figures are higher the national average.

4.3 Place of Delivery

It is important to know about the delivery places where the mother gave birth to his/her child. Encouraging deliveries in a proper direction can help to cut down maternal and neonatal mortality. The below table-4.5 (a) tells about the percentage distribution of live birth take place in different facility birth in institutional delivers (public sector, private sector and NGOs) and home deliveries (own home, parents home and others) According to the NFHS-3 around 40 per cent of birth comes under instructional deliveries and instructional deliveries are divided between the number of birth taken in public instruction (government hospitals and primary health care center in the villages) and private hospitals. More than half of 20.2 per cent of instructional deliveries are taken place in private health centers and 18 per cent of birth in public health centers. Under home delivery system more than half around 60.5 per cent of births in total are taken place in home in which 51.3 per cent deliveries happen in own home (husband home), and 9.2 per cent deliveries are in parents' home. Across the states it is noticed that the southern part of the country was prepared institutional services for their deliveries Kerala was the state having 99.3 per cent live births deliveries under health facility (Institutional delivery) followed by Tamil Nadu 99.1 per cent, Maharashtra (82.3 per cent), Karnataka (64.7 per cent) then Andhra Pradesh (64.4 per cent). On other side Nagaland was the state using very less 11.6 per cent of deliveries covered under health facility. In case of home delivery, less than 1 per cent live birth in Kerala (0.6) and Tamil Nadu (0.9) taken place in home (own and parents' home), and Nagaland was the state with highest 88.3 per cent live birth occurred at own home. More than 30 per cent of live birth to Scheduled caste and other backward class mother delivered in health facilities, and 18 per cent of births delivered by Scheduled Tribe mother under institutional deliveries. Compare to this 51 per cent of birth to mother not belong to any

group like Scheduled caste, Scheduled tribe and other backward. More than half of birth took place in mother won home for all the three categories like Scheduled caste, Scheduled tribe and other backward.

Table 4.5(a): Place of delivery, Health facility and Home delivery in percentage (for births in the 5 years before the survey) 2005-06

S.N	Name of State	Institutional delivery			Home delivery		
		Public	Private	Total	Own home	Parents home	Total
1	Madhya Pradesh	18.4	7.8	26.2	65.5	7.9	78.5
02	Uttar Pradesh	6.6	13.8	20.6	70.8	7.6	79.3
03	Andhra Pradesh	24.0	39.8	64.4	22.4	12.5	35.2
04	Himachal Pradesh	37.0	5.4	43.0	51.3	4.6	56.5
05	Haryana	13.9	21.8	35.7	59.7	4.2	64.3
06	Bihar	3.5	16.3	19.9	69.2	10.4	79.7
07	Punjab	12.3	37.9	51.3	38.8	9.6	48.6
08	Assam	13.0	9.5	22.4	73.7	3.5	77.5
09	Nagaland	7.3	4.1	11.6	87.2	0.9	88.3
10	Manipur	36.1	9.4	45.9	53.2	0.3	54.1
11	Tamil Nadu	59.5	39.2	99.1	0.4	0.5	0.9
12	Kerala	35.6	63.5	99.3	0.5	0.1	0.6
13	Maharashtra	48.5	32.2	82.3	11.8	5.1	16.9
14	Karnataka	34.8	28.9	64.7	19.3	14.8	34.8
15	Rajasthan	19.0	10.6	29.6	59.8	10.0	70.3
Total	India	18.0	20.2	38.7	51.3	9.2	60.5
Place of Deliveries Based on Caste							
1	**Scheduled caste**	19.4	13.4	32.9	56.8	9.6	66.4
2	**Scheduled tribe**	11.6	5.8	17.7	70.9	10.5	81.4
3	**OBC**	16.1	21.1	37.7	51.8	9.6	61.4
4	**Others**	21.8	28.7	51.0	40.5	7.9	48.4

Source:-NFHS-3 (2005-06)

When we compare the figures with NFHS- 4, we noticed a huge change in the delivery system in over ten years. People are moving towards institutional delivery system giving less preference to home delivery with an expectation of healthy baby without losing mother. At national level around 79 per cent of live births occurred under intuitional delivery in which more than half 52 per cent delivers are under public hospital, and 26.3 per cent delivers in private health centers. Whereas, 20.6 per cent births have occurred in traditional style at home delivery system in that 18 per cent live birth took place in mother own home and 2.7 per cent in parents' home. Across the country, all fifteen major states witnessed a huge transformation from traditional deliveries to modern delivery system. The same five southern states Kerala (99.9), Tamil Nadu (98.8), Karnataka (94.3), and Andhra Pradesh (91.5) including Maharashtra (90.3) above 90 per cent of live births happened under intuitional delivery system.

On the other hand, Nagaland is the state shows very low proportion 32.8 per cent of live births occurred in institutions followed by Uttar Pradesh 67.8 per cent birth took place in institutions. In case of home delivery during these ten years the society changes a lot in their preference of deliveries system. Mostly they came out of their old traditional thinking and superstitions belief system in carrying deliveries in their own home such as most of the families are not aware of modern delivery system and neglect the necessity systematic deliveries, in some families the husband or his parents not allowed the women for instructional delivery by saying it is against to their culture or religion, lake of proper transport facilities and the hick in cost of deliveries in private hospital hamper the society to move towards. Nevertheless, in these ten years, India experienced a transformation and improvement now the people are more interested in adopting instructional deliveries for their new-born. So now the home deliveries are drastically declining at national as well as across the states, 60.5 per cent to 20.6 per cent decline at national level. However, still some of the states follow the traditional delivery system. Uttar Pradesh (29.8), Bihar (29.6), Assam (27.4) and Manipur (29.0) witness more than 25 per cent of live birth delivery at home. Scheduled Tribes are still lagging of Scheduled caste and other backward class in both the delivery system (institutional delivery and home delivery). Moreover, the same high proportion of 83 per cent of live birth to mother not belong to any particular group like Scheduled caste, Scheduled tribe and other backward. This implies improvement in delivery system is noticed in Scheduled tribes but still inequality exits in the society.

Comparing Madhya Pradesh with India according to NFHS-3 report, it is evident that the state's less than 30 per cent of live birth were taken place in health facilities whereas almost 79 per cent birth followed traditional home-based system. In Madhya Pradesh 7.8 per cent birth is in

private hospital and 18.4 per cent in public health centers that is more or less equal to national average. On other side around 66.0 per cent of deliveries took place in women own house and 8 per cent of birth were in parents' home. However, the above scenario explains still 2005 Madhya Pradesh follows old and traditional home-based delivery system and this is due to less awareness of institutional delivery system and huge cost to go through this process. The figure in NFHS-4 report that presented in table-4.5 (b) witness that over the ten years the delivery system in Madhya Pradesh noticed a drastic change were the figures are just reversed, and the proportion of live birth occurrence through institutional deliveries are now 80 percent whereas 26 per cent in 2005 and deliveries in home are 19 per cent whereas it was 79 per cent in 2005. Like the same around 70 per cent of live birth in Madhya Pradesh taken place in public health centers (like government hospital and primary health centers) and 11 per cent birth took place in private hospitals. Another side less the one-fifth of the delivery (17 per cent) occurred in women own home and 2 per cent in parents' home. Hence, the above information supports the improvement in delivery pattern in Madhya Pradesh from traditional home base delivery to health facility-based deliveries.

Table 4.5(b) Place of delivery, Health facility and Home delivery in percentage (for births in the 5 years before the survey), 2015-16)

S.N	Name of State	Institutional delivery			Home delivery		
		Public	Private	Total	Own home	Parents home	Total
1	Madhya Pradesh	69.5	10.8	80.8	17.0	1.8	19.0
02	Uttar Pradesh	44.5	23.1	67.8	29.8	1.6	31.8
03	Andhra Pradesh	38.3	52.0	91.5	4.1	4.0	8.3
04	Himachal Pradesh	61.6	14.7	76.4	20.9	2.0	23.1
05	Haryana	52.0	28.0	80.4	18.4	0.9	19.5
06	Bihar	47.7	15.9	63.8	29.6	6.1	35.9
07	Punjab	51.6	38.6	90.5	7.7	1.5	9.5
08	Assam	60.0	10.4	70.6	27.4	1.6	29.2
09	Nagaland	25.1	7.7	32.8	65.3	1.6	67.1
10	Manipur	45.7	23.3	69.1	29.0	1.0	30.5
11	Tamil Nadu	66.7	31.9	98.9	0.6	0.3	1.0

12	Kerala	38.4	61.4	99.9	0.1	Na	0.1
13	Maharashtra	48.9	40.7	90.3	6.7	2.7	9.6
14	Karnataka	61.4	32.5	94.3	3.2	2.2	5.6
15	Rajasthan	63.5	20.4	84.0	13.9	1.7	15.8
Total	India	52.1	26.3	78.9	17.9	2.7	20.6
Place of deliveries based on Caste							
1	Scheduled caste	59.9	18.1	78.3	18.5	2.6	21.1
2	Scheduled tribe	55.9	11.7	68.0	27.9	3.6	31.5
3	OBC	50.4	28.9	79.8	17.1	2.6	19.7
4	Others	46.1	36.1	82.9	14.1	2.6	16.7

Source: NFHS-4 (2015-16)

4.4: Educational Status among Male and Female

The section begins with the first objective that tries to focus on the present educational status of the women in India where the government and people sought slogan *"Beti Bachao Beti Padhao"* in reality all these slogans are simply words and nothing more than a kind of 'new year resolutions'. Despite the forceful intervention and the support of female privilege, lot of feminist critics, constitutional guarantees of women education, protecting laws and continuous efforts by state as well as central government through providing number of schemes and programs scene independence and above all, the United Nation's enormous pressure on the Indian government, women education is still lagging behind and it remains as a challenge to the nation. Literacy level and Educational status are considered as one of the best indicators to measure the stock of human capital. Universal primary education is one of the Millennium Development Goal set by the United Nations which is targeted by the year 2015. Education development is considered as a principal variable that influences demographic indicators such as fertility rate, mortality rate (epically infant deaths) and change in migration level. Education, as an instrument, greatly contributes to shaping human behaviour, develop their mental (learning) ability, improving quality of life (epically increase in life expectancy). Higher the literacy level and higher the educational development helps to channelize the awareness in one hand and on another hand, it makes the people more capable of attaining new skills from it. As more as the population of the societies get educated, we can expect a rise in the level of socio-economic development. An individual educational status makes him take right decision to attain desired demographic and health goals.

Basic literacy: as we know the basic literacy is the individual's ability to reading and writing. According to NFHS-1 and NFHS-2, literacy measured on the ground of self –reported criteria considered as literate. However, in contrast to this NFHS-3 round represents criteria that measure the literacy rate by conducting a test among the individual (female/male) who had not completed at least standard six. The individuals are given a card with pre-printed sentences in all major languages and told to them to read the sentences and based on their representation /performance the respondent ranked in any one of the three categories (1) can read sentence, (2) cannot read part of the sentence and (3) cannot read at all. As a result, according to the HFHS-3 report, those who can read a portion of a sentence on a card provided to them in their preferred language and have either successfully finished six years of full schooling or passed the literacy exam as indicated above are considered to be literate.

Table 4.6: Literacy Rates, Decadal Difference in Literacy Rates and Gender Gap in Literacy by Sex

Name of State		NFHS-3 (2005-06)			NFHS-4 (2015-16)			Decadal Difference in Literacy Rates	
		Women	Men	Gender Gap	Women	Men	Gender Gap	Women	Men
S.N.	**India (Total)**	**55.1**	**78.1**	**23**	**68.4**	**85.7**	**17.3**	**13.3**	**7.6**
01	Madhya Pradesh	44.4	73.5	29.1	59.4	81.8	22.4	15.0	8.3
02	Uttar Pradesh	44.9	76.2	31.3	61.0	82.4	21.4	16.1	6.2
03	Andhra Pradesh	62.9	79.4	16.5	57.4	73.6	16.2	-5.5	-5.8
04	Himachal Pradesh	79.5	94.0	14.5	88.2	96.2	8.0	8.7	2.2
05	Haryana	60.4	83.4	23.0	75.4	90.6	15.2	15.0	7.2
06	Bihar	37.0	70.4	33.4	49.6	77.8	28.2	12.6	7.4
07	Punjab	68.7	82.9	14.2	81.4	87.5	6.1	12.7	4.6
08	Assam	63.0	76.4	13.4	71.8	82.8	11	8.8	6.4
09	Nagaland	75.2	83.1	7.9	81.0	85.6	4.6	5.8	2.5
10	Manipur	72.6	91.5	18.9	85.0	96.0	11.0	12.4	4.5
11	Tamil Nadu	69.4	84.1	14.7	79.4	89.1	9.7	10.0	5.0
12	Kerala	93	95.5	2.5	97	98.7	1.7	4.0	3.2
13	Maharashtra	70.3	88.3	18	80.3	92.8	12.5	10.0	4.5

14	Karnataka	59.7	75.3	15.6	71.7	85.1	13.4	12.0	9.8
15	Rajasthan	36.2	73.9	37.7	56.5	85.4	28.9	20.3	11.5
	National Average	**63.0**	**82.0**	**19.3**	**73.0**	**87.0**	**14.0**		

Source: - NFHS-3 (2005-6) NFHS-4 (2015-16)

It is encouraging to note that at the national level, the male-female literacy rate in 2005-06 is around 55 per cent and 78 per cent as presented in table 4.6. However, the figure improved to 68.4 per cent for women and 85.7 per cent for men in 2015-16. Coming to the male-female gender gap in NFHS-3 (2005-6) it stood at 23 per cent whereas it comes down to only 17 per cent in NFHS-4 (2015-16) round. When we take national average male-female gender gap into the consideration as per NFHS-3, five states are higher than the national average (19.3 per cent) male-female gender gap and reaming ten states are below the national average male-female gender gap. According to report of NFHS-4 (2015-16) the total number of states higher than the national average (14 per cent) male-female gender gap was stood to six from five in this ten years and reaming nine states are below the national average male-female gender gap. The four states Bihar, Rajasthan, Uttar Pradesh and Madhya Pradesh, are seen as huge literacy gap in both the period. Kerala from South zone and Nagaland from North East zone are noticed as minimum differentials men and women literacy gap in both the period NFHS-3 (2005-06) and NFHS-4 (2015-16). Uttar Pradesh is reported as a large differential of almost 10 per cent from 2005 to 2016 this followed by Rajasthan 8 per cent and Madhya Pradesh by 7 per cent. Another side the decadal difference in literacy rates for women and men stands at 13.3 per cent and 7.6 per cent respectively over the period. Another interesting point is noticed here that Andhra Pradesh was the only state in the country which has a negative decadal difference in literacy rates for both women (-5.5) and men (-5.8) and except one remaining state shows double digits decadal difference in literacy rates for women. This implies the women educational backwardness in the country compared to men education and how consistent forerunner for last ten years.

The table 4.7 explains the literacy rate among the Scheduled Caste, Scheduled Tribes and other backward class. At the national level the women literacy rate increases from 55.1 per cent to 68.4 per cent and for men it is increased from 78.1 per cent to 85.7 per cent with a differential increase of 13 per cent for women and 17 per cent to men over the ten years (NFHS-3, 2005-06 to NFHS-4, 2015-16).

Table 4.7: Women and Men Literacy rate (Age 15-49) among the Social Groups (in %)

	Social Group	NFHS-3(2005-06)		NFHS-4(2015-16)	
S.N	**Caste**	**Women**	**Men**	**Women**	**Men**
01	**Scheduled Caste**	43.8	72.4	63.3	82.7
02	**Scheduled Tribe**	33.4	59.9	53.0	75.6
03	**Other Backward Class**	51.8	78.5	67.7	86.1
04	**India (Total)**	55.1	78.1	68.4	85.7

Source: - NFHS-3 (2005-6) NFHS-4 (2015-16)

Other backward class placed in top position in the group with a higher educational level for both men and women with increment of 15 per cent for women from 51.8 per cent to 67.8 per cent, and from men 78.5 per cent to 86 per cent with increment of 8 per cent. Scheduled caste shows the second-highest literacy rate in the group for women the literacy rate stood to 43.8 per cent to 63.3 per cent, and for men it is 72.4 per cent to 82.7 per cent and the differential increment of 19 per cent points for women and 10 per cent. Scheduled Tribes are in the bottom in a group having very low literacy rate of 33.4 per cent for women and 59.9 per cent for men in 2005-06 and its improved to 53.3 per cent for women and 75.6 per cent for men in 2015-16 with a differential increment of 8 per cent points literacy in women category and 15 per cent in men literacy. Hence, the above information describes an improvement in educational level for all three socially backward groups in the country, and the differential increment represents a substantial improvement in respect to women's education for Other Backward Class and Scheduled Tribe. In contest of Scheduled Tribes very less differential increment is noticed for women education compared to women literacy in other two groups.

4.5: Concluding Remarks

There is a negligible change in the total fertility rate has experienced among the scheduled caste (SC), scheduled tribe (ST) and other backward class (OBC) women over the last two decades. Over the period of (2005-06 to 2015-16) ten years the total fertility decreased by 22.6 per cent in Scheduled caste and 20.5 per cent in Scheduled tribe and in case of other backward class much improvement is noticed in controlling fertility over the period which is on average of 0.6 children per women comes down in one decade for all the fifteen major states. Finally, India experienced reduction of IMR by 17 deaths per 1000 live births in all the three groups SC, ST and OBC in these past ten years. The scenario changes Under-five mortality case wherein scheduled caste (SC) category highest number of deaths decline in Assam and

Rajasthan on average 60 deaths per 1000 live births. Then comes to the scheduled tribe (ST) Rajasthan was the state with the highest number of deaths on average of 56 per 1000 live births, and in case of Other backward class, 39 deaths per 1000 births is decline in Andhra Pradesh.

Next coming to the delivery system, India experienced a transformation and improvement; now the people are more interested in adopting instructional deliveries for their new-born. So now the home deliveries have drastically declined at national as well as across the states, 60.5 per cent to 20.6 per cent decline at national level. Scheduled tribes are still behind of Scheduled castes and other backward classes in both the delivery system (institutional delivery and home delivery). Furthermore, the same high proportion of 83 per cent of live birth to mother not belong to any group like Scheduled Castes, Scheduled Tribes and other backward. This implies improvement in delivery system is noticed in *Scheduled tribes, but still inequality prevails in the society*.

From the above analysis, we find that in terms of education the marginalised groups getting better over the period with the differential increment figures representing a substantial improvement in respect to women education for Other Backward Classes and Scheduled Tribes. In contest, Scheduled Tribes category has noticed with very less differential increment for women education compare to women literacy in other two groups.

Chapter 5: Health Care Financing System in India

"Women's health needs to be front and center – it often isn't, but it needs to be."

Cynthia Nixon

5.1 Introduction

Health is indisputably a fundamental aspect of well-being, and it also considers as a spine of the country's economic growth. Protecting and improving human life will have countless benefits to both individuals and society; the importance of society health in the contribution of economic growth or say today's health is tomorrow's wealth for the nation. Long back ago in 18th century a famous American philosopher Ralph Waldo Emerson first quote the words "the first wealth is health." This emphasizes the importance of health and its major contribution in human development. People's freedom, which encompasses, among other things, freedom from poverty, starvation, and malnutrition, as well as freedom to work and have a healthy life, empowers them (Sen, 1999). In order to improve health status and empower oneself, access to healthcare is essential. Ensuring access to healthcare reduces absences, boosts labour productivity, and alleviates suffering. The prevalence of a significant degree of information asymmetry in the health industry is another argument in favour of government action in the field of medicine. It should come as no surprise that governments have a considerable role in regulating and delivering health care across the world, and this is especially true in emerging nations with high poverty rates.

The growing importance of the concept "health for all" according to the WHO the resources for the health should be distributed equally to all the members of society, and that essential health care should be easily accessible to everyone in society. It implies that individuals adopt better methods for avoiding sickness and reducing preventable disease and disability and that health starts at home, in the classroom, and at work. The cost of healthcare in India is very high, which is unaffordable for the majority of people in society. This urges many economists and policymakers to analyse the pattern of health expenditure and its various sources. Various research studies at the micro and macro level highlighted that the larger proportion of healthcare spending in India was covered by the private sector, mostly it has households.

This chapter deals with some important insights into healthcare spending in India. The information regarding the health care expenditure and its pattern across the different states are analysed with respect to Madhya Pradesh (MP).

5.2 Health Care Financing System and its Structure

Health expenditure: it refers to the expenditure incurred on all those activities which are directly or indirectly contribute to improve health status of the common people. "Health includes both the health of individuals and the health of groups of individuals, or population health expenditure consists of all expenditures for medical care, prevention, promotion, rehabilitation, community health activities, health administration and regulation, and capital formation with the primary goal of improving health." (Hong Kong's Domestic Health Accounts, DHA; 2014[1]).

Health financing systems are complex to derive and critical to provide universal health coverage to all the people of society. The national health account (NHA) of the country provides detailed information regarding the set of health financing indicators based on the expenditure pattern that was framed internationally. National health account (NHA) is compelled and maintain the detail record of health financing and its spending and distribution across the states. The sources of health financing, their financing agents and the fund mobilization are briefly illuminated with the help of flow chart 5.1, 5.2, 5.3 and 5.4. Sources of health care financing are institutions or private entities that make available of funds in the health care system.

Federal country like India, where the states play a predominant role in providing social services and central government takes the responsibility of providing of economic services. When we talk about the social services, healthcare is the major service that directly delivered by the state government. Health care services involve significant public expenditures, yet the federal government only makes a little amount of payments to the states. The tax portion that the centre contributes assures the state's level of financial capacity to manage a variety of public services. Large interstate discrepancies in the collection of tax contributions from the central government, however, reveal a significant vertical fiscal imbalance in India.

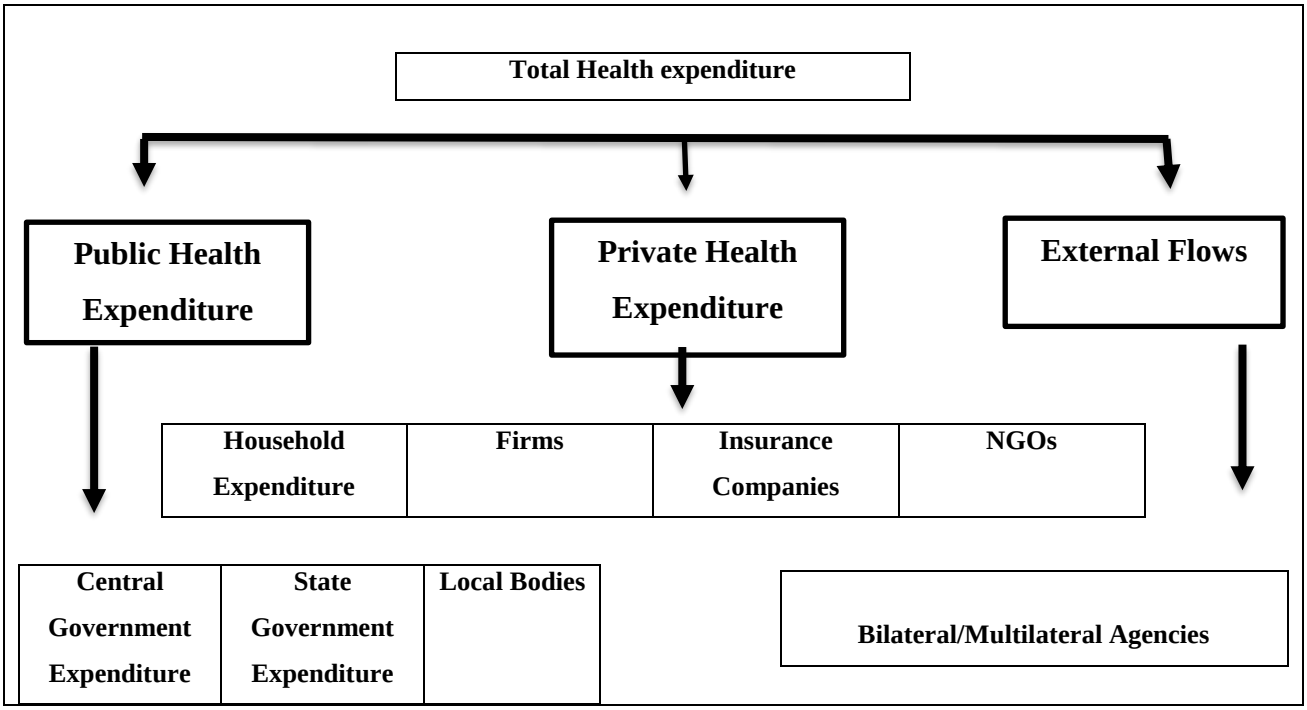
As was previously said, state governments are largely in charge of providing healthcare services. Entry 6 of the "state list" in the Seventh Schedule of the Constitution assigns responsibility for "Public health and sanitation, hospitals and dispensaries" to the state governments. The concurrent list includes the responsibilities of "Population management and family planning" (Entry 20 A), "Legal, medical, and other professional" (Entry 26), and "Lunacy and mental deficiency, including locations for the reception or treatment of lunatics and mental deficiencies" (Entry 16). Institutions designated by the Parliament as being of national importance as well as those for professional and technical training and

[1] https://www.fhb.gov.hk/statistics/download/dha/en/c_definition_0405.pdf

research, fall under the preview of the national government. A three-tiered structure is used to supply health services in India. The sub-centres are the lowest levels, each of which has 3,000 people in mountainous and challenging terrain and roughly 5,000 people on the plains. These sub-centres are staffed only by paramedical personnel. The primary health facilities, which serve roughly 30,000 people in the lowlands and about 20,000 in mountainous and challenging terrain, are the initial points of contact with a clinician. Community health facilities are arranged at the block levels and offer secondary care. The upper tiers are made up of district-level hospitals and sub-divisional hospitals. In theory, sub-centres, primary health centres, and community health centres must manage preventative healthcare, institutionalise births, treat minor illnesses, and serve as referral hubs. The hospitals at the subdivision and district levels would subsequently provide referral care for serious illnesses. In reality, though, this hasn't been the case because all medical needs are handled by the district- and subdivision-level hospitals.

These bodies are the main contributor in the country who bears the cost of expenditure incurred on health care. The major heads of healthcare financings in India are shown in Figure 5.1, where the total health expenditure in the healthcare system comprises public health expenditure, private health expenditure and external flows.

Figure 5.1 Classification of Health Care Expenditure in India.



Source: National Health Account, India 2004-05 report. (PP-13).

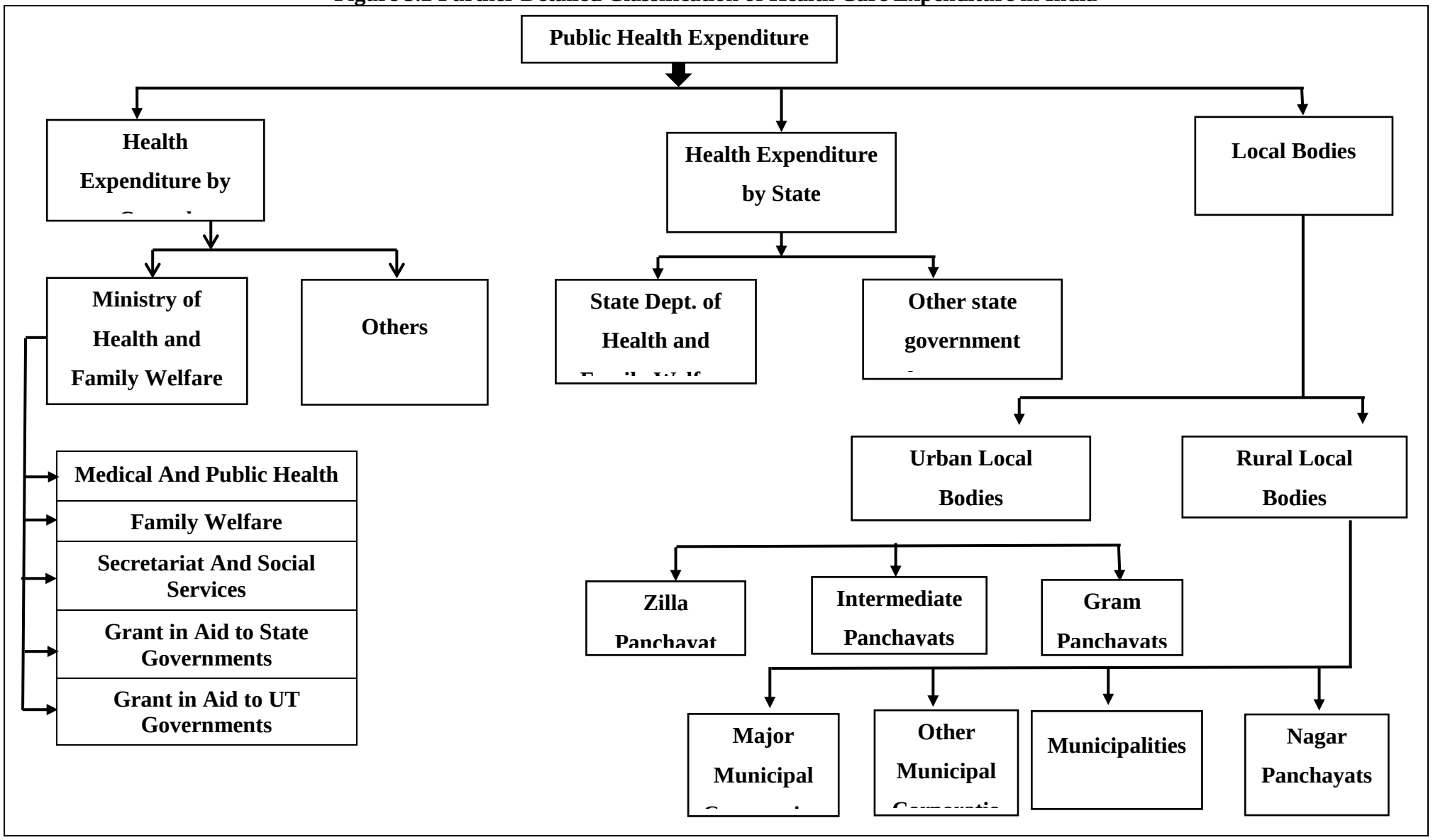
While public health expenditure considered as the important source of funding for poor in India. The public health expenditures consist of three major heads (1) central government (2) state government and (3) local bodies. The total spending of union government on public health is driven these governing bodies. Later the private health spending in India is much higher than the public health expenditure; predominately these spending are covered by the households, insurance companies, firms and NGOs. However, household and insurances companies have larger share of private health spending. The expenditure on health meets by external flows in the form of bilateral or multilateral agencies and it's consisted very lowest share in the total health expenditure.

Further detailed classification of public health expenditure is explained in Figure 5.2. This expenditure flows from three governing bodies namely, expenditure made by central government, state government health expenditure and health expenditure covered by local bodies. Under the central government two sub-divisions handles the expenditure (1) Ministry of Health and Family Welfare (MOHFW) and (2) others central ministries. Like the same state also has two sub-divisions (1) State Dept. of Health and Family Welfare and (2) Other state government departments. Finally, expenditure by local bodies goes to urban and rural local bodies. Under urban local bodies the expenditure flow through Zilla Panchayat, Intermediate Panchayats and Gram Panchayats. Major Municipal Corporations, Other Municipal Corporations, Municipalities, and Nagar Panchayats are the recipients of rural local bodies' expenditures.

The private spending on health care is constitute of four major entities (1) expenditure by household on health care (2) expenditure by business firms (3) health expenditure by insurance providers and (4) expenditure by non-government organizations. Further, these four heads are sub-grouped as shown in the Figure 5.3. Under household spending, out-of-pocket expenditure (OOPE) is considered as an important source to finance for healthcare.

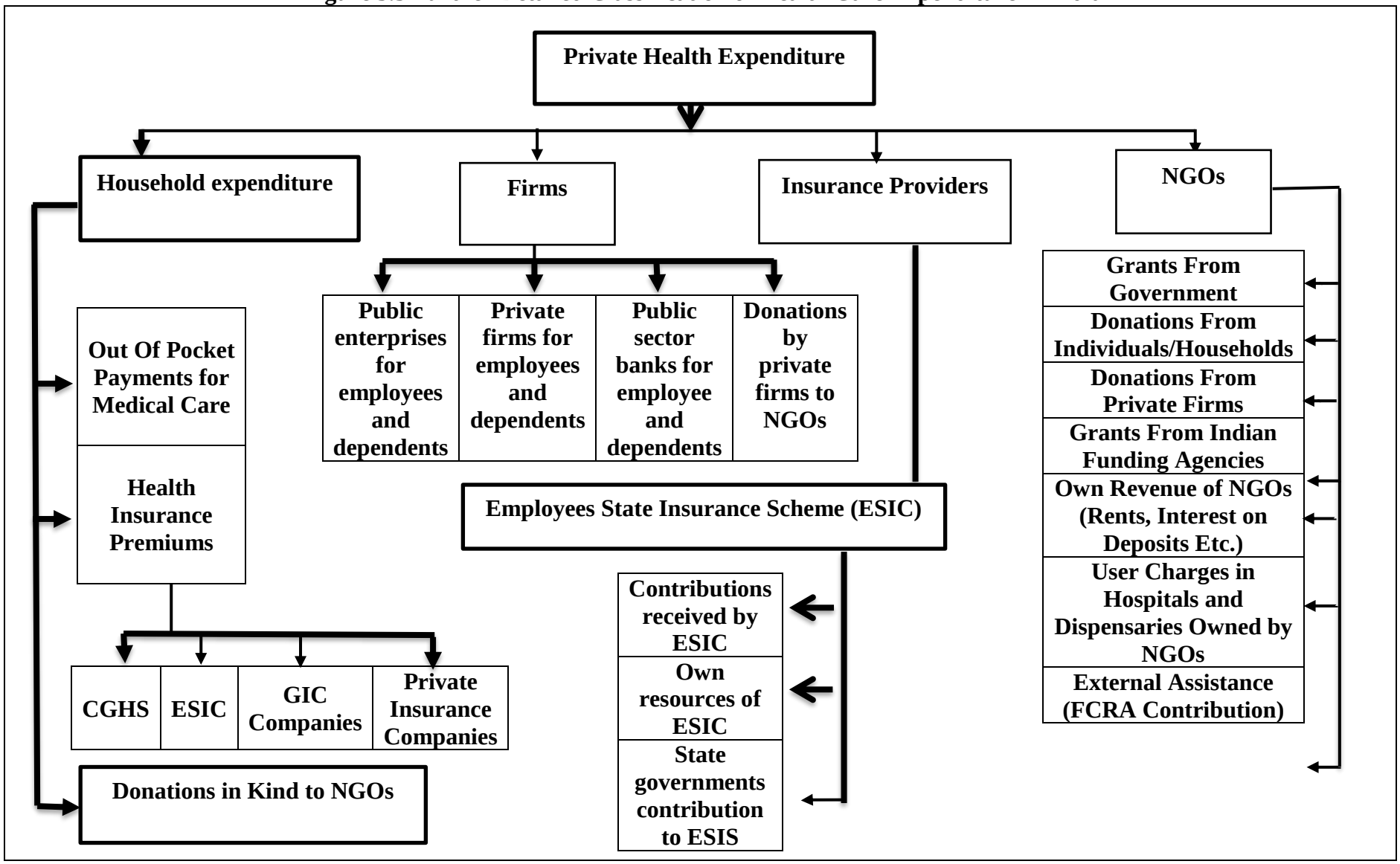
Finally, Figure 5.4 shows the external support to heath sector or say contribution of external support to finance health care in India. External support to health sector is divided in four heads namely, (1) Aid to Central Government, (2) Material Aid to Central Government, (3) Aid to State Government and, (4) NGOs (Foreign Contributions).

Figure 5.2 Further Detailed Classification of Health Care Expenditure in India



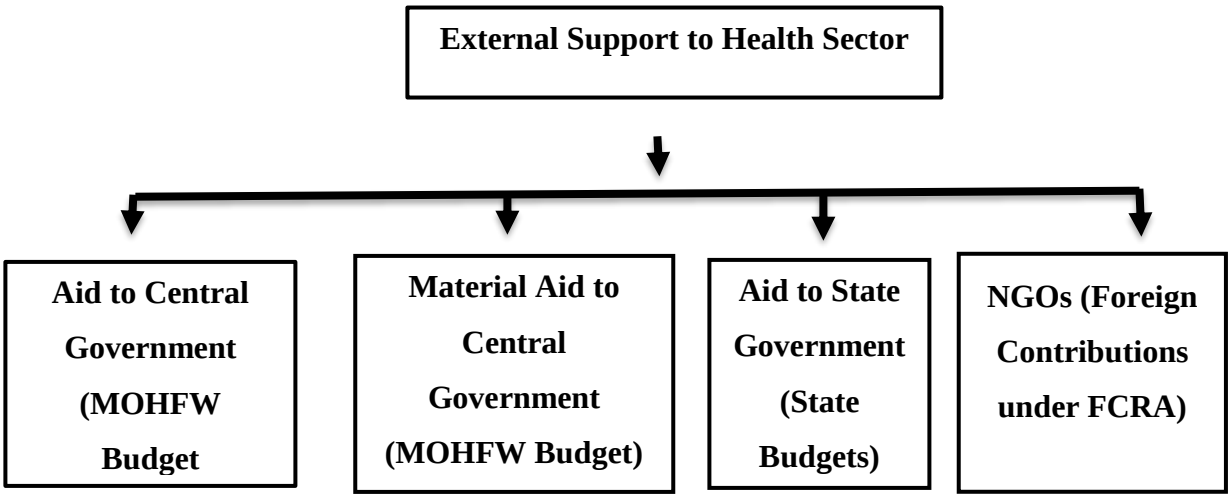
Source: - National Health Account, India 2001-02 report (pp-11).

Figure 5.3 Further Detailed Classification of Health Care Expenditure in India



Source: - National Health Account, India 2001-02 report (pp-18

Figure 5.4 Further Detailed Classification of Health Care Expenditure in India



Source: - National Health Account, India 2001-02 report (pp-24).

5.3 Comparison of Health Expenditure in India in Selected Global Countries

The concept of health care financing is associated with the functioning and interaction between different types of financing agents and their services providing. For instance, a nation may have a social health insurance programme, but it might not cover public hospitals because, in theory, they should offer free treatment. As costs are paid by insurance in this case, there may be increased incentives for patients to travel to private hospitals as there would be little motivation for the public hospitals to operate efficiently. In that situation, receiving subpar public healthcare may be detrimental to the poor who lack rapid access to insurance or private institutions.

India is one of the nations with the lowest per capita health care spending in the world, according to the literature. India is rated 163 out of 194 nations in terms of current health expenditure (CHE) as a percentage of gross domestic product (GDP) and 161 in terms of CHE per capita in US dollars, according to the WHO's "World Health Statistics" report. The level of overall public spending in India can be inferred from its low health status.

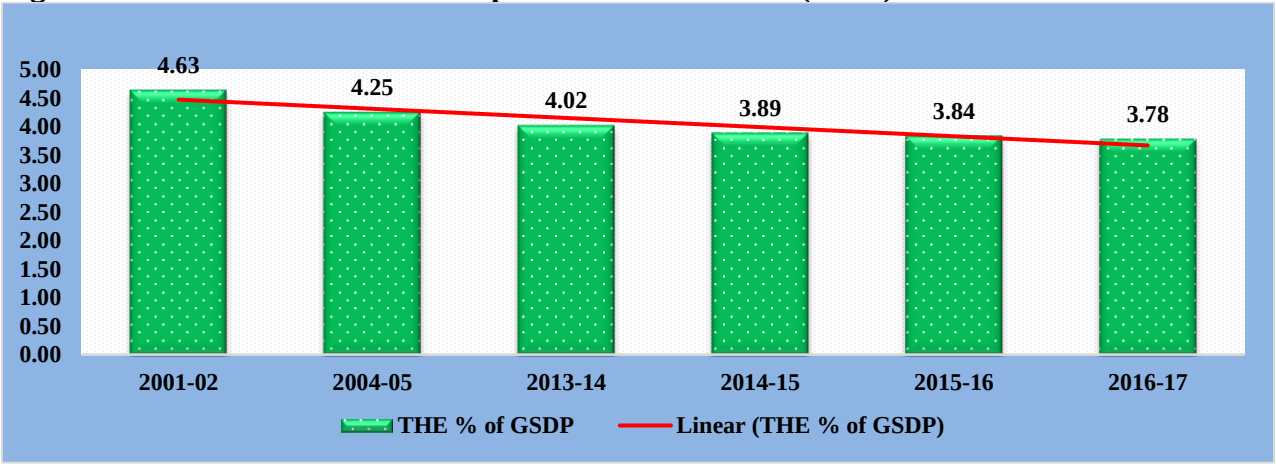
Table 5. 1: Level of Health Care Spending in Selected Counties, 2015-16

Country	Current Health Expenditure Per Capita (US$)	Current health expenditure % GDP
United States of America	9 536	16.8
United Kingdom	4 356	9.9
Thailand	217	3.8
Switzerland	9 818	12.1
Sri Lanka	118	3
Singapore	2 280	4.3
Philippines	127	4.4
Pakistan	38	2.7
Norway	7 464	10
New Zealand	3 554	9.3
Nepal	44	6.1
Mexico	535	5.9
Malaysia	386	4
Japan	3 733	10.9
Italy	2 700	9
Indonesia	112	3.3
India	**63**	**3.9**
Germany	4 592	11.2
France	4 026	11.1
China	426	5.3
Canada	4 508	10.4
Bhutan	91	3.5
Bangladesh	32	2.6
Australia	4 934	9.4
South-East Asia Region	**176**	**4.6**
Global	**822**	**6.3**

Source: World Health Report 2017.

More specifically, Table 5.1 indicates that health care spending in India is 3.9 % of GDP which is less than the average spending of 4.6 % in the South-East Asia Region, while it is far away, compared to global healthcare spending of 6.3 %. According to National Health Account (NHA), the total health expenditure percentage of GSDP is decreasing over the period; it was around 4.63 % of GSDP during 2001-02 while it declined to 3.78 % of GSDP by the end of 2016-17 (Figure 4.5).

Figure: 5.5: India's Total Health Expenditure % of GSDP (India)



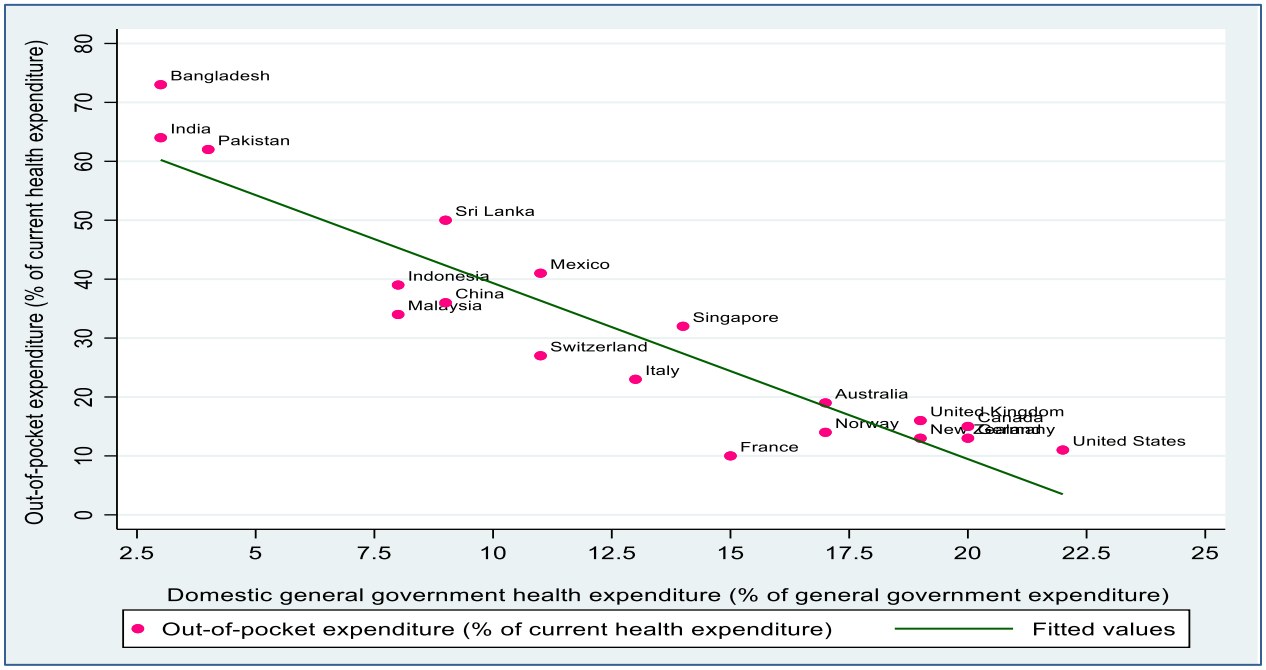
Author's own calculation using National Health Accounts, 2001 -02, 2004-05, 2014-15, 2015-16, 2016-17.

The trend line shows that India witnesses a sharp decline in its total health spending by more than eighteen percent during the last two decades. Similarly, the per capita spending in India is around $ 63 (PPP), which is just 15 percent of China's, 53 per cent of Sri Lanka's, 70 per cent of Bhutan and 29 per cent of Thailand's (WHO, 2015). Furthermore, the per capita health care spending in India is less than one percent comparing to developed economies like Switzerland and the USA. But in absolute terms, India improved much in its per-capita total health expenditure over the last fifteen years (Figure 5.5).

The importance of central and state budget share on healthcare and the level of spending, decides the burden carried out by the national citizens to finance health expenses from their pocket. In other words, the hardships due to high out-of- pocket expenditure are the reason of lower budget share for healthcare. Figure 5.6 shows the levels of government health expenditure visa-a-via out of pocket expenditure. The total public spending on healthcare in India is less than 3 per cent of total spending on health, while more than 60 percent of health expenditure was paid from public own pockets. However, there is negative relationship between government health spending and

OOP expenditure. As the size of government expenditure on health increases the level of OOP expenditure on health declines. For instance, when India spends 12 percent on public health than the level of OOP expenditure comes down to from 60 per cent to about 30 per cent.

Figure 5.6: Government Expenditure Verses Out-Of-Pocket Expenditure across the Countries



Author's own calculation

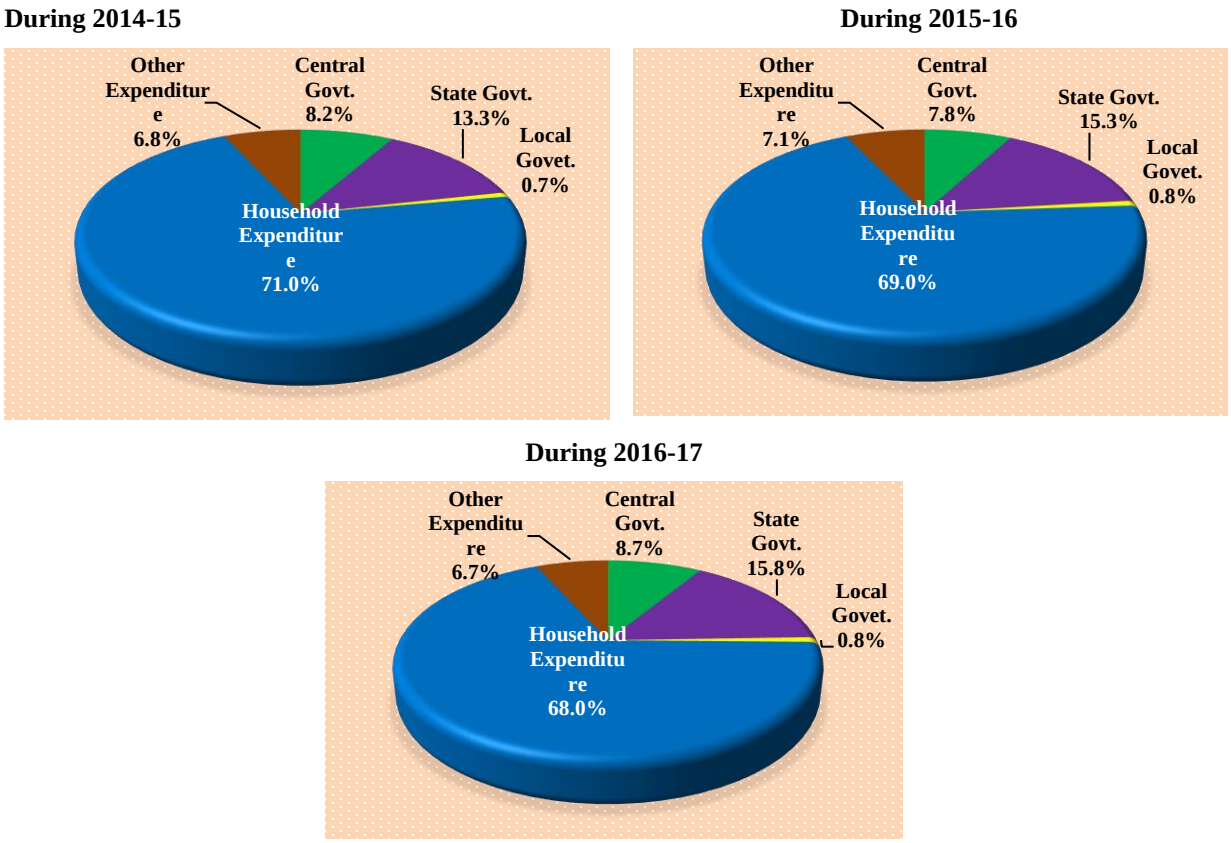
Moreover, the scenario across the country shows that developed nations spends a larger share of their budget on public health than compare to developing countries. Such as US, UK, France, Norway and New Zealand are the countries with an average government spending of 20 percent on public health and just 10 percent of OOP expenditure. On the other hand, Bangladesh, India, Pakistan and Sri Lanka observed high OOP expenditure and a lowest public health spending.

Only one-fourth of the overall health spending is shared by the three levels of government—central (6.4 percent), state (12.6 percent), and municipal (1.3 percent).While a large share of expenditure is contributed by private entities, in which total household spending covers more than 72 percent of total expenditure (NHA Report, 2002).

The scenario doesn't improve much in the last two decades; Figure 5.7 shows a minimal increment in state government spending, whereas the contribution of central and local is stagnant over the

last three consecutive years. When it comes to private expenditure particularly the household spending, the financial hardship continues due to time to time rise in OOP expenditure

Figure: 5.7: Major sources of health care financing in India



Author's own calculation National Health Accounts, 2014-15, 2015-16,2016-17

Around 7% of spending goes to other items, which includes "foreign aid, social insurance contributions from employers, voluntary prepayment from employers, other corporate earnings, NPISH and all direct foreign financial transfers." Government health insurance comprises social insurance programmes including ESIC, CGHS, and ECHS (3.2%), although a sizeable portion of it was added by financial intermediaries. While the annual increases in the overall health budget for non-profit serving homes (NPISH) (1.7%) and enterprise financing schemes (2.8%) are constant (NHA report, 2016-17).

The distribution of total current health care expenditures in terms of Health care providers (those maybe the organizations or different entities) and their primary aim is to provide healthcare services to all citizens. Table 5.2, shows that the expenditure incurred on Government Hospitals is on average 14 percent of total current health care expenditures over the last three years.

Expenditure on private hospitals is much higher than government; it contains an average of 26 percent. Expenditure attributed to Pharmacies is the larger share approx.; 28 percent of total current healthcare expenditures. Similarly, expenditure incurred on Private Clinics (5%), Patient transport (4%), Diagnostics labs (4.6 %), Preventive care (5 %), Admin agencies (3 %), and others (1.7 %) on average of total current healthcare spending.

Table 5. 2 Healthcare Services Provided by Different Entities in India

Services Providers	2014-15	2015-16	2016-17
Government Hospitals	14.3	14.3	14.9
Private Hospitals	25.9	26	26.2
Government Clinics	6.8	7.9	7.8
Private Clinics	5.3	4.9	4.8
Pharmacies	28.9	27.9	27.9
Patient transport	4.6	4.4	4.3
Diagnostics labs	4.7	4.6	4.5
Preventive care	5.3	5.1	4.5
Admin agencies	2.6	3.1	3.4
Others	1.6	1.8	1.7

Source: - National Health Accounts, India, 2014-15, 2015-16, 2016-17

Similarly, Table 5.3 shows the distribution of total current health expenditures by health care functions[2]. On average 52 percent is spends under curative care in which 35 % on Inpatient Curative Care and 17 % on Outpatient curative care. The next highest expenditure made on Pharmaceuticals and others medical goods around 29 % of current health expenditure (CHE). Than followed by Preventive Care an average of 6.8 % of CHE and Patient transportation 4.5 % of CHE.

Table 5. 3: Expenditure by Healthcare functions in India

Services Consumed	2014-15	2015-16	2016-17
Governance & Admin	2.6	3.1	3.4
Lab & Imaging	4.7	4.3	4.4

[2] Health care function defines the goods and services consumed by the individual users for the specific health issues.

Patient transportation,	4.6	4.4	4.3
Pharmaceuticals and others medical goods	29	28	29
Other Functions	1.2	1.6	1.5
Preventive Care	6.7	6.9	6.8
Inpatient Curative care	35.1	34.4	35.3
Outpatient Curative care	16.2	17.3	17.1

Source: - National Health Accounts, India, 2014-15, 2015-16, 2016-17

5.4 Public Financing of Health

As we noticed total public health sector spending is less than a quarter of the total health spending in India, whereas it is considered an important source to streamline the planning, regulating, and shaping the health care services and make them easily available to the general public of the society. To maintain the standard of health and prevent harmful externalities related to health, public investment on healthcare services is crucial. Over time, a large-scale public health system developed throughout the nation; in 2001–2002, there were 137,311 sub-centers, 22,842 PHCs, 3043 CHCs, 4048 hospitals, and a staff of 345,514 people. Understanding the funding processes in this sector is necessary since how well services are delivered depends on how the sector is financed. Health care is a state issue, and state governments are largely responsible for funding health care services. The government health expenditure in India increased over the period; however, the intensity becomes stronger after 2010. The per capita government health expenditure was around US$4 at the beginning of 2000, and it became US$21 in 2018 with an average growth of 9 percent (World Bank 2018). The government spending on health in India is substantially low as compared to countries in developing countries such as Indonesia (US$51), China (US$282), Sri Lanka (US$64), Malaysia (US$218), and far from developed nations like Switzerland (US$6788), USA (US$5355), United Kingdom (US$3392) and Germany (US$4251). India is one of the lowest spending nations in the world, according to the amount of public health expenditure in these nations. Despite the robust and high levels of health care financing in these nations compared to India, it is clear that higher government health spending is necessary to upgrade the country's current health system and offer top-notch medical facilities to all of its citizens, regardless of class, caste, religion, or gender. General tax and non-tax revenue is the main source of income for states

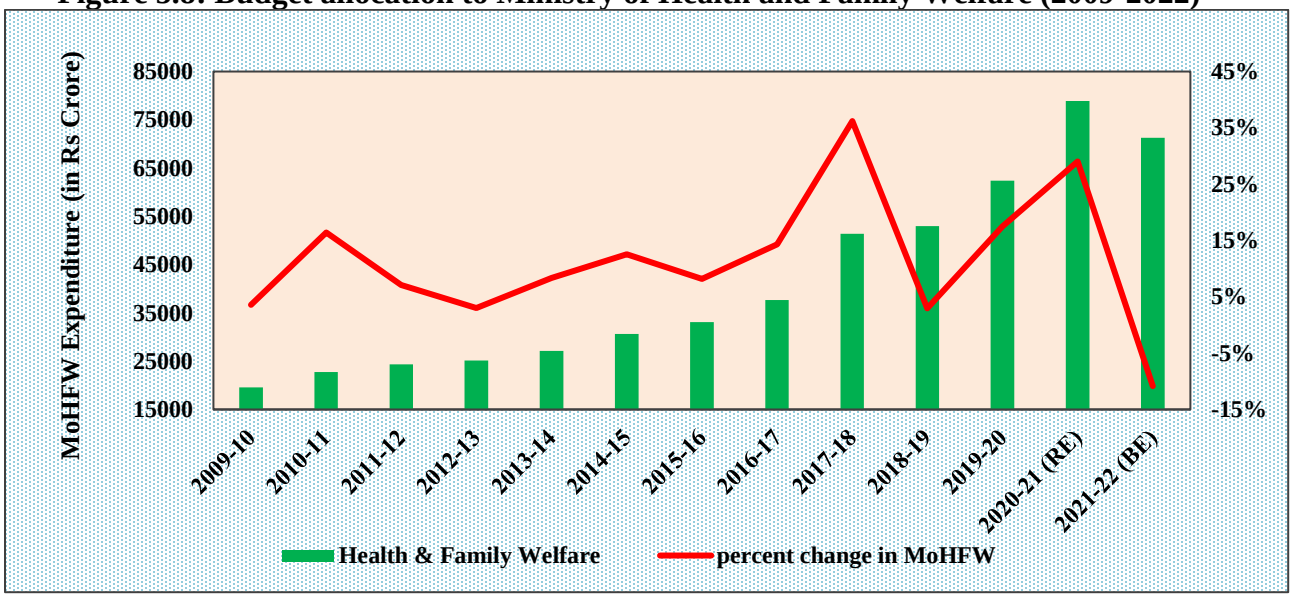
and unions (including grants and loans received from both internal and external agencies).The share of the divisible pool from center to state decides the public financing structure of the sub-nation in which the major part goes to schemes that are run by States and centers. While the Centre also contributes to improving the healthcare facilities at the state level through different health schemes that are directly sponsored by the center (under various policy guidelines) such as centrally sponsored programmers implemented by the State Governments.

5.4.1 Central Government Spending on Public Health

The "Ministry of Health and Family Welfare (MoHFW)", which is in charge of paying for health care services in India, is the conduit through which the federal government's expenditures on public health are directed. The Department of Health and Family Welfare and the Department of Health Research make up the Ministry of "Health and Family Welfare." The former is in charge of carrying out and overseeing a number of health programmes, including the "Central Government Health Scheme (CGHS)," and it also assumes control over medical training and education. The latter focuses broadly on medical health research and its up gradation. Table 5.4 shows the distribution of the budget allocation “The Ministry of Health and Family Welfare (MoHFW)”. The total budget of MoHFW is around Rs 20,138 crores in 2009-10 which was increased to Rs 73,932 crores by 2021-22, an average growth of 12 % over the period. Figure 5.8 shows the increase in budget size on the Ministry of “Health and Family Welfare” and the red line show the percent change in MoHFW allocation in last one decade.

Nearly 97 percent of the overall funding goes to the Department of Health and Family Welfare, whereas only around 3 percent is spent on research by the Department of Health. Additionally, a significant portion of the Ministry's overall budget is given to States as grants-in-aid for the implementation of several national health programmes.

Figure 5.8: Budget allocation to Ministry of Health and Family Welfare (2009-2022)



Author's own calculation

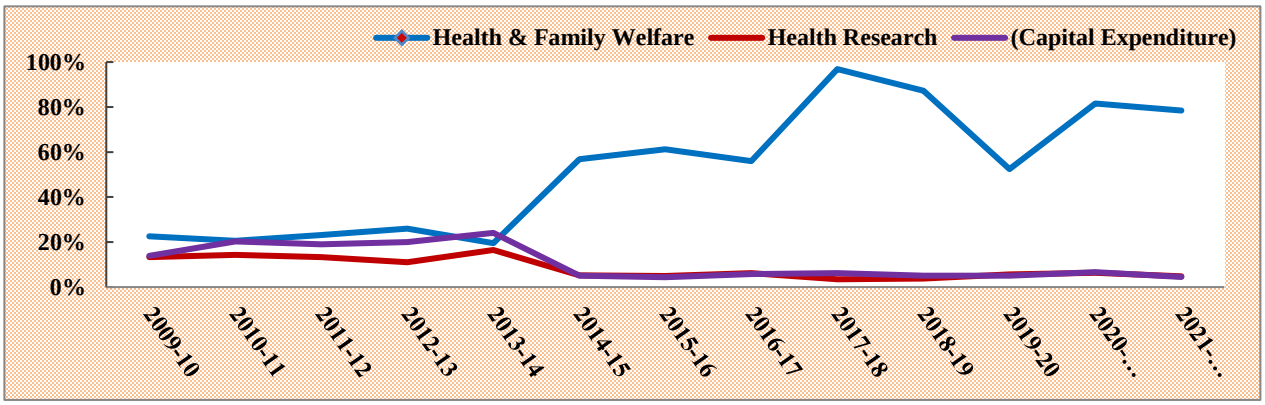
Table 5. 4: Budget Allocation for the Ministry of Health and Family Welfare (MOHFW) Over the Period (in Rs Crore)

Year	Health & Family Welfare	Health Research	Total MoHFW allocation	percent change in MoHFW
2009-10	19554	584	20138	4%
2010-11	22765	675	23440	16%
2011-12	24355	746	25102	7%
2012-13	25133	720	25854	3%
2013-14	27145	874	28019	8%
2014-15	30626	911	31537	13%
2015-16	33121	993	34114	8%
2016-17	37671	1324	38995	14%
2017-18	51382	1732	53114	36%
2018-19	52954	1728	54682	3%
2019-20	62397	1861	64258	18%
2020-21 (RE)	78866	4062	82928	29%
2021-22 (BE)	71269	2663	73932	-

Source: -Demand for grants, Ministry of health and family welfare union budget government of India, respective years.

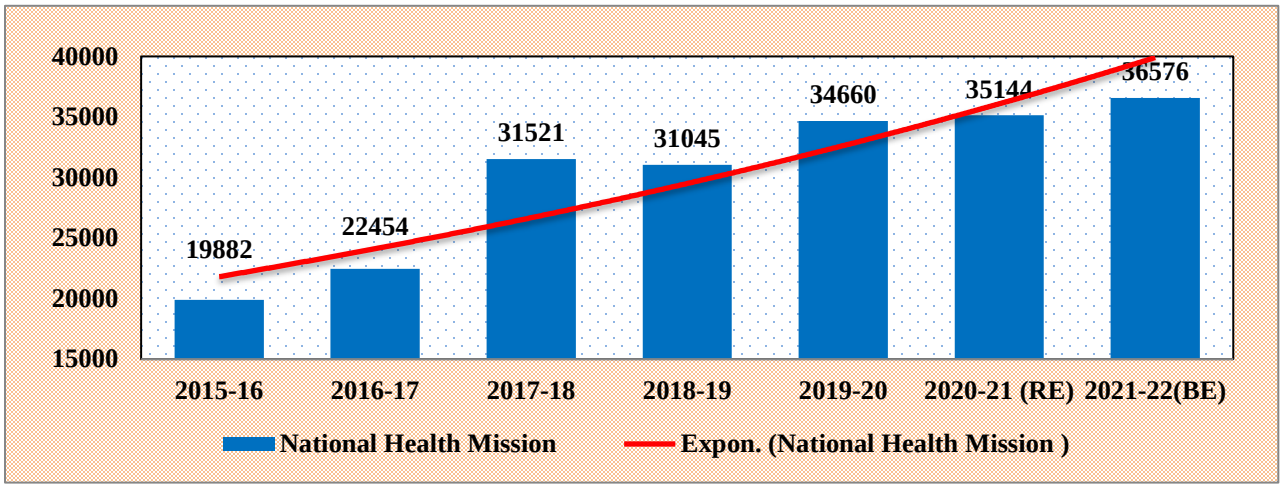
The share of the Central Government spending on health care services, which includes 'grant-in-aid to States', contributes to one-third spending of both the States and the Centre. The trend in this allocation is presented in figure 5.9. It shows that budget allocation for the MoHFW has increased around 25 % after 2014-15 to 2021-22. The total capital expenditure experienced less than 6 % which was just one-fourth of the total Ministry's expenditure (excluding grant-in-aid to States and UTs but including capital expenditure incurred by the Ministry). The allocations for materials and equipment supplies for central sector public hospitals was just 10 % of the net MoHFW in the year 2009-10 and increased a huge in 2017-18 and again reaches to very low level of 6 % by the end of 2020-21 (Appendix, Table 5.1). One of the reasons might be a sharp or say a sudden rise in salary pay, because of the introduction of sixth Pay Commission and revise pension plan in central. As a result of this the quality of medical health and its services tumble down like anything in the last few years. Despite this, the Ministry of Health and Family Welfare (MOHFW) budget allocation is projected to grow at a compound annual growth rate (CAGR) of about 11% from 2009 to 2022.

Figure 5.9: Trends in Grants-in-aid to State Governments allocated by MoHFW during the period of 2009-10 to 2021-22



Author's own calculation.

Figure 5.10: Allocation towards National Health Mission



Author's own calculation.

Analysing the Ministry of Health and Family Welfare (MoHFW) expenditure on major head, Table 5.5 clearly indicates that the larger share of Rs 36,576 crore is allocated to the National Health Mission which is almost 55 % of total MoHFW during 2021-22. The rising expansional trend in the allocated towards the National Health Mission shows the strengthening in public health systems in providing better healthcare delivery (Figure 5.10). The National Rural Health Mission (NRHM), which received a budget of Rs. 30,100 crore, and the National Urban Health Mission (NUHM), which received a budget of Rs.1000 crore, combine to form the National Health Mission (NHM). (Union budget 2022-23). The former is in charge of working on rural health, and the latter is in charge of caring for urban areas.

Table 5. 5: Expenditure on Main heads of MoHFW (in Rs crore)

Major Heads in MoHFW	**2018-19**	**2019-20**	**2020-21**	**2021-22**
National Health Mission (total)	31045	34660	35144	36576
Autonomous Bodies	7142	7992	8185	8566
PMJAY	1998	3200	3100	6400
PMSSY	3797	4683	7517	7000
National AIDS & STD Control Programme	1803	2813	2900	2900
Family Welfare Schemes	490	489	496	387
RSBY	227	57	29	1

Total	46501	53894	57371	61830

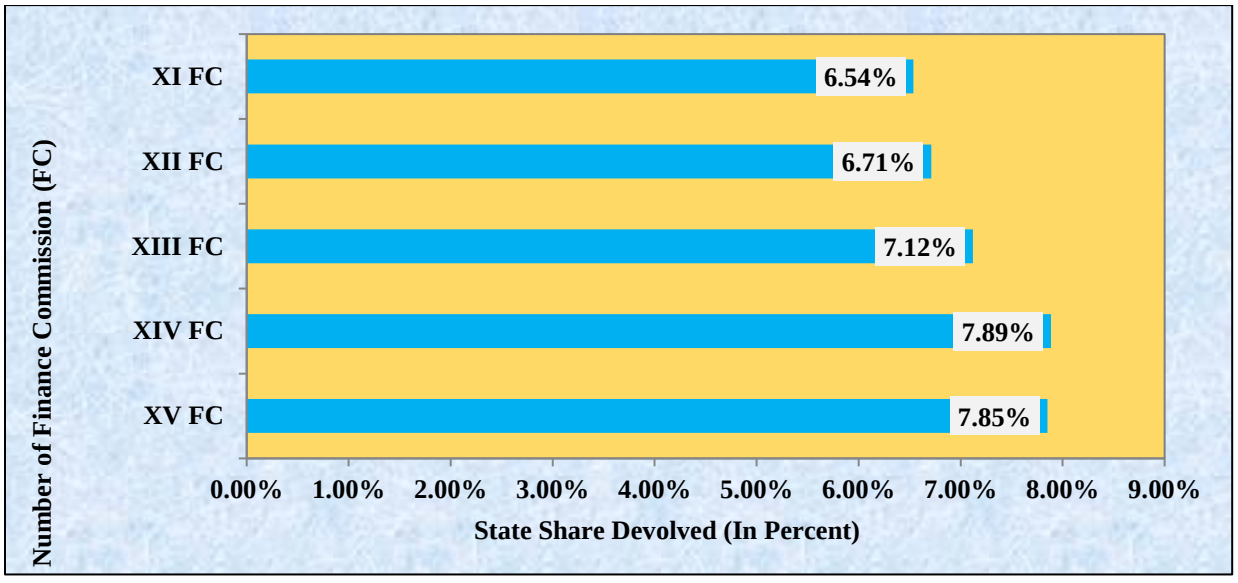
Author's own calculation

The expenditure on autonomous bodies, Pardhan Mantri Swasthya Suraksha Yojana (PMSSY), Rashtriya Swasthya Bima Yojna (RSBY), Pradhan Mantri Jan Arogya Yojana (PMJAY) varies over the period. However, the allocation to PMJAY was increased 52 % in the post Covid period; on the other hand, the allocation to RSBY witnessed a huge fall during the same period.

5.4.2 Expenditure on Health Care Made by the State Government

The endowment of health care in India is primarily comes under the state governments responsibility. Now the level of health care spending is directly links to the state governments' fiscal health that in turn decides the state's overall performance in terms of revenue generating. For instant, if the state comes under low-income category states, where the level of fiscal performance is very poor, in that case it's not surprising to say that these states have limited capacity to finance public health. The lower Central transfers to these states failed to offset the fiscal imbalances fully across the states.

Figure 5.11: Share of Central transfers to Madhya Pradesh (Tax devolution)



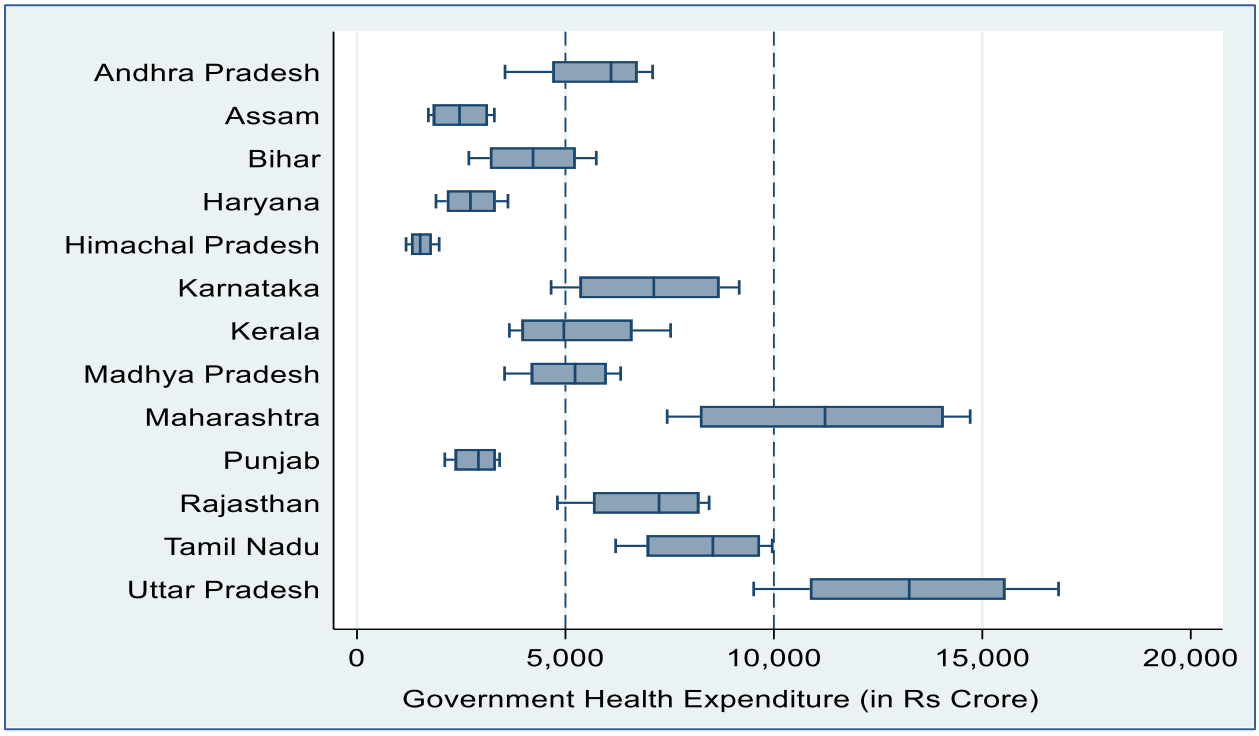
Author's own calculation.

While Madhya Pradesh is counted as one of the low-income states across the India, despite of this the level of Central transfers to Madhya Pradesh increased in every Finance Commission (FC) but not at satisfactory level (Appendix Table 5.2). Figure 5.11 shows that there is a 0.3 % growth in Tax devolution to state from centre in every Finance Commission (FC). In addition, the majority

of the available resources—about one-third of them—are being utilised to cover committed commitments including wages, pensions, and interest payments. As a result, the government has very little money left over to invest in the health sector. All states now have fiscal responsibility laws in place, and there is very little flexibility to raise funding for the healthcare industry. It is well known fact that there is positive correlation between the state's income level and the per capita health spending.

The level of government health expenditure across the states varies over the period of ten years. Figure 5.12, observed a huge variation in total government health expenditure over the period and across the country. Such as Himachal Pradesh (HP) stands at Rs. 2500 crore and the level of government spending on health in Uttar Pradesh (UP) ranges from Rs 9000 to 22000 crores. However, the Madhya Pradesh witness less variation in public spending compare to other states, that confirms the steady change in government health expenditure during last one decade.

Figure: 5.12: State-Wise Box Plot Presentations for Government Health Expenditure During 2000-01 to 2019-2020



Note: Manipur and Nagaland are dropped due to unavailability of data (Author's own calculation)

Public health is also funded at the State level through regular tax and non-tax income streams, despite of having negligible share in total government health expenditure. In Madhya Pradesh

state an average own-tax revenue collection is around 10.4 % of GSDP and state own non-tax revenue is 1.9 % of GSDP in last three consecutive periods (Appendix , Table 5.3).In general, the State Government's financial performance has a significant impact on the distribution of resources to the public health sector. For instance, one of the primary factors contributing to the growth in the state deficit was the implementation of the Fifth Pay Commission in the late 1990s. Similarly, from last five years the state fiscal position drastically changed such as, the level of fiscal debt to GSDP, outstanding debt to GSDP and interest payment to revenue receipts ratio increased from 3.5 to 8.1 percent, 30.5 to 51.1 percent and 8 to 13 percent during 2015-16 to 2021-22 (Appendix, Table 5.3). One of the reasons is that during period majority of states commenced power projects under the scheme Ujwal Discom Assurance Yojana (UDAY), this resulted in an increase of 0.7 percent outstanding debt (RBI 2020). Moreover, the rise in outstanding debt further increased the interest payment to revenue receipts ratio and fiscal deficit. It implies that whenever there is a fiscal consolidation and stress, the expenditure on social sectors like health and education will get reduced due to decline in budget allocations (Tanzi and Schuknecht 2000). The budgetary allocation to the health sector across the states seems to be decline for majority of the states by 0.4 percent during the year 1995-99 to 2015-20 (Table 5.6). However, Madhya Pradesh state witness improvement to an extent of about one percentage points as compared to 1995-99. Interestingly, during the same time the level of fiscal deficit as a percentage of the GSDP decline to 2 percent, witnessed the rise in budget allocation on health sector does not necessarily accentuate fiscal deficits.

Table 5. 6: Share of Public Health Spending in Total Budget Size in Majority States (in %)

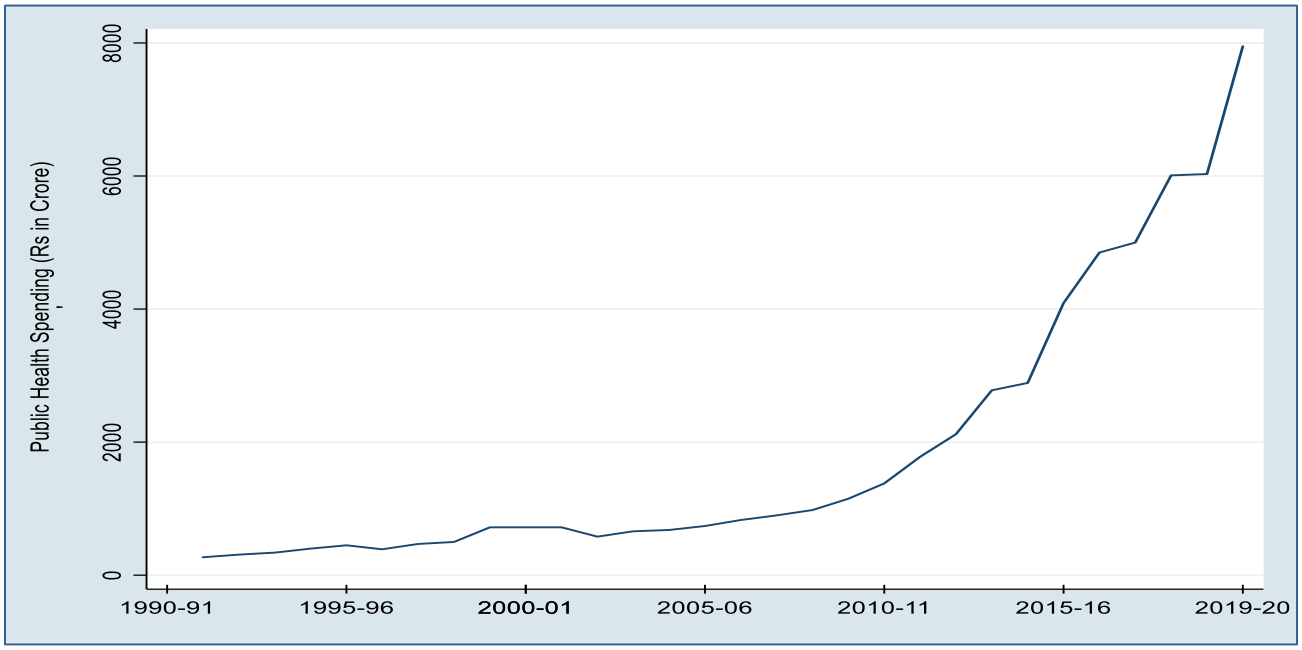
States	1995-99	2000-04	2005-09	2010-14	2015-20
Andhra Pradesh	3.7	3.2	2.9	3.5	3.3
Assam	4.2	3.1	4.0	4.2	6.0
Bihar	3.9	3.3	3.5	3.0	4.2
Haryana	5.2	4.3	4.1	4.4	4.6
Himachal Pradesh	2.5	2.5	2.6	3.2	3.6
Karnataka	4.8	4.3	4.2	4.7	5.1
Kerala	4.3	3.4	3.1	3.6	3.8
Madhya Pradesh	4.0	3.4	3.1	3.4	4.1

Maharashtra	3.6	3.2	3.0	3.5	3.9
Manipur	3.7	2.9	3.3	5.3	5.0
Nagaland	5.0	4.2	3.8	4.1	4.7
Punjab	3.8	3.3	2.7	3.7	3.3
Rajasthan	4.5	3.7	3.8	3.9	3.9
Tamil Nadu	4.6	3.5	3.2	3.7	3.7
Uttar Pradesh	3.8	2.9	4.3	3.5	3.3

Sources: Economic and Political Weekly Research Foundation (Data base).

Public spending on the health sector in Madhya Pradesh State increased to about 8000 crore in 2019-20 which is just 270 crore in 1990-91. During the first decade 1990-2000, the level of public health spending is in steady state with a marginal change. During the second decade 2000-10 the state experienced a gradual increased in public health spending. The third decade registered a substantial increase in public health spending that reaches to around 8000 crores to the end of 2015-20 with an annual growth of 13 percent. "The State Governments were obliged to enact austerity measures due to the severity of the budgetary strain in the late 1980s, and the 'soft' sectors like health were targeted for expenditure compressions (Rao, K. S. (2005)" When the Center began to implement reform measures in the early 1990s, the percentage of fiscal transfers to the States was raised. In addition, states also saw a significant growth in their Gross State Domestic Product (GSDP). Figure 5.13, is one of the best examples, where it shows a positive correlation exist between state GSDP and budget size. It implies, as the level of GSDP increases, the state expenditure on public health will increase proportionately.

Figure: 5.13: Trends in Public Health Spending in Madhya Pradesh During 1990-01 to 2015-20



Author's own calculation.

5.5 Inter-State Differentials in Public Spending on health in India

For certain states, the level of government health spending has significantly increased throughout the years. The top five states for health spending during this time period are Maharashtra, Uttar Pradesh, Andhra Pradesh, Tamil Nadu, and Karnataka, according to Table 5.7.The level of public spending on health in Himachal Pradesh are less than one-third compare to top five states over the period. Moreover, the scenario wasn't changed in last two decades, the same set of states Himachal Pradesh, Assam, Punjab, Haryana and Bihar continued in bottom in terms of health spending. In case of Madhya Pradesh the government health expenditure increased from Rs 800 crore in 2001-02 to Rs 6324 crore by 2016-17 and registered a growth of 12 % in last three years.

The disparities in per capita health care spending between states have widened. The top four states are Kerala, Karnataka, Tamil Nadu, and Maharashtra, whereas the worst four states are Bihar, Uttar Pradesh, Madhya Pradesh, and Assam. In recent years, there has been a significant disparity between state per capita government health expenditures (Table 5.8). Despite of increase in government health spending in Madhya Pradesh, still this state lagging behind compare to other states in terms of per capita health spending.

Table 5. 7: Total Government Health Expenditure (TGHE) for Selected 15 States

States	2001-02	2004-05	2013-14	2014-15	2015-16	2016-17
Andhra Pradesh	1397	1517	6373	3551	5814	7090
Assam	472	455	1712	1927	2992	3294
Bihar	771	826	2682	3689	4756	5740
Haryana	346	461	1895	2410	3033	3621
Himachal Pradesh	302	400	1177	1411	1621	1971
Karnataka	1097	26313	4656	6011	8227	9168
Kerala	769	1290	3655	4229	5694	7522
Madhya Pradesh	800	943	3539	4799	5662	6324
Maharashtra	1912	938	7440	9009	13443	14708
Punjab	632	133	2106	2578	3245	3421
Rajasthan	1034	632	4807	6511	7980	8447
Tamil Nadu	1272	1128	6203	7696	9378	9959
Uttar Pradesh	1409	1433	9515	12209	14283	16828
Mean	939	2805	4289	5079	6625	7546
Standard Deviation	453	6798	2418	3011	3779	4236
Coefficient of Variation	48.2	242.3	56.4	59.3	57.0	56.1

Note: Manipur and Nagaland are dropped due to unavailability of data
Source: - National Health Accounts, India, 2001 -02, 2004-05, 2013-14, 2014-15, 2015-16, 2016-17

Table 5. 8: Per Capita Government Health Expenditure for Selected 15 States

States	2001-02	2004-05	2013-14	2014-15	2015-16	2016-17
Andhra Pradesh	182	191	733	573	923	1125
Assam	176	162	532	602	907	998
Bihar	92	93	247	338	425	504
Haryana	163	203	722	927	1123	1341
Himachal Pradesh	493	630	1653	2016	2316	2816
Karnataka	206	233	731	939	1266	1389
Kerala	240	287	1062	1208	1627	2149

Madhya Pradesh	132	145	476	640	745	811
Maharashtra	196	204	636	763	1120	1216
Punjab	258	247	741	889	1119	1180
Rajasthan	182	186	670	904	1078	1126
Tamil Nadu	202	223	839	1026	1234	1293
Uttar Pradesh	84	128	456	581	667	772
Mean	200.5	225.5	730.6	877.4	1119.2	1286.2
Standard Deviation	97.4	126.9	328.0	397.3	450.3	578.5
Coefficient of Variation	48.6	56.2	44.9	45.3	40.2	45.0

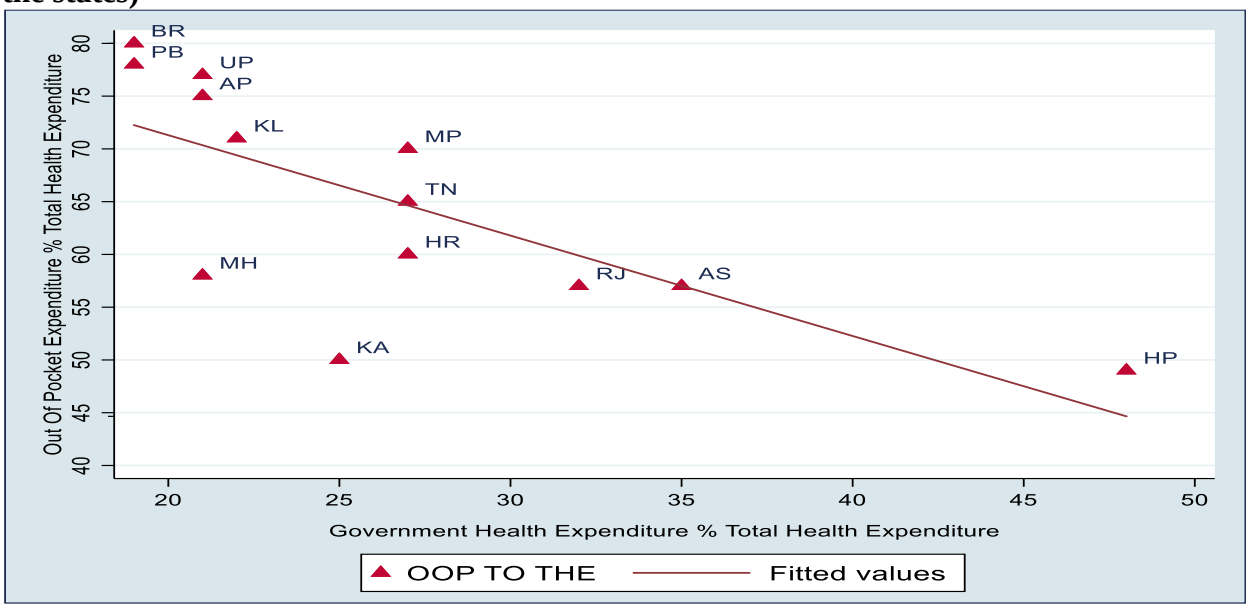
Note: Manipur and Nagaland are dropped due to unavailability of data
Source: - National Health Accounts, India, 2001 -02, 2004-05, 2013-14, 2014-15, 2015-16, 2016-17

Additionally, in the first two years, there was an increase in state-to-state heterogeneity in government health spending per capita. For instance, between 2001-2002 and 2004-2005, the coefficient of variance in state-by-state government health spending per capita grew from 48.6 to 56.2 (Table 5.8).It is significant to highlight that state-level per capita income is positively connected with government spending on health. The public spending on health as increase from 24 % to 28 % of total health spending as the per capita GSDP approaches to 4.6 % to 5.3 %(Appendix 5, Figure 5.1).

5.6 Household Out-of-Pocket Expenditure on Health

It is well known that Indian health care system is predominately control by private sector for both in health provision and financing. The share of private spending on consumption of health care services is disproportionate that of the Government's contribution. According to National Health Account (NHA) more than 70 % of health care expenses was paid from public own pockets/Household income. Figure 5.14 shows a negative relationship between government health spending and OOP expenditure. As the size of government expenditure on health increases the level of OOP expenditure on health declines. For instance, when India spends 20 percent on public health than the level of OOP expenditure is 73 % and it's gradually comes down to 15 % as the public health expenditure rises to 50 %.

Figure: 5.14: Association between Public Health Expenditure and OOP Expenditure (across the states)



Author's own calculation

Out-of-pocket spending (OOPE) was around Rs 72,759 crore in India in 2001–2002, or almost 3.2% of the country's GDP at the time. The projected household health spending in India in 1995–1996 was Rs 33,253 crore at nominal prices; this figure rose to Rs 72,759 crore in 2001–2002; and then to Rs 93000 crore in 2004–2005. However, in absolute terms the household out-of-pocket expenditure increased in recent period, but in percentage of GSDP its decline to 2 % towards the end of 2016-17. Moreover, the overall growth rate of household spending is 6 % that is close to be Rs 40,000 crore in nominal terms during 2016-17. Analyzing the state wise household expenditure on health, Table 5.9 observed that during 2004-05 states like Uttar Pradesh, Maharashtra, and Kerala were noted as the highest out-of-pocket expenditure states. While Himachal Pradesh, Assam and Haryana registered as lowest OOPE spending states. Further, examine the decadal transaction in OOPE the people of Uttar Pradesh, Maharashtra and Bihar spends major share of health expenditure from their own pockets compare to other states.

Table 5. 9: Out of Pocket Expenditure for Selected 15 States (Rs in Crore)

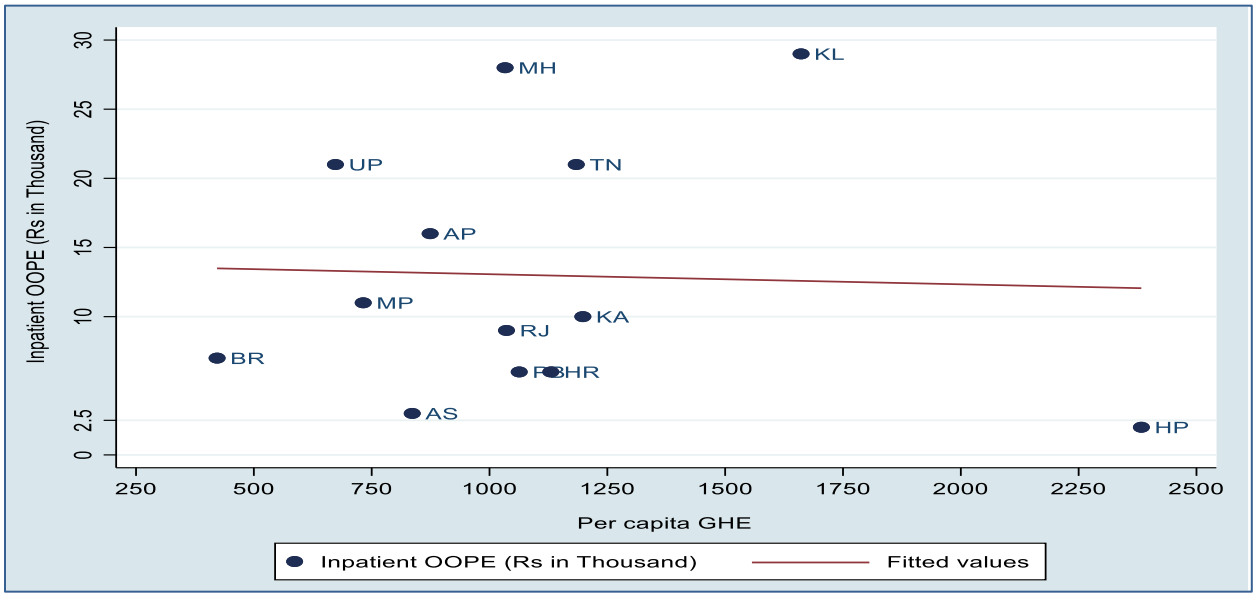
States	2004-05	2014-15	2015-16	2016-17	Decadal Change (2004-05 to 2014-15)
Andhra Pradesh	6913	17988	19512	20928	11075

Assam	1722	4139	4339	4547	2417
Bihar	3726	18364	19890	20857	14638
Haryana	1987	6177	6552	6923	4190
Himachal Pradesh	560	1592	1706	1785	1032
Karnataka	3304	14603	15908	16815	11299
Kerala	8754	17581	17889	18967	8827
Madhya Pradesh	4169	13560	14283	15166	9391
Maharashtra	10340	31675	33459	35771	21335
Punjab	2846	12001	12563	13362	9155
Rajasthan	3487	12529	13455	14504	9042
Tamil Nadu	6656	20432	21500	22626	13776
Uttar Pradesh	15101	50322	52841	56609	35221

Note: Manipur and Nagaland are dropped due to unavailability of data
Source: - National Health Accounts, India, 2004-05, 2014-15, 2015-16, 2016-17.

In general, it is expected that as the size of government budget on public health increases the level of out-of-pocket expenditure comes down. This can illustrate clearly in Figure 5.15 where there is a negative correlation between per capita government health spending and inpatient OOPE. It implies a rise in per capita government health spending will reduce the burden of out-of-pocket expenditure. When the per capita public spending was Rs 250 then the level of OOPE is around Rs 14000, and the burden gradually decrease to 12000 as the level of per capita public spending rises to Rs 2500. The states that have higher per capita spending like Himachal Pradesh have lower out-of-pocket expenditure, which also holds true at global level (Figure: 5.6). The finding suggests the states government should target to increase the healthcare spending to limit the burden of out-of-pocket spending. A similar behavior is noted in case of as per capita health spending and out-patient OOPE (Appendix 5, Figure 5.2).

Figure 5.15: Correlation between State Health Spending and Inpatient OOPE



Author's own calculation

It is acknowledged that Madhya Pradesh's household out-of-pocket expenses are similar to those in other low-income states. In Madhya Pradesh, the amount of out-of-pocket medical costs rose during the course of the study with a 5% overall growth rate. It is noted that the per capita rise in government health spending is now at 8%, which is slightly higher than the per capita out-of-pocket spending. This suggests that the state government's insufficient funding of health care will raise the financial burden on the population's poorer segments. The impact of out-of-pocket spending is much higher for them those household incomes is very low, especially the burden of out-of-pocket huge in case of inpatient care or critical illnesses. The increase in family out-of-pocket expenses will cause them to spend less on other fundamental requirements like food, clothes, housing, and education. As a result, the households are forced to borrow money from friends, family, or money lenders, further driving the households into a debt cycle.

Next when we compare the out-of-pocket expenditure per Hospitalization in Madhya Pradesh and India during the last 365 days (2017-18). Table 5.10, shows an average out-of-pocket expenditure by male is Rs 20422 and Rs 10385 by female in rural Madhya Pradesh, while comparing to India it was while 20% higher for male and 10% higher for female. In terms of social groups, the highest out-of-pocket spending categories are OBC, followed by ST and SC. While ST males and SC

females are spending more form their pockets in Madhya Pradesh, but India as whole SC peoples are paying more after OBCs category. The level of education and out-of-pocket spending in Madhya Pradesh, both male and female with Graduation and above will spend from their pockets to cover health expense than compare to others. In terms of age groups, peoples with age group above 60 spends an average of Rs 18943 form their own pocket. In all the

Table 5. 10 : Average Out-of-Pocket Health Expenditure per Hospitalization Case during the last 365 day by Characteristics in India and Madhya Pradesh, 2017-18 (In Rs)

Characteristics	Madhya Pradesh			India		
Residence	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Rural	20422	10385	13602	25422	11385	18602
Urban	25286	18244	20872	27286	15244	24872
Total	22142	12761	15926	29142	10761	17926
Social Group						
ST	14013	3072	5555	16423	6390	9110
SC	12540	5520	7088	19526	9569	12814
OBC	23281	6489	12434	20813	12444	15271
Others	30179	10287	16181	26767	17388	20773
Education Level						
Illiterate	22777	6239	10802	16203	11794	13223
Up to Primary	14228	5520	8073	18784	10335	13626
Middle	25514	4081	10387	21308	9779	13396
Secondary to Higher Secondary	21829	8150	13033	26613	14410	18379
Graduation and above	32564	11674	18309	42361	22304	28389
Marital Status						
Never Married	12803	12405	12683	14893	12467	14052
Currently Married	26699	5425	10528	26356	12205	16083
Others	19291	11302	12751	21805	18254	18963
Age Group						
0-14	12920	7476	10968	12885	11424	12370
15-59	22478	5805	9974	22395	11969	14643

60+	28275	11279	18943	30609	20971	26198
Type of Hospital						
Private	3622	1687	2090	6127	3339	4089
Public	36733	19409	27631	33117	24894	28254

Author's own calculation using unit level data of NSSO 75st round

Cases the out-of-pocket spending by women are less compare to men. Similarly, the household out-of-pocket health expenditure does not show much difference when we analysis OOP Health Expenditure per OPD Spending during the last 15 day for the same time period (Table 5.11).

Moreover, the financing channel to cover the health expenses (Appendix, Table 5.4) clearly indicates that around 90 % of out-of-pocket expenditure comes from individual household income/savings.

Table 5. 11: Average Out-of-Pocket Health Expenditure per OPD Spell during the last 15 day by Characteristics in India and Madhya Pradesh, 2017-18

Characteristics	Madhya Pradesh			India		
Residence	Male	Female	Total	Male	Female	Total
Rural	866.5	822.8	842.7	686.1	600.6	639.6
Urban	842.6	1240.0	1048.0	743.5	760.2	752.4
Total	858.2	956.4	910.9	707.2	658.2	680.7
Social Group						
ST	635.0	547.0	592.6	725.6	443.9	573.7
SC	648.8	849.8	767.6	706.2	606.5	653.6
OBC	980.6	972.2	975.9	700.0	654.1	674.9
Others	976.1	1365.3	1169.7	713.6	727.0	720.8
Education Level						
Illiterate	859.3	933.8	904.3	617.8	588.1	598.9
Up to Primary	762.4	745.4	753.8	648.8	596.5	622.1
Middle	576.9	1549.3	1103.6	660.6	703.3	682.7
Secondary to Higher Secondary	1123.5	564.5	940.1	911.7	833.9	875.5
Graduation and above	945.3	1134.3	1063.6	783.2	925.2	840.6

Marital Status						
Never Married	698.4	603.3	661.4	607.4	536.9	577.3
Currently Married	979.1	1116.3	1054.9	780.1	738.9	758.7
Others	881.4	899.5	896.3	571.7	588.1	585.1
Age Group						
0-14	671.8	507.3	607.5	599.2	473.5	543.8
15-59	945.4	1000.7	979.5	754.9	706.9	726.6
60+	900.9	1170.2	1025.8	718.1	661.9	689.2
Type of Hospital						
Private	569.0	410.4	487.2	480.8	392.8	432.7
Public	1110.0	1345.5	1238.1	889.4	859.3	873.1

Author's own calculation using unit level data of NSSO 75st round

5.7 Health Insurance

One who is healthy he/she can win the battle of life easy, in contrast one who has un-health may considered difficult to continue happy life. Promoting and protecting health is necessary for human welfare. The primary concern of any nation is to provide better health care facilities to improve their social and economic life of the citizens that will have positive effect on global peace and security. Health is one of main priorities to increase the size of work force (with respect of employment), level of efficiency (in concern of wage), and status of living etc. Therefore, it has become a major political, social & economic issue. The governments play a major role in providing all these facilities, but poor countries (low developing/developed) are striving hard to achieve to provide meet general public expectations regarding good health. The primary objective of Indian government is to enhance per capita health expenditure, keeping in concern of socially and economically disadvantaged groups.

Insurance is a way of pooling and spreading risks among a large number of persons exposed to same risk. It provides financial security and protection against financial loss suffered by an insured person only up to the specified insured limit. Risks are shifted and divided in consideration of a cost called premium in insurance scheme. It is one of the most important forms of risk transfer. There are many definitions of insurance, some of them are as follow: -

"Insurance is the guarantee to one, on condition of contributing while he can work, an income sufficient for his existence and that of his family when for any reason of sickness, accident, old age or unemployment he cannot work but relationship between contribution & benefits remained sacrosanct" John Beveridge, 1942

"Insurance is a contract whereby one party guarantees the other that he won't suffer loss, damage, or prejudice as a result of the occurrence of the hazards listed to specific items that may be exposed to them in exchange for a price given to him adequate to the risk..." Justice Lawrence.

"Health insurance is a term used to describe a method of funding health care that includes distributing financial risk related to a person's fluctuating medical expenses by pooling costs over time (prepayment) and among individuals.…". Tapay and Colombo, 2004"

"A type of contract or agreement whereby one party consents to pay another party an agreed sum of money in exchange for a consideration in order to compensate the other party for a loss, damage, or injury to something of value in which the insured has a financial interest as a result of an uncertain event…-" Dictionary of Business and Finance

In India the first insurance company was stabilised in Calcutta (present Kolkata) called "Oriental Life Insurance Company" in the year 1818, but by the end of 1834 the company was shutdown. Than during the same period "Bombay Mutual, Oriental and Empire of India" were started to provide the insurance facilities in the Bombay Residency. Later Life Insurance Corporation (LIC) came into existence by the entrance of 245 Indian and foreign insurers and stands as the monopoly before the privatization of the Insurance sector. Triton Insurance Company Ltd. started "General Insurance Company" in India in 1850 later it was under control of "Mercantile Insurance Ltd" that deals with the entire general business insurances.

The "Insurance Association of India" was the branch under which the General Insurance Council board was established in 1957. The association created a system for handling insurance that ensures honest, open, and ethical business operations. In 1973, four public sector organizations—NICL, NIACL, OICL, and UICL—were formed from 107 general insurance businesses. This is regarded as the country's first health insurance programme, which began in India in 1986. The Indian government (GOI) established a committee in 1994 to make changes to the country's

insurance system. The Reserve Bank of India Governor, RN Malhotra, served as the committee's chair, and they presented suggestions for improving the insurance industry.

India improved the health insurance sector and continued its large number of coverages. In 2003 India introduces new insurance policy called “Universal Health Insurance Scheme” to provide the benefits to each and every one irrespective of caste and class. Later India introduced many such schemes to improve the insurance system such as “Rastriya Swasthya Bima Yojana” in 2008 to support the families under Below Poverty Line (BPL). The rising demand for health insurance by the public is mainly driven by the introduction of “Insurance Repository System (IRS), which was established in 2013 to monitor and maintain the standardization come transference in health insurance.

5.7.1 Necessity of Health Insurance

Having a health insurance is necessary now a today, because it will help the individual to cover the health expenses that might be unaffordable for them. Putting it differently, the occurrence of unexpected health issues and the exorbitant prices of hospitalization and medication, in such a case insurance is an instrument to overcome the burden of high cost of health expenses. Health insurance is the source of financial support that can reduce the out-of-pocket expenditure of an individual or a family.

The rise in technology and its effect on the society not always positive, it has some dark side also. An innovative idea and the utilization of the technology sometime creates deadly health diseases such as an increase of toxic chemical release in the open air will surge the air pollution. Examples of the harsh reality include high levels of pollution, particularly in "metros," occupational stress and strain, and the toll that ruthless competition takes. When waiting in line to get to work, a person is exposed to harmful carbon monoxide gas emissions from moving vehicles for extended periods of time. In this circumstance, a persistent rise in healthcare demand is strongly correlated with high costs. Treatment for serious ailments or accidents is so pricey that it makes the individual in question thousands of rupees poorer.

When the sufferer requires specialist treatment, it is very bad. Health costs are exorbitant, and the illness leaves one cognitively confused. To address these difficulties, it is advisable to have health insurance in this case. Or, to put it another way, handle such circumstances with ease by offering

prompt and sufficient medical attention. The cost of paying for expensive medical expenses is covered by health insurance.

5.7.2 Types of Health Insurance in India

Health insurance is well functioned and better established in developed economies such as United States of America, United Kingdom, Germany, France and, Canada. But in developing countries the scenario is very poor, where less than one fourth of the people come under proper health insurance coverage. India is one of these countries having very small percentage of health insurance coverage in total. As per insurance holding an individual has pay certain amount of premium in advance as regular and the benefits will reimbursement latter on when they are affected by illness. The collected insurance amount will utilized to finance the healthcare needs & expenses. In India there are different way to getting health insurance coverage. Some are voluntary based and some considered as compulsory. The following are the health insurances structure followed by the India.

I. Compulsory Health Insurance

This health insurance considered an important for certain groups of the people (such as people associated with organized/formal sector), where they not directly contribute to the scheme. The health care expenses of insured are reimbursed of the loss of wages due to sickness, disability & death during employment, maternity benefits etc. Under this there is two essential insurance schemes covers.

- **Employee's State Insurance Scheme**

Employee State Insurance Scheme (ESIS) introduced in India 1948 and with the aim of providing health benefits to the insured population comes under this scheme. This scheme is broadly managed by the government owned enterprise and Employees State Insurance Corporation (ESIC), where it provides the insurance facilities only to the employees associated with formal sector. Under this scheme the person avail the health care expenses (finance) against the loss of wages due to sickness, disability and death during employment, maternity benefits, and funeral expenses at the death of a worker etc.

- **Central Government Health Scheme**

The goal of the Central Government Health Scheme (CGHS), which has been in operation since 1954, is to offer a broad range of health insurance coverage to all central government employees and their families, as well as to Members of Parliament (MPs), Supreme Court and High Court judges, among other people. While the insurance services and its benefits are facilitated through some wellness centres such as Allopathic, Ayurveda, Yoga, Homeopathic systems of medicines etc.

II. Private Health Insurance

The private health insurance is voluntary and the services are commercial, under this the policyholders has to pay certain amount of premium in advance to the insurance company and the benefits are realised or compensated later to finance the health care, illness and hospitalization expenses. The amount of premium is determined based on; customer age, his level of risk taking, and wellness to pay. In India a large number of private companies are available those are providing health insurance to the public at high cost of premium. People in India are largely depends on private health insurance due to its managing efficiency in providing fast services to public in a less time.

III. Community Based Health Insurance

The community-based health insurance (CBHI) considered one of important schemes for the poor people to access the healthcare services easily at lower cost. These schemes especially operate by non-governmental organizations (NGOs) or by some charitable trusts. In this scheme the person has to pays certain fixed amount every year to avail the specific services and that amount is not related to their income. Protection against preventive care, inpatient care etc. is given to insured person and these are financed through the insured collection, government grants, donations, charity etc.

IV. Government Sponsored Health Insurance

The government sponsored health insurance schemes (GHISs), this will provide coverage to secondary and tertiary care health care expenses only. Under these scheme the Centre Govt. or State Govt. or both collects the funds and pay the amount as a premium to the insurance company and get the services. An autonomous body is formed sometimes by the government who provides insurance coverage only to the eligible insured the poor person and their families through

empanelled hospitals. Rastriye Swasthye Bima Yojana, Ayushman Bharat Jan Arogya National Health Protection Scheme etc. are some of scheme sponsored by Central Government (Anita, 2008).

5.8 Health Insurance Coverage in India

The accessibility of Health insurance or health scheme in India shows a satisfactory improved over the last ten years. The NFHS report figures out the percentage of household in which at least one usual member is covered by a health scheme or health insurance which shows an improvement in the number of insurance coverage by the people the below Table.5.12 represents the changes in health insurance coverage over the last one decade. Based on the NFHS-3 and NFHS-4 report it is seen that nearly seven times increase in accessibility of health insurance by the people from 2005 to 2015. Only 4.8 per cent of total health insurance covered up to 2005-06 from the entire population while it comes to 2015-16 in these ten years the number of insurances covered by the public increase to 28.7 percentage of total population. When we compare sixteen major states in India,

Table 5. 12: Health Insurance Coverage Percentage of households covered by health Scheme or health insurance[3]

Name of State	NFHS-3 (2005-06)	NFHS-4 (2015-16)
Madhya Pradesh	**4.8**	**17.7**
Uttar Pradesh	1.2	6.1
Andhra Pradesh	74.6	80.5
Himachal Pradesh	5.5	25.8
Haryana	6.7	12.2
Bihar	0.9	12.3
Punjab	6.8	21.2
Assam	2.3	10.4
Nagaland	1.6	6.1

[3] at least one usual member is covered by a health scheme or health insurance

Manipur	6.7	3.6
Tamil Nadu	65.5	82.8
Kerala	8.9	47.7
Maharashtra	7.1	15.0
Karnataka	10.3	28.1
Rajasthan	4.5	18.7
India	**4.8**	**28.7**

Source: NFHS-3 (2005-06) NFHS –4 (2015-16).

Andhra Pradesh was the state which covers a large number of health insurance from last ten years. As per NFHS-3 during 2005-06 it was around 74.6 per cent and it increased to 80.5 per cent respectively to the end of 2015-16 (NFHS-4). Tamil Nadu is the second best state that encounters 17 percent of improvement in total coverage of health insurance. On contrary, the state Manipur shows the least number of households covered under the health insurance (that is less the 7 per cent over the period), where the state witnessed a marginal improvement over the last ten years. It is observed Bihar, Uttar Pradesh, Himachal Pradesh, Assam and Kerala are the states experienced an improved of more than four times in their health insurance coverage over the last ten year period. Bihar is the only state that shows an improvement of 12 percent and Manipur a deteriorated 3 percent. However, in case of Madhya Pradesh the health insurance coverage over the period increased by 13 percent, but it is less than the national average. It implies Madhya Pradesh is still lagging behind compare to others states in covering the optimal number of health insurance. Hence, the overall representation of the above table speaks that there is a huge improvement in health schemes or health insurance in India for the last ten years.

Table 5. 13: Health Insurance Coverage by caste/ category wise

Caste	**NFHS-3 (2005-06)**	**NFHS4 (2015-16)**	**Change (NFHS-3 to NFHS-4)**
Scheduled Caste	3.3	31.1	11%
Scheduled Tribe	2.6	30.8	8%
Other Backward Class	3.8	30.5	12%
India (Total)	**4.9**	**28.7**	**17%**

Source: -NFHS-3 (2005-06) NFHS –4 (2015-16).

Analysing the health insurance coverage by category wise; Table-5.13 observed a huge improvement in health insurance coverage. On average 11 per cent increase in all the three groups SC, ST and OBC during compared to NFHS-3 to NFHS-4 and 7 per cent increase in total. It noticed that in the last survey by NFHS- 3 the lowest health insurance coverage was made by Scheduled tribe (2.6) followed by Scheduled caste (3.8). And other backward class (3.3). But the scenario changed in NFHS-4 survey that represents the percentage of health insurance holdings by OBC comes down to the third position whereas SC and ST stand on a first and second place in the list of the higher holding of health insurance. Its implies that the health policies undertaken by the government in India from the last ten years show an upgrading in the health services of this three groups SC, ST and OBC. But at the same time, it is also revealed that the improvement goes in favour of SC and ST pushing back to OBC that creates an upcoming problem for the country.

Table 5. 14: Health Insurance Coverage by Women and Men with the categories

Name of State	NFHS -4(2015-16) Women				NFHS-4 (2015-16) Men			
	SC	ST	OBC	Total	SC	ST	OBC	Total
India	22.5	24.3	21.3	20.4	24.2	27.6	24.0	22.9
Madhya Pradesh	15.5	11.3	10.0	10.9	17.3	13.4	11.5	12.6
Uttar Pradesh	2.8	2.4	2.2	2.6	3.2	8.6	2.9	3.4
Andhra Pradesh	75.0	75.1	69.8	70.0	78.4	78.1	75.8	75.8
Himachal Pradesh	23.3	19.0	14.3	17.4	27.5	21.5	12.5	22.2
Haryana	3.9	3.6	3.1	4.5	6.4	*	5.9	7.8
Bihar	10.3	7.3	7.4	7.7	7.6	0.0	5.7	5.8
Punjab	10.3	(4.8)	8.9	9.4	17.8	*	10.8	14.5
Assam	4.4	3.9	5.5	5.1	6.8	6.6	6.9	7.8
Nagaland	0.3	1.7	3.4	1.7	3.5	3.1	*	0.0
Manipur	0.4	0.3	1.4	0.9	1.2	2.1	6.6	3.1
Tamil Nadu	44.9	42.0	40.4	41.6	43.6	25.4	41.3	41.5
Kerala	55.4	61.1	39.5	41.9	38.5	39.8	35.3	33.2
Maharashtra	7.4	8.0	9.1	8.4	15.7	11.0	13.0	13.2
Karnataka	20.4	18.6	22.6	21.0	25.1	32.0	31.0	29.0

Rajasthan	13.9	13.2	11.2	12.1	9.4	9.4	7.7	9.0

Source: -NFHS-3 (2005-06) NFHS –4 (2015-16).

When we compare the health insurance coverage between females and males within the categories, we see that as per NFHS-4 report the total health insurance coverage by women in India is 20.4 per cent whereas is 22.9 per cent in case of men. This implies that the health insurance covered by a male is three per cent above the female which implies the number of insurances undertaken by a male is still large compared to the female. We pointed out little gender bias in insurance holdings, and it also reflects how the society is under control (dominated) of male gender or says the insurance preference is mostly undertaken by the male compared to female. The insurance coverage by categories wise SC (22.5), ST (24.3) female is same as usual behind to the SC (24.2), ST (27.6) male. But in the case of OBC, the health insurance for male (21.3) and female (24.0) shows very little difference. When it comes to state wise comparison, it is seen that Andhra Pradesh perform the best to all other states where the percentage of health insurance coverage is more than 70 per cent and as usually the women health insurance is lagged by 5 per cent compared to men. The next highest health insurance covered state is Kerala which covers above 40 percent in case of men and below 35 percent for women and the third largest state under health insurance coverage is Tamil Nadu for men it is 41.6 percent, and for women it is 41.5 percent, and these statistics implies there is no gander discrimination in case of covering health insurance in this state. And the same is followed when it comes to categories wise Scheduled tribe, Scheduled caste and other backward class occupies the first, second and third place in all the three state for covering health insurance with usually male dominations having highest coverage of insurance by male compare to female. The worst condition is seen in the case of Nagaland with less the 2 per cent health insurance covered by men and almost nil by women. But for Manipur, the scenario is different the proposition of having health insurance is higher than 3 per cent for the men, but in the case of a female, it does not exceed even one per cent. Another important point noted here that by categorisation Other Backward Class in Nagaland, Manipur and Assam are the states having highest coverage of health insurance schemes (check the population) compared to all other thirteen states. Madhya Pradesh as a case study it is observed that the health insurance covered by men is 2 percent more than the women and same is noticed for category wise, men are in better position to attain insurance. Hence, from the above discussion, it is clear that the health insurance schemes coverage in India is not satisfactory.

Form the expenditure side, according to National Health Account (NHA) the health insurance covered under Social Health Insurance Schemes such as Employee state insurance scheme (ESIS) which shows a fall of 3 percent in last period 2016-17(Appendix, Table 5.5). while the central government health scheme (CGHS) obsereved an average gowth of 22 percent for the same period. Under Government Financed Health Insurance, Rashtriya Swasthya Bima Yojana (RSBY) shows an improvement of twice in number from 1171 crore to 2729 crore (Appendix, Table 5.6). The health insurance proved by private agencies are plays a dominating role in india (espically the boom in health insurance market came to see after the economic liberalization of the country) with large number of insurance coverage in the recent past. India experienced a growth of 24 percent in private health insurance expenditure over the last three consecutive period from 2014-15 to 2016-17 (Appendix, Table 5.7). However, the information highlights a very poor condition in coverage of health insurance, especially in case of women and categories wise all three category Scheduled tribe, Scheduled caste, and other backward class, are in poor condition in some part of the country like Assam, Manipur and Uttar Pradesh. The government requests to take some urgent remedial steps to provide a large number of health insurances at the low cost of premium so that a large number of the household can easily access health insurance without any gender and caste discrimination.

5.9 Concluding Remarks

The present chapter analyses the health care financing system in India. Specifically, it analyses the nature of public spending on health across the Indian states with special focus on Madhya Pradesh (MP). It begins with the comparison of health care expenditure in India with selected global countries, than it discuss the central government spending on public health and the channel through which its funds the state governments, next state government spending on public health, than brief discussion on inter-state differentials in public spending on health in India, than private health expenditure and its rising burden on people and finally, it analysis the coverage of health insurance across the states and its contribution towards financing the health expenses. The Indian healthcare system stands out for its low levels of public spending on healthcare, poor quality healthcare services that have a negative impact on the population's health, lack of emphasis on preventative healthcare, and population dependence on private health care providers, especially the poor, which leads to high OOP spending and poverty. According to the WHO's "World Health Statistics"

report, India is ranked 163 out of 194 countries in terms of current health expenditure (CHE) as a percentage of gross domestic product (GDP) and 161 in terms of current health expenditure (CHE) per capita (US$), which speaks to the country's poor state of health overall. Similarly, the per capita spending in India is around $ 63 (PPP), which is just 15 percent of China's, 53 per cent of Sri Lanka's, 70 per cent of Bhutan and 29 per cent of Thailand's (WHO, 2015). Furthermore, the per capita health care spending in India is less than one percent comparing to developed economies like Switzerland and the USA. According to National Health Account (NHA), the total health expenditure percentage of GSDP is decreasing over the period; it was around 4.63 % of GSDP during 2001-02 while it declined to 3.78 % of GSDP by the end of 2016-17.

We noticed that total public health sector spending is less than a quarter of the total health spending in India, whereas it is considered an important source to streamline the planning, regulating, and shaping the health care services and make them easily available to the general public of the society. Public spending in terms of providing health care services is essential to maintain the quality of health and avoid negative externalities associated with health. However, healthcare is a state's subject and financing the health care services is primarily the State Governments responsibilities. The government health expenditure in India increased over the period; however, the intensity becomes stronger after 2010.

The central government spending on public health is channeled through the "Ministry of Health and Family Welfare (MoHFW)", which takes the responsibility for financing the health care services in India. The total budget of MoHFW is around Rs 20,138 crore in 2009-10 which was increased to Rs 73,932 crore by 2021-22, an average growth of 12 % over the period. The share of the Central Government spending on health care services, which includes 'grant-in-aid to States', contributes to one-third spending of both the States and the Centre. The allocation pattern witnessed that the central allocations was increased from 4% to 6% over the period of 1991 to 2003. The larger share of Rs 36,576 crore is allocated to the National Health Mission which is almost 55 % of total MoHFW during 2021-22. The rising exponensional trend in the allocated towards the National Health Mission shows the strengthening in public health systems in providing better healthcare delivery.

The endowment of health care in India is primarily comes under the state governments responsibility. Now the level of health care spending is directly links to the state governments'

fiscal health that in turn decides the state's overall performance in terms of revenue generating. For instant, if the state comes under low-income category states, where the level of fiscal performance is very poor, in that case it's not surprising to say that these states have limited capacity to finance public health. The lower Central transfers to these states failed to offset the fiscal imbalances fully across the states Madhya Pradesh witnessed less variation in public spending compare to other states that confirm the steady change in government health expenditure during last one decade.

At the State level, public health is also financed through general tax and non-tax revenue resources despite of having negligible share in total government health expenditure. In Madhya Pradesh state an average own-tax revenue collection is around 10.4 % of GSDP and state own non-tax revenue is 1.9 % of GSDP in last three consecutive periods. In early 1990s, when reform measures were initiated by the Centre the share of fiscal transfers to States were increased, moreover states also observed a sharp rise in Gross State domestic Product (GSDP). We find a positive correlation exist between state GSDP and budget size. It implies, as the level of GSDP increases, the state expenditure on public health will increase proportionately. It is important to note that government spending on health is positively correlated with per capita income levels by states. The public spending on health increase from 24 % to 28 % of total health spending as the per capita GSDP approaches to 4.6 % to 5.3 %.

Analysing the inter-state differentials in public spending on health, In some states, the level of government health spending has significantly increased. For example, the top five states in terms of health spending are Maharashtra, Uttar Pradesh, Andhra Pradesh, Tamil Nadu, and Karnataka. In Madhya Pradesh, however, the government health spending increased from Rs 800 crore in 2001-02 to Rs 6324 crore by 2016-17 and registered a growth of 12% in the last three years. The disparities in health care spending between states have widened. The top four states in terms of per capita government health spending are Kerala, Karnataka, Tamil Nadu, and Maharashtra, whereas the worst four states are Bihar, Uttar Pradesh, Madhya Pradesh, and Assam. This disparity has grown significantly in recent years.. Despite of increase in government health spending in Madhya Pradesh, still this state lagging behind compare to other states in terms of per capita health spending. Moreover, the variations in per capita government health expenditure across states

increased in first two years. Such as from 2001-02 to 2004-5, the coefficient of variation in per capita government health expenditure across states has increased from 48.6 to 56.2.

Next, analyzing the share of private spending on consumption of health care services is disproportionate that of the Government's contribution. According to National Health Account (NHA) more than 70 % of health care expenses was paid from public own pockets/Household income. From the graphical presentation it is confirms that there is a negative relationship between government health spending and OOP expenditure. As the size of government expenditure on health increases the level of OOP expenditure on health declines. However, in absolute terms the household out-of-pocket expenditure increased in recent period, but in percentage of GSDP its decline to 2 % towards the end of 2016-17. Moreover, the overall growth rate of household spending is 6 % that is close to be Rs 40,000 crore in nominal terms during 2016-17. Analyzing the state wise household expenditure on health it is observed that during 2004-05 states like Uttar Pradesh, Maharashtra, and Kerala were noted as the highest out-of-pocket expenditure states. While Himachal Pradesh, Assam and Haryana registered as lowest OOP Expenditure spending states. In general, it is expected that as the size of government budget on public health increases the level of out-of-pocket expenditure comes down. It implies a rise in per capita government health spending will reduce the burden of out-of-pocket expenditure. When the per capita public spending was Rs 250 then the level of OOP expenditure is around Rs 14000, and the burden gradually decrease to 12000 as the level of per capita public spending rises to Rs 2500. The states that have higher per capita spending like Himachal Pradesh have lower out-of-pocket expenditure.

In context of Madhya Pradesh, it is recognized that the nature of household OOP is not much different from other low-income states. In Madhya Pradesh the level of out-of-pocket expenditure on health expenses increasing over the period with an overall growth rate of 5 %. It is observed that the overall growth of per capita government spending on health is around 8 % which just above the per capita out-of-pocket spending. This implies an inadequate health care financing by state government will increase the financial burden on the poorer sections of the population. The impact of out-of-pocket spending is much higher for them those household incomes is very low, especially the burden of out-of-pocket huge in case of inpatient care or critical illnesses. The rise in household out-of-pocket expenditure will reduces their spending on other essential and basic

needs such as food, shelter, clothing, education etc. Due to which the households have to borrow loan money from friends/ relatives/ money lenders that further pushes the household into debt trap.

Next when we compare the out-of-pocket expenditure per Hospitalization in Madhya Pradesh and India during the last 365 days (2017-18). The average out-of-pocket expenditure by male is Rs 20422 and Rs 102385 by female in rural Madhya Pradesh, while comparing to India it was while 20% higher for male and 10% higher for female. In terms of social groups, the highest out-of-pocket spending categories are OBC, followed by ST and SC. While ST males and SC females are spending more form their pockets in Madhya Pradesh, but India as whole SC peoples are paying more after OBCs category. The level of education and out-of-pocket spending in Madhya Pradesh, both male and female with Graduation and above will spend from their pockets to cover health expense than compare to others. In terms of age groups, peoples with age group above 60 spends an average of Rs 18943 form their own pocket. In all the Cases the out-of-pocket spending by women are less compare to men. Similarly, the household OOP health expenditure does not shows much difference when we analysis OOP Health Expenditure per OPD Spending during the last 15 day for the same time period. Moreover, the financing channel to cover the health expenses clearly indicates that around 90 % of OOP expenditure comes from individual household income/savings.

The accessibility of Health insurance or health scheme in India shows a satisfactory improved over the last ten years. According to NHA, by the end of 2013-14, in India around 40.8 crore individuals were covered by health insurance which is about one-third of the Indian total population. There is 8.8 crore individuals are covered under social health insurance, 15.5 crore individuals covered under government health insurance (associated with an insurance company), 10.3 crore individuals having government health insurance associated with government department/trusts/societies, and around 6.09 crore individuals covered under private insurance policies. Based on the NFHS-3 and NFHS-4 report it is seen that nearly seven times increase in accessibility of health insurance by the people from 2005 to 2015. Only 4.8 per cent of total health insurance covered up to 2005-06 from the entire population while it comes to 2015-16 in these ten years the number of insurances covered by the public increase to 28.7 percentage of total population. Andhra Pradesh was the state which covers a large number of health insurance coverage about 80.5 per cent respectively to the end of 2015-16. Bihar is the only state that shows an improvement of 12% and Manipur a deterotion of 3%. However, in case of Madhya Pradesh the health insurance coverage over the

period increased by 13 percent, but it is less than the national average. When it comes to by category wise all the three groups SC, ST and OBC improved its insurance coverage. It noticed that the percentage of health insurance holdings by OBC comes down to the third position, whereas SC and ST stand on a first and second place in the list of the higher holding of health insurance (NFHS-4, 2015-16). Its implies that the health policies undertaken by the government in India from the last ten years show an upgrading in the health services of this three groups SC, ST and OBC. But at the same time, it is also revealed that the improvement goes in favour of SC and ST pushing back to OBC that creates an upcoming problem for the country. Compare the health insurance coverage between female and male within the categories, as per NFHS-4 report the total health insurance coverage by women in India is 20.4 per cent whereas is 22.9 per cent in case of men (around 3 per cent above the female), it implies the number of insurances undertaken by a male is still large compared to the female that represent a little gender bias in insurance holdings, and it also reflects how the society is under control (dominated) of male gender or says the insurance preference is mostly undertaken by the male compared to female. Comparing across the states the men in Andhra Pradesh are 5% above in holding health insurance than to compare to women. The next highest health insurance covered state is Kerala followed by Tamil Nadu , where in both states men are better in avaling health insurance than to woemen. The worst condition is seen in the case of Nagaland with less the 2 per cent health insurance covered by men and almost nil by women, the same scenario is witnessed for Manipur, where the proportion insurance is 3 per cent for men, but no coverage for women. Madhya Pradesh as a case study it is observed that the health insurance covered by men is 2 percent more than the women and same is noticed for category wise, men are in better position to attain insurance.

However, it is noticed that the health insurance coverage is not at all satisfactory, especially in case of women across the states and categories wise (Scheduled tribe, Scheduled caste, and other backward class), like Assam, Manipur and Uttar Pradesh. Madhya Pradesh is the states that shows an improvement in over all coverage of health inshurance but it is still behind from Andhra Pradesh Kerala and Tamil Nadu and need to focused on this issue.

Hence, from the above discussion, it is clear that the health insurance schemes coverage in India is not satisfactory even the improvement is continuing from expenditure side. The government requests to take some urgent remedial steps to provide a large number of health insurances at the

low cost of premium so that a large number of the household can easily access health insurance without any gender and caste discrimination.

Chapter 6: Women Health Status of SCs and STs in Madhya Pradesh: A Primary Data Analysis

"There is one lesson from the past, in particular, that we cannot afford to ignore: You cannot make progress on gender equality or broader human development without safeguarding women's reproductive health and rights." *Hillary Clinton*

6.1. Introduction

The vast existing debates on women's health have reflected only briefly aspects of women's health outside of their reproductive health, specially, at the level of health policy, women's major relevance has been as child bearers and carers in India and other developing nations.. Any accurate conception of women's health must consider their overall well-being, a state of being that is influenced by a variety of circumstances, including the demands of their jobs, their diets, their stress levels, their experiences in war, and their migration. Almost entirely unconsidered in health research and policy analysis is a critical area (Carr-Harris J.1992).

The literature asserts that women engage in a variety of gender-based activities as domestic employees, producers, and wage earners. The ability to avoid artificial distinctions between the natural and constructed environments, rural and urban locations, and developing and developed nations as settings for women's environmental health issues comes from understanding the environment for human health as a "biophysical life space."(Bonnie Kettel, 1996).

Women are also controlled on a daily basis as health managers in India and other nations. Women maintain the health of their families through performing household tasks including sweeping, cleaning, fetching water, washing clothing, cooking, and providing food to the family (MacCormack C, 1992). Through a variety of activities, women play a crucial part in preserving the health and wellbeing of their homes. Women maintain their health by taking on caregiving responsibilities. This is a universal truth: once a family member becomes ill, it is usually women who tend to them. According to MacCormack, ignoring their expertise, interest, and social legitimacy to give care is a waste of a precious human resource. It is clear that women's health interests and needs are not taken into account; this is made difficult by top-down health delivery,

gender-blind data gathering, and a lack of interest in women's participation. A substantially less expensive alternative is to formulate health policies that take gender equality into account.

Diarrhoeal disorders, acute respiratory illnesses like bronchitis and pneumonia, various infectious diseases like TB, and vector-borne illnesses like schistosomiasis and malaria are the primary causes of mortality in India. Diseases including diarrhoea, typhoid, schistosomiasis, and malaria are brought on by bacteria or other vectors (such as snails and mosquitoes) in local water systems. Smoke and other airborne contaminants frequently cause pneumonia and bronchitis. Airborne bacteria, which cause tuberculosis, are typically made more prevalent by insufficient and unhygienic living circumstances.

The two main causes of mortality, including those of women, are heart disease and cancer. Although it is not clear how much of an impact environmental factors, such as toxic contamination, water and air pollution, and recent studies have drawn attention to the impact of the organochlorines, which are present in pesticides and refrigerants and increase the risk of breast and ovarian cancer, may have on health issues like heart disease and cancer, which are not typically recognised as "environmental illnesses,"

In this chapter the participation of women and their health-related issues are the main concern. This chapter's goal is to analyse some of the key concerns pertaining to the effect of the on women's health, particularly in three districts of Madhya Pradesh, and to provide a conceptual framework that will aid in the development of women's health policies and initiatives.

6.2. Joint and Nuclear Family

Family, and their composition and structure is considered as a mysterious social institution to define. The question is arises what is the joint and nuclear family and what constitute it. The usually define of the nuclear family is that it consists of wife and husband with or without their unmarried sons and daughters (Abraham, 2015). Specially in India the joint family is generally understood at least three generations of parents, like their married sons and grandchildren staying and living together or even their brothers and brothers wives and children residing together (Dube, 1955; Gore, 1968). The preliminary research shows that in India, the joint family number has been declining and it is less in comparison to nuclear family.

In India, the type of family supports people's living standards in all areas, enabling them to have contented and quality lives. Indian culture has been demonstrated to standardise the family network by defining different family kinds and sizes, as well as social obstacles, norms of cooperation, appropriate behaviours, regulation, connection patterns, and family hierarchy. Family is as a social group where parents and their children live under the one floor. In India, there is different kind of family systems. In the existing literature, there is two types of family, one is joint family and other is nuclear family systems. “The concept of a nuclear family is "a two-generation family made up of a father and mother and children, or a single, maybe widowed, parent and his or her offspring." Joint families, which are defined as those with "three or more generations living together with both vertical and lateral extension having a single line of authority, either patrilineal or matrilineal," fall under the same concept. (Lodhi, Fahad Saqib, et al (2021).

There is two kind of argument about joint and nuclear family, and both are associate with advantages and disadvantages or both may affect the quality of life (QOL) of the family. Purpose of this study to see how many families have been living as joint and nuclear family among the study village, and also analyses their quality of live by the social groups.

Table No: 6.1. Joint and Nuclear family of the households of in three districts of the rural Madhya Pradesh.

Districts	Joint family	Nuclear family	Total
Hoshangabad	63	185	248
	(25.4)	(74.6)	100
Betul	58	118	176
	(32.95)	(67.05)	100
Harda	37	91	128
	(28.91)	(71.09)	100
Total	**158**	**394**	**552**
	(28.62)	**(71.38)**	**100**

Source: Author’s own estimates from primary survey (2018-2019).

Table 6.1 This study is investigated and found very similar results. This study proclaims that in the total household 71.38 percent of the household have nuclear family and 28.62 percent of the

joint family. This study also found very similar result, and its highlight that STs Household (32.76 percent) living as more joint family than SCs households (24.05). But in case of nuclear family, its shows that STs household (67.24 percent) have less nuclear family than SCs household (75.95 percent) (Appendix, Table 6.1).

6.3: Types of Houses

The vast literature talks about the basic need of the people as bread, cloth and housing. In India, some people do not have these basic needs. House is one of the essential basic need of the people, which show the quality of life. During the rainy season, people faced huge problems because of Kachcha house and hut. Table 6.2 this study found that around 67 percent of the household have Kachcha house, only 13 percent of the family have Pakka House. Among the social Group, SC has more Pakka house in comparison to STs. Among the three districts, the Pakka House is more in Hoshangabad district than the other two districts. In study village few people have given their house on rent (Appendix, Table 6.2).

Table No.6.2: Type of houses of scheduled Caste and Scheduled Tribes in three district of Madhya Pradesh.

District No	Social group	Type of house			Total
		Pakka	Semi-Pakka	Kachcha	
Hoshangabad	ST	24 (16.22)	44 (29.73)	80 (54.05)	**148 (100)**
	SC	20 (20.0)	28 (28.0)	52 (52.0)	**100 (100)**
	Total	**44 (17.74)**	**72 (29.03)**	**132 (53.23)**	**248 (100)**
Betul	ST	1 (1.35)	4 (5.41)	69 (93.24)	**74 (100)**
	SC	11 (10.78)	10 (9.8)	81 (79.41)	**102 (100)**
	Total	**12 (6.82)**	**14 (7.95)**	**150 (85.23)**	**176 (100)**

Harda	ST	7 (10.29)	7 (10.29)	54 (79.41)	**68 (100)**
	SC	11 (18.33)	17 (28.33)	32 (53.33)	**60 (100)**
	Total	18 (14.06)	24 (18.75)	86 (67.19)	**128 (100)**
All districts	ST	32 (11.03)	55 (18.97)	203 (70.0)	**290 (100)**
	SC	42 (16.03)	55 (20.99)	165 (62.98)	**262 (100)**
	Total	**74 (13.41)**	**110 (19.93)**	**368 (66.67)**	**552 (100)**

Source: Author's own estimate from the primary survey (2019)

6.4: Public Distribution System

In India, central and state government spend huge money under the public distribution system (PDS). The purpose of this scheme is to reduce poverty and malnutrition in India. This is one of the largest ever social welfare programme which provides subsidized food grain such as rice and wheat to the poor households and low income people (Panda, Basant Kumar, et al, 2020).This program is very effective for the poor people, as well as rich people also. This study attempt to estimate how many household have BPL, Antodaya and Patragrihasti card among the SC and ST in the study village.

One of the key factors in malnutrition that is mediated by inadequate nutritional intake, bad environment, lack of access to sanitation and hygiene services, and medical treatment (Ijarotimi, O. S. (2013). The primary priority of emerging nations has been the elimination of poverty and undernourishment through different welfare initiatives. In order to eradicate poverty and enhance quality of life, state and municipal governments in India have implemented several social welfare programmes. The results of these programmes vary depending on the services provided and the country in question. (Vanneman, R., & Desai, S. (2015). In addition to having a negative impact on health, childhood mortality, and the chance of acquiring non-communicable illnesses in the

long run, undernourishment in children is directly related to poverty and quality of life (Victora, Cesar G., et al 2008).

Poverty is very disgraceful. Many studies found that the incidence of poverty is much higher among SCs and STs (Chandra, S. 2018). This study also found that the incidence of poverty is much higher among SCs and STs. Most of the policy and program has linked with the BPL card. If the poor people have BPL Card, then they can gate the benefit of policies and program. The table 6.3 shows that around 68 percent of the household have BPL card. It means by the government estimates all the BPL cardholders are below the poverty line; only six percent of the household are above the poverty line. This indicates that the economic condition of poor people is very shocking.

Table No.6.3: Household Possess Ration Card by the Social Groups.

Districts	**Social Group**	**Antodaya**	**BPL**	**APL**	**Others (Patragrhsti)**	**Total**
Hoshangabad	**ST**	9 (6.08)	108 (72.97)	9 (6.08)	0 (0.0)	148 (100)
	SC	9 (9.0)	56 (56.0)	11 (11.0)	6 (6.0)	100 (100)
	Total	18 (7.26)	164 (66.13)	20 (8.06)	6 (2.42)	248 (100)
Betul	**ST**	26 (35.14)	44 (59.46)	0 (0.0)	*	74 (100)
	SC	8 (7.84)	78 (76.47)	8 (7.84)	*	102 (100)
	Total	34 (19.32)	122 (69.32)	8 (4.55)	*	176 (100)
Harda	**ST**	3 (4.41)	40 (58.82)	3 (4.41)	1 (1.47)	68 (100)
	SC	0 (0.0)	48 (80.0)	4 (6.67)	1 (1.67)	60 (100)
	Total	3	88	7	2	128

		(2.34)	(68.75)	(5.47)	(1.56)	(100)
All Districts	**ST**	38 (13.1)	192 (66.21)	12 (4.14)	1 (0.34)	290 (100)
	SC	17 (6.49)	182 (69.47)	23 (8.78)	7 (2.67)	262 (100)
	Total	**55 (9.96)**	**374 (67.75)**	**35 (6.37)**	**8 (1.45)**	**552 (100)**

Source: Author's own estimate from the primary survey (2019)

6.5: Drinking Water Availability

A few diseases that can spread because of polluted water and poor sanitation are cholera, diarrhoea, dysentery, hepatitis A, typhoid, and polio. When water and sanitation services are unavailable, inadequate, or poorly administered, people are subjected to health risks that can be avoided. This is particularly true in healthcare facilities where a lack of services for cleanliness, sanitation, and water raises the risk of illness and infection for both patients and staff. This study found that the availability of clean drinking water is very poor in three districts' study area. Among all three districts, only seven percent of the household have a drinking water facility inside the premises. Table 6.4 shows that around 93 percent of the sample household bring drinking water from outside the premise and only 3 percent of the households have drinking water facility inside the premise. We find that SC household have has slightly more drinking water facility inside the premise than the ST household.

Table No. 6.4. Drinking water source inside and outside the premise.

District No	**Social Group**	**Drinking Water Source**		**Total**
		Inside	**Outside**	
Hoshangabad	**ST**	12 (8.11)	136 (91.89)	148 (100)
	SC	9 (9.0)	91 (91.0)	100 (100)
	Total	**21 (8.47)**	**277 (91.53)**	**248 (100)**

Betul	**ST**	1 (1.35)	73 (98.65)	74 (100)
	SC	0 (0.0)	102 (100)	102 (100)
	Total	**1** **(0.57)**	**175** **(99.43)**	**176** **(100)**
Harda	**ST**	4 (5.88)	64 (94.12)	68 (100)
	SC	16 (26.67)	44 (73.33)	60 (100)
	Total	**20** **(15.63)**	**108** **(84.38)**	**128** **(10 0)**
All districts	**ST**	17 (5.86)	273 (94.14)	290 (100)
	SC	25 (9.54)	237 (90.46)	262 (100)
	Total	**42** **(7.61)**	**510** **(92.39)**	**552** **(100)**

Source: Author's own estimate from the primary survey (2019)

6.6: Electricity Availability

Electricity is one of the important sources to improve the well-being of the poor. The unavailability of electricity in rural as well some urban area has been a problem. The main purpose of electricity is lightening and use it for agriculture work. The study finds that some of the households have not electricity facility, and has been facing huge problem because government is not distributing kerosene oil under the PDS. The household, those who are not having electricity facility facing many problems. Table 6.5 we see that 10% of the sample household have no electricity facility. This percentage is much higher in the Betul and Harda district in comparison to Hoshangabad.

Table No.6.5: Availability of electricity among three districts.

District No	Social Group	Electricity		
		No	**Yes**	**Total**
Hoshangabad	ST	17 (11.49)	131 (88.51)	148 (100)
	SC	3 (3.0)	97 (97.0)	100 (100)
	Total	**20 (8.06)**	**228 (91.94)**	**248 (100)**
Betul	ST	8 (10.81)	66 (89.19)	74 (100)
	SC	10 (9.8)	92 (90.2)	102 (100)
	Total	**18 (10.23)**	**158 (89.77)**	**176 (100)**
Harda	ST	18 (26.47)	50 (73.53)	68 (100)
	SC	1 (1.67)	59 (98.33)	60 (100)
	Total	**19 (14.84)**	**109 (85.16)**	**128 (100)**
All districts	ST	43 (14.83)	247 (85.17)	290 (100)
	SC	14 (5.34)	248 (94.66)	262 (100)
	Total	**57 (10.33)**	**495 (89.67)**	**552 (100)**

Source: Author's own estimate from the primary survey (2019)

6.7 Type of Fuel Energy for Cooking

This study demonstrated that women who cooked with biomass fuel experienced respiratory and other morbidities. Additionally, it was shown that the morbidities rose as cooking time increased. There are a number of health issues for which there is either very little or contradictory data. To further understand the dose-response interactions between indoor air pollution and numerous health impacts, more study is needed (e.g., increased mortality and morbidity risks).

Table 6.6 The study found that around 40 of the households have LPG, and approximately 70 percent of households use wood as cooking energy. The study also found that many households are not using LPG because of the high gas refiling price.

Table No 6.6: Type of fuel energy for cooking: Firewood, LPG and Kerosene.

Districts	**Social group**	**Firewood**		**LPG**		**Kerosene**		
		No	**Yes**	**No**	**Yes**	**No**	**Yes**	**Total**
Hoshangabad	ST	24 (16.22)	124 (83.78)	114 (77.03)	34 (22.97)	144 (97.3)	4 (2.7)	**148 (100)**
	SC	43 (43.0)	57 (57.0)	36 (36.0)	64 (64.0)	91 (91.0)	9 (9.0)	**100 (100)**
	Total	**67 (27.02)**	**181 (72.98)**	**150 (60.48)**	**98 (39.52)**	**235 (94.76)**	**13 (5.24)**	**248 (100)**
Betul	ST	4 (5.41)	70 (94.59)	66 (89.19)	8 (10.81)	73 (98.65)	1 (1.35)	**74 (100)**
	SC	57 (55.88)	45 (44.12)	41 (40.2)	61 (59.8)	100 (98.04)	2 (1.96)	**102 (100)**
	Total	**61 (34.66)**	**115 (65.34)**	**107 (60.8)**	**69 (39.2)**	**173 (98.3)**	**3 (1.7)**	**176 (100)**
Harda	ST	8 (11.76)	60 (88.24)	56 (82.35)	12 (17.65)	65 (95.59)	3 (4.41)	**68 (100)**
	SC	35 (58.33)	25 (41.67)	19 (31.67)	41 (68.33)	59 (98.33)	1 (1.67)	**60 (100)**
	Total	43 (33.59)	85 (66.41)	75 (58.59)	53 (41.41)	124 (96.88)	4 (3.13)	**128 (100)**

All districts	ST	36 (12.41)	254 (87.59)	236 (81.38)	54 (18.62)	282 (97.24)	8 (2.76)	**290 (100)**
	SC	135 (51.53)	127 (48.47)	96 (36.64)	166 (63.36)	250 (95.42)	12 (4.58)	**262 (100)**
	Total	**171 (30.98)**	**381 (69.02)**	**332 (60.14)**	**220 (39.86)**	**532 (96.38)**	**20 (3.62)**	**552 (100)**

Source: Author's own estimate from the primary survey (2019)

6.8. Type of Toilet Use and Drainage System

In underdeveloped nations, people's health is guaranteed and promoted by having access to adequate restrooms and cleanliness. To stop the transmission of disease, toilets and good hygiene are crucial. In order to protect human health, sanitation systems seek to uphold and foster a clean environment. The World Bank discovered that additional health problems, such child stunting, are brought on by the consequences of contaminated drinking water and poor cleanliness. Sanitation is crucial for women and girls' health, safety, and dignity. Toilets offer a sanctuary for women and teenage girls to reduce the danger of harassment.

Table 6.7 This Study found that only 20% of the household have toilet facility inside the house, around 25 percent of the household have toilet facility outside of the house, and around 55 percent of the household they do not have toilet facility. The study also found that the quality of toilet facility inside and outside is not good. So overall the condition of the people is very disgraceful. The government policy and program (Swachh Bharat) has not been effective in terms of sanitation.

Table No 6.7: Types of Toilet Use Inside & Outside the House and Open Defecation.

District No	**Social group**	**inside the house**	**Outside house**	**Open defecation**	**Total**
Hoshangabad	ST	41 (27.7)	53 (35.81)	54 (36.49)	148 (100)
	SC	32 (32.0)	46 (46.0)	22 (22.0)	100 (100)
	Total	**73 (29.44)**	**99 (39.92)**	**76 (30.65)**	**248 (100)**

Betul	ST	*	0 (0.0)	74 (100)	74 (100)
	SC	*	5 (4.9)	97 (95.1)	102 (100)
	Total	*****	**5(2.84)**	**171 (97.16)**	**176 (100)**
Harda	ST	7 (10.29)	9 (13.24)	52 (76.47)	68 (100)
	SC	31 (51.67)	21 (35.0)	8 (13.33)	60 (100)
	Total	**38 (29.69)**	**30 (23.44)**	**60 (46.88)**	**128 (100)**
All Districts	ST	48 (16.55)	62 (21.38)	180 (62.07)	290 (100)
	SC	63 (24.05)	72 (27.48)	127 (48.47)	262 (100)
	Total	**111 (20.11)**	**134 (24.28)**	**307 (55.62)**	**552 (100)**

Source: Author's own estimate from the primary survey (2019)

6.9 General and Chronic Disease

6.9.1 General Disease

Economic growth and development of a country is mainly linked with the health status of its people and health is one of the important determinants of economic development of the country. The vast literature proclaim that a nation with health and strong workers has capability and ability to increase the productivity of the economy. The numerous empirical findings have demonstrated a beneficial association between the nation's health and economic growth. Strong and healthy workers have a greater chance of boosting the nation's total economic output. In other words, increased levels of productivity can only be found by employing strong, dependable workers. Economic growth is a necessary but insufficient condition in India for eliminating poverty and enhancing public health. Even though economic expansion may raise some people's incomes, it

may not necessarily lead to better health for everyone. Because of this, the Commission on Macroeconomics and Health (CMH) was established by the World Health Organization (WHO) in 2000. This was done in an effort to assess the role that health plays in the advancement of the global economy. (Sengupta, K., 2016).

The enormous literature proclaimed that the poor people are the victims of higher level of mortality and morbidity. Most of India's poor spend a bigger portion of their income on chronic and non-chronic illnesses. As a result, ill individuals in India are enmeshed in a vicious circle of low income, poor health, low productivity, limited earning capacity, and increased debt. A population's overall well-being and economic growth are both boosted by excellent health. In light of this, there is a distinct link between worker health and productivity, as well as capacity to earn a living and economic growth. Schultz 1999a, b, 2002; Strauss and Thomas 1998; Saved off and Schultz 2000; Schultz and Tansel 1992. (Saved off and Schultz 2000; Schultz 1999a, b, 2002; Schultz and Tansel 1992; Strauss and Thomas 1998).

This study reveals that in most of the general diseases, women are suffering more than in comparison to men. Table 6.8A shows that among all the study area, around 53 percent of the female and 47 percent of men are suffering general disease. In case of all male and female general disease such as Malaria, Eye Infection, Tooth Ache, Goiter, Spine/Hip Pains, Womb/Uterus Problems, Skin Disease and Piliya, more of the women are suffering then men *(*Appendix, Table 6.3A *District wise analysis*).

Table No.6.8 A: General disease of three districts Male-female

	For all District	**Female**	**Male**	**Aggregate**
S. No	**Name of the Disease**	**Number of persons (percentage)**	**Number of persons percentage**	**Total percentage**
Communicable diseases				
1	Malaria	39 (57.35)	29 (42.65)	68 (100)
2	Typhoid	5 (50.0)	5 (50.0)	10 (100)
3	Dengue	1 (50.0)	1 (50.0)	2 (100)
4	Chicken guniya	1	1	2

		(50.0)	(50.0)	(100)
5	Chicken Pox	5 (55.56)	4 (44.44)	9 (100)
6	Cough And Cold	308 (50.49)	302 (49.51)	610 (100)
7	Eye Infection	12 (63.16)	7 (36.84)	19 (100)
8	Tooth Ache	13 (68.42)	6 (31.58)	19 (100)
9	Goiter	2 (66.67)	1 (33.33)	3 (100)
10	General Fever	304 (50.84)	294 (49.16)	598 (100)
11	Joint Pains	102 (56.67)	78 (43.33)	180 (100)
12	Spine/Hip Pains	25 (60.98)	16 (39.02)	41 (100)
13	Injuries/Burns /transport	3 (42.86)	5 (57.14)	8 (100)
14	Womb/Uterus Problems	13 (100.0)	0 (0.0)	13 (100)
15	Periods/Menses/over-bleeding	21 (100)	0 (0.0)	21 (100)
16	Itching	14 (50.0)	14 (50.0)	28 (100)
17	Skin Disease	3 (75.0)	1 (25.0)	4 (100)
18	Headache	1 (50.0)	1 (50.0)	2 (100)
19	Ear-Pain	1 (50.0)	1 (50.0)	2 (100)
20	Piliya	2 (66.67)	1 (33.33)	3 (100)
Total		875 (53.3)	767 (46.7)	1642 (100)

Source: Author's own estimate from the primary survey (2019)

6.9.2. Chronic Diseases

Chronic diseases are long-term diseases and many chronic diseases has several sever negative impact on the life of people. Day by day, the death rate has been increasing gradually and hampering the socio-economic development. Chronic diseases are one of the important causes of death and disability. The literature finds that a 53% death happened due to chronic diseases in India (WHO, 2005) The literature also find that Chronic diseases include Cancer, Cardiac Failure, Chronic Respiratory Diseases, Cardiac Arrhythmia, Chronic Kidney Disease (CKD), Diabetes Mellitus, Human Immunodeficiency Virus (HIV), Obesity, Hemophilia, Strokes, Hypertension, Asthma, Hyperlipidemia, Arthritis Coronary Artery Disease and Parkinson's disease.

The vast literature suggest that Men have higher rates of mortality, while women report higher prevalence of morbidity in comparison to men. This can be described by utilizing two important theories namely psychosocial and the biological. As many studies find that India is underdeveloped country, incidence of chronic diseases can enforce a double burden, most state is still struggling communicable diseases. Some important report and study highlight that the emergence of chronic diseases are demographic changes, urbanization, and lifestyle factors such as consumption of alcohol & tobacco, and diet exercise (Nugent, 2008; Upadhyay, 2012). Thakur et al 2011 argued that “Chronic diseases are in fact highly inequitable with higher risk factors among lower socio-economic groups and with more adverse financial implication for the poor in India”. Malnutrition in early life and Infection, a common incidence amongst the poor are found to increase the risk of chronic disease in later life (Bygbjerg, 2012).

We find that the prevalence rate of the chronic disease is much higher in the women in comparison to the men. The table 6.8B shows that in total male and female cancer patient around 80 percent are women and 20 percent are men, and similar result found in case of obesity (Appendix Table 6.3B).This study also finds that in case of TB, the prevalence rate in male (60%) is higher than female (40%) in the study village.

Table No.6.8 B: Chronic Disease among Three Districts Male-female Wise Estimate

	For all District	Female	Male	Aggregate
S. No	**Name of the Disease**	**Number of persons (%)**	**Number of persons (%)**	**Total (%)**
Communicable diseases				
1	Diarrhea	3 (75.0)	1 (25.0)	4 (100)
2	Lower Respiratory	5 (71.43)	2 (28.57)	7 (100)
3	Iron Deficiency	37 (71.15)	15 (28.85)	52 (100)
4	Tuberculosis (TB)	2 (40.0)	3 (60.0)	5 (100)
5	Paralysis	4 (66.67)	2 (33.33)	6 (100.0)
6	Cancer	4 (80.0)	1 (20.0)	5 (100.0)
7	Cardiovascular	9 (60.0)	6 (40.0)	15 (100)
8	Urogenital	1 (33.33)	2 (66.67)	3 (100)
9	Blood Presser (BP)	34 (64.15)	19 (35.85)	53 (100)
10	Mental Disorders	2 (100.0)	0 (0.0)	2 (100)
11	Digestive Diseases	10 (62.5)	6 (37.5)	16 (100)
12	Diabetes	7 (53.85)	6 (46.15)	13 (100)
13	Obesity	4	1	5

		(80.0)	(20.0)	(100)
14	Piles	5 (55.56)	4 (44.44)	9 (100)
15	Appendix	0 (0.0)	7 (100)	7 (100)
16	Visual Handicap	1 (33.33)	2 (66.67)	3 (100)
17	Neemoniya	1 (50.0)	1 (50.0)	2 (100)
18	Hernia	1 (25.0)	3 (75.0)	4 (100)
19	Stone	9 (60.0)	6 (40.0)	15 (100)
20	Heart Attack	0 (0.0)	1 (100)	1 (100)
21	AIDS	0 (0.0)	1 (100)	1 (100)
Total		**139** **(61.0)**	**89** **(39.0)**	**228** **(100)**

Source: Author's own estimate from the primary survey (2019).

6.10.1: Health Expenditure on General and Chronic Diseases

There is a need to understand the status and relevancy of basic health facility in India, the vast literature proclaim that healthcare sector is one of the largest sectors, and India has been a large hub of well-trained medical professionals and also the cost of healthcare is low in India as compared to Asia and Western countries. A recent article published in the Lancet states that over five million people each year pass away owing to insufficient healthcare, with nearly a third of them occurring in India (1.6 million). Many people died due to heart attacks, stroke, diabetes etc. have either increased or stagnated. There is an epidemic of poor-quality care (Lyer, 2018).

Table 6.9A and 6.9B shows the health expenditure incurred by the individuals on general and chronic disease. This study estimated and classified expenditure in three parts, first is fee of the

Doctor, second is medicine expenditure and third is expenditure of diagnostic. Table 6.9A shows that in case of general disease, 69.7% of the individuals have no expenditure (zero) incurred on doctor fee, 65.9% on medicine and 88% on diagnostic in the study village. We find that 14.81% of the people paid Doctor Fee 3.4% of people paid for diagnostic between Rs 1 to 100 for general diseases and around 11% of the people paid for medicine between Rs 1to 500.

Table 6.9A: Health expenditure on general diseases (Dr. Fee, Medicine and Diagnostic)

Expenditure on Doctor fee		**Expenditure on Medicine**		**Expenditure on Diagnostic**	
Expenditure Range	**Number of persons (%)**	**Expenditure Range**	**Number of persons (%)**	**Expenditure Range**	**Number of persons (%)**
0	1,903 (69.78)	0	1,799 (65.97)	0	2,400 (88.01)
1 to 100	404 (14.81)	1 to 500	291 (10.67)	1 to 100	95 (3.48)
101 to 200	240 (8.8)	501 to 1000	271 (9.94)	101 to 200	57 (2.09)
201 to 300	68 (2.49)	1001 to 2000	194 (7.11)	201 to 300	31 (1.14)
301 to 400	18 (0.66)	2001 to 3000	67 (2.46)	301 to 400	7 (0.26)
401 to 500	52 (1.91)	3001 to 4000	39 (1.43)	401 to 500	56 (2.05)
501 to 600	3 (0.11)	4001 to 5000	21 (0.77)	501 to 600	5 (0.18)
601to 1000	17 (0.62)	5001to 6000	10 (0.37)	601to 1000	44 (1.61)
1001 to 5000	18 (0.66)	6001 to 10000	22 (0.81)	1001 to 5000	29 (1.06)

5001to 30000	4 (0.15)	10001to 50000	13 (0.49)	5001to 10000	3 (0.11)
Total	**2,727 (100)**	**Total**	**2727 (100)**	**Total**	**2727 (100)**

Source: Author's own estimate from the primary survey (2019).

This study finds similar result in case of chronical diseases, where around 93% of the people find that they are not suffering with any chronical diseases or zero expenditure on chronical diseases (see Table 6.9B)

Table 6.9B: Health expenditure on chronic diseases (Dr. Fee, Medicine and Diagnostic)

Chronic Diseases Expenditure on Doctor fee		**Chronic Diseases Expenditure on Medicine**		**Chronic Diseases Expenditure on Diagnostic**	
Expenditure Range	**Number of persons (%)**	**Expenditure Range**	**Number of persons (%)**	**Expenditure Range**	**Number of persons (%)**
0	2,547 (93.4)	0	2536 (93.0)	0	2,569 (94.21)
1 to 100	41 (1.5)	301 to 400	1 (0.04)	1 to 100	14 (0.51)
101 to 200	22 (0.81)	401 to 500	2 (0.07)	101 to 200	15 (0.55)
201 to 300	10 (0.37)	501 to 600	2 (0.07)	201 to 300	9 (0.33)
301 to 400	6 (0.22)	601to 1000	21 (0.77)	301 to 400	4 (0.15)
401 to 500	22 (0.81)	1001 to 5000	96 (3.52)	401 to 500	25 (0.92)
601to 1000	35 (1.28)	5001to 10000	34 (1.25)	601to 1000	37 (1.36)

1001 to 5000	23	10001 to 30000	27	1001 to 5000	38
	(0.84)		(0.99)		(1.39)
5001to 10000	10	30001 to 70000	7	5001to 10000	8
	(0.37)		(0.26)		(0.29)
10001 to 70000	11	70001 to 100000	1	10001 to 40000	8
	(0.41)		(0.04)		(0.29)
Total	**2727**	**Total**	**2727**	**Total**	**2727**
	(100)		**(100)**		**(100)**

Source: Author own estimate from the primary survey (2019).

6.10.2 Transport and Food Expenditure on General Diseases

The extensive body of literature has shown that accessibility to and use of health care by the underprivileged is significantly influenced by distance. Most people prefer not to travel more than 5 kilometres to obtain basic preventative and curative treatment in many poor nations (Muller et al., 1998). This study noticed that there is lack of basic health facility in the study village of three district. Government as well as private hospitals is available all the study villages, but the distance from the government hospital to study villages is around 15-20 km. Many of the people those who are suffering from general disease and chronic disease, they are avoid to go government hospitals, and they take their treatment in the private hospital, and as we know in the name of private hospital they charged much. Many of the responded said that they do not want to go government hospital because there is lack of availability of the doctors and medicine. This study noticed that most of the people prefer to go with "Jhola Chhap Doctor" or family doctor because the distance from home the hospital is lesser than the government hospitals. Table 6.10A shows that 75% of the responded free from the general disease and around 21.6% of the people bear the transport cost between Rs 1 to 100. In case of expenditure on food, this study finds that 88.63 percent of total study person free from the general disease and only 2.4% of the patient paid Rs. 1 to 100 on food.

Table 6.10A: Transport and Food Expenditure on General Diseases

Expenditure on Transport		Expenditure on Food	
Expenditure Range	**number of persons (%)**	**Expenditure Range**	**number of persons (%)**
0(free from diseases)	2,055 (75.36)	0 (free from diseases)	2,417 (88.63)
1 to 100	564 (20.68)	1 to 100	68 (2.49)
101 to 200	62 (2.27)	101 to 200	69 (2.53)
201 to 300	5 (0.18)	201 to 300	32 (1.17)
301 to 400	1 (0.04)	301 to 400	17 (0.62)
401 to 500	22 (0.81)	401 to 500	50 (1.83)
601to 1000	14 (0.51)	501 to 600	7 (0.26)
1001 to 5000	4 (0.15)	601to 15000	67 (2.46)
Total	**2727 (100)**	**Total**	**2727 (100)**

Source: Auther's own estimate from the primary survey (2019).

In case of Transport and Food Expenditure on Chronic Diseases, table 6.10B this study find that around 92.92% percent of the people are free from chronic disease. We find that expenditure on transport is higher that the food expenditure. The expenditure on chronic disease is higher than the general disease.

Table 6.10B: Transport and Food Expenditure on Chronic Diseases

Expenditure on Transport		Expenditure on Food		Total Expenditure on Chronic Diseases	
Expenditure Range	**Number of persons (%)**	**Expenditure Range**	**Number of persons (%)**	**Expenditure Range**	**Number of persons (%)**
0(free from diseases)	2,567 (94.13)	0 (free from diseases)	2,592 (95.05)	0 (free from diseases)	2,534 (92.92)
1 to 100	63 (2.31)	1 to 100	5 (0.18)	1 to 100	1 (0.04)
101 to 200	22 (0.81)	101 to 200	2 (0.07)	601to 1000	4 (0.15)
201 to 300	5 (0.18)	201 to 300	14 (0.51)	1001 to 5000	81 (2.97)
401 to 500	31 (1.14)	301 to 400	5 (0.18)	5001to 10000	47 (1.72)
501 to 600	1 (0.04)	401 to 500	18 (0.66)	10001 to 30000	37 (1.36)
601to 1000	20 (0.73)	601to 1000	34 (1.25)	30001 to 70000	14 (0.51)
1001 to 5000	14 (0.51)	1001 to 5000	39 (1.43)	70001 to100000	3 (0.11)
5001to 10000	4 (0.15)	5001to 45000	18 (0.66)	100001 to 200000	6 (0.22)
Total	**2727 (100)**	**Total**	**2727 (100)**	**Total**	**2727 (100)**

Source: Auther's own estimate from the primary survey (2019).

6.11 Pregnancy and Place of Delivery

The rate of caesarean sections has grown globally due to a number of circumstances, including better safety. According to the research, these rates have become epidemic-level in several nations. Unnecessary caesarean section is very difficult for the poor and low-income women. According to some of the literature, avoidable caesarean sections may result in increased maternal and perinatal morbidity. The development of health systems in poor nations is crucial for the improvement of maternal and perinatal health. When resources are limited, doing unnecessary caesarean sections in a high number might be a severe resource drain. While the misuse of unneeded surgical operations is being evaluated in certain nations, millions of women in other nations lack access to the surgeries they require, endangering both their own and their children's lives.

6.11.1 Analysis of Pregnancy

Table 6.11 show the district-wise sample household women pregnancy among the social group. Among the 552 household, this study finds that in 74 (13.4%) household one or two women found pregnant. The study notice that ST women are more pregnant than SC women among all three districts.

Table No. 6.11: District Wise Women Pregnancy among the Social Group

District No	Social Group	Pregnancy		
		No	Yes	Total
Hoshangabad	ST	27 (18.24)	121 (81.76)	148 (100)
	SC	14 (14.0)	86 (86.0)	100 (100)
	Total	41 (16.53)	207 (83.47)	248 (100)
Betul	ST	8 (10.81)	66 (89.19)	74 (100)
	SC	11 (10.78)	91 (89.22)	102 (100)

	Total	19 (10.8)	157 (89.2)	176 (100)
Harda	**ST**	9 (13.24)	59 (86.76)	68 (100)
	SC	5 (8.33)	55 (91.67)	60 (100)
	Total	14 (10.94)	114 (89.06)	128 (100)
All Districts	**ST**	44 (15.17)	246 (84.83)	290 (100)
	SC	30 (11.45)	232 (88.55)	262 (100)
	Total	74 (13.41)	478 (86.59)	552 (100)

Source: Author's own estimate from the primary survey (2019)

6.11.2 Place of Delivery

An important factor in lowering the risk of new born and mother mortality is the location of delivery. Women were questioned about whether their most recent live delivery occurred at home or in a medical facility over the four years prior to the study (public hospitals, private hospitals or other health care institutions). Table 6.11A the study found that more than 30 percent delivery happened at own home only and around 40 percent in the Government Hospital. This study also asked some important question to the household such as: Have you ever birth to boy or girl who was born alive but later died? In the 552-sample size, the study finds that 79 (14.31%) household face this kind of problems (Appendix, Table 6.4).

Table No. 6.11A: Place of delivery: public & private hospital, own home or parents' home.

District No	Social group	Place of delivery					
		No	Public hospital	Private hospital	Own home	Parents home	Total
Hoshangabad	**ST**	27 (18.24)	52 (35.14)	4 (2.7)	64 (43.24)	1 (0.68)	148 (100)
	SC	14 (14.0)	47 (47.0)	4 (4.0)	29 (29.0)	6 (6.0)	100 (100)
	Total	**41 (16.53)**	**99 (39.92)**	**8 (3.23)**	**93 (37.5)**	**7 (2.82)**	**248 (100)**
Betul	**ST**	7 (9.46)	14 (18.92)	2 (2.7)	29 (39.19)	22 (29.73)	74 (100)
	SC	11 (10.78)	42 (41.18)	4 (3.92)	22 (21.57)	23 (22.55)	102 (100)
	Total	**18 (10.23)**	**56 (31.82)**	**6 (3.41)**	**51 (28.98)**	**45 (25.47)**	**176 (100)**
Harda	**ST**	8 (11.76)	25 (36.76)	1 (1.47)	12 (17.65)	22 (32.35)	68 (100)
	SC	5 (8.33)	37 (61.67)	3 (5.0)	15 (25.0)	0 (0.0)	60 (100)
	Total	**13 (10.16)**	**62 (48.44)**	**4 (3.13)**	**27 (21.09)**	**22 (17.19)**	**128 (100)**
All districts	**ST**	42 (14.48)	91 (31.38)	7 (2.41)	105 (36.21)	45 (15.52)	290 (100)
	SC	30 (11.45)	126 (48.09)	11 (4.2)	66 (25.19)	29 (11.07)	262 (100)
	Total	**72 (13.04)**	**217 (39.31)**	**18 (3.26)**	**171 (30.98)**	**74 (13.41)**	**552 (100)**

Source: Author's own estimate from the primary survey (2019).

The other important questions regarding how many times visited health Centre during pregnancy. Table 6.11B. show that 22% of the household had no antenatal check-up, 39.8% of the household visited health facilitation center less than four times and 24% of the household visited health Centre more than four times. This study noticed that antenatal check-up is higher in SC than ST among the study villages. It is seen in the village that most of the pregnant women take care by the Asha Worker (government employee).

Table 6.11 B. How many times you visited health facilitation center during pregnancy

social group		**How many times you visited health facilitation Centre during pregnancy**			
	0	**No antenatal check-up**	**less than 4 times**	**4 times and above**	**Total**
ST	43 (14.83)	73 (25.17)	127 (43.79)	47 (16.21)	290 (100)
SC	34 (12.98)	49 (18.7)	93 (35.5)	86 (32.82)	262 (100)
Total	77 (13.95)	122 (22.1)	220 (39.86)	133 (24.09)	552 (100)

Source: Author's own estimate from the primary survey (2019).

Tetanus is prevented by using tetanus toxoid, generally known as the tetanus vaccination (TT). Five doses of this TT vaccination are advised, with a sixth administered during adolescence. According to the literature, practically everyone becomes initially immune after three doses. It is observed that some more dosages every 10 years are advised to maintain immunity. People with expired immunisations should receive a booster dose within 48 hours after an accident. The results of several additional studies support the requirement that pregnant women have tetanus shots every pregnancy. These shots can protect against both maternal and neonatal tetanus. The extensive research claims that the TT vaccination is quite safe, including for pregnant women and those with HIV/AIDS. (WHO, 2017).

The study tried to get the information regarding, whether you received any Tetanus Toxoid (TT) vaccine during your pregnancy. Table 6.11C shows that around 77% study household received TT vaccine during pregnancy and rest 23% of the household not receive any tetanus toxoid vaccine. We also find that SC household had more TT vaccinated than the ST.

Table 6.11C: - Whether you received any Tetanus Toxoid (TT) vaccine during your pregnancy.

District No	Social Group	Tetanus toxoid vaccine		
		No	Yes	Total
Hoshangabad	ST	42 (28.38)	106 (71.62)	148 (100)
	SC	35 (35.0)	65 (65.0)	100 (100)
	Total	77 (31.05)	171 (68.95)	248 (100)
Betul	ST	30 (40.54)	44 (59.46)	74 (100)
	SC	34 (33.33)	68 (66.67)	102 (100)
	Total	64 (36.36)	112 (63.64)	176 (100)
Harda	ST	20 (29.41)	48 (70.59)	68 (100)
	SC	10 (16.67)	50 (83.33)	60 (100)
	Total	30 (23.44)	98 (76.56)	128 (100)
All districts	ST	92 (31.72)	198 (68.28)	290 (100)
	SC	79 (30.15)	183 (69.85)	262 (100)
	Total	171 (30.98)	381 (69.02)	552 (100)

Source: Author's own estimate from the primary survey (2019).

The study noticed that very less pregnant women goes for ultrasound test at the time during pregnancy. Most of the pregnant women responded that they want to go for test but they are not going for the ultrasound because the cost of the ultrasound is high and distance also matter. Table 6.11D shows that 73% of the household do not go for ultrasound during the pregnancy, and only around 27% of the household go for ultrasound test during pregnancy. We also find that the ultrasound test during pregnancy is higher among SC household than the ST household.

Table 6.11D. Question: At any time during the pregnancy, have you had an ultrasound Test.?

Social Group	No Ultrasound Test	Ultrasound Test	Total
ST	223 (76.9)	67 (23.1)	290 (100)
SC	181 (69.08)	81 (30.92)	262 (100)
Total	**404** **(73.19)**	**148** **(26.81)**	**552** **(100)**

Source: Author's own estimate from the primary survey (2019)

Table 6.11E details the prevalence of folic acid or iron supplementation among pregnant members of the study home by social group. We discover that 61% of households in the socioeconomic group consume iron or folic acid during pregnancy. Additionally, 39% of households in the social group do not take iron tablets or folic acid during pregnancy. In the study home, we also observed that the SC women are better informed than the ST women.

Table: 6.11E. Folic Acid' or 'Iron Tablets during pregnancy Period among the social Group

Social Group	No	Yes	Total
ST	120 (41.38)	170 (58.62)	290 (100)
SC	93 (35.5)	169 (64.5)	262 (100)
Total	**213** **(38.59)**	**339** **(61.41)**	**552** **(100)**

Source: Author's own estimate from the primary survey (2019)

Table 6.11F shows that abortion and miscarriage is a big problem for women specially those who are living in rural area in comparison to urban area. In urban area basic health facility is available near to the place. We tried to find out the how many of the study household face problems of miscarriage and abortion. We find that among the 552 household 44 (7.9%) household faced these kinds of problems. We also noticed that among the social group SC household faced more problem than ST household.

Table 6.11F. Question: Have you ever had a pregnancy that miscarried, was aborted, or ended in a still birth?

Social Group	No	Yes	Total
ST	273 (94.14)	17 (5.86)	290 (100)
SC	235 (89.69)	27 (10.31)	262 (100)
Total	508 (92.03)	44 (7.97)	552 (100)

Source: Author's own estimate from the primary survey (2019)

The study also tried know, the place of treatment taken after delivery**.** Table 6.11G shows that 43% of the household takes treatment in the government hospital after the delivery, this percentage is much higher in SC in comparison to ST.

Table 6.11G. Place of Treatment Taken After Delivery

Social Group	No Treatment	RMP	Government Hospital	Private Hospital	Own Home	Parents Home	Total
ST	46 (15.86)	0 (0.0)	111 (38.28)	10 (3.45)	74 (25.52)	49 (16.9)	290 (100)
SC	42 (16.03)	2 (0.76)	127 (48.47)	10 (3.82)	49 (18.7)	32 (12.21)	262 (100)
Total	88 (15.94)	2 (0.36)	238 (43.12)	20 (3.62)	123 (22.28)	81 (14.67)	552 (100)

Source: Author's own estimate from the primary survey (2019)

6.12. Source of Health Care Financing and Source of Borrowing

India has a multi-payer health care system that combines public and private health insurance funds with publicly financed hospitals that are totally supported by taxes. The public hospital system is essentially free for everyone in every state. The Indian government unveiled Ayushman Bharat in 2018, a nationally supported national public health insurance programme. The aim of this plan is to give free medical treatment to the poorest 50% (500 million) of the population of the nation who work in the unorganised sector (enterprises with less than 10 workers), (Zodpey, Sanjay; Farooqui, Habib Hasan) at both public and private facilities (2018). The net amount of government spending on healthcare in 2019 was $36 billion, or 1.23% of the country's GDP. The public hospital system has been wholly supported by general taxes since the nation's independence.

This study tried to find out that where do household get finance to pay for health services or health expenses. Table 6.12A shows that around 80% of the household used their income and saving bear the health expenses. And 20% of the households does zero health expenses. We also noticed that SC household of the study village payed more than the ST household of their income or saving.

Table 6.12 A. Question: Where do you get finance to pay for health services?

District No	Social Group	No Income/savings	Income/savings	Total
Hoshangabad	ST	57 (38.51)	91 (61.49)	148 (100)
	SC	19 (19.0)	81 (81.0)	100 (100)
	Total	76 (30.65)	172 (69.35)	248 (100)
Betul	ST	14 (18.92)	60 (81.8)	74 (100)
	SC	21 (20.59)	81 (79.41)	102 (100)
	Total	35 (19.89)	141 (80.11)	176 (100)
	ST	1	67	68

		(1.47)	(98.53)	(100)
Harda	SC	0 (0.0)	60 (100)	60 (100)
	Total	1 (0.78)	127 (99.22)	128 (100)
All districts	**ST**	**72** **(24.83)**	**218** **(75.17)**	**290** **(100)**
	SC	**40** **(15.27)**	**222** **(84.73)**	**262** **(100)**
	Total	**112** **(20.29)**	**440** **(79.71)**	**552** **(100)**

Source: Author's own estimate from the primary survey (2019)

During the field work, I see the face of the respondent and feel that many of the respondent are sad because of their socio-economic condition, many of the respondent responded that they are facing more problem because of health-related expenditure. Many of the household said that their 75% of the income goes on health expenditure, and their economic condition is disgraceful because of low income.

Table 6.12B Source of borrowing from banks, money lenders, friends, self-help group etc.

Social Group	0	Money lenders	Banks	Friends and neighbor	Lease of gold or other assets	Sale of physical assets	Self-help group	Total
ST	45 (15.5)	89 (30.7)	20 (6.9)	106 (36.6)	2 (0.7)	5 (1.7)	23 (7.9)	290 (100)
SC	73 (27.9)	49 (18.7)	47 (17.9)	80 (30.5)	1 (0.4)	5 (1.9)	7 (2.7)	262 (100)
Total	118 (21.4)	138 (25.0)	67 (12.1)	186 (33.7)	3 (0.5)	10 (1.8)	30 (5.4)	552 (100)

Source: Author's own estimate from the primary survey (2019)

Table 6.12B shows the source of borrowing from banks, money lenders, with friends, self-help group etc. for the health expenses. We find that 21% of the household does not borrow money from any given sources, they spend their saving or income only. The study found that most of the

household borrow money from Money lenders (25%) and with their Friends and neighbour (33.7%). Only 5% of the household borrow money from self-help group and 12% from the Banks. We noticed that non-institutional credit is much higher than the institutional credit.

6.13 Female and Male Sterilization

Sterilization is known as a permanent method of contraception, sterilization involves a small operation, and it is an appropriate technique to sterilize a man and a woman both. As we know, it is an individual decision, the existing literature suggest that generally male sterilization is safer than the women and it is also quicker and more effective. It is just for those who have made the decision not to have children now or in the future.

On the good side, you won't ever need to consider contraception again following sterilisation. On the negative side, it requires surgery, and you never know what life has in store. You could believe that you don't want any more children, yet anything could happen in the future. The purpose of sterilization is to family planning. In the study village respondent have many kinds of story regarding sterilization. There was/are some schemes central as well as state government scheme for the sterilize male and female.

Table: -6.13 Female and Male sterilization

Social Group	Female Sterilization		Male Sterilization	
	No	**Yes**	**No**	**Yes**
ST	113 (38.97)	177 (61.03)	282 (97.24)	8 (2.76)
SC	83 (31.68)	179 (68.32)	262 (100)	0 (0)
Total	**196 (35.51)**	**356 (64.49)**	544 (98.55)	8 (1.45)

Source: Author's own estimate from the primary survey (2019)

Table 6.13 reveals that around 64 percent of the Female Sterilization among the social group. Overall, the percentage of Female Sterilization among the SCs is higher than the STs. Overall, Male Sterilization is very minimal less than 2 percent only.

6.14. Conclusion

The goals of this chapter are to analyse some of the key concerns pertaining to how the impacts women's health, particularly in three districts of Madhya Pradesh, and to provide a conceptual framework that would aid in the formulation of women's health policies and initiatives.

This study found that in the total household 71.38 percent of the household have nuclear family and 28.62 percent of the joint family. This study also found very similar result, and its highlight that STs Household (32.76 percent) living as more joint family than SCs households (24.05). But in case of nuclear family, its shows that STs household (67.24 percent) have less nuclear family than SCs household (75.95 percent). As we noticed, during the rainy season, people faced huge problems because of Kachcha house and hut. This study found that around 67 percent of the household have Kachcha house, only 13 percent of the family have Pakka House. Among the social Group, SC has more Pakka house in comparison to STs. Among the three districts, the Pakka House is more in Hoshangabad district than the other two districts. In study village few people have given their house on rent. Many studies found that the incidence of poverty is much higher among SCs and STs. This study also found that the incidence of poverty is much higher among SCs and STs. Most of the policy and program has linked with the BPL card. If the poor people have BPL Card, then they can gate the benefit of policies and program. This study shows that around 68 percent of the household have BPL card. It means by the government estimates all the BPL cardholders are below the poverty line; only six percent of the household are above the poverty line. This indicates that the economic condition of poor people is very shocking.

This study found that the availability of clean drinking water is very poor in three districts' study area. Among all three districts, only seven percent of the household have a drinking water facility inside the premises. It noticed that around 93 percent of the sample household bring drinking water from outside the premise and only 3 percent of the households have drinking water facility inside the premise. We find that SC household have has slightly more drinking water facility inside the premise than the ST household.

The study also finds that some of the households have not electricity facility, and has been facing huge problem because government is not distributing kerosene oil under the PDS. The household, those who are not having electricity facility facing many problems. We see that 10% of the sample

household have no electricity facility. This percentage is much higher in the Betul and Harda district in comparison to Hoshangabad.

The study found that around 40 of the households have LPG, and approximately 70 percent of households use wood as cooking energy. The study also found that many households are not using LPG because of the high gas refiling price.

This Study found that only 20% of the household have toilet facility inside the house, around 25 percent of the household have toilet facility outside of the house, and around 55 percent of the household they do not have toilet facility. The study also found that the quality of toilet facility inside and outside is not good. So overall the condition of the people are very disgraceful. The government policy and program (Swachh Bharat) has not been much effective in term of sanitation.

This study reveals that in most of the general disease, women are suffering more than in comparison to the men, among all the study area, around 53 percent of the female and 47 percent men are suffering general the general disease. In case of all male and female general disease such as Malaria, Eye Infection, Tooth Ache, Goiter, Spine/Hip Pains, Womb/Uterus Problems, Skin Disease and Piliya, more of the women are suffering then men

We found that the prevalence rate of the chronic disease is much higher in the women in comparison to the men, in total male and female cancer patients around 80 percent are women and 20 percent are men, and similar result found in case of obesity. This study also finds that in case of TB, the prevalence rate in male (60%) is higher than female (40%) in the study village.

This study estimated and classified expenditure in three parts, first is fee of the Doctor, second is medicine expenditure and third is expenditure of diagnostic. It finds that in case of general disease, 69.7% of the individuals have no expenditure (zero) incurred on doctor fee, 65.9% on medicine and 88% on diagnostic in the study village. We find that 14.81% of the people paid Doctor Fee 3.4% of people paid for diagnostic between Rs 1 to 100 for general diseases and around 11% of the people paid for medicine between Rs 1to 500. This study noticed that most of the people prefer to go with “Jhola Chhap Doctor” or family doctor because the distance from home the hospital is lesser than the government hospitals, 75% of the responded free from the general disease and around 21.6% of the people bear the transport cost between Rs 1 to 100. In case of expenditure on food, this study finds that 88.63 percent of total study person free from the general disease and only 2.4% of the patient paid Rs. 1 to 100 on food. The district wise sample household women

pregnancy among the social group. Among the 552 household, this study finds that in 74 (13.4%) household one or two women found pregnant. The study notice that ST women are more pregnant than SC women among all three districts.

The study found that more than 30 percent delivery happened at own home only and around 40 percent in the Government Hospital. This study also asked some important question to the household such as: Have you ever birth to boy or girl who was born alive but later died? In the 552-sample size, the study finds that 79 (14.31%) household face this kind of problems. This study tried to find out that where do household get finance to pay for health services or health expenses, around 80% of the household used their income and saving bear the health expenses. And 20% of the households does zero health expenses. We also noticed that SC household of the study village payed more than the ST household of their income or saving. There was/are some schemes central as well as state government scheme for the sterilize male and female. This study reveals that around 64 percent of the Female Sterilization among the social group. Overall, the percentage of Female Sterilization among the SCs is higher than the STs. Overall, Male Sterilization is very minimal less than 2 percent only.

Chapter 7: An Empirical Analysis to understand the Utilization of Maternal Health Care Services in Madhya Pradesh, State of India

"At the end of the day, your health is your responsibility"

Jillian Michaels

7. 1. Introduction

In general, it is believed that an increase in the use of maternal health care services is expected to decrease maternal and child mortality over time and help to improve women's reproductive health. Advanced economies are a good example of better women's health, which witnesses lower maternal and mortality rates with stronger utilization of their maternal health care services. The scenario does not apply to underdeveloped countries, where there are high rates of maternal and infant mortality and inadequate maternal health care services. The fact that health care services are less accessible and available in poorer nations is the cause of these large discrepancies. In terms of targeting, the Sustainable Development Goals (SDG) established "Improving maternity care health services" as one of the significant objectives, which was then carried over into the Millennium Development Goals. The program's main goal is to regulate and lower the rates of maternal death, child death, and pregnancy problems. In this context, the United Nations Millennium Development Goals set a challenge to cut maternal death by three-quarters by 1990 and the under-five mortality rate by two-thirds by 2015. According to figures from the 1998 census, India reported 398 maternal deaths per 100,000 live births; however, by the end of 2013, that number had decreased by 42% to 167 maternal deaths per 100,000 live births. In the years that followed, Madhya Pradesh (a state in India) recorded 441 maternal deaths per 100,000 live births in 1998, which decreased to 221 (50%) fatalities in 2013. Even though there is an overall improvement in the MMR in India and across the states, Madhya Pradesh was the recorded second-largest MMR among the other states in the country. Lower utilization of maternal health services is the strong reason for high MMR in this state. These factors are based on an individual level, household level, and community-based level. Women with higher socioeconomic status are better users of maternal health care services than women with low socioeconomic status. Hence, it is observed that mother education, religion, place of residence (distance from the hospital), caste,

cultural norms, and standard of living are the important factors that alter the use of maternal health services. However, very few studies are available in this context for the case of Madhya Pradesh (state of India). Madhya Pradesh is considered one of the second largest states of India with a population of 72,597,565, of which around 26.7 % population were settled in rural areas and on average 20.3% are Scheduled tribe and 16% are Scheduled cast. Moreover, the state recorded one poorest states of India with 38% of the population coming under below poverty line by the end of 2014.

7.2. Methodology and Data Description

To measure the impact of all the expected factors on the use of maternal health care services, binary logistic regression models are used (MHCS). Logistic regression models are used because they are thought to be one of the finest methods for handling categorical data. The dependent variables used in this work include categorical and dichotomous, and the current work is based on primary data that includes qualitative responses in categorical form (Alison, 1984; Hosmer & Lemeshow, 2000). We can quickly understand the effect of the factors on the use of maternal health care by utilising logistic regression. However, the estimated probability ratio of 1 suggests that the reference category and maternal health care services (MHCS) are equally utilised, therefore we are unable to distinguish between the two. If the estimated odd ratio is larger than 1, it means that more women than the reference group are likely to utilise maternal health care services, and if it is less than 1, it means that fewer women than the reference category are likely to use these services.

7.2.1 Measures

To examine how the utilization of maternal health care services is influenced by individual and household characteristics. We selected six indicators based on Past literature such as; Place of delivery[4] (institution/home), antenatal care (ANC) check-up at least 4 times[5], proper Tetanus

[4] this indicator is another significant determinant of MHCS that reduces the risk associated with infant and maternal death

[5] As "recommended by the World Health Organization" it is essential for a woman to receive minimum 4 ANCs check-up during her pregnancy (WHO, 1994).

Toxoid vaccination[6], consuming Iron tablets (IFA)[7], assistance during delivery[8], postnatal check-up (PNC) within 24 hours of delivery[9]. All these six indicators are the dependent (outcome) variables in my analysis which are in the categorical form or binary terms i.e., 1 for yes response and 0 for an alternative response of N0.

7.2.2 Explanatory variables

The list of explanatory variables used in the model are categorized into three groups, (I) individual-level characteristics, such as women's age group, birth order, women's level of education, women occupation, Mass media exposure, Age at marriage, women's health insurance coverage. (II) Household-level characteristics such as social group, economic status (poor/ non-poor), type of family, (III) geographical distance to reach nearest health centres like PHC (primary health centre distance), Government hospital distance, and private hospital distance.

7.2.3 Sampling Technique and Study Design

Primary data from a "multi-stage stratified systematic sampling strategy" were utilised in the study. 20 primary sample units (PSUs), or rural villages, were chosen in the first stage from the Madhya Pradesh (M.P.) state's three districts (Hosangbad, Betul, and Harda). In the context of rural regions, houses were chosen based on "systematic sampling" using the SC and ST population in the second stage, while villages were chosen using "probability proportional to size (PPS) systematic sampling" in the first stage. The sampled households are “all ever-married women aged between 15-49 years”. In a total of 552 households, 516 respondents were examined in this present study[10].

7.3. Empirical Framework

To analyse the influence of various socio-economic, demographic, and community-based variables on the utilization of maternal health care services. Here we applied logistic regression models, known as one of the best statistical tools that deal with categorical variables as explained above.

[6] this indicator measures the number of times women have taken injections to prevent babies from tetanus infections, we took at least two doses during her pregnancy

[7] it measures the number of Iron tables (FCA) consumed during pregnancy (at least two or above).

[8] assistance provided by good health professionals during the delivery such as doctor/nurse/auxiliary nurse midwife will help to reduce the risk associated with the labour experienced by the women during her delivery

[9] this indicator is another significant determinant of MHCS that reduces the risk associated with infant and maternal death

[10] The women who are unmarried or married but not carrying any baby are exempted.

These models are appropriate for our study because the dependent variable in our study is dichotomous. The binary logistic models estimate the probability that represents y = 1, as the function of the independent variable:

$$\rho = pr(y = 1/x) = F\ (x'\ \beta) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ (1)$$

For the logit model, $F(x'\beta) = \Lambda(x'\beta) = \frac{e^{x'\beta}}{1+e^{x'\beta}} = \frac{exp(x'\beta)}{1+\ exp(x'\beta)}$ …… (2)

The predicted probabilities are limited between 0 and 1

The model represents that log odds of maternal health care service (MHCS) follows,

$$\text{Log } \frac{P_i}{1-P_i} = \ \beta_o + \sum(\beta_i X_i)\ \ \text{[where n=13]} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ (3)$$

Where Ln $[p_i\ /1 - p_i]$ represents the conditional odds of using maternal health care services (MHCS); X_i, in the model, represents the number of explanatory variables, here we used 13 variables. The parameter β_i indicates the effects of the explanatory variable on the dependent variable, and β_o is the constant of the equation. Here, we used STATA 15 software to estimate logistic regression models. The first equation with the place of delivery as a proxy for utilization of maternal health care services (MHCS) is as follows:

$$\text{Ln} = [Pi/\ 1 - Pi]_{\ pod\ =}\ \beta_0 + \beta_i X_{1\ (age)} + \beta_2 X_{2\ (Bo)+} \ldots\ldots\ldots \beta_{13}\ X_{13\ (pvhd)} \ldots\ldots\ (4)$$

Where

X_1= Women age group, X_2=Birth order, X_3=Women education level, X_4=Mother occupation, X_5=Mass media exposure, X_6=Age at marriage, X_7=Women health insurance, X_8=Social group, X_9=Economic status, X_{10}=Type of family, X_{11}= Primary health centre distance, X_{12}=Government hospital distance, X_{13}=Private hospital distance.

The second equation is taken for, ANC visits at least 4 times(anc_{4t}) as the dependent

$$\text{Ln}\ [P_i/1 - P_i]_{\ (anc_{4t})} = \ \beta_0 + \beta_i X_{1\ (age)} + \beta_2 X_{2\ (Bo)+} \ldots\ldots\ldots \beta_{13}\ X_{13\ (pvhd)}\ \ldots\ \ldots\ \ldots (5)$$

Where, $X_i,\ X_2, X_3,$……X_{13} are the set of independent variables equations…… (5)

And third equation represents the Taking tetanus toxoid injection (TT) is

$$\text{Ln}\,[P_i/1-P_i]_{(tt)} = \beta_0 + \beta_i X_{1\,(age)} + \beta_2 X_{2\,(Bo)} + \ldots\ldots\ldots \beta_{13}\, X_{13\,(pvhd)} \ldots\ldots\ldots\ldots \quad (6)$$

The fourth equation for taking iron tablets (IT) is

$$\text{Ln}\,[P_i/1-P_i]_{(it)} = \beta_0 + \beta_i X_{1\,(age)} + \beta_2 X_{2\,(Bo)} + \ldots\ldots\ldots \beta_{13}\, X_{13\,(pvhd)} \ldots\ldots\ldots\ldots \quad (7)$$

The fifth equation for the assistance during delivery (ASD)

$$\text{Ln}\,[P_i/1-P_i]_{(ASD)} = \beta_0 + \beta_i X_{1\,(age)} + \beta_2 X_{2\,(Bo)} + \ldots\ldots\ldots \beta_{13}\, X_{13(pvhd)} \ldots\ldots\ldots\ldots \quad (8)$$

The sixth equation for postnatal care within 24 hours of delivery (PNC_{24})

$$\text{Ln}\,[P_i/1-P_i]_{(PNC_{24})} = \beta_0 + \beta_i X_{1\,(age)} + \beta_2 X_{2\,(Bo)} + \ldots\ldots\ldots \beta_{13}\, X_{13\,(pvhd)} \ldots\ldots\ldots \quad (9)$$

7.4. Bivariate Results and Its Interpretation

Table 7A.1 presents the bivariate relationship between Individual, Household-level characteristics, and Distance to the hospital with all the six proxies MHCS. It presents both the percentage of Yes and No responses including their confidence interval at 95%, but the response of Yes is interpreted. The estimates of individual characters show a significant (<0.001) association between place of delivery and women age groups. Women age groups in 25-34 and 35-44 are more in

Table: 7A.1: Bivariate Relationship between Individual and Demographic Characteristics With Maternal Healthcare Services Utilization

Independent Variables	Dependent Variables															
	Place of Delivery						ANC Visit (At Least 4 Times)					Tetanus Toxoid Injection (TT)				
Women Age Group	Individual Characteristics															
	N	No %	[95 % CI]	Yes %	[95 % CI]	Total %	No %	[95 % CI]	Yes %	[95 % CI]	Total %	No %	[95 % CI]	Yes %	[95 % CI]	Total %
15-24	74	73	[65.4,79.4]	27	[20.6,34.6]	100	86.5	[80.0,91.1]	14	[8.9,20.0]	100	41.9	[34.3,49.9]	58.1	[50.1,65.7]	100
25-34	68	42.6	[34.6,51.1]	57.4	[48.9,65.4]	100	58.8	[50.4,66.7]	41	[33.3,49.6]	100	29.4	[22.4,37.6]	70.6	[62.4,77.6]	100
35-44	203	44.3	[39.6,49.2]	55.7	[50.8,60.4]	100	61.1	[56.3,65.7]	39	[34.3,43.7]	100	16.3	[13.0,20.1]	83.7	[79.9,87.0]	100
45-55	171	63.7	[58.6,68.6]	36.3	[31.4,41.4]	100	77.8	[73.1,81.9]	22	[18.1,26.9]	100	30.4	[25.8,35.4]	69.6	[64.6,74.2]	100
Total	516	54.7	[51.6,57.6]	45.3	[42.4,48.4]	100	70	[67.1,72.7]	30	[27.3,32.9]	100	26.4	[23.8,29.1]	73.6	[70.9,76.2]	100
P-value		(<.0001) ***					(<.0001) ***					(<.0001) ***				
Birth Order																
0 to 1	93	67.7	[60.7,74.0]	32.3	[26.0,39.3]	100	72	[65.2,78.0]	28	[22.0,34.8]	100	46.2	[39.2,53.4]	53.8	[46.6,60.8]	100
2 or 3	314	46.5	[42.7,50.4]	53.5	[49.6,57.3]	100	64.3	[60.5,68.0]	36	[32.0,39.5]	100	20.4	[17.4,23.7]	79.6	[76.3,82.6]	100
4 and above	109	67	[60.5,72.9]	33	[27.1,39.5]	100	84.4	[79.0,88.6]	16	[11.4,21.0]	100	26.6	[21.2,32.8]	73.4	[67.2,78.8]	100
Total	516	54.7	[51.6,57.6]	45.3	[42.4,48.4]	100	70	[67.1,72.7]	30	[27.3,32.9]	100	26.4	[23.8,29.1]	73.6	[70.9,76.2]	100
P-value		(<.0001) ***					(<.0001) ***					(<.0001) ***				
Education																
Illiterate	255	65.5	[61.3,69.4]	34.5	[30.6,38.7]	100	80.8	[77.1,84.0]	19	[16.0,22.9]	100	30.2	[26.4,34.3]	69.8	[65.7,73.6]	100
Below Prim	26	53.8	[40.4,66.8]	46.2	[33.2,59.6]	100	65.4	[51.7,76.9]	35	[23.1,48.3]	100	19.2	[10.7,32.1]	80.8	[67.9,89.3]	100
Graduate and above	15	66.7	[48.4,81.0]	33.3	[19.0,51.6]	100	86.7	[69.5,94.9]	13	[5.1,30.5]	100	60	[42.0,75.7]	40	[24.3,58.0]	100
Middle	72	45.8	[37.9,54.0]	54.2	[46.0,62.1]	100	58.3	[50.2,66.1]	42	[33.9,49.8]	100	18.1	[12.6,25.2]	81.9	[74.8,87.4]	100
Primary	36	58.3	[46.7,69.1]	41.7	[30.9,53.3]	100	66.7	[55.1,76.5]	33	[23.5,44.9]	100	27.8	[18.7,39.1]	72.2	[60.9,81.3]	100

Secondary and Higher-Secondary	112	33	[27.2,39.4]	67	[60.6,72.8]	100	52.7	[46.2,59.1]	47	[40.9,53.8]	100	19.6	[15.0,25.3]	80.4	[74.7,85.0]	100
Total	516	54.7	[51.6,57.6]	45.3	[42.4,48.4]	100	70	[67.1,72.7]	30	[27.3,32.9]	100	26.4	[23.8,29.1]	73.6	[70.9,76.2]	100
P-value		(<.0001) ***					(<.0001) ***					(<.0001) ***				
Mother Occupation																
Unemployed	153	45.8	[40.3,51.3]	54.2	[48.7,59.7]	100	64.7	[59.2,69.8]	35	30.2,40.8	100	24.8	[20.3,30.0]	75.2	[70.0,79.7]	100
farmer/causal labors/agriculture labors	322	59	[55.2,62.7]	41	[37.3,44.8]	100	71.1	[67.5,74.5]	29	[25.5,32.5]	100	25.8	[22.6,29.3]	74.2	[70.7,77.4]	100
Government	25	56	[42.3,68.9]	44	[31.1,57.7]	100	72	[58.2,82.6]	28	[17.4,41.8]	100	32	[20.6,46.0]	68	[54.0,79.4]	100
Self-employed Business	16	50	[33.4,66.6]	50	[33.4,66.6]	100	93.8	[78.3,98.4]	6.3	[1.6,21.7]	100	43.8	[27.9,60.9]	56.3	[39.1,72.1]	100
Total	516	54.7	[51.6,57.6]	45.3	[42.4,48.4]	100	70	[67.1,72.7]	30	[27.3,32.9]	100	26.4	[23.8,29.1]	73.6	[70.9,76.2]	100
P-value		(<.0001) ***					(<.0001) ***					p= 0.09*				
Media Exposure																
A No Exposure	401	57.1	[53.7,60.5]	42.9	[39.5,46.3]	100	71.1	[67.8,74.1]	29	[25.9,32.2]	100	27.4	[24.5,30.6]	72.6	[69.4,75.5]	100
Exposure	115	46.1	[39.8,52.5]	53.9	[47.5,60.2]	100	66.1	[59.8,71.9]	34	[28.1,40.2]	100	22.6	[17.7,28.4]	77.4	[71.6,82.3]	100
Total	516	54.7	[51.6,57.6]	45.3	[42.4,48.4]	100	70	[67.1,72.7]	30	[27.3,32.9]	100	26.4	[23.8,29.1]	73.6	[70.9,76.2]	100
P-value		(<.0001) ***					p=0.14					p=0.14				
Age at Marriage																
Age Blow18	202	63.4	[58.6,67.9]	36.6	[32.1,41.4]	100	79.7	[75.5,83.3]	20	[16.7,24.5]	100	30.7	[26.4,35.3]	69.3	[64.7,73.6]	100
Age above18	314	49	[45.2,52.9]	51	[47.1,54.8]	100	63.7	[59.9,67.4]	36	[32.6,40.1]	100	23.6	[20.4,27.0]	76.4	[73.0,79.6]	100
Total	516	54.7	[51.6,57.6]	45.3	[42.4,48.4]	100	70	[67.1,72.7]	30	[27.3,32.9]	100	26.4	[23.8,29.1]	73.6	[70.9,76.2]	100
P-value		(<.0001) ***					(<.0001) ***					(<.0001) ***				

Health Insurance																
No Health Insurance	473	56.2	[53.1,59.3]	43.8	[40.7,46.9]	100	70	[67.0,72.8]	30	[27.2,33.0]	100	27.5	[24.7,30.4]	72.5	[69.6,75.3]	100
Having Health insurance	43	37.2	[27.7,47.8]	62.8	[52.2,72.3]	100	69.8	[59.4,78.5]	30	[21.5,40.6]	100	14	[8.1,23.0]	86	[77.0,91.9]	100
Total	516	54.7	[51.6,57.6]	45.3	[42.4,48.4]	100	70	[67.1,72.7]	30	[27.3,32.9]	100	26.4	[23.8,29.1]	73.6	[70.9,76.2]	100
P-value		(<.0001) ***					P=0.96					(<.0001) ***				
Social Group	**Household Level Characteristics**															
Scheduled Tribes (STs)	268	63.8	[59.7,67.7]	36.2	[32.3,40.3]	100	78.7	[75.1,82.0]	21	[18.0,24.9]	100	26.5	[23.0,30.4]	73.5	[69.6,77.0]	100
Scheduled Castes (SCs)	248	44.8	[40.5,49.1]	55.2	[50.9,59.5]	100	60.5	[56.1,64.7]	40	[35.3,43.9]	100	26.2	[22.6,30.2]	73.8	[69.8,77.4]	100
Total	516	54.7	[51.6,57.6]	45.3	[42.4,48.4]	100	70	[67.1,72.7]	30	[27.3,32.9]	100	26.4	[23.8,29.1]	73.6	[70.9,76.2]	100
P-value		(<.0001) ***					(<.0001) ***					P=0.91				
Economics Status																
Non-Poor	168	53	[47.6,58.2]	47	[41.8,52.4]	100	67.9	[62.7,72.6]	32	[27.4,37.3]	100	28	[23.5,33.0]	72	[67.0,76.5]	100
Poor	348	55.5	[51.8,59.1]	44.5	[40.9,48.2]	100	71	[67.5,74.2]	29	[25.8,32.5]	100	25.6	[22.5,28.9]	74.4	[71.1,77.5]	100
Total	516	54.7	[51.6,57.6]	45.3	[42.4,48.4]	100	70	[67.1,72.7]	30	[27.3,32.9]	100	26.4	[23.8,29.1]	73.6	[70.9,76.2]	100
P-value		P=0.44					P=0.30					P= 0.40				
Type Family																
Joint Family	143	56.6	[50.9,62.3]	43.4	[37.7,49.1]	100	62.2	[56.5,67.7]	38	[32.3,43.5]	100	25.2	[20.5,30.5]	74.8	[69.5,79.5]	100
Nuclear family	373	53.9	[50.4,57.4]	46.1	[42.6,49.6]	100	72.9	[69.6,76.0]	27	[24.0,30.4]	100	26.8	[23.8,30.1]	73.2	[69.9,76.2]	100
Total	516	54.7	[51.6,57.6]	45.3	[42.4,48.4]	100	70	[67.1,72.7]	30	[27.3,32.9]	100	26.4	[23.8,29.1]	73.6	[70.9,76.2]	100
P-value		P=0.42					(<.0001) ***					P=0.5				

Primary Health Centre	**Distance to the Hospital**															
0 to 4 km	241	54.4	[49.9,58.7]	45.6	[41.3,50.1]	100	67.6	[63.4,71.6]	32	[28.4,36.6]	100	24.9	[21.3,28.9]	75.1	[71.1,78.7]	100
5 to 24 km	253	54.2	[49.9,58.4]	45.8	[41.6,50.1]	100	74.3	[70.4,77.9]	26	[22.1,29.6]	100	28.5	[24.7,32.5]	71.5	[67.5,75.3]	100
25 km above	22	63.6	[48.7,76.4]	36.4	[23.6,51.3]	100	45.5	[31.6,60.1]	55	[39.9,68.4]	100	18.2	[9.4,32.3]	81.8	[67.7,90.6]	100
Total	516	54.7	[51.6,57.6]	45.3	[42.4,48.4]	100	70	[67.1,72.7]	30	[27.3,32.9]	100	26.4	[23.8,29.1]	73.6	[70.9,76.2]	100
P-value		P=0.4					(<.0001) ***					P=0.19				
Govt-Distance																
0 to 5km	88	39.8	[32.9,47.1]	60.2	[52.9,67.1]	100	65.9	[58.7,72.4]	34	[27.6,41.3]	100	23.9	[18.2,30.7]	76.1	[69.3,81.8]	100
6 to 20 km	209	57.9	[53.1,62.5]	42.1	[37.5,46.9]	100	68.4	[63.9,72.6]	32	[27.4,36.1]	100	22	[18.3,26.2]	78	[73.8,81.7]	100
21 to 50 km	208	57.7	[53.0,62.2]	42.3	[37.8,47.0]	100	72.6	[68.2,76.6]	27	[23.4,31.8]	100	30.8	[26.6,35.3]	69.2	[64.7,73.4]	100
51 to 100 km	11	54.5	[34.2,73.5]	45.5	[26.5,65.8]	100	81.8	[60.5,93.0]	18	[7.0,39.5]	100	45.5	[26.5,65.8]	54.5	[34.2,73.5]	100
Total	516	54.7	[51.6,57.6]	45.3	[42.4,48.4]	100	70	[67.1,72.7]	30	[27.3,32.9]	100	26.4	[23.8,29.1]	73.6	[70.9,76.2]	100
P-value		(<.0001) ***					P=0.181					(<.0001) ***				
Pvt- Distance																
0 to 4 km	217	59.9	[55.3,64.4]	40.1	[35.6,44.7]	100	73.3	[68.9,77.2]	27	[22.8,31.1]	100	28.1	[24.1,32.5]	71.9	[67.5,75.9]	100
5 to 30 km	260	50.8	[46.5,55.0]	49.2	[45.0,53.5]	100	70	[65.9,73.8]	30	[26.2,34.1]	100	22.7	[19.3,26.5]	77.3	[73.5,80.7]	100
31 km and above	39	51.3	[40.3,62.1]	48.7	[37.9,59.7]	100	51.3	[40.3,62.1]	49	[37.9,59.7]	100	41	[30.7,52.2]	59	[47.8,69.3]	100
Total	516	54.7	[51.6,57.6]	45.3	[42.4,48.4]	100	70	[67.1,72.7]	30	[27.3,32.9]	100	26.4	[23.8,29.1]	73.6	[70.9,76.2]	100
P-value		P=0.01**					(<.0001) ***					(<.0001) ***				

Note: Standard errors are presented in brackets are p-values and the character '*' '**' '***' indicates '10','5','1' per cent level of significance.

Continue of Table: 1

Independent Variables	**Dependent Variables**		
	Taking Iron Tablets	**Assistant by skilled health personals during delivery**	**PNC Within 24 Hours of Delivery**

Women Age Group	Individual Characteristics															
	N	No %	[95 % CI]	Yes %	[95 % CI]	Total %	No %	[95 % CI]	Yes %	[95 % CI]	Total %	No %	[95 % CI]	Yes %	[95 % CI]	Total %
15-24	74	47.3	[39.5,55.3]	52.7	[44.7,60.5]	100	82.4	[75.5,87.7]	17.6	[12.3,24.5]	100	24.3	[18.1,31.8]	75.7	[68.2,81.9]	100
25-34	68	36.8	[29.1,45.1]	63.2	[54.9,70.9]	100	50	[41.7,58.3]	50	[41.7,58.3]	100	47.1	[38.9,55.4]	52.9	[44.6,61.1]	100
35-44	203	26.6	[22.5,31.1]	73.4	[68.9,77.5]	100	49.3	[44.5,54.0]	50.7	[46.0,55.5]	100	20.7	[17.1,24.8]	79.3	[75.2,82.9]	100
45-55	171	37.4	[32.5,42.6]	62.6	[57.4,67.5]	100	68.4	[63.4,73.0]	31.6	[27.0,36.6]	100	28.1	[23.6,33.0]	71.9	[67.0,76.4]	100
Total	516	34.5	[31.7,37.4]	65.5	[62.6,68.3]	100	60.5	[57.5,63.4]	39.5	[36.6,42.5]	100	27.1	[24.5,29.9]	72.9	[70.1,75.5]	100
P-value		(<.0001) ***					(<.0001) ***					(<.0001) ***				
Birth Order																
0 To 1	93	52.7	[45.6,59.7]	47.3	[40.3,54.4]	100	68.8	[61.8,75.0]	31.2	[25.0,38.2]	100	49.5	[42.4,56.6]	50.5	[43.4,57.6]	100
2 Or 3	314	27.1	[23.8,30.7]	72.9	[69.3,76.2]	100	53.5	[49.7,57.3]	46.5	[42.7,50.3]	100	21.7	[18.6,25.0]	78.3	[75.0,81.4]	100
4 And above	109	40.4	[34.1,47.0]	59.6	[53.0,65.9]	100	73.4	[67.2,78.8]	26.6	[21.2,32.8]	100	23.9	[18.7,29.9]	76.1	[70.1,81.3]	100
Total	516	34.5	[31.7,37.4]	65.5	[62.6,68.3]	100	60.5	[57.5,63.4]	39.5	[36.6,42.5]	100	27.1	[24.5,29.9]	72.9	[70.1,75.5]	100
P-value		(<.0001) ***					(<.0001) ***					(<.0001) ***				
Education																
Illiterate	255	38.4	[34.3,42.7]	61.6	[57.3,65.7]	100	69.4	[65.4,73.2]	30.6	[26.8,34.6]	100	24.3	[20.8,28.2]	75.7	[71.8,79.2]	100
Below Prim	26	34.6	[23.1,48.3]	65.4	[51.7,76.9]	100	61.5	[47.8,73.6]	38.5	[26.4,52.2]	100	23.1	[13.6,36.3]	76.9	[63.7,86.4]	100
Graduate and Above	15	53.3	[35.9,70.0]	46.7	[30.0,64.1]	100	53.3	[35.8,70.0]	46.7	[30.0,64.2]	100	53.3	[35.8,70.0]	46.7	[30.0,64.2]	100
Middle	72	23.6	[17.4,31.2]	76.4	[68.8,82.6]	100	45.8	[37.9,54.0]	54.2	[46.0,62.1]	100	18.1	[12.6,25.2]	81.9	[74.8,87.4]	100
Primary	36	38.9	[28.4,50.5]	61.1	[49.5,71.6]	100	66.7	[55.1,76.5]	33.3	[23.5,44.9]	100	38.9	[28.4,50.5]	61.1	[49.5,71.6]	100
Secondary and Higher-Secondary	112	28.6	[23.1,34.8]	71.4	[65.2,76.9]	100	48.2	[41.8,54.7]	51.8	[45.3,58.2]	100	33	[27.2,39.4]	67	[60.6,72.8]	100
Total	516	34.5	[31.7,37.4]	65.5	[62.6,68.3]	100	60.5	[57.5,63.4]	39.5	[36.6,42.5]	100	27.1	[24.5,29.9]	72.9	[70.1,75.5]	100
P-value		(<.0001) ***					(<.0001) ***					(<.0001) ***				

Mother Occupation																
Unemployed	153	36.6	[31.4,42.1]	63.4	[57.9,68.6]	100	51	[45.4,56.5]	49	[43.5,54.6]	100	26.1	[21.5,31.3]	73.9	[68.7,78.5]	100
farmer/causal labors/agriculture labors	322	32.3	[28.8,36.0]	67.7	[64.0,71.2]	100	65.2	[61.5,68.8]	34.8	[31.2,38.5]	100	28.6	[25.2,32.2]	71.4	[67.8,74.8]	100
Government	25	36	[24.0,50.0]	64	[50.0,76.0]	100	64	[50.0,76.0]	36	[24.0,50.0]	100	24	[14.2,37.6]	76	[62.4,85.8]	100
Self-employed business	16	56.3	[39.1,72.1]	43.8	[27.9,60.9]	100	50	[33.4,66.6]	50	[33.4,66.6]	100	12.5	[4.8,28.9]	87.5	[71.1,95.2]	100
Total	516	34.5	[31.7,37.4]	65.5	[62.6,68.3]	100	60.5	[57.5,63.4]	39.5	[36.6,42.5]	100	27.1	[24.5,29.9]	72.9	[70.1,75.5]	100
P-value		P=0.03**					(<.0001) ***					p=0.20				
Media Exposure																
A No Exposure	401	36.2	[32.9,39.5]	63.8	[60.5,67.1]	100	61.6	[58.2,64.8]	38.4	[35.2,41.8]	100	29.9	[26.9,33.2]	70.1	[66.8,73.1]	100
Exposure	115	28.7	[23.2,34.9]	71.3	[65.1,76.8]	100	56.5	[50.1,62.8]	43.5	[37.2,49.9]	100	17.4	[13.0,22.8]	82.6	[77.2,87.0]	100
Total	516	34.5	[31.7,37.4]	65.5	[62.6,68.3]	100	60.5	[57.5,63.4]	39.5	[36.6,42.5]	100	27.1	[24.5,29.9]	72.9	[70.1,75.5]	100
P-value		P=0.03**					p=0.16					(<.0001) ***				
Age at Marriage																
Ageblow18	202	37.6	[33.1,42.4]	62.4	[57.6,66.9]	100	72.8	[68.3,76.8]	27.2	[23.2,31.7]	100	27.2	[23.1,31.8]	72.8	[68.2,76.9]	100
Ageabove18	314	32.5	[29.0,36.2]	67.5	[63.8,71.0]	100	52.5	[48.7,56.4]	47.5	[43.6,51.3]	100	27.1	[23.8,30.7]	72.9	[69.3,76.2]	100
Total	516	34.5	[31.7,37.4]	65.5	[62.6,68.3]	100	60.5	[57.5,63.4]	39.5	[36.6,42.5]	100	27.1	[24.5,29.9]	72.9	[70.1,75.5]	100
P-value		P=0.08*					(<.0001) ***					p=0.95				
Health Insurance																
No Health Insurance	473	36.6	[33.6,39.7]	63.4	[60.3,66.4]	100	60.5	[57.4,63.5]	39.5	[36.5,42.6]	100	26	[23.3,28.9]	74	[71.1,76.7]	100

Having Health Insurance	43	11.6	[6.4,20.3]	88.4	[79.7,93.6]	100	60.5	[49.8,70.2]	39.5	[29.8,50.2]	100	39.5	[29.8,50.1]	60.5	[49.9,70.2]	100
Total	516	34.5	[31.7,37.4]	65.5	[62.6,68.3]	100	60.5	[57.5,63.4]	39.5	[36.6,42.5]	100	27.1	[24.5,29.9]	72.9	[70.1,75.5]	100
P-value		(<.0001) ***					P=1.000					(<.0001) ***				
Social Group	**Household Level Characteristics**															
Scheduled Tribes (STs)	268	36.9	[33.0,41.1]	63.1	[58.9,67.0]	100	64.2	[60.1,68.1]	35.8	[31.9,39.9]	100	26.9	[23.3,30.8]	73.1	[69.2,76.7]	100
Scheduled Castes (SCs)	248	31.9	[27.9,36.0]	68.1	[64.0,72.1]	100	56.5	[52.1,60.7]	43.5	[39.3,47.9]	100	27.4	[23.7,31.5]	72.6	[68.5,76.3]	100
Total	516	34.5	[31.7,37.4]	65.5	[62.6,68.3]	100	60.5	[57.5,63.4]	39.5	[36.6,42.5]	100	27.1	[24.5,29.9]	72.9	[70.1,75.5]	100
P-value		P=0.08*					P=0.01**					P=0.84				
Economics Status																
Non-POOR	168	33.3	[28.5,38.5]	66.7	[61.5,71.5]	100	58.9	[53.6,64.0]	41.1	[36.0,46.4]	100	32.7	[28.0,37.9]	67.3	[62.1,72.0]	100
Poor	348	35.1	[31.6,38.7]	64.9	[61.3,68.4]	100	61.2	[57.6,64.7]	38.8	[35.3,42.4]	100	24.4	[21.4,27.7]	75.6	[72.3,78.6]	100
Total	516	34.5	[31.7,37.4]	65.5	[62.6,68.3]	100	60.5	[57.5,63.4]	39.5	[36.6,42.5]	100	27.1	[24.5,29.9]	72.9	[70.1,75.5]	100
P-value		P=0.58					P=0.48					(<.0001) ***				
Type Family																
Joint Family	143	32.2	[27.0,37.8]	67.8	[62.2,73.0]	100	56.6	[50.9,62.3]	43.4	[37.7,49.1]	100	23.1	[18.6,28.3]	76.9	[71.7,81.4]	100
Nuclear family	373	35.4	[32.1,38.9]	64.6	[61.1,67.9]	100	61.9	[58.5,65.3]	38.1	[34.7,41.5]	100	28.7	[25.6,32.0]	71.3	[68.0,74.4]	100
Total	516	34.5	[31.7,37.4]	65.5	[62.6,68.3]	100	60.5	[57.5,63.4]	39.5	[36.6,42.5]	100	27.1	[24.5,29.9]	72.9	[70.1,75.5]	100
P-value		P=0.32					P=0.11					P=0.06*				
Primary Health Center	**Distance to the Hospital**															
0 To 4 Km	241	34.9	[30.7,39.2]	65.1	[60.8,69.3]	100	58.5	[54.1,62.8]	41.5	[37.2,45.9]	100	27.8	[24.0,31.9]	72.2	[68.1,76.0]	100

5 To 24 Km	253	36	[31.9,40.2]	64	[59.8,68.1]	100	62.5	[58.2,66.5]	37.5	[33.5,41.8]	100	28.1	[24.3,32.1]	71.9	[67.9,75.7]	100
25 Km Above	22	13.6	[6.3,27.2]	86.4	[72.8,93.7]	100	59.1	[44.2,72.5]	40.9	[27.5,55.8]	100	9.1	[3.5,21.8]	90.9	[78.2,96.5]	100
Total	516	34.5	[31.7,37.4]	65.5	[62.6,68.3]	100	60.5	[57.5,63.4]	39.5	[36.6,42.5]	100	27.1	[24.5,29.9]	72.9	[70.1,75.5]	100
P-value		P= 0.01**					p=0.43					p=0.02**				
Govt-Distance																
0 To 5km	88	29.5	[23.3,36.7]	70.5	[63.3,76.7]	100	56.8	[49.5,63.8]	43.2	[36.2,50.5]	100	22.7	[17.2,29.4]	77.3	[70.6,82.8]	100
6 To 20 Km	209	34.9	[30.6,39.5]	65.1	[60.5,69.4]	100	55	[50.2,59.7]	45	[40.3,49.8]	100	25.8	[21.9,30.2]	74.2	[69.8,78.1]	100
21 To 50 Km	208	35.6	[31.2,40.2]	64.4	[59.8,68.8]	100	67.3	[62.7,71.6]	32.7	[28.4,37.3]	100	30.8	[26.5,35.4]	69.2	[64.6,73.5]	100
51 To 100 Km	11	45.5	[26.5,65.8]	54.5	[34.2,73.5]	100	63.6	[42.4,80.6]	36.4	[19.4,57.6]	100	18.2	[7.0,39.6]	81.8	[60.4,93.0]	100
Total	516	34.5	[31.7,37.4]	65.5	[62.6,68.3]	100	60.5	[57.5,63.4]	39.5	[36.6,42.5]	100	27.1	[24.5,29.9]	72.9	[70.1,75.5]	100
P-value		P=0.33					(<.0001) ***					p=0.12				
Pvt-Distance																
0 To 4 Km	217	40.1	[35.6,44.8]	59.9	[55.2,64.4]	100	57.1	[52.5,61.6]	42.9	[38.4,47.5]	100	30	[25.9,34.4]	70	[65.6,74.1]	100
5 To 30 Km	260	30	[26.2,34.1]	70	[65.9,73.8]	100	62.7	[58.5,66.7]	37.3	[33.3,41.5]	100	24.6	[21.1,28.5]	75.4	[71.5,78.9]	100
31 Km and Above	39	33.3	[23.8,44.4]	66.7	[55.6,76.2]	100	64.1	[52.9,73.9]	35.9	[26.1,47.1]	100	28.2	[19.4,39.1]	71.8	[60.9,80.6]	100
Total	516	34.5	[31.7,37.4]	65.5	[62.6,68.3]	100	60.5	[57.5,63.4]	39.5	[36.6,42.5]	100	27.1	[24.5,29.9]	72.9	[70.1,75.5]	100
P-value		(<.0001) ***					p=0.16					p=0.17				

Note: Standard errors are presented in brackets are p-values and the character '*' '**' '***' indicates '10','5','1' per cent level of significance.

favour of the institutional delivery system, where 57.4 % [48.9-65.4] and 55.7 % [50.8-60.4] women in this age group prepared institutional delivery for their new-born. Similarly, a significant (p-value <0.001) relationship is observed between age groups and ANC visits at least four times, TT vaccination, consuming Iron tablets, skilled assistance at delivery, PNC check-up within 24 hours of delivery. Women with 2 or 3 birth orders attended 53.5 % [49.6-57.3] through institutional delivery, with 36 % [32.0-39.5] of ANC at least four times, 79.6 % [76.3-82.6] of taking TT vaccine and 72.9 % [69.3-76.2] of taking Iron tablets ,46.5 % [42.7-50.3] of skilled assistance at delivery, 78.3 % [75.0-81.4] of PNC check-up within 24 hours. Mothers with education levels of primary, middle, and secondary/Higher secondary are the better users of maternal health care systems (MHCS). On average [8] 65% of mothers with secondary/Higher secondary education are the better utilization of MHCS. Unemployed women are highly responding to the better utilization of MHCS, followed by self-employed/ business category women. It implies employment doesn't make any difference in the utilization of MHCS, with respect to the occupation. Exposure to media helped the mother to attain 53.9 % [47.5-60.2] of institutional delivery, 71.3 % [65.1-76.8] of taking Iron tablets, and 82.6 % [77.2-87.0] PNC within 24 hours of delivery. Age at marriage is a significant indicator that determines the use of MHCS. An average of 55 % of women married above 18 years strongly associated with the utilization of MHCS. Women having health insurance coverage is significantly associated with MHCS utilization, where 62.8 % [52.2-72.3] of women's attending their delivery in an institution (hospital), 86 % [77.0-91.9] TT vaccine, 88.4 % [79.7-93.6] taking Iron tablets and 60.5 % [49.9-70.2] PNC within 24 hours of delivery. It emphasizes having insurance coverage will improve the utilization of MHCS independent of other factors. In general, the demographic behaviours of 'members of the social background' communities are different such as Scheduled caste and Scheduled tribe. It reveals from Table7.1 that, averages of 51 % of Scheduled caste (SCs) women are utilizing MHCS, which is compared to more than Scheduled Tribe (STs). Coming to economic status, non-poor women are better users of MHCS compared to poor women, but not significantly. A significant association was observed between women in nuclear families and ANC visits at least four times, 27 % [24.0-30.4] and PNC check-ups within 24 hours, 71.3 % [68.0-74.4], however, the percentage is less with respect to joint families. Geographical distance to reach the nearest health centres is a significant effect on MHCS utilization. Private hospital distance shows a significant effect on the use of MHCS. Hospitals ranging from respondents' houses such as 0 to 4 km, 5 to 30 and above 30 are almost equal in the

percentage of utilization of MHCS, respectively, whereas PHC and government hospitals don't have much effect on MHCS utilization. It implies how society is interested in private hospitals for their treatment, rather than going to a PHC or government hospital. This might be the reason for the lack of proper health facilities in these hospitals.

7.5. Logistic Regression Results and Discussion

This section represents the binary logistic regression results of the model predicting the impact of individual and demographic characteristics on utilization of maternal health care services among the women age group 15-49.

Place of delivery

Table7A.2 reports the estimated odds ratios for the dependent variable place of delivery (institutional vs. home). It is observed that women within the age group of 25-34, 35-44- and 45–55-year are about 5, 3, and 2 times more likely (significant <1 %, <1%, and 10 %) to prefer institutional delivery (e.g. hospital) to deliver their babies, rather than traditional delivery. However, women who had birth orders of children 2, 3, and 4 or above are about 4 and 3 times more likely (significant < 1 %) to prefer institutional delivery. Women's education is an important predictor to know the health-seeking behaviour of the mother during her pregnancy. The odds of women having middle and secondary/higher secondary education are 1.88 and 2.48 times (significant 5% and <1%) more likely to deliver their child in hospital than delivering at home. In terms of occupation status, mothers working as farmers, casual labour and agriculture labourers are 0.66 times less likely to (with 10% significant) attend institutional delivery systems to deliver their babies. Similarly, mothers with greater exposure to media are observed to have a higher probability of choosing institutional delivery. The odds of media exposure are about 65 percent more likely (at 5% significant) to deliver the new born in hospital (institutional) than the women with no-media exposure. Insurance is another important predictor to know the health expenditure behaviour of the mother during her delivery. Thus, the financial burden can be reduced by acquiring proper health insurance. A mother having health insurance coverage shows 2 times more likely (at < 5 % significance) to prepare institutional delivery rather than traditional ones. With respect to household characteristics, caste was an important factor that determines the choice of the delivery system. Mothers who belong to the SCs are 90 % more likely to (at < 1 % significant)

go to the hospital for delivery than the Scheduled tribe STs Women. However, the hospital distance is a significant indicator to choose the place of delivery. It was found that women who are residents between 25 km and above from PHC are 35 % less likely to (at < 10 % significant) use institutional delivery systems, respectively, whereas women who are residents of 0 to 5 km from government hospitals are 65 % more likely to (at 10% significant) prefer institutional delivery. However, economic status, age at marriage, and private hospital distance do not seem to be a significant predictor to choose an institutional delivery system for the best.

- **Frequency of Antenatal Visit (at least 4 times)**

In the previous section, we explained how the choice of delivery is influenced by the various covariates. Similarly, the health impact of ANC also depends on how frequently the mother receives ANC during her pregnancy. Table 7A.2 shows that the odds of women's age group between 25-34, 35-44, and 45-55 is about, 3.09, 3, and 2.11 times (significant < 5 %, 1 %, and < 10 %) more likely to receive ANC (at least 4 times) during their pregnancy. However, as the mother gets older by age group their visits for ANC check-ups decrease. Mothers belonging to SCs with an education level of secondary/higher secondary, are 2 times more likely (significant <1 %) to receive an adequate amount of ANC compared to STs women. Similarly, mothers from nuclear families are 0.47 times less likely to (significant <1 %) receive ANC (at least 4 times) than mothers from joint families. However, Birth order, media exposure, age at marriage, women's health insurance, economic status, and hospital distance don't show any effect on receiving ANC.

- **Taking Tetanus Injection (TT)**

Factors that show a significant effect on receiving ANC (at least 4 times) are equally important for TT vaccination as well. Table 7A.2 shows that the women in age groups particularly, 35-44 are in the high probability of obtaining vaccination, followed by age group 25-34 and the vaccination seems to reduce as age increases. Higher-order births say 2 to 3 and 4 or above, were associated with an increased probability of 4 times TT vaccination. However, media exposure is a significant predictor of TT vaccination. Higher degree of media exposure is associated with 1.6 times more likelihood (at <10 % significance) of TT vaccination. Similarly, health insurance shows an important determinant in taking a TT vaccination; it indicates 3 times more likelihood (at < 5 % significance) in obtaining TT vaccination. With respect to hospital distance, women who are residents between 6 to 20 km from government hospitals are 1.8 times more likely to

Table: 7A.2: Logistic Regression Analysis to Capture the Influence of Individual and Demographic Characteristics on the Use Maternal Healthcare Services

Predictor variables	Outcome Variables								
	Place of Delivery		p-value	ANC visit (at least 4 times)		p-value	Taking Tetanus Toxoid Injection (TT)		p-value
	Odds Ratio	[95 % CI]		Odds Ratio	[95 % CI]		Odds Ratio	[95 % CI]	
Individual Characteristics									
Women age group									
15 to 24	1.00R			1.00			1.00R		
25 to 34	4.92	1.96-12.30	0.001***	3.09	1.15-8.26	0.03**	3.17	1.29-7.84	0.01**
35 to 44	3.42	1.65-7.10	0.001***	2.98	1.28-6.92	0.01**	4.63	2.23-9.63	0.000***
45 to 55	1.79	0.89-3.59	0.10*	2.11	0.92-4.84	0.08*	2.01	1.05-3.87	0.03**
Birth Order									
0 to 1	1.00			1.00			1.00		
2 to 3	4.16	2.27-7.62	0.00***	1.50	0.83-2.71	0.18	3.92	2.19-7.02	0.000***
4 and above	3.07	1.43-6.56	0.00***	0.70	0.31-1.57	0.39	4.33	2.06-9.09	0.000***
Women Education level									
Illiterate	1.00			1.00			1.00		
Below Primary	1.37	0.56-3.38	0.49	1.96	0.74-5.17	0.175	1.37	0.45-4.23	0.58

primary	1.21	0.56-2.61	0.63	1.55	0.69-3.52	0.291	1.70	0.41-2.22	0.92
middle	1.88	0.99-3.56	0.05**	1.60	0.83-3.09	0.158	1.70	0.80-3.60	0.17
Secondary/Higher secondary	2.48	1.37-4.47	0.00***	2.22	1.23-4.00	0.008***	0.20	0.67-2.63	0.42
Graduate and above	0.56	0.16-1.94	0.36	0.38	0.07-1.95	0.247	0.20	0.06-0.70	0.01**
Mother occupation									
unemployed	1.00			1.00			1.00		
self-employed/ business	1.68	0.53-5.33	0.38	0.14	0.02-1.20	0.07*	0.66	0.20-2.17	0.49
farmer/causal labors/agriculture labours	0.66	0.41-1.08	0.10*	0.96	0.59-1.58	0.89	0.86	0.49-1.49	0.59
Government/ private employ	0.51	0.18-1.41	0.19	0.75	0.26-2.17	0.59	0.67	0.24-1.89	0.45
Media exposure									
No Media exposure	1.00			1.00			1.00		
Media exposure	1.65	1.00-2.72	0.05**	1.43	0.85-2.39	0.18	1.64	0.93-2.89	0.09*
Age at marriage									
below 18 years	1.00			1.00			1.00		
18 and above	1.42	0.91-2.22	0.13	1.36	0.84-2.21	0.21	1.30	0.80-2.12	0.28
women health insurance									
No health insurance	1.00			1.00			1.00		
Having health insurance	2.30	1.05-5.02	0.04**	1.13	0.50-2.52	0.77	2.94	1.08-8.06	0.04**
Household-level characteristics									

Social group									
Scheduled tribes (ST)	1.00			1.00			1.00		
Scheduled Caste (SC)	1.91	1.21-3.04	0.006***	2.40	1.45-3.96	0.001***	1.11	0.67-1.85	0.69
Economic Status									
No Poor	1.00			1.00			1.00		
Poor	1.91	0.69-1.64	0.79	0.89	0.57-1.40	0.63	1.27	0.79-2.04	0.32
Type of Family									
Joint family	1.00			1.00			1.00		
Nuclear family	1.13	0.71-1.79	0.61	0.47	0.29-0.76	0.002***	0.84	0.51-1.40	0.51
Distance to the hospital									
PHC distance									
5 to 24 km	1.00			1.00			1.00		
0 to 4 km	1.30	0.82-2.05	0.27	1.45	0.90-2.36	0.13	1.27	0.77-2.09	0.36
25 and above	0.35	0.12-1.05	0.06*	1.61	0.55-4.67	0.38	1.20	0.29-4.95	0.80
Government hospital distance									
21to 50 km	1.00			1.00			1.00		
0 to 5	1.65	0.92-2.97	0.10*	1.10	0.60-2.01	0.77	1.23	0.65-2.33	0.53
6 to 20	0.92	0.56-1.52	0.75	0.87	0.50-1.49	0.61	1.79	1.03-3.11	0.04**
51 to 100 km	1.69	0.42-6.86	0.46	0.58	0.11-3.02	0.51	0.44	0.11-1.75	0.24

Private hospital Distance									
5 to 30	1.00			1.00			1.00		
0 to 4 km	0.87	0.56-1.36	0.54	1.12	0.70-1.80	0.63	0.68	0.41-1.13	0.141
31 and above	0.86	0.37-2.02	0.74	1.21	0.51-2.87	0.66	0.21	0.08-0.52	0.001***
Log likelihood	-293.25748			-268.01598			-253.99573		
Pseudo R2	0.1749			0.1502			0.1465		
Prob > chi2	0.0000***			0.0000***			0.0000***		
Observation	516			516			516		

Note: Place of Delivery, ANC visit (at least 4 times), Taking Tetanus Toxoid Injection (TT) are used as a dependent variable; (R) denotes the reference category; Standard errors are presented in brackets are p-values and the character '*' '**' '***' indicates '10','5','1' per cent level of significance.

Table: 7A.3: Logistic Regression Analysis to Capture the Influence of Individual and Demographic Characteristics on the Use Maternal Healthcare Services

Predictor variables	**Outcome Variables**								
	Taking Iron Tablets		p-value	Assistance During Delivery by Skilled Health Personnel		p-value	PNC within 24 hours of delivery		p-value
	Odds Ratio	[95 % CI]		Odds Ratio	[95 % CI]		Odds Ratio	[95 % CI]	
Individual Characteristics									
Women age group									
15 to 24	1.00			1.00R			1.00		
25 to 34	1.97	0.85-4.57	0.116	4.14	1.67-10.26	0.002***	0.53	0.22-1.28	0.16
35 to 44	2.40	1.23-4.66	0.01**	3.59	1.69-7.66	0.001***	1.39	0.66-2.96	0.39
45 to 55	1.67	0.90-3.13	0.10*	2.02	0.97-4.22	0.06*	0.79	0.39-1.60	0.51
Birth Order									

0 to 1	1.00			1.00			1.00		
2 to 3	3.07	1.79-5.26	0.000***	3.14	1.77-5.59	0.000***	3.85	2.17-6.85	0.000***
4 and above	2.36	1.20-4.64	0.01**	1.96	0.93-4.12	0.07*	3.46	1.65-7.25	0.001***
Women Education level									
Illiterate	1.00			1.00			1.00		
Below Primary	1.04	0.42-2.58	0.94	0.92	0.36-2.33	0.86	0.90	0.31-2.5	0.84
primary	0.86	0.40-1.84	0.70	1.09	0.49-2.39	0.84	0.38	0.17-0.8	0.17
middle	1.73	0.88.3.39	0.10*	1.89	1.01-3.54	0.05**	1.43	0.67-3.08	0.36
Secondary/Higher secondary	1.29	0.71.2.35	0.41	1.39	0.79-2.44	0.25	0.51	0.27-0.96	0.04**
Graduate and above	0.45	0.13-1.50	0.19	1.32	0.41-4.25	0.64	0.23	0.06-0.87	0.03**
Mother occupation									
unemployed	1.00			1.00			1.00		
self-employed/ business	0.60	0.20-1.85	0.38	1.99	0.63-6.23	0.24	3.28	0.67-16.20	0.15
farmer/causal labours/agricultures labours	1.02	0.63.1.63	0.95	0.72	0.45-1.14	0.16	0.61	0.36-1.05	0.07*
Government/ private employ	0.96	0.36-2.56	0.93	0.62	0.23-1.67	0.34	0.85	2.27-2.68	0.78
Media exposer									
No Media exposer	1.00			1.00			1.00		
Media exposer	1.63	0.98-2.71	0.06*	1.36	0.84-2.21	0.22	2.58	1.42-4.70	0.002***
Age at marriage									
below 18 years	1.00			1.00			1.00		
18 and above	1.16	0.75-1.81	0.49	1.86	1.19-2.89	0.006***	1.21	0.74-1.97	0.44
women health insurance									

No health insurance	1.00			1.00			1.00		
Having health insurance	4.87	1.74-13.62	0.003***	1.40	0.66-3.00	0.38	0.48	0.22-1.05	0.07*
Household-level characteristics									
Social group									
Scheduled tribes (STs)	1.00			1.00			1.00		
Scheduled Caste (SCs)	1.01	0.64-1.60	0.97	1.56	0.98-2.46	0.06*	0.80	0.48-1.32	0.38
Economic Status									
No Poor	1.00			1.00			1.00		
Poor	0.94	0.62-1.44	0.79	1.02	0.67-1.56	0.91	1.58	1.00-2.50	0.05**
Type of Family									
Joint family	1.00			1.00			1.00		
Nuclear family	0.80	0.51-1.26	0.34	0.72	0.46-1.12	0.15	0.74	0.44-1.24	0.25
Distance to the hospital									
PHC distance									
5 to 24 km	1.00			1.00			1.00		
0 to 4 km	1.26	0.81-1.97	0.30	1.04	0.66-1.62	0.87	1.12	0.69-1.84	0.64
25 and above	3.02	0.71-12.55	0.13	0.49	0.17-1.43	0.19	3.48	0.71-17.07	0.12
Government hospital distance									
21to 50 km	1.00			1.00			1.00		
0 to 5	1.19	0.66-2.15	0.57	1.30	0.73-2.30	0.38	1.84	0.97-3.51	0.06*
6 to 20	0.95	0.58-1.53	0.82	1.70	1.04-2.78	0.03**	1.14	0.67-1.95	0.64
51 to 100 km	0.54	0.15-1.96	0.35	1.64	0.40-6.69	0.49	1.18	0.23-6.16	0.84
Private hospital Distance									
5 to 30	1.00			1.00			1.00		
0 to 4 km	0.75	0.48-17	0.20	1.53	0.98-2.37	0.06*	0.66	0.41-1.08	0.10*
31 and above	0.76	0.32-1.81	0.54	0.57	0.24-1.32	0.19	0.84	0.33-2.15	0.71

Log likelihood	-299.49585	-301.21183	-258.65402
Pseudo R2	0.0991	0.1301	0.1425
Prob > chi2	0.0000***	0.0000***	0.0000***
Observation	516	516	516

Note : Taking Iron Tablets, Assistance During Delivery by Skilled Health Personnel, PNC within 24 hours of delivery are used as a dependent variable; (R) denotes the reference category; Standard errors are presented in brackets are p-values and the character '*' '**' '***' indicates '10','5','1' per cent level of significance.

Obtain TT vaccine. Whereas residents between 31 km and above from a private hospital are 0.21 times less likely (at <1 % significant) to receive TT vaccine. Education, occupation, marriage, social group, economic status, and family size were not important covariates that affect the obtaining TT vaccination.

- **Taking Iron Tablets**

According to the *"Reproductive and Child Health Programme,"* a pregnant woman must receive two times TT vaccination and consume supplementary iron-folic acid (IFA) tablets at least three months during her pregnancy. Results presented in Table 3 shows women within the age category of 35-44 are 2.4 times more likely (significant 1 %) to consume iron (IFA) tablets than compared to other categories. mothers of higher birth orders of 2 to 3 and 4 or above are 3 times more likely (at <1 % and 1% significance) to consume iron (IFA) tablets during their pregnancy. However, the level of education at least middle standard shows 73 % more likely (at 10 % significant) to consume Iron (IFA) tablets. As expected, women with greater media exposure were 63 % more likely to (<10 % significant) consumer Iron tablets during their pregnancy compared to women with no media exposure. Furthermore, having health insurance shows a probability of 5 times more likely (at < 1 % significance) to consume iron (IFA) tablets, than the no-insurance mother. Mother occupation, marriage age, social group, economic status, family size, hospital distance are not significant covariates to explain the use of MHCS.

- **Assistance by Skilled Personnel During Delivery**

The estimated results in Table 7A.3 represent the association between covariates and the assistance made by skilled personnel during delivery. These are broadly similar to what we find in the case of place of delivery. All the three age categories 25-34, 35-44, and 45-55 are about 4.1, 4, and 2 times more likely to (significant < 1 %, < 1 %, and < 10 %) receive better assistance by the skilled personnel at the point of delivery. While this assistance decreases as the mother gets older. Assistance by skilled personnel is an important predictor for different birth orders, women with birth orders of 2 to 3 are 3 times more likely to (significantly at < 1 %) receive skilled assistance during delivery, and its decreases with an increase in birth order. Mothers with a middle level of education were 2 times more likely (significant at 5 %) to receive skilled assistance during delivery in comparison to illiterate mothers. With respect to marriage age and caste, women who married after 18 years and belonged to SCs were on average 70 % more likely (significant at < 1 %) to use skilled assistance at delivery than the women married below 18 and belong to the STs community.

However, it is found that women who are residents between 6 to 20 km from a government hospital and 0 to 4 km from a private hospital are on average 60 % more likely to (at <10 % significant) receive skilled assistance during delivery. Other predictors of the use of skilled assistance during delivery like mother occupation, media exposure, health insurance, economic status, type of family, PHC distance were insignificant to explain.

- **Postnatal care within 24 hours of the delivery**

The overall use of PNC within 24 hours of the delivery was found to be significant. Table 7A.3 shows that PNC within 24 hours is strongly associated with birth order. Women having 2 to 3 and 4 or above birth orders are 4 and 3 times more likely (with < 1 % significance level) to receive postnatal care (PNC) check-ups within 24 hours of the delivery. Mother level of education shows a lower likelihood to receive PNC check-ups within 24 hours of the delivery. As expected mothers working as farmer/casual labours/agriculture labours were less likely (at <10 % significance) of using PNC within 24 hours of delivery. The odds of reporting the use of PNC within 24 hours of the delivery among women who were greater exposure to media were 3 times higher than the women with no media exposure. However, having health insurance does not show much importance in receiving a postnatal check-up within 24 hours of delivery. Furthermore, women belonging to BPL (poor) were more concerned about their PNC care, 58 % of poor women were more likely (at < 5 % significant) to use postnatal check-ups within 24 hours of delivery in comparison with non-poor women. Hospital distance is considered as an important predictor that shows women who are residents between 0 to 5 km were 84 % more likely (at <10 % significance) to use government hospitals for their PNC. However, they prefer 66 % less likely (at a significant 10 %) to use private hospitals for PNC check-ups. Factors like women's age group, marriage age, social group, and type of family PHC distance don’t seem to have any significant effect on the utilization of PNC care.

7.6. Discussion and Conclusion

This study examines the effect of individual and household characteristics and hospital distance on the utilization of maternal health care services (MHCS), such as place of delivery, frequency of Antenatal visits, taking TT vaccine, consuming iron (IFA) tablets, assistance by Skilled personnel during delivery and PNC check-up within 24 hours of delivery. The empirical investigation through binary logit regression shows that women's age group, birth order, education

level, mass media exposure, and age at marriage, health insurance, social group, and government hospital distance are the significant predictors of the utilization of maternal health care services. However, the impacts of these covariates varied based on the availability and accessibility of maternal health services. The individual-level characteristics are strongly influential factors for the use of MHCS, such as women with age groups between 25 to 34 and 35 to 44 are positive and strongly associated with all the six indicators of maternal health services. However, the strength of these indicators decreases with the increases in mother's age, the bivariate results show almost 20 percent of respondents' views in using MHCS decreased with an increase in their age. It emphasizes mothers of higher age groups are less concerned about acquiring maternal health services. From the field evidence, one of the respondents 40-year-old lady in Betul district opined that the "family constraints and husband ill behaviours stop them to use better health services. According to her, women between the age groups of 25 to 40 are highly involved in domestic works and rarely allowed by the family to use all these maternal health services frequently". It is evident that the use of MHCS highly depends on women's autonomy in family and husband support towards her. Birth order showed considerable influences on the use of all six maternal health services; mothers with 2 to 3 orders of birth are better utilizers of maternal health services. However, the probability of using MHCS decreases with the increase in higher birth order. Findings suggest that mothers with 2 and 3 orders of births were more likely to deliver their new born in hospital (institutional system) than the mother with the higher order of births and the same followed for all other five MHCS. This result is consistent with those of past studies, which suggests the decrease in the priority of using maternal health services is due to time, family, and resource constraints (Wong, Popkin, Guilkey, & Akin, 1987; Raghupathy, 1996; Navaneetham & Dharmalingam, 2002; Barman, Saha & Chouhan, 2020). Our results also highlight the importance of middle and higher education for women to improve the utilization of maternal health care services. The results show that mothers with education levels such as middle and secondary/higher secondary are more likely to avail maternal health services which improves the treatment-seeking behaviour. Hence, the present society needs to encourage women's education to make them independent and have greater autonomy in decision making, rise in empowerment and help them to eliminate socio-economic backwardness in the society.

This study also demonstrated that mothers with greater exposure to mass media were more likely to utilize maternal health care services compared to mothers with no mass media exposure.

Watching TV and listening to the radio is a common practice in rural India where most of the social, economic, and health-related issues are broadcast daily or once a week. It Present India is much more advanced in technology, what was not there in the past. The high-speed internet and number of channels that broadcast several programmers related to social development, health care, education, news, entertainment, market, and many other things. Most of the women in rural India have a greater habit of watching TV regularly for multi-purpose. Frequently watching TV and using a mobile phone increases the availability of information about the use of modern medical services and exposure to the outside world. Bankole and West off (1996) observed that mass media exposure changes the women's attitude towards health-seeking behaviour such as contraceptive use, reproductive preference, and treatment for children.

Women's health insurance coverage was also found to be an important determinant that increases the probability of maternal health care utilization. As we know health insurance serves the household to reduce the '*risk of medical expenses that can be large, relative to modest incomes' '. Our* study observed that mothers having insurance coverage were greater acceptance of attending institutional delivery, PNC within 24 hours of delivery, proper TT vaccination, and consuming a sufficient number of Iron folic acid (IFA) tablets. The financial arrangements made by private or government entities help them to avoid high out-of-pocket expenditure at their time of use. The use of health insurance coverage in India increased from 4.8 to 28.7 percent from 2005-06 to 2015-16, whereas in Madhya Pradesh it covers 10.9 percent (62803) of women between the age group 15-49 (NFHS report 2015-16). We observed that caste has a significant influence in choosing institutional delivery, number of ANC visits, and assistance by skilled personnel during delivery. In general, it is a known fact that the "lack of access to health care services for the socially backward communities still exists in the present society compared to the rest of the population". The estimates show that Scheduled tribes (STs) women were less likely to use maternal health care services compared to scheduled caste (SCs) women. These findings are interesting, which suggests the existence of social gaps among these socially deprived groups; ST and SC to access community health care services. However, the "*spatial disadvantage combined with social and economic seclusion of these groups, could contribute significantly to the relative underutilization of maternal health care services among themselves"* (Navaneetham & Dharmalingam,2002). Maternal health services in India are delivered by the government as well as private organizations. Government serves through CHCs, PHCs and Sub Health Centres, medical colleges, district hospitals, and state

hospitals. Similarly, private hospitals, nursing homes, and private practitioners are available at private cost. In general, it is expected that the services provided by private organizations are easy to access as well as greater in the availability of better medical facilities. The findings suggest a significant association between private and government hospital distance in the use of PNC within 24 hours of delivery, assistance by skilled personnel during delivery, and proper TT vaccination. Especially, women reside between 0 to 5 and 6 to 20 km from a government hospital and 0 to 4 km from private hospitals. Notably, this witnesses the greater preference of private hospitals by the society even though at the high cost, these findings are consistent with the results of past studies (Babalola & Fatusi, 2009; Navaneetham & Dharmalingam, 2002; jat, et al. 2011; Tiruneh, Chuang & Chuang, 2017). Interestingly we find that PHCs are strongly associated with place of delivery. Hence, from the above findings, it is concluded that both individual and household characteristics including hospital distance have a significant effect on the utilization of maternal health care services. Some policy implications to improve the utilization of maternal health care services in Madhya Pradesh, which have diverse social settings. Their finding confirms women that with higher birth order experience lower utilization of maternal health care services. Hence, India (MP) should improve and design its maternal and child health care programmes including education as a special component to target higher orders births. Because this study finds that women's education is an essential component that's highly correlated with the use of maternal health care services. Improving the girls' level of education, such as middle, secondary, higher secondary, and above in rural Madhya Pradesh will strongly encourage them to use better MHCS during their pregnancy. In addition, improving the maternal and childcare health programme keeping in mind the rural population, especially women who belong to scheduled caste (SCs) and scheduled tribes (STs) also including illiterate women will help to reduce disparities in the use of MHCS. Our study shows the place of delivery is strongly associated with the PHC distance and PNC within 24 hours and assistance by skilled personnel during delivery are associated with private and government hospital distance. Hence it is important to develop health infrastructure and health care facilities in rural Madhya Pradesh, by increasing the numbers of PHCs, CHCs, Sub Health Centres, and government hospitals with sufficient numbers of doctors and skilled health workers. Finally, the government should launch regular health monitoring programmers to improve health delivery without losing a mother or child, by installing special units in every village with strong skilled health workers.

Chapter 8: Conclusions and Policy Implication

"It's okay to talk about birth, okay - then menstruation. I first started my advocacy for women's health in the field of reproductive freedom, and the next stage would be bringing menopause out of the closet."

—Cybill Shepherd

8.1 Introduction

Solving the problem of women health effectively requires a context-specific knowledge about the causes of moving into the women health issues. There is a need for various policy interventions to solve the issues of women health and improve the well-being of women health. The state and central government have various policy and program specially women health but most of the policy and programs is not implemented properly in rural Madhya Pradesh. We noticed that in the rural area, there is lack of health facility, and most of the district there is only one government hospital. The distance from the government hospital to village is far away, so most of the people go to the 'Jholachhap' Doctor for the treatment and face many kinds of problems. As we know most of the ST and SC people are poor in Madhya Pradesh, and some time their half of the income spend on health-related issues. There is one kind of perception that government is providing free health check-up and distributing free medicine to the poor people. But it happened once in five year at the time of election. It is seen that villager's women face many kind general and chronic disease because various reason. To better understand the issue of women's health and the nature of causalities and determinants, it is crucial to collect micro-level evidence. Why do some women have so many different health problems? Why are some women able to recover from illness? What is the state of women's health at this time? Because of this, the primary goal of this study is to comprehend the issue of poor women's health, particularly among SCs and STs, in rural Madhya Pradesh. The study's particular goals are as follows:

- To examine the women health status among the social groups in India and its major states.
- To examine the health care finance system in India and Madhya Pradesh.

- To examine the health status of SCs and STs Women in Madhya Pradesh.
- To analysis the Utilization of Maternal Health Care Services (MHCs) among SC and ST women in Madhya Pradesh.

8.2 Summary of the Major Findings

Women Health Status among Social Groups

There is a negligible change in the total fertility rate has experienced among the scheduled caste (SC), scheduled tribe (ST) and other backward class (OBC) women over the last two decades. Over the period of ten years the total fertility decreased by 22.6 per cent in Scheduled caste and 20.5 per cent in Scheduled tribe and in case of other backward class much improvement is noticed in controlling fertility over the period which is on average of 0.6 children per women comes down in one decade for all the fifteen major states. Finally, India experienced reduction of IMR by 17 deaths per 1000 live births in all the three groups SC, ST and OBC in these past ten years. The scenario changes Under-five mortality case wherein scheduled caste (SC) category highest number of deaths decline in Assam and Rajasthan on average 60 deaths per 1000 live births. Then comes to the scheduled tribe (ST) Rajasthan was the state with the highest number of deaths on average of 56 per 1000 live births, and in case of Other backward class, 39 deaths per 1000 births is decline in Andhra Pradesh.

Next coming to the delivery system, India experienced a transformation and improvement; now the people are more interested in adopting instructional deliveries for their new-born. So now the home deliveries have drastically declined at national as well as across the states, 60.5 per cent to 20.6 per cent decline at national level. Scheduled tribes are still behind of Scheduled castes and other backward classes in both the delivery system (institutional delivery and home delivery). Furthermore, the same high proportion of 83 per cent of live birth to mother not belong to any group like Scheduled Castes, Scheduled Tribes and other backward. This implies improvement in delivery system is noticed in Scheduled tribes, but still inequality prevails in the society.

Analyses the Health Care Financing System in India.

The nature of public spending on health across the Indian states with special focus on Madhya Pradesh (MP). It begins with the comparison of health care expenditure in India with selected

global countries, than it discuss the central government spending on public health and the channel through which its funds the state governments, next state government spending on public health, than brief discussion on inter-state differentials in public spending on health in India, than private health expenditure and its rising burden on people and finally, it analysis the coverage of health insurance across the states and its contribution towards financing the health expenses.

The Indian healthcare system, particularly MP, is characterised by low levels of public spending on healthcare, poor quality in healthcare services, which has an adverse effect on the population's health, a lack of focus on preventative healthcare, and dependency of the population, particularly the poor, on private healthcare providers, which leads to high OOP spending and poverty. According to the WHO's "World Health Statistics" report from 2005, India is ranked 163 out of 194 countries in terms of current health expenditure (CHE) as a percentage of gross domestic product (GDP) and 161 in terms of current health expenditure (CHE) per capita (US$), demonstrating the country's poor state of health overall. Similarly, the per capita spending in India is around $ 63 (PPP), which is just 15 percent of China's, 53 per cent of Sri Lanka's, 70 per cent of Bhutan and 29 per cent of Thailand's (WHO, 2015). Furthermore, the per capita health care spending in India is less than one percent comparing to developed economies like Switzerland and the USA. According to National Health Account (NHA), the total health expenditure percentage of GSDP is decreasing over the period; it was around 4.63 % of GSDP during 2001-02 while it declined to 3.78 % of GSDP by the end of 2016-17.

It also states that total public health sector spending is less than a quarter of the total health spending in India, whereas it is considered an important source to streamline the planning, regulating, and shaping the health care services and make them easily available to the general public of the society. Public spending in terms of providing health care services is essential to maintain the quality of health and avoid negative externalities associated with health. However, healthcare is a state's subject and financing the health care services is primarily the State Governments responsibilities. The government health expenditure in India increased over the period; however, the intensity becomes stronger after 2010.

The central government spending on public health is channeled through the "Ministry of Health and Family Welfare (MoHFW)", which takes the responsibility for financing the health care services in India. The total budget of MoHFW is around Rs 20,138 crore in 2009-10 which was

increased to Rs 73,932 crore by 2021-22, an average growth of 12 % over the period. The share of the Central Government spending on health care services, which includes 'grant-in-aid to States', contributes to one-third spending of both the States and the Centre. The allocation pattern witnessed that the central allocations was increased from 4% to 6% over the period of 1991 to 2003. The larger share of Rs 36,576 crore is allocated to the National Health Mission which is almost 55 % of total MoHFW during 2021-22. The rising exponensional trend in the allocated towards the National Health Mission shows the strengthening in public health systems in providing better healthcare delivery

The endowment of health care in India is primarily comes under the state governments responsibility. Now the level of health care spending is directly links to the state governments' fiscal health that in turn decides the state's overall performance in terms of revenue generating. For instant, if the state comes under low-income category states, where the level of fiscal performance is very poor, in that case it's not surprising to say that these states have limited capacity to finance public health. The lower Central transfers to these states failed to offset the fiscal imbalances fully across the states Madhya Pradesh witnessed less variation in public spending compare to other states that confirm the steady change in government health expenditure during last one decade.

At the State level, public health is also financed through general tax and non-tax revenue resources despite of having negligible share in total government health expenditure. In Madhya Pradesh state an average own-tax revenue collection is around 10.4 % of GSDP and state own non-tax revenue is 1.9 % of GSDP in last three consecutive periods. In early 1990s, when reform measures were initiated by the Centre the share of fiscal transfers to States were increased, moreover states also observed a sharp rise in Gross State domestic Product (GSDP). We find a positive correlation exist between state GSDP and budget size. It implies, as the level of GSDP increases, the state expenditure on public health will increase proportionately. It is important to note that government spending on health is positively correlated with per capita income levels by states. The public spending on health increase from 24 % to 28 % of total health spending as the per capita GSDP approaches to 4.6 % to 5.3 %.

The study found that the level of government health expenditure is highly improved for some states; namely, Maharashtra, Uttar Pradesh, Andhra Pradesh, Tamil Nadu and Karnataka are the

top five states in terms of health spending over, while, in case of Madhya Pradesh the government health expenditure increased from Rs 800 crore in 20001-02 to Rs 6324 crore by 2016-17 and registered a growth of 12 % in last three years. The interstate inequalities in health care spending have increased. In the recent period the difference between the per capita government health expenditure is huge across the states, where the top four states are Kerala, Karnataka, Tamil Nadu, and Maharashtra on other side the bottom four states are Bihar, Uttar Pradesh, Madhya Pradesh, and Assam. Despite of increase in government health spending in Madhya Pradesh, still this state lagging behind compare to other states in terms of per capita health spending. Moreover, the variations in per capita government health expenditure across states increased in first two years. Such as from 2001-02 to 2004-5, the coefficient of variation in per capita government health expenditure across states has increased from 48.6 to 56.2.

The share of private spending on consumption of health care services is disproportionate that of the Government's contribution. According to National Health Account (NHA) more than 70 % of health care expenses was paid from public own pockets/Household income. From the graphical presentation it is confirms that there is a negative relationship between government health spending and OOP expenditure. As the size of government expenditure on health increases the level of OOP expenditure on health declines. However, in absolute terms the household OOP expenditure increased in recent period, but in percentage of GSDP its decline to 2 % towards the end of 2016-17. Moreover, the overall growth rate of household spending is 6 % that is close to be Rs 40,000 crore in nominal terms during 2016-17. Analysing the state wise household expenditure on health it is observed that during 2004-05 states like Uttar Pradesh, Maharashtra, and Kerala were noted as the highest OOP expenditure states. While Himachal Pradesh, Assam and Haryana registered as lowest OOP expenditure spending states. In general, it is expected that as the size of government budget on public health increases the level of OOP expenditure come down. It implies a rise in per capita government health spending will reduce the burden of OOP expenditure. When the per capita public spending was Rs 250 then the level of OOP expenditure is around Rs 14000, and the burden gradually decrease to 12000 as the level of per capita public spending rises to Rs 2500. The states that have higher per capita spending like Himachal Pradesh have lower out-of-pocket expenditure.

It is recognized that the nature of household out-of-pocket expenditure is not much different from other low-income states. In Madhya Pradesh the level of OOP expenditure on health expenses increasing over the period with an overall growth rate of 5 %. It is observed that the overall growth of per capita government spending on health is around 8 % which just above the per capita OOP spending. This implies an inadequate health care financing by state government will increase the financial burden on the poorer sections of the population. The impact of OOP spending is much higher for them those household incomes is very low, especially the burden of out-of-pocket huge in case of inpatient care or critical illnesses. The rise in household OOP expenditure will reduces their spending on other essential and basic needs such as food, shelter, clothing, education etc. Due to which the households have to borrow loan money from friends/ relatives/ money lenders that further pushes the household into debt trap.

The study compares the OOP expenditure per Hospitalization in Madhya Pradesh and India during the last 365 days (2017-18). The average OOP expenditure by male is Rs 20422 and Rs 10385 by female in rural Madhya Pradesh, while comparing to in India it was while 20% higher for male and 10%higer for female. In terms of social groups, the highest OOP spending categories are OBC, followed by ST and SC. While ST males and SC females are spending more form their pockets in Madhya Pradesh, but India as whole SC peoples are paying more after OBCs category. The level of education and OOP spending in Madhya Pradesh, both male and female with Graduation and above will spend from their pockets to cover health expense than compare to others. In terms of age groups, peoples with age group above 60 spends an average of Rs 18943 form their own pocket. In all the Cases the OOP spending by women are less compare to men. Similarly, the household out-of-pocket health expenditure does not show much difference when we analysis OOP Health Expenditure per OPD Spending during the last 15 day for the same time period. Moreover, the financing channel to cover the health expenses clearly indicates that around 90 % of OOP expenditure comes from individual household income/savings.

The accessibility of Health insurance or health scheme in India shows a satisfactory improved over the last ten years. According to NHA, by the end of 2013-14, in India around 40.8 crore individuals were covered by health insurance which is about one-third of the Indian total population. There is 8.8 crore individuals are covered under social health insurance, 15.5 crore individuals covered under government health insurance (associated with an insurance company), 10.3 crore individuals having government health insurance associated with government department/trusts/societies, and

around 6.09 crore individuals covered under private insurance policies. Based on the NFHS-3 and NFHS-4 report it is seen that nearly seven times increase in accessibility of health insurance by the people from 2005 to 2015. Only 4.8 per cent of total health insurance covered up to 2005-06 from the entire population while it comes to 2015-16 in these ten years the number of insurances covered by the public increase to 28.7 percentage of total population. In the state of Andhra Pradesh which was covers a large number of health insurance coverage about 80.5 % respectively to the end of 2015-16. Bihar is the only state that shows an improvement of 12 percent and Manipur a deterotion of 3 percent. However, in case of Madhya Pradesh the health insurance coverage over the period increased by 13%, but it is less than the national average. When it comes to by category wise all the three groups SC, ST and OBC improved its insurance coverage. It noticed that the percentage of health insurance holdings by OBC comes down to the third position, whereas SC and ST stand on a first and second place in the list of the higher holding of health insurance (NFHS-4, 2015-16). Its implies that the health policies undertaken by the government in India from the last ten years show an upgrading in the health services of this three groups SC, ST and OBC. But at the same time, it is also revealed that the improvement goes in favour of SC and ST pushing back to OBC that creates an upcoming problem for the country. Compare the health insurance coverage between female and male within the categories, as per NFHS-4 report the total health insurance coverage by women in India is 20.4 per cent whereas is 22.9 per cent in case of men (around 3 per cent above the female), it implies the number of insurances undertaken by a male is still large compared to the female that represent a little gender bias in insurance holdings, and it also reflects how the society is under control (dominated) of male gender or says the insurance preference is mostly undertaken by the male compared to female. Comparing across the states the men in Andhra Pradesh are 5 percent above in holding health insurance than to compare to women. The next highest health insurance covered state is Kerala followed by Tamil Nadu , where in both states men are better in avaling health insurance than to woemen. The worst condition is seen in the case of Nagaland with less the 2 per cent health insurance covered by men and almost nil by women, the same scenario is witnessed for Manipur, where the proportion insurance is 3 per cent for men, but no coverage for women. Madhya Pradesh as a case study it is observed that the health insurance covered by men is 2 percent more than the women and same is noticed for category wise, men are in better position to attain insurance.

We find that the health insurance coverage is not at all satisfactory, especially in case of women across the states and categories wise (Scheduled tribe, Scheduled caste, and other backward class), like Assam, Manipur and Uttar Pradesh. Madhya Pradesh is the states that shows an improvement in over all coverage of health inshurance but it is still behaind from Andhra Pradesh Kerala and Tamil Nadu and need to focused on this issue.

It is clear that the health insurance schemes coverage in India is not satisfactory even the improvement is continuing from expenditure side. The government requests to take some urgent remedial steps to provide a large number of health insurances at the low cost of premium so that a large number of the household can easily access health insurance without any gender and caste discrimination.

Women Health Status: A Primary Data Analysis finding

The objective of this chapter is to analyses some of the important issues relevant to the impact of the on women's health especially three districts of Madhya Pradesh, and to formulate a conceptual framework that will facilitate women health policy and action.

This study found that in the total household 71.38 percent of the household have nuclear family and 28.62% of the joint family. This study also found very similar result, and its highlight that STs Household (32.76 %) living as more joint family than SCs households (24.05). But in case of nuclear family, its shows that STs household (67.24%) have less nuclear family than SCs household (75.95 percent).

As we noticed, during the rainy season, people faced huge problems because of Kachcha house and hut. This study found that around 67 percent of the household have Kachcha house, only 13 percent of the family have Pakka House. Among the social Group, SC has more Pakka house in comparison to STs. Among the three districts, the Pakka House is more in Hoshangabad district than the other two districts. In study village few people have given their house on rent.

Many studies found that the incidence of poverty is much higher among SCs and STs. This study also found that the incidence of poverty is much higher among SCs and STs. Most of the policy and program has linked with the BPL card. If the poor people have BPL Card, then they can gate the benefit of policies and program. This study shows that around 68 percent of the household have

BPL card. It means by the government estimates all the BPL cardholders are below the poverty line; only six percent of the household are above the poverty line. This indicates that the economic condition of poor people is very shocking.

This study found that the availability of clean drinking water is very poor in three districts' study area. Among all three districts, only seven percent of the household have a drinking water facility inside the premises. It noticed that around 93 percent of the sample household bring drinking water from outside the premise and only 3 percent of the households have drinking water facility inside the premise. We find that SC household have has slightly more drinking water facility inside the premise than the ST household.

The study also finds that some of the households have not electricity facility, and has been facing huge problem because government is not distributing kerosene oil under the PDS. The household, those who are not having electricity facility facing many problems. We see that 10% of the sample households have no electricity facility. This percentage is much higher in the Betul and Harda district in comparison to Hoshangabad.

The study found that around 40 of the households have LPG, and approximately 70% of households use wood as cooking energy. The study also found that many households are not using LPG because of the high gas refiling price.

This Study found that only 20% of the household have toilet facility inside the house, around 25% of the household have toilet facility outside of the house, and around 55% of the household they do not have toilet facility. The study also found that the quality of toilet facility inside and outside is not good. So overall the condition of the people is very disgraceful. The government policy and program (Swachh Bharat) has not been much effective in term of sanitation.

This study reveals that in most of the general disease, women are suffering more than in comparison to the men, among all the study area, around 53% of the female and 47 % men are suffering the general disease. In case of all male and female general disease such as Malaria, Eye Infection, Tooth Ache, Goiter, Spine/Hip Pains, Womb/Uterus Problems, Skin Disease and Piliya, more of the women are suffering then men

We find that the prevalence rate of the chronic disease is much higher in the women in comparison to the men, in total male and female cancer patients around 80 % are women and 20 % are men, and similar result found in case of obesity. This study also finds that in case of TB, the prevalence rate in male (60%) is higher than female (40%) in the study village.

This study estimated and classified expenditure in three parts, first is fee of the Doctor, second is medicine expenditure and third is expenditure of diagnostic. We find that in case of general disease, 69.7% of the individuals have no expenditure (zero) incurred on doctor fee, 65.9% on medicine and 88% on diagnostic in the study village. We find that 14.81% of the people paid Doctor Fee 3.4% of people paid for diagnostic between Rs 1 to 100 for general diseases and around 11% of the people paid for medicine between Rs 1to 500.

This study noticed that most of the people prefer to go with "Jhola Chhap Doctor" or family doctor because the distance from home the hospital is lesser than the government hospitals, 75% of the responded free from the general disease and around 21.6% of the people bear the transport cost between Rs 1 to 100. In case of expenditure on food, this study finds that 88.63% of total study person free from the general disease and only 2.4% of the patient paid Rs. 1 to 100 on food.

The district wise sample household women pregnancy among the social group. Among the 552 household, this study finds that in 74 (13.4%) household one or two women found pregnant. The study notice that ST women are more pregnant than SC women among all three districts.

The study found that more than 30 % delivery happened at own home only and around 40 percent in the Government Hospital. This study also asked some important question to the household such as: Have you ever birth to boy or girl who was born alive but later died? In the 552-sample size, the study finds that 79 (14.31%) household face this kind of problems.

This study tried to find out that Where do household get finance to pay for health services or health expenses, around 80% of the household used their income and saving bear the health expenses. And 20% of the households does zero health expenses. It also noticed that SC household of the study village payed more than the ST household of their income or saving.

There was some schemes central as well as state government scheme for the sterilize male and female. This study reveals that around 64 % of the Female Sterilization among the social group. Overall, the percentage of Female Sterilization among the SCs is higher than the STs. Overall, Male Sterilization is very minimal less than 2 %only.

Utilization of Maternal Health Care Services

This study examines the effect of individual and household characteristics and hospital distance on the utilization of maternal health care services (MHCS), such as place of delivery, frequency of Antenatal visits, taking TT vaccine, consuming iron (IFA) tablets, assistance by Skilled personnel during delivery and PNC check-up within 24 hours of delivery. The empirical investigation through binary logit regression shows that women's age group, birth order, education level, mass media exposure, and age at marriage, health insurance, social group, and government hospital distance are the significant predictors of the utilization of maternal health care services. However, the impacts of these covariates varied based on the availability and accessibility of maternal health services. The individual-level characteristics are strongly influential factors for the use of MHCS, such as women with age groups between 25 to 34 and 35 to 44 are positive and strongly associated with all the six indicators of maternal health services. However, the strength of these indicators decreases with the increases in mother's age, the bivariate results show almost 20 percent of respondents' views in using MHCS decreased with an increase in their age. It emphasizes mothers of higher age groups are less concerned about acquiring maternal health services. From the field evidence, one of the respondents 40-year-old lady in Betul district opined that the "family constraints and husband ill behaviours stop them to use better health services. According to her, women between the age groups of 25 to 40 are highly involved in domestic works and rarely allowed by the family to use all these maternal health services frequently". It is evident that the use of MHCS highly depends on women's autonomy in family and husband support towards her. Birth order showed considerable influences on the use of all six maternal health services; mothers with 2 to 3 orders of birth are better utilizers of maternal health services. However, the probability of using MHCS decreases with the increase in higher birth order. Findings suggest that mother with 2 and 3 orders of births were more likely to deliver their new born in hospital (institutional system) than the mother with the higher order of births and the same followed for all other five MHCS. This result is consistent with those of past studies, which suggests the decrease in the priority of using maternal health services is due to time, family, and resource constraints (Wong, Popkin, Guilkey, & Akin, 1987; Raghupathy, 1996; Navaneetham & Dharmalingam,2002; Barman, Saha & Chouhan, 2020). Our results also highlight the importance of middle and higher education for women to improve the utilization of maternal health care services. The results show that mothers with education levels such as middle and secondary/higher

secondary are more likely to avail a maternal health service which improves the treatment-seeking behaviour. Hence, the present society needs to encourage women's education to make them independent and have greater autonomy in decision making, rise in empowerment and help them to eliminate socio-economic backwardness in the society.

Ours study also demonstrated that mothers with greater exposure to mass media were more likely to utilize maternal health care services compared to mothers with no mass media exposure. Watching TV and listening to the radio is a common practice in rural India where most of the social, economic, and health-related issues are broadcast daily or once a week. At present India is much more advanced in technology, what was not there in the past. The high-speed internet and number of channels that broadcast several programmers related to social development, health care, education, news, entertainment, market, and many other things. Most of the women in rural India have a greater habit of watching TV regularly for multi-purpose. Frequently watching TV and using a mobile phone increases the availability of information about the use of modern medical services and exposure to the outside world. Banklole and Westoff (1996) observed that mass media exposure changes the women's attitude towards health-seeking behaviour such as contraceptive use, reproductive preference, and treatment for children.

Women's health insurance coverage was also found to be an important determinant that increases the probability of maternal health care utilization. As we know health insurance serves the household to reduce the '*risk of medical expenses that can be large, relative to modest incomes*' '. this study observed that mothers having insurance coverage were greater acceptance of attending institutional delivery, PNC within 24 hours of delivery, proper TT vaccination, and consuming a sufficient number of Iron folic acid (IFA) tablets. The financial arrangements made by private or government entities help them to avoid high out-of-pocket expenditure at their time of use. The use of health insurance coverage in India increased from 4.8 to 28.7 percent from 2005-06 to 2015-16, whereas in Madhya Pradesh it covers 10.9 percent (62803) of women between the age group 15-49 (NFHS report 2015-16). We observed that caste has a significant influence in choosing institutional delivery, number of ANC visits, and assistance by skilled personnel during delivery. In general, it is a known fact that the "lack of access to health care services for the socially backward communities still exists in the present society compared to the rest of the population". The estimates show that Scheduled tribes (STs) women were less likely to use maternal health care services compared to scheduled caste (SCs) women. These findings are interesting, which suggests

the existence of social gaps among these socially deprived groups; ST and SC to access community health care services. However, the "*spatial disadvantage combined with social and economic seclusion of these groups, could contribute significantly to the relative underutilization of maternal health care services among themselves"* (Navaneetham & Dharmalingam,2002). Maternal health services in India are delivered by the government as well as private organizations. Government serves through CHCs, PHCs and Sub Health Centers, medical colleges, district hospitals, and state hospitals. Similarly, private hospitals, nursing homes, and private practitioners are available at private cost. In general, it is expected that the services provided by private organizations are easy to access as well as greater in the availability of better medical facilities. The findings suggest a significant association between private and government hospital distance in the use of PNC within 24 hours of delivery, assistance by skilled personnel during delivery, and proper TT vaccination. Especially, women reside between 0 to 5 and 6 to 20 km from a government hospital and 0 to 4 km from private hospitals. Notably, this witnesses the greater preference of private hospitals by the society even though at the high cost, these findings are consistent with the results of past studies (Babalola & Fatusi, 2009; Navaneetham & Dharmalingam,2002; jat, et al. 2011; Tiruneh, Chuang & Chuang, 2017). Interestingly we find that PHCs are strongly associated with place of delivery. Hence, from the above findings, it is concluded that both individual and household characteristics including hospital distance have a significant effect on the utilization of maternal health care services. Some policy implications to improve the utilization of maternal health care services in Madhya Pradesh, which have diverse social settings. There finding confirms women with higher birth order experience lower utilization of maternal health care services. Hence, India (MP) should improve and design its maternal and child health care programmes including education as a special component to target higher orders births. Because our study finds that women's education is an essential component that's highly correlated with the use of maternal health care services. Improving the girls' level of education, such as middle, secondary, higher secondary, and above in rural Madhya Pradesh will strongly encourage them to use better MHCS during their pregnancy. In addition, improving the maternal and childcare health programme keeping in mind the rural population, especially women who belong to scheduled caste (SCs) and scheduled tribes (STs) also including illiterate women will help to reduce disparities in the use of MHCS. The study shows the place of delivery is strongly associated with the PHC distance and PNC within 24 hours and assistance by skilled personnel during delivery are associated with private and government

hospital distance. Hence it is important to develop health infrastructure and health care facilities in rural Madhya Pradesh, by increasing the numbers of PHCs, CHCs, Sub Health Centers, and government hospitals with sufficient numbers of doctors and skilled health workers. Finally, the government should launch regular health monitoring programmers to improve health delivery without losing a mother or child, by installing special units in every village with strong skilled health workers.

8.3 Policy Recommendations

Some policy recommendations can be presented in the following ways based on the results and conclusion:

- Form the study it is identified that lack of essential physical health infrastructure in community health centres (CHC) are one of the major issues for rural women. Particularly, shortage of sufficient number of specialised physicians (gynaecologist), women health workers and number of emergence equipment required in the CHCs. In this regard, it is recommended that the government should take some special measures to improve the health infrastructure by adding more numbers of CHC, appointing additional physicians, predominantly female doctors, and adequate skill-mix of health workers, and strengthening the investment on medical essential equipment.
- It is known fact that female education is positively related to socio-economic development and reproductive health care. In rural Madhya Pradesh most of the women population are unaware of basic health care remedies to be taken at the time of any emergency (especially during the tenancy of delivery). There is a need to upgrade the existing health institutions with the modern technology which can provide better health care education related to nutrition practices during antenatal and postnatal phase.
- Following the example given above, Aganwadi workers should be trained as health and nutrition entrepreneurs so they can advise mothers on health and nutrition, ensure antenatal check-ups and care, deliver care, treat minor illnesses by charging for the drugs, and ensure referral of all risky cases.
- The majority of deliveries take at at house, where they are typically handled by untrained family members or dais. They must all receive healthcare education in order for them to have access to medical professionals for safer births that would lower MMR and CMR.As

empirically observed women with age above 25 and age at marriage above 20 are better utilizers of maternal health care services. It implies women age matters to understand the importance of the use of maternal health care. Hence the government should conduct or organise more programmes at village level to aware the about the importance of the marriage age.

8.4 Limitation of the Study and Scope for Future Research

This study attempted to examine some of the important features of women health of the villagers by using primary as well as secondary data. However, there are some reasonable constraints to this analysis, and reflection on these caveats may open up possibilities for more study in the field. The future research on these must focus on longitudinal analysis of these factors. Further research should be on issues on women's health in rural and urban area among all the social region and religious groups at the large-scale data. There can be further research to analyze the children, and women which have long term consequences not only for particular households but to the society as a whole.

Appendix

Table: 5.1 Trends in Grant-In Aid Allocation by MoHFW to States

Year	Grants-in-aid to State Governments	Grants-in-aid to Union Territory Governments	Aid Materials and Equipment	Total
2009-10	4296	58	46	4,400
2010-11	4591	60	47	4,698
2011-12	5491	52	82	5,624
2012-13	6252	38	224	6,514
2013-14	5038	42	220	5,300
2014-15	16469	202	725	17,396
2015-16	20059	236	7	20,302
2016-17	20816	286	0	21,102
2017-18	47092	541	2146	49,778
2018-19	45653	332	230	46,215
2019-20	32254	430	5	32,688
2020-21 (RE)	60506	3103	751	64,360
2021-22(BE)	53811	1954	110	55,875

Source: -Demand for grants Ministry of health and family welfare union budget government of India, respective years.

Table 5.2 State Share Devolved (In Percent) MP

Finance Commission (Fc)	State Share Devolved (In Percent)	Amount (Rs in Crore)
XI FC	6.54	3984
XII FC	6.71	7623
XIII FC	7.12	22419
XIV FC	7.89	48565
XV	7.85	52247

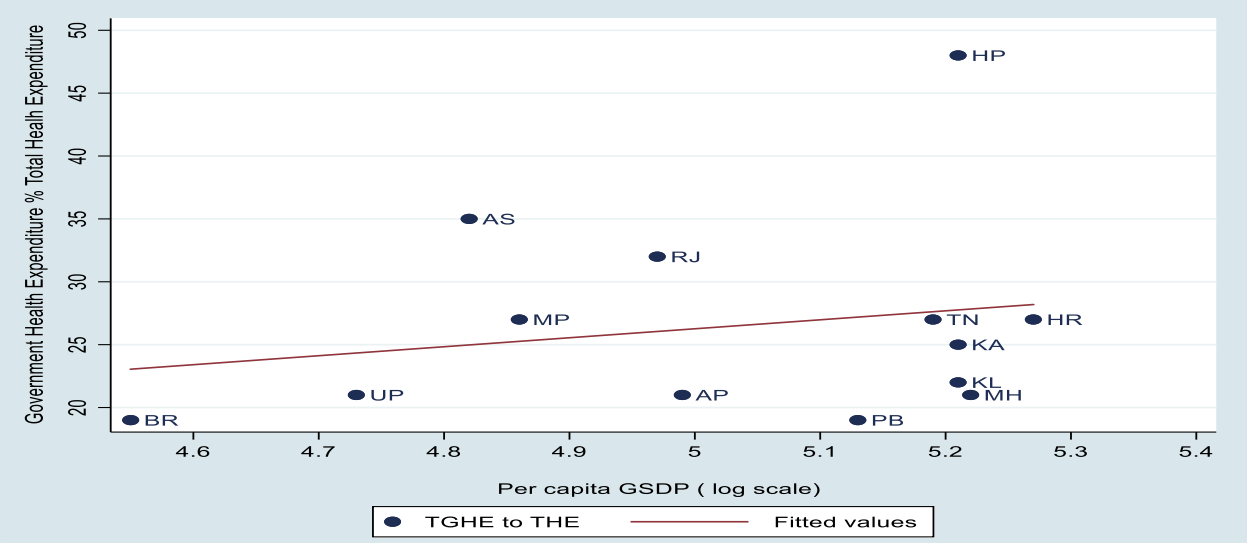
Source: -Finance commission reports for the respective years.

Table 5 3: Performance of State Key Fiscal Indicators, Over the Period 2010-11 to 2021-22

Year	GFD/GSDP	Debt/GSDP	State's Own Tax Revenue/GSDP	State's Own Non-Tax Revenue/GSDP	Interest Payments to Revenue Receipts (IP/RR)
2010 - 2011	1.8	26.0	7.4	2.0	10
2011 - 2012	1.8	25.7	8.5	2.4	8
2012 - 2013	2.7	25.4	8.7	2.0	8
2013 - 2014	2.7	26.4	9.2	2.1	8
2014 - 2015	3.0	28.3	9.5	2.7	8
2015 - 2016	3.4	30.5	9.6	2.0	8
2016 - 2017	5.9	33.2	9.4	1.9	7
2017 - 2018	4.6	34.8	10.0	1.8	8
2018 - 2019	4.0	35.9	9.6	2.4	8
2019 - 2020	5.7	36.7	9.7	1.8	10
2020 - 2021	8.4	47.3	8.6	1.6	12
2021 - 2022	8.1	51.1	10.4	1.9	13

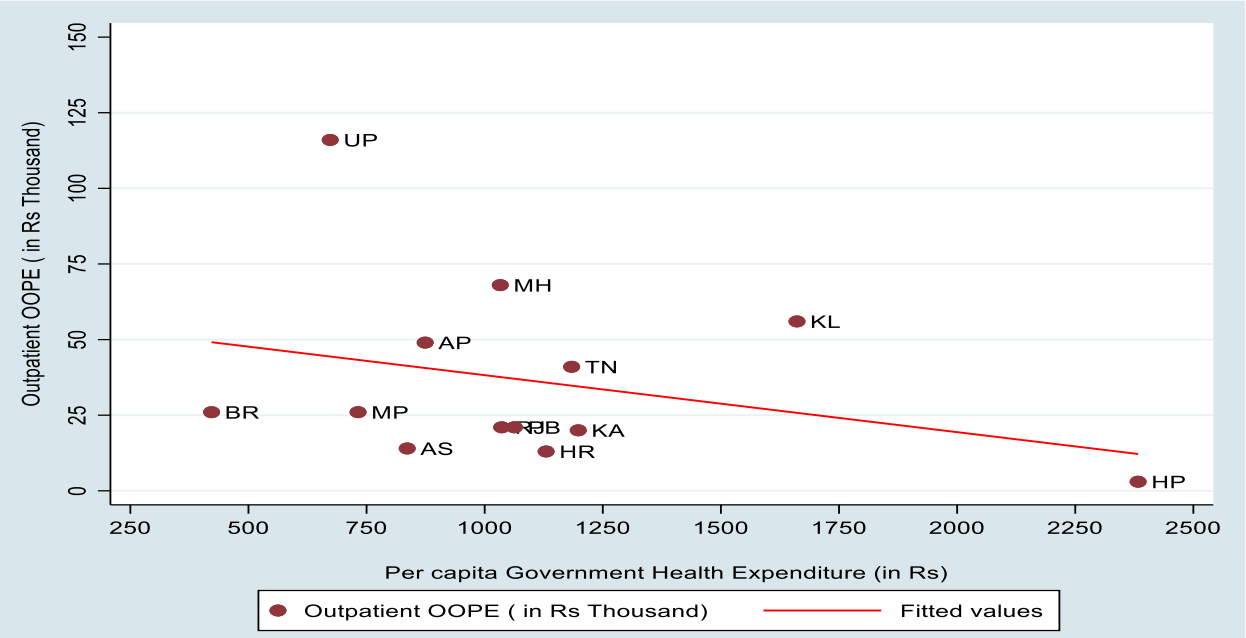
Sources: Economic and Political Weekly Research Foundation. (Database).

Figure 5.1: Public Health Spend as percentage of Total Government Budget for (Centre and state combined)



Author's own calculation

Figure 5.2: Correlation between State Health Spending and Outpatient OOPE



Author's own calculatio

Table 5.4 Key indicators for Healthcare Utilization and OOPE: 2004-05 and 2014-15 (constant prices)

States	OOPE on ANC Public. (Rs)		OOPE on PNC Public. (Rs)		OOPE on ANC Private. (Rs)		OOPE on PNC Private. (Rs.)		OOPE on ANC All. (Rs)		OOPE on PNC All. (Rs)		Catastrophic OOPE* (%)	
	2004-5 to 2014-15		2004-5 to 2014-15		2004-5 to 2014-15		2004-5 to 2014-15		2004-5 to 2014-15		2004-5 to 2014-15		2004-5 to 2014-15	
Andhra Pradesh	167	748	306	552	624	1765	401	1775	280	787	347	516	3%	4%
Assam	407	1408	220	482	1446	2934	476	939	907	2492	360	548	17%	22%
Bihar	408	913	238	650	473	2698	339	1139	462	1286	319	571	5%	13%
Haryana	186	717	244	940	876	5016	1245	2085	356	1423	919	973	14%	12%
Himachal Pradesh	437	1147	531	680	1912	2312	742	1516	557	1218	556	553	17%	15%
Karnataka	113	995	178	912	948	2648	447	1238	366	1641	273	594	10%	8%
Kerala	214	417	308	560	1189	2043	589	1760	450	702	405	435	15%	15%

Madhya Pradesh	1337	1571	784	1140	1492	3709	1388	1944	1446	3040	1209	1179	30%	31%
Maharashtra	142	710	115	410	1246	2450	485	1936	598	1534	307	882	18%	20%
Punjab	930	1340	658	638	1631	3479	587	1637	1267	1898	618	805	14%	22%
Rajasthan	292	639	548	686	883	2690	864	1924	406	967	713	436	13%	16%
Tamil Nadu	583	2111	116	410	1730	5493	596	929	224	328	63	196	12%	20%
Uttar Pradesh	316	907	109	671	556	2185	395	1496	334	560	175	589	20%	23%

Note: Manipur and Nagaland are dropped due to unavailability of data
Source: - National Health Accounts India, 2004-05, 2014-15

Table 5.5 Social Health Insurance Schemes

		2014-15	**2015-16**	**2016-17**
1	**Social Health Insurance Schemes**	12530.38	15889	16607
1.1	Central Government Health Scheme (CGHS) (Incl. Capital Expenditure)	2299.88	2913	3569
1.2	Employee State Insurance Scheme (ESIS) (Incl. Capital Expenditure)	7987.71	10413	10132
1.3	Ex-Serviceman Contributory Health Scheme (Incl. Capital Expenditure)	2242.79	2563	2906

Table 5 6: Government Financed Health Insurance

		2014-15	**2015-16**	**2016-17**
2	**Government Financed Health Insurance**	4589.84	5064	7705
2.1	Rashtriya Swasthya Bima Yojana (RSBY) (All States Not Specified Else Where)	1137.6	1171	2729
2.2	Yeshasvini Health Insurance, Karnataka	158.04	285	318
2.3	Aarogyasri Health Insurance, Telangana	431.32	437	840
2.4	Handloom Weaver Health Insurance	5.48	20	4

2.5	Insurance for Information and Broadcasting Workers, West Bengal		2	3
2.6	NTR Vaidyaseva, Andhra Pradesh	622.6	620	1462
2.7	Chief Minister's Health Insurance Scheme, Chhattisgarh	88	38	60
2.8	Goa Mediclaim and Swarnjayanti Aarogya Bima Yojna, Goa	13.61	10	48
2.9	Mukhyamantri Amrutam Yojna, Gujarat	93.02	118	395
2.10	Mukhya Mantri Health Insurance, Himachal Pradesh		2	4
2.11	Suvarna Arogya Suraksha Trust, Karnataka		178	285
2.12	Megha Health Insurance, Meghalaya (Incl. RSBY)	13.82	25	22
2.13	Public Health Insurance, Mizoram	10.35	9	14
2.14	Bhagat Puran Singh Health Insurance Punjab	5.83	18	72
2.15	Chief Minister's Health Insurance Tamil Nadu	758.33	953	1177
2.16	Chief Minister Swasthya Bima Yojna Uttarakhand		24.5	35
2.17	Biju Krushak Yojana, Odisha	30.98	100	74
2.18	Comprehensive Health Insurance Scheme, Kerala	128.49	154	156
2.19	Other Government Financed Health Insurance		5	7
2.20	BijuKrushak Yojana, Odisha		100	
2.21	Comprehensive Health Insurance Scheme, Kerala		154	
2.22	Other Government Financed Health Insurance		5	

*Source: - National Health Accounts India, 2014-15, 2015-16, 2016-17***.**

Table 5 7: Private Health Insurance

		2014-15	**2015-16**	**2016-17**
3	**Private Health Insurance**	17755.31	22013	27339
3.1	Employer-based insurance (Other than enterprises schemes)	8899	11621	14718
3.2	Other primary coverage schemes	8772	10353	12584
3.3	Community-based insurance	84.31	39	37

Source: - National Health Accounts India, 2014-15, 2015-16, 2016-17

Table 6.1 Types of Family by the social Groups

District Name	Social group	Type of family		
		Joint family	Nuclear family	Total
Hoshangabad	**ST**	42 (28.38)	106 (71.62)	148 (100)
	SC	21 (21.0)	79 (79.00)	100 (100)
	Total	63 (25.40)	185 (74.60)	248 (100)
Betul	**ST**	29 (39.19)	45 (60.81)	74 (100)
	SC	29 (28.43)	73 (71.57)	102 (100)
	Total	58 (32.95)	118 (67.05)	176 (100)
Harda	**ST**	24 (35.29)	44 (64.71)	68 (100)
	SC	13 (21.67)	47 (78.33)	60 (100)
	Total	37 (28.91)	91 (71.09)	128 (100)
All districts	**ST**	95 (32.76)	195 (67.24)	290 (100)
	SC	63 (24.05)	199 (75.95)	262 (100)
	Total	158 (28.62)	394 (71.38)	552 (100)

Source: Author's own estimate from the primary survey (2019)

Table 6.2 Type Ownership House

District No	Social group	Ownership house		Total
		Own	Rented	
Hoshangabad	ST	132 (89.19)	16 (10.81)	148 (100)
	SC	91 (91.0)	9 (9.0)	100 (100)
	Total	223 (89.92)	25 (10.8)	248 (100)
Betul	ST	72 (97.3)	2 (2.7)	74 (100)
	SC	100 (98.04)	2 (1.96)	102 (100)
	Total	172 (97.73)	4 (2.27)	176 (100)
Harda	ST	67 (98.53)	1 (1.47)	68 (100)
	SC	58 (96.67)	2 (3.33)	60 (100)
	Total	125 (97.66)	3 (2.34)	128 (100)
All Districts	ST	271 (93.45)	19 (6.55)	290 (100)
	SC	249 (95.04)	13 (4.46)	262 (100)
	Total	520 (94.2)	32 (5.8)	552 (100)

Source: Author's own estimate from the primary survey (2019)

Table 6.3A: General disease of three districts.

	District	Hoshangabad	Betul	Harda	Overall
S. No	Name of the Disease	Number of persons	Number of persons	Number of persons	Total percentage
1	Malaria	44 (64.7)	18 (26.5)	6 (8.8)	68 (100.0)
2	Typhoid	4 (40.0)	5 (50.0)	1 (10.0)	10 (100.0)
3	Dengue	1 (50.0)	1 (50.0)	0 (0.0)	2 (100.0)
4	Chikguniya	0 (0.0)	1 (50.0)	1 (50.0)	2 (100.0)
5	Chicken Pox	6 (66.7)	3 (33.3)	0 (0.0)	9 (100.0)
6	Cough and Cold	231 (37.9)	175 (28.7)	204 (33.4)	610 (100.0)
7	Eye Infection	12 (63.2)	5 (26.3)	2 (10.5)	19 (100.0)
8	Tooth Ache	15 (79.0)	4 (21.1)	0 (0.0)	19 (100.0)
9	Goiter	2 (66.7)	1 (33.3)	0 (0.0)	3 (100.0)
10	General Fever	211 (35.3)	177 (29.6)	210 (35.1)	598 100.00
11	Joint Pains	73 (40.6)	69 (38.3)	38 (21.1)	180 100.00
12	Spine/Hip Pains	20 (48.8)	12 (29.3)	9 (22.0)	41 100.00
13	Injuries/Burns/transport	2 (28.6)	4 (57.1)	2 (14.3)	8 100.00

14	Womb/Uterus Problems	8 (61.5)	5 (38.5)	0 (0.0)	13 100.00
15	Periods/Menses/ Over-Bleeding	9 (42.9)	8 (38.1)	4 (10.1)	21 100.0
16	Itching	15 (53.6)	11 (39.3)	2 (7.1)	28 (100.0)
17	Skin Disease	0 (0.0)	4 (100.0)	0 (0.00)	4 (100.0)
18	Headache	1 (50.0)	1 (50.0)	0 (0.00)	2 (100.0)
19	Ear-Pain	2 (100.0)	0 (0.0)	0 0.00	2 (100.0)
20	Pilia	0 (0.0)	2 (66.7)	1 (33.3)	3 (100.0)
	Total	656 (40.0)	506 (30.8)	480 (29.2)	1642 (100)

Source: Author's own estimate from the primary survey (2019).

Table 6.3B: Chronic Disease of Three Districts.

CHRONIC DISEASE					
S. No	**District**	**Hoshngabad**	**Betul**	**Harda**	**Overall**
1	Diarrhea	1 (25.0)	3 (75.0)	0 0.0	4 100.0
2	Lower Respiratory	3 (42.86)	4 (57.14)	0 0.0	7 100.0
3	Iron Deficiency	11 (21.55)	29 (55.77)	12 (23.08)	52 100.0
4	Tuberculosis (TB)	1 (20.0)	2 (40.00)	2 (40.0)	5 100.0
5	Paralysis	4 (66.67)	0 (0.0)	2 (33.33)	6 100.0

6	Cancer	2 (40.0)	1 (20.0)	2 (40.0)	5 100.0
7	Cardiovascular	7 (46.67)	5 (33.33)	3 (20.0)	15 100.0
8	Urogenital	2 (66.67)	1 (33.33)	0 (0.0)	3 100.0
9	Blood Presser (BP)	33 (62.26)	10 (18.87)	10 (18.9)	53 100.0
10	Mental Disorders	1 (50.0)	1 (50.0)	0 (0.0)	2 100.0
11	Digestive Diseases	2 (12.5)	11 (68.75)	3 (18.75)	16 100.0
12	Diabetes	5 (38.5)	6 (46.15)	2 (15.38)	13 100.0
13	Obesity	4 (80.0)	1 (20.0)	0 (0.0)	5 100.0
14	Piles	1 (11.11)	5 (55.55)	3 (33.33)	9 100.0
15	Appendix	0 (0.0)	6 (85.71)	1 (14.29)	7 100.0
16	Visual Handicap	0 (0.0)	3 (100.0)	0 (0.0)	3 100.0
17	Neemoniya	0 (0.0)	2 (100.0)	0 (0.00)	2 100.0
18	Hernia	0 (0.0)	4 (100.0)	0 (0.0)	4 100.0
19	Stone	2 (13.33)	12 (80.0)	1 (6.67)	15 100.0
20	Heart Attack	1	0	0	1

		(100.0)	(0.0)	(0.0)	100.0
21	Aids	1 (100.0)	0 (0.0)	0 (0.0)	1 100.0
	Total	81 (35.5)	106 (46.5)	41 (18.0)	228 (100)

Source: Author's own estimate from the primary survey (2019).

Table 6.4. Have you ever birth to boy or girl who was born alive but later died?

District No	**Social group**	**Have you ever birth to boy or girl who was born alive but later died?**		
		No	**Yes**	**Total**
All Districts	ST	252 (86.9)	38 (13.1)	290 (100)
	SC	221 (84.35)	41 (51.65)	262 (100)
	Total	**473** **(85.69)**	**79** **(14.31)**	**552** **(100)**

Source: Author's own estimate from the primary survey (2019)

Annexure

Table 5.8: Key Health Indicators Expenditure

States	2014-15			2015-16			2016-17		
	THE	TGHE	OOPE	THE	TGHE	OOPE	THE	TGHE	OOPE
Andhra Pradesh	23064	3551	17,988	26133	5814	19512	28981	7090	20928
Assam	6556	1927	4,139	7874	2992	4339	8453	3294	4547
Bihar	22317	3689	18,364	24901	4756	19890	26885	5740	20857
Haryana	9878	2410	6,177	11015	3033	6552	12238	3621	6923
Himachal Pradesh	3183	1411	1592	3448	1621	1706	3851	1971	1785
Karnataka	27995	6011	14603	32083	8227	15908	34210	9168	16815
Kerala	23805	4229	17581	25090	5694	17889	28291	7522	18967
Madhya Pradesh	18829	4799	13560	20373	5662	14283	21999	6324	15166
Maharashtra	53122	9009	31675	56806	13443	33459	63046	14708	35771
Punjab	15138	2578	12001	16234	3245	12563	17285	3421	13362
Rajasthan	21188	6511	12529	23869	7980	13455	25592	8447	14504
Tamil Nadu	30761	**7696**	**20432**	32975	**9378**	21500	**36451**	**9959**	22626
Uttar Pradesh	64256	12209	50322	69036	14283	52841	75634	16828	56609
India	**483259**	**139949**	**302425**	**528484**	**161863**	**320211**	**581023**	**188010**	**340196**

Source: - National Health Accounts, India, 2014-15, 2015-16, 2016-17.

Table 5.9: State fiscal condition, over the period 2010-11 to 2021-22

Year	Pensions	Per Capita SDP (Rs.)	Grants from the Centre crore	Grants-In-Aid and Contributions	Internal Debt/GSDP
2010 - 2011	3767	40532	9077	2935	16
2011 - 2012	4389	43023	9929	3203	16
2012 - 2013	4947	47153	12040	4065	15
2013 - 2014	5932	48159	11777	4539	16
2014 - 2015	6836	49827	17591	4225	18
2015 - 2016	7819	53485	18330	5891	20
2016 - 2017	8793	59225	23963	6807	23
2017 - 2018	9290	61664	30150	7065	25

2018 - 2019	11984	66446	28625	7672	26
2019 - 2020	12053	69429	31952	5900	28
2020 - 2021	16993	67172	32910	4950	36
2021 - 2022	16913	73034	35775	5941	40

Sources: Economic and Political Weekly Research Foundation (data base).

Table 5.10 Total Health Expenditure (THE) for Selected 15 States

States	2001-02	2004-05	2014-15	2015-16	2016-17
Andhra Pradesh	7979	8430	23064	26133	28981
Assam	1527	2176	6556	7874	8453
Bihar	6516	4552	22317	24901	26885
Haryana	3344	2448	9878	11015	12238
Himachal Pradesh	799	960	3183	3448	3851
Karnataka	3789	4594	27995	32083	34210
Kerala	5957	9698	23805	25090	28291
Madhya Pradesh	5253	5107	18829	20373	21999
Maharashtra	9868	12430	53122	56806	63046
Punjab	3754	8090	15138	16234	17285
Rajasthan	3397	17381	21188	23869	25592
Tamil Nadu	5317	153	30761	32975	36451
Uttar Pradesh	18811	171	64256	69036	75634

Note: Manipur and Nagaland are dropped due to unavailability of data
Source: - National Health Accounts, India, 2001 -02, 2004-05, 2014-15, 2015-16, 2016-17.

Table 5.11 Per capita Total Health Expenditure (PTHE) for Selected 15 States

States	2001-02	2004-05	2014-15	2015-16	2016-17
Andhra Pradesh	1039	1061	3720	4148	4600
Assam	569	774	2049	2386	2562
Bihar	779	513	2047	2223	2358
Haryana	1570	1078	3799	4080	4533
Himachal Pradesh	1305	1511	4547	4926	5501
Karnataka	712	830	4374	4936	5183

Kerala	1858	2950	6801	7169	8083
Madhya Pradesh	864	789	2511	2681	2820
Maharashtra	1011	1212	4502	4734	5210
Punjab	1530	1359	5220	5598	5960
Rajasthan	597	761	2943	3226	3412
Tamil Nadu	846	1256	4101	4339	4734
Uttar Pradesh	1124	974	3060	3226	3469

Note: Manipur and Nagaland are dropped due to unavailability of data

Source: - National Health Accounts, India, 2001 -02, 2004-05, 2014-15, 2015-16, 2016-17.

Table 5.12 Per-Capita Total Health Expenditure (PTHE)

year	Per capita THE
2001-02	997
2004-05	1201
2013-14	3638
2014-15	3826
2015-16	4116
2016-17	4381

Source: - National Health Accounts, India, 2001 -02, 2004-05, 2013-14, 2014-15, 2015-16, 2016-17.

Table 5.13 Total Government Health Expenditure (TGHE) and its %of GDP

year	TGHE	TGHE % THE	TGHE % GDP	Growth In THE
2001-02	21439	20.3	0.94	0
2004-05	26313	19.7	0.84	23
2013-14	129778	28.6	1.15	393
2014-15	139949	29.0	1.10	8
2015-16	161863	30.6	1.18	16
2016-17	188010	32.4	1.2	16

Source: - National Health Accounts India, 2001 -02, 2004-05, 2013-14, 2014-15, 2015-16, 2016-17

Table 5.14 Per capita Government Health Expenditure (PGHE)

year	Per capita THE	GROWTH
2001-02	207	0

2004-05	242	17
2013-14	1042	331
2014-15	1108	6
2015-16	1261	14
2016-17	1418	12

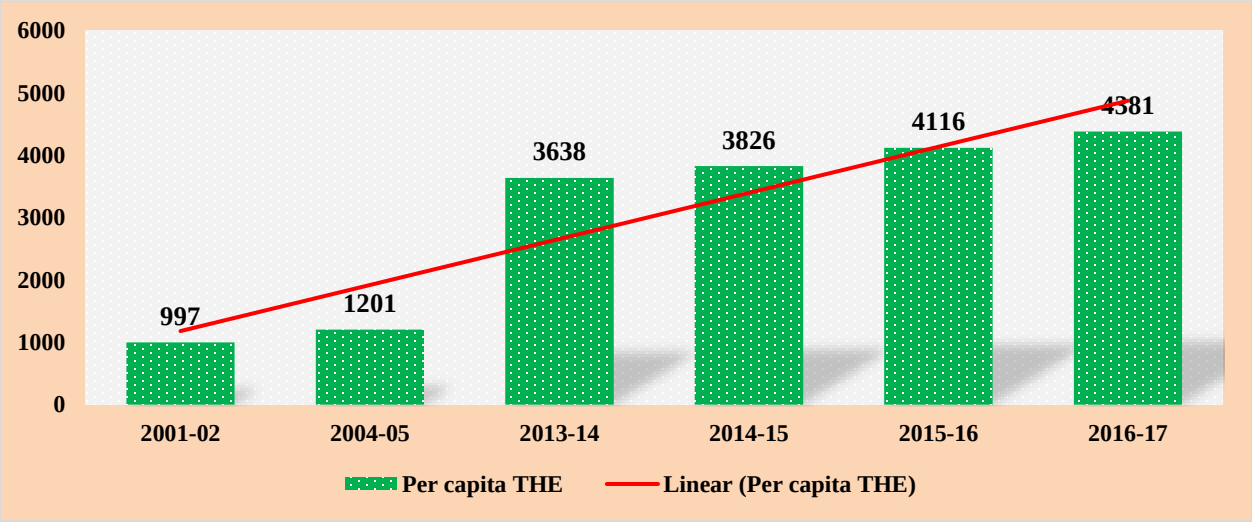
Source: - National Health Accounts, India, 2001 -02, 2004-05, 2013-14, 2014-15, 2015-16, 2016-17.

Table 5.15: Out of pocket expenditure

year	Total OOPE	OOPE % THE	OOPE % GDP	OOPE % CHE	Per capita OOPE
2001-02					
2004-05	93000	6.9	3.0	26	854
2013-14	290932	64.2	2.6	69	2336
2014-15	302425	62.6	2.4	67	2394
2015-16	320211	60.6	2.3	65	2494
2016-17	340196	58.7	2.2	63	2570

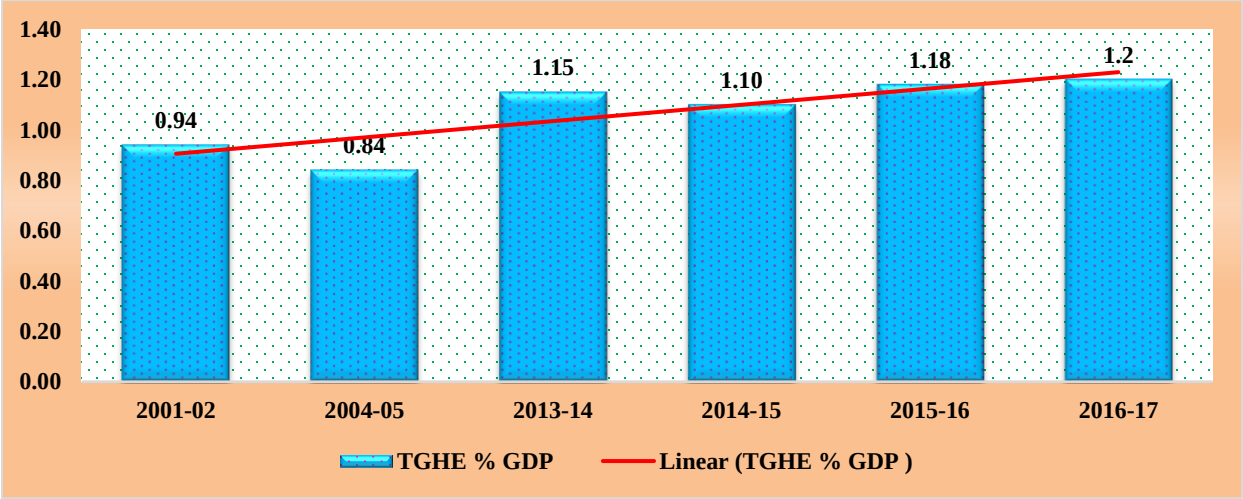
Source: - National Health Accounts, India, 2001 -02, 2004-05, 2013-14, 2014-15, 2015-16, 2016-17.

Figure: 5.3 India's Per Capita Total Health Expenditure



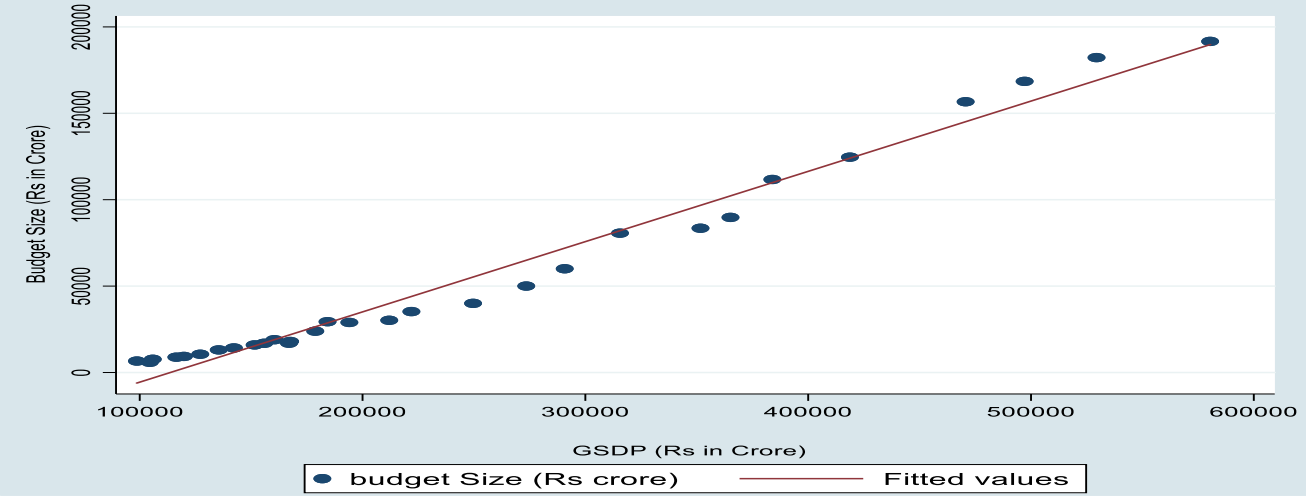
Author's own calculation National Health Accounts, 2001-02, 2004-05,2013-14, 2014-15, 2015-16,2016-17.

Figure: 5.4 Total Government Health Expenditure % of GDP (India)



Author's own calculation National Health Accounts, 2001-02, 2004-05,2013-14, 2014-15, 2015-16, 2016-17

Figure 5.5 Correlations between State GSDP and State Budget Size



Author's own calculation

Table 5.16: Government Health Expenditure (GHE) % of GSDP for Selected 15 States

States	2004-05	2013-14	2014-15	2015-16	2016-17
Andhra Pradesh	0.7	0.7	0.7	1.0	1.0
Assam	0.9	1.1	1.0	1.5	1.3
Bihar	1.1	0.8	1.0	1.2	1.4
Haryana	0.5	0.5	0.5	0.6	0.7

Himachal Pradesh	1.7	1.4	1.4	1.4	1.6
Karnataka	0.9	0.8	0.7	0.8	0.8
Kerala	0.9	0.9	0.8	1.0	1.2
Madhya Pradesh	0.9	0.8	1.0	1.1	1.0
Maharashtra	0.6	0.5	0.5	0.7	0.7
Punjab	0.7	0.7	0.7	0.8	0.8
Rajasthan	1.0	0.9	1.1	1.2	1.1
Tamil Nadu	0.7	0.7	0.7	0.8	0.8
Uttar Pradesh	0.9	1.1	1.2	1.3	1.3

Note: Manipur and Nagaland are dropped due to unavailability of data
Source: - National Health Accounts, India, 2004-05, 2013-14, 2014-15, 2015-16, 2016-17

Table 5.17 Per Capita Out of Pocket Expenditure for Selected 15 States

States	2014-15	2015-16	2016-17
Andhra Pradesh	2901	3097	3322
Assam	1293	1315	1378
Bihar	1685	1776	1830
Haryana	2376	2427	2564
Himachal Pradesh	2274	2437	2550
Karnataka	2282	2447	2548
Kerala	5023	5111	5419
Madhya Pradesh	1808	1879	1944
Maharashtra	2684	2788	2956
Punjab	4138	4332	4608
Rajasthan	1740	1818	1934
Tamil Nadu	2724	2829	2938
Uttar Pradesh	2396	2469	2597

Note: Manipur and Nagaland are dropped due to unavailability of data
Source: - National Health Accounts India, 2014-15, 2015-16, 2016-17.

Table 6.5. Drainage system: open and closed drainage

District No	Social group	closed drainage	Open drainage	Total
Hoshangabad	**ST**	23 (15.54)	125 (84.46)	148 (100)
	SC	16 (16.0)	84 (84.0)	100 (100)
	total	39 (15.73)	209 (84.27)	248 (100)
Betul	**ST**	*	74 (100)	74 (100)
	SC	*	102 (100)	102 (100)
	total	*	176 (100)	176 (100)
Harda	**ST**	0 (0.0)	68 (100)	68 (100)
	SC	1 (1.67)	59 (98.33)	60 (100)
	Total	1 (0.78)	127 (99.22)	128 (100)
All Districts	**ST**	23 (7.93)	267 (92.07)	290 (100)
	SC	17 (6.49)	245 (93.51)	262 (100)
	Total	40 7.25)	512 (92.75)	552 (100)

Source: Author's own estimate from the primary survey (2019)

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Women Health Status among the Social Groups in India and Its Major States: A Special Focus on Madhya Pradesh

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Abstract: Madhya Pradesh is one of the most neglected states with low budgetary allocation for health and non-functioning awareness programmes. The malnutrition has been a crucial factor for infant's death, especially among Scheduled Castes (SCs) and Scheduled Tribes (STs). Child and Maternal malnutrition is one of the important risk factors leading to death and disability. Lack of nutritional food to pregnant women affects women itself, and the healthy growth of newborn, and major causes of death are pre-term birth complications in India. In this context, it is pertinent to analyse sthe health status of the women based on level and trends in infant mortality rate and under five mortality and also a place of delivery among the marginalised groups (SCs and STs). The paper focuses on gender inequality in educational attainment and accessing general health insurance. We take help of NFHS-3 and NFHS-4 database to examine the women health condition. Investigation reveals that very negligible improvement is noticed in total fertility and infant mortality rate and under five-year mortality rate among the marginalised groups and their performance is still lagging behind to compete with the present society. Finally, literacy shows a better improvement from the last ten years for all the three groups. Hence, our study comes with the conclusion that women in marginalised groups are still backward to compete with other groups of societies.

Keywords: Social Groups,Women Health, Madhya Pradesh,and Major States

JEL Classification Number: I13, I18, H41

1. Introduction

Madhya Pradesh is one of the most neglected stateswith low budgetary allocation for health and non-functioning awareness programmes. The malnutrition has been a crucial factor for the infant's death, especially among the Scheduled Castes (SCs) and Scheduled Tribes (STs). Child and maternal malnutrition is one of the important risk factors leading to death and disability in Madhya Pradesh. Lack of nutritional food to pregnant women affects women itself, and it affects the healthy growth of the newborn as well. Thus, one ofthe major causes of death preterm birth complications in India.

Park (1928) was the first who introduced the concept "marginalise" that is referred as processes in which individuals or groups of people kept at or pushed beyond the edges of

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Madurai Kamaraj University

8 - 10 January 2020

CERTIFICATE

This is to certify that Mr/Ms/Dr. Mamta Waiker of University Of Hyderabad, Hyderabad, Telangana presented a research paper entitled Women Health Status among the Social Groups in India and Its Major States: A Special Focus on Madhya Pradesh in the 56th Annual Conference of The Indian Econometric Society (TIES) held during 08 – 10 January 2020, organized by School of Economics, Madurai Kamaraj University, Madurai, Tamil Nadu, India.

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Survey Questionnaire on "Women Health Status among the Scheduled Castes and Scheduled Tribes: A Case Study of Madhya Pradesh"

Investigator Introduction and statement of informed consent

My name is **MAMTA WAIKER** *and I am from university of Hyderabad, pursuing Ph.D. Economics and working on* ***"Women Health status among the Scheduled castes and scheduled tribes : A case Study of Madhya Pradesh".*** *The finding of this survey will be strictly used for the academic purposes. This survey is an independent study and is not linked to any private organization or agency. Information gathered will be kept strictly confidential. Participation in this survey is voluntary and it is entirely up to you to answer or not any question that I ask. I hope that you will take part in this survey since your participation is important. It usually takes 10 to 15 minutes to complete this interview. Please spare some time for the interview and help me in successfully completing the survey.*

मेरा नाम **ममता वाईकर** मैं हैदराबाद विश्वविद्यालय से अर्थशास्त्र में पीएचडी कर रही हूं। मेरा शोध का विषय "अनुसूचित जातियों और अनुसूचित जनजातियों के बीच महिला स्वास्थ्य स्थिति " मध्य प्रदेश का विशेष अध्ययन. इस सर्वेक्षण की खोज अकादमिक उद्देश्यों के लिए सख्ती से उपयोग की जाएगी। यह सर्वेक्षण एक स्वतंत्र अध्ययन है और किसी भी निजी संगठन या एजेंसी से जुड़ा नहीं है। इकट्ठा की गई जानकारी को सख्ती से गोपनीय रखा जाएगा। इस सर्वेक्षण में भागीदारी स्वैच्छिक है और मैं आपके द्वारा पूछे जाने वाले किसी भी प्रश्न का जवाब देने के लिए पूरी तरह से निर्भर हूं। मुझे उम्मीद है कि आप इस सर्वेक्षण में हिस्सा लेंगे क्योंकि आपकी भागीदारी महत्वपूर्ण है। इस साक्षात्कार को पूरा करने में आमतौर पर 10 से 15 मिनट लगते हैं। साक्षात्कार के लिए कृपया कुछ समय दें और सफलतापूर्वक सर्वेक्षण पूरा करने में मेरी सहायता करें।

[1] Descriptive Identification of Household Samples					
1	Name of the Respondent:				
2	Village Name		4	District Name	

3	Block/Town/ Tehsil		5	Respondent Mob No:	

[2] Household Characteristics

1	Type of family: Joint family-1 and Nuclear family-2 [ ]				8	Household possess ration card [Yes-1, No-0]	
2	Household size	Male	Female	Total	9	If Yes in Items of 8 then, types of Ration card (code): Antodaya-1,BPL-2,APL-3, Patragrahsti-4,other-5	
3	Religion (code): [ ]				10	Drinking water source (code): (inside the house -1 outside the house -2)	
4	Social group (code): [ ]				11	Electricity connection and bill [Yes-1, No-0]	
5	Type of House code (Pucca-1, Semi–pucca- 2, Kachha-3, Any other-4): [ ]				12	Type of fuel used for cooking code (firewood-1, LPG-2, Kersoan-3)	
6	Ownership of house code (Own-1 or Rented-2) [ ]				13	Type of toilets use (code): (inside the house-1, outside the house-2, open defication-3)	
7	Number of rooms available: [ ]				14	Drainage system (code): (closed drainage-1 open drainage-2)	

CODES FOR BLOCK -2
Col. (3) Hinduism- 1, Islam- 2, Christianity- 3, Sikhism-4, Jainism-5, Buddhism-6, Other-7
Col. (4) Scheduled tribes-1, Scheduled caste-2, Other Backward Classes-3 and General-4

[3] Demographic And Other Particulars Of Household Members

		1	2	3	4	5	6			
SN	Name of member	Relationship with the respondent	Age	Sex (Code)	Marital Status (Code)	Educational Status (Code)	Employment Status (code) and Monthly Income			
							Primary	Income	Secondary	Income
1										

2										
3										
4										
5										
6										
7										
8										
9										
10										

CODES FOR BLOCK -3

Col.(1) Relation with head: Respondent (self)-1, spouse of head-2, married child-3, spouse of married child-4, unmarried child-5, Grandchild-6, father/mother/father-in-law/mother-in-law-7, brother/sister/brother-in-law/sister-in-law/other relative-8, servants/ employees/other non-relatives-9.

Col. (3) Male-1 and Female-2, transgender-3

Col. (4) Marital status: Married- 1, unmarried-2, widowed-3, and divorced/separated-4

Col (5): General educational level: illiterate-0, literate 1, below primary-2, primary-3, middle-4, secondary-5, higher secondary-6, diploma/certificate cource-7, gradute-8, postgraduate-9,

Col (6): self-employed (car, auto)-1 agriculture labour 2, cultivator 3, Business-4 (all type- small, medium, big), MGNREGA work-5, Government employ-6, private employ-7, causal labour -8, house wife-9, others- 10.

	[4] Consumption and Expenditure Pattern of the Family					
S. N	**Food items**	**Quantities In (kg)**	**Cost (In Rs.)**	**S N**	**Non-food items**	**Cost in (In Rs.)**
	During last 30 days				**During last 365 days**	
1	Rice			18	Clothing	
2	Wheat			19	Footwear	
3	Dal(Arhar, Moong, Masur, Muter, Other pulses)				**Education**	
4	Oil (all type cooking oils)			20	Books and Stationary	
5	Masala			21	School and college fee	
6	Salt			22	Private tutor (coaching)	

7	Gur			23	Transportation fees	
8	Sugar			24	**Health expenditure /(year)**	
	Total				**Total**	
	During last 7 days				**During last 30 days**	
9	Egg			24	Fuel & light	
10	Chicken			25	Entertainment	
11	Fish			26	Toilet articles	
12	Red meat			27	Pan	
13	Green Vegetables			28	Tabaco	
14	Leaf vegetables			29	Smoke	
15	Fruits (Dry and fresh fruits)			30	Alcohol	
16	Milk				**Sub Total**	
17	Ghee				**Personal hygienic**	
	Sub Total			31	Sanitary pads	
				32	All beauty items	
					Sub Total	

[5] General Diseases (During Last 365 Days)														
SN		**1**		**2**	**3**	**4**		**5**	**6**					
	Name (reference based on table-3 and referred row)	Whether you are suffering from any Diseases Yes-1,No-0 If Yes,		Do you taking any treatment for that Yes-1 No- 0	If yes, place of treat-ment	Total duration of ailment (days)		Hospital distance to the place of treatment	Expenditure on treatment Doctor Fee-1 Medicine-2 Diagnostic test-3 Transportation-4 Food during hospitalization-5					
						P	A		1	2	3	4	5	Total
1														

2														
3														
4														
5														
									Sub total					

***CODES FOR BOLCK* – 5**

Col. (1): Malaria -1, Typhoid-2, dengue-3, chicken guniya-4, chicken pox-5, cough and cold-6, eye infection-7, tooth ache-8, goiter-9, general fever-10, joint pains-11, spine/hip pains-12, injuries/burns13, womb/uterus problems-14, periods/menses/bleeding-over bleeding-15, itching -16, Others-17

Col (3). Home-1(traditional method of delivery), Public Hospital-2, Private Hospital-3 and RMP-4

[6] Chronic Diseases (during last 365 days)														
SN		**1**		**2**	**3**	**4**		**5**	**6**					
	Name (reference based on table-3 and referred row)	Whether you are suffering from any Diseases Yes-1,No- 0 If Yes,		Do you taking any treatment for that Yes-1 No- 0	If yes, place of treatment	Total duration of ailment (days)		Hospital distance to the Place of treatment	Expenditure on treatment Doctor Fee-1 Medicine-2 Diagnostic test-3 Transportation-4 Food during hospitalization-5					
						P	A		1	2	3	4	5	Total
1														
2														
3														
4														
5														
									Sub total					

***CODES FOR BLOCK**: 6*

Col- 1 Communicable diseases: Diarrhea-1, lower respiratory-2 (Acute Bronchial: sleeping difficulties, chest tightness, Asthma), iron deficiency anemia-3 (Lack of hemoglobin in blood), Tuberculosis (TB)-4,

Non communicable disease: cancer -5, cardiovascular (CVD) diseases-6, urogenital-7, blood presser (BP)-8, mental disorders-9, digestive diseases-10, COPD (chronic obstructive pulmonary diseases)-11. Injuries: transport injuries-12, diabetes- 13, Obesity-14, piles-15 suicide and interpersonal violence-16,

[7] Source of Health Care Financing (365 days)			
SL.No	**1**	**2**	
1	Where do you get finance to pay for health services (health expenses) (code) [ ]	2	Borrowing [ ]

CODES FOR BLOCK-7

Col. (1) Household income/savings- 1

Col. (2) Money lenders-1, Bank-2, Friends and neighbours-3, Lease of gold or other assets-4, Sale of physical assets-5

	[8] Health Insurance And Its Details	
1	Do you know about any health insurance scheme (code)	[ ]
2	If yes (code)	[ ]
3	How do you know about this health insurance (code)	[ ]
4	Name of the health insurance scheme, you know (code)	[ ]

CODES FOR BLOCK: 8

Col (1), Yes-1, No- 0

Col. (2) Very poor-1, Poor-2, Average -3, Excellent-4

Col (3) newspaper-1, television-2, internet browsing-4, friends (public talks)-5

Col (4) Government funded health insurance schemes Ayushman bharat-1, RSBY-2, ESIS-3, and CGHS-4, employer supported health schemes -5, arranged by household with insurance companies-6, private health insurance (all)-7

S.N	[9] Reproduction (If More Than One, Report Separately)		
1	How old were you when you got married Age: [ ] [ ]	2	Have you ever had a pregnancy (code) [ ]
3	You have had in total [ ] births during your life	4	Place of delivery (code) [ ]
5	Do you have any son or daughter a) Number of boy child b) Number of girl child	6	Then place of delivery of each child (code) girl child [ ] boy child [ ]
7	Have you ever given birth to a boy or girl who was born alive but Later died (code)	8	Number of children's died? a) Number of boy child died b) Number of girl child died
9	Then place of death of the each child (code) Girl child [ ] boy child [ ]	10	Reason for child death:

CODES FOR BLOCK-9

Col (1), (2) (4) Yes-1 and No-0

Col (4), (6), (9) Public hospital-1, Private hospital-2, Own home-3, Parents home-4

S.N	[10] Antenatal Care For Women Of Age 15-49 (If More Than One, Report Separately)					
1	First antenatal check- up? (a) First trimester [ ] (b) Second trimester [ ] (c) Third trimester [ ]					
2	Where did you receive antenatal care for your pregnancy (code) [ ]					
3	How many times you visited health facilitation centre during pregnancy (a) No antenatal check-up [ ] (b) less than 4 times [ ] (c) 4 times and above [ ]					
4	Whether you received any Tetanus toxoid (TT) vaccine during your pregnancy (code) [ ]					
5	At any time during the pregnancy, have you had an ultrasound test (code) [ ]					
6	Whether you taken IFA during pregnancy period (code) [ ]					
7	Weather you taken 'Folic Acid' or 'Iron Tablets' during pregnancy period (code) [ ]					
8	Have you ever had a pregnancy that miscarried, was aborted, or ended in a stillbirth (code) [ ]					
9	Do you have smoke during this period (code) [ ]					
10	Do You Consume Tabaco During This Period (Code) [ ]					
11	Total Expenditure Incurred On Antenatal Check-Up (In Rup)					
	Doctor Fee	Medicine	Diagnostic Test	Transportation	Other Exp (Food Tips)	Total

CODES FOR BLOCK-10

Col. (2) Public hospital-1, private hospital-2, own home-3, Parents home-4

Col. (4), (5), (6), (7), (8), (9), (10) Yes-1 and No-0

S.no	**[11] Postnatal Care For Women Of Age 15-49 (If More Than One, Report Separately)**					
1	How long after delivery did the first check take place (code) [ ]					
2	Place of treatment taken after delivery (code) [ ]					
3	Who checked on your health at that time (code) [ ]					
4	Total expenditure incurred on postnatal check-up (in Rup)					
	Doctor Fee	Medicine	Diagnostic Test	Transportation	Other Exp (Food Tips)	Total

CODES FOR BLOCK-11

Col. (1) Hours-1, Days-2, weeks-3, don't know-4

Col. (2) RMP-1, government hospital-2, private doctor-3 own home-4, parents home-5

Col. (3) Doctor-1, ANM/ Nurse/ Midwife-2, Personal-3, Asha-4, Dai (TBA)-5, Others-6 (parents)

S.L	**[12] Family Planning**
1	Female Sterilization women can have an operation to avoid having any more children (code) [ ]
2	Male sterilization men can have an operation to avoid having any more children (code) [ ]
3	Have you used emergency contraception pills to avoid pregnancy (code) [ ]
4	If No, in case of (3) then why (code) [ ]

CODES FOR BLOCK-12

Col. (1), (2), (3) Yes-1 and No-0

Col. (4) Lack of information-1, Lack of source-2, Lack of money-3, Due to social/ethical/culturalbarriers-4

	[13] Women Health Nutrition								
S. no	Type of food	Daily	Quantities (Kg)	Weekly	Quantities (Kg)	Occasionally	Quantities (kg)	Never	Expenditure (Rs)
1	Milk								
2	Curd								
3	Pulses								

4	Beans								
5	Vegetables								
6	Leafy Vegetables								
7	Fruits								
8	Egg								
9	Fish								
10	Chicken								
11	Red Meat								
12	Fried Food								
13	Aerated Drinks								Total

	[14] Health Institution /utilisation										
S. No	Varies types of health services	Whether you have any awareness Of the below services Yes (1) No (0)	If yes, whether you use any services Yes (1) No (0)	Are you getting any Medicine Facilities Yes (1) No (0)	Distance (In km.) To the following Services	Response towards the services				
						Very good	Good	Medium	Poor	Very poor
Public	Sub Centre(Asha)									
	CHC									
	PHC/ANM									
	Government Hospital									
	Government multi special hospital									
	Anganwadi									
Private	RMP									
	Private Clinic									
	Multi-speciality hospitals									
	Pharmacy									

Other	Homeopathy									
	Ayurvedic									
Managed Care										

[15] Awareness of Govt. Programme Health Related and women related (MP)				
S. No	Name of programme	Yes =1 No = 0	If yes, level of awareness (code)	How do you know? (code)
1	Ladli Lakshmi Yojana.			
2	Beti Bachao Beti Padhao Yojana.			
3	Swagat Laxmi Yojana.			
4	Balika Shiksha Protsahan Yojana			
5	Ek Loti Beti ko Shikha Vikas Chatravarti for Girls Scholarship			
6	Gaon ki Beti Yojana for Girls Financial Assistance			
7	Mukhya Mantri Kanyadan Yojana for Poor ,Needy, Destitute Families			
8	Vijaya Raje Janani Kalyan Beema Yojana			
9	Janani Express Yojana.			
10	Prasav Hetu Privahan Evam Upchar Yojana			
11	Janani Suraksha Yojana.			
12	Madhya Pradesh Rajya Bimari Sahyata Nidhi Yojana			
13	Indira Gandhi Matritva Sahyog Yojana(IGMSY)For the Pregnant and Lactating Women			
14	Deendayal Upchar Yojana			
15	Sukanya Samriddhi Yojana			

CODES FOR BaLOCK-15

Col. (3) Very Poor-1, Poor-2, Average -3, Excellent-4

Col. (4) Newspaper-1, Television-2, Internet Browsing-3, Friends (Public Talks)-4, Anganwadi-5

Remark by Investigator

Comments About Respondent:

Comments on Specific Questions:

Other comments on respondent:

Name of the Investigator:

_____

Investigator signature:

_____

Date …….

Health Status of Women Among the Scheduled Castes and Scheduled Tribes in India: A Case Study of Madhya Pradesh

by Mamta Waiker

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