



Gender discrimination in healthcare expenditure: A study of Indian states

Supriya Upadhyay¹, Shilpa²

¹ M. Phil, Center for the Study of Regional Development (CSRSD), School of Social Sciences, Jawaharlal Nehru University, New Delhi, India

² M.A, Department of Political Science, Faculty of Social Sciences, Banaras Hindu University, Varanasi, Uttar Pradesh, India

Abstract

Gender plays an important role in shaping all aspects of health and well-being. India is making progress in every field from economic spheres to human development, in spite of such progress even today there are various fields where gender discrimination can be observed. To address this gap we have made an attempt to measure the gender disparity in healthcare expenditure across states in India to understand where disparity exists and to characterise their nature. This paper also examines the difference in the male-female healthcare expenditure in rural and urban parts of the country. We have used NSSO 71st round data on healthcare expenditure and Sopher's disparity index has been used to measure the value of disparity. Gender discrimination observed in healthcare expenditure varied among all the states of India and there is significant difference between the gender disparity existing in rural and urban areas.

Keywords: female disparity, gender discrimination, male disparity, healthcare expenditure, rural-urban inequality

Introduction

Health is an important domain of women's empowerment and central to their well-being, capability enhancement, productivity and child health. Women, overall, live longer but lose more healthy life to disability than men and so suffer an excess of disease burdens (WHO). In the recent times, there is increasing amount of researches and documents available on gender disparity existing in the health sector. Still in a society like India it is important to study the effect of gender on health, as in patriarchal societies female have to face discrimination on the ground of treatment of ailments. There is not only biological but also the social-structural factors have important consequences on the health of female may it is of any age group. Studies on finance strategies suggests that HCE reveals that hospitalisation among girls is considerably lower than that of boys and it also had been observed that parents in India are substantially more likely to borrow, sell or seek financial help to pay expenses if boys are hospitalised.

There has been number of research done to understand the gender inequality in the healthcare services and expenditures in India. Majority of these literatures concludes unequal accessibility of males and females towards healthcare services. There is limited number of works dealing with the gender discrimination in Healthcare expenditure in India. And concerned literature look into the extent and direction of gender difference existing in health expenditure, they do not adequately look into the various factors contributing in the gender discrimination. Here, we examine the gender disparity in HCE with respect to spatial factor, whether there is some difference in gender gap observed in rural and urban areas and if it exists then what are the probabilistic factors leading to such difference.

Nationally represented data of NSSO on healthcare expenditure (HCE) for medical and other medical expenditure in rural and urban areas is collected to get a complete picture of how gender discrimination across Indian states. Apart from this information on total health expenditure which includes both medical and nonmedical expenditures incurred for inpatient care during the 365 days, is analysed to examine the gender disparity existing in the HCE.

Objectives

The study looks into the following objectives-

1. To analyse the gender discrimination in the health care expenditure.
2. To study the gender disparity in health expenditure in urban and rural areas of India.

Data Sources

NSSO provide nationwide population based survey data. In this study data from Key Indicators of Social Consumption in India- Health, 2014, NSS 71st Round", Ministry of Statistics & Programme Implementation is used. In 71st round, the information was collected from 65932 households and the sample sizes for male and female was 168,697 and 164,407 by Mo SPI, Government of India.

Data on HCE for hospitalization was collected along with medical and other medical expenditure. Medical expenditure includes expenditure occurred on medicine, hospitalisation charges, medical tests and doctor fees and other medical charges constitutes all the expenditure (excluding expenditure on medical treatment) constituting treatment of an ailment incurred by households.

Methodology

This paper is solely based on secondary sources of data. Data regarding medical and other medical Healthcare Expenditure for rural and urban areas of India is collected. Gender disparity is calculated for-

1. average medical expenditure during stay at hospital
2. average other medical expenditure on account of hospitalization
3. total health expenditure

There are number of methods available to measure gender disparity which can be used such as, Traditional method, Atkinson Disparity Index, Sopher's Variety Disparity Index, Log Inequality Index, Lorenz curve.

In 1974, Sopher came up with disparity index to measure relative disparity in various fields.

$$\text{Disparity Index (DI)} = \text{Log}(X_2/X_1) + \text{Log} [(Q-X_2)/(Q-X_1)]$$

Where $X_2 > X_1$

$$Q = 100$$

In order to avoid monotonicity additive axiom in the sopher's index, Kundu and Rao modified it in year 1986, by replacing value Q from 100 to 200.

Sopher's index can be used only when value of indicators is in percentage, where X_2 represents the higher percentage indicator, and X_1 is a lower percentage value of the indicator.

This index is a logarithmic equation and the objective of taking log is to reduce the leveling off effect, for example-states with high levels of attainments may show a lower disparity value than states with low levels of attainments even if the gender difference is the same for the two states.

The value of DI is 0 when X_1 and X_2 both are equal to 100 percent, which implies that there exists perfect equality. Whereas, the maximum DI value can reach up to infinity still, practically four is considered as the maximum value when X_2 approaches to 99 percent and X_1 to 1 percent. There will be a high level of disparity when the deviation of DI from 0 either in a positive or negative direction is higher.

Review of Literatures

(Moradhvaj and Saikia), in their paper tries to investigate the gender role in HCE, and also examines gender disparities in health care expenditures (HCE) and health care financing strategies (HCFS) for inpatient care among adults aged 15 and older in India. Various descriptive statistics such as chi-square tests, correlation, variance and multinomial logit regressions were used to analyse the gender discrimination in healthcare expenditure and financing strategies. The paper presents the study of gender disparity in various categories- by age groups, social background, income status etc.

(Mishra, Ratnawali and Nishad), this paper provides a review of many literatures concerned with the gender disparity in access to healthcare services in India. The authors came up with list of causes of gender discrimination prevailing in the country, those are- poverty, illiteracy, cultural opinion, preference of male child, distance of the health facility etc.

(Maharana and Ladusingh), authors aim to look into the gender disparity in Health and Food Expenditure among Elderly population in India. To assess gender disparity descriptive statistics and bivariate analysis are used, and then

Gender inequality in the distribution of household health and food expenditure is measured by Theil decomposition indices. The paper tells that the discrimination in health expenditure between male and females amongst elderly population is highly significant e.g. in 1999-2000 health expenditure on the elderly, 91.2 percent was spent on males and 8.8 percent on females, however gender gap is narrowing with time.

(Kapoor, Agrawal and Ravi) highlights the relationship with the patient's age and distance from the healthcare facility and gender discrimination in accessing healthcare services. And found that gender discrimination in access to healthcare, was very high for female patients of younger and older age groups, and also for those who lived at a greater distances from the hospital. In order to analyse the situation logistic regressions are used.

(Rout) presents a case study of Orissa to look into the Gender Inequality In Household Health Expenditure. Gender disparities in health outcomes in India are prominent and disturbing, and the study shows there is a significant difference between male and female out-of-pocket health expenditure in urban areas of Orissa.

(A. Mehrotra and Chand) focussed on the various determinants of health care facilities and examine the socio economic factors which are responsible for poor health status of women in India on the basis of different parameters. Logistic regression is used on various parameters to determine the status of women in healthcare facilities. This paper revealed that health and empowerment status of women is much better in urban areas, compared to their counterparts in rural India.

(Moradhvaj) highlights the gender disparity in intra household health expenditure in treatment of illness and also investigates into the effect of various demographic and socio-economic factors on gender disparity in HCE. To estimate average HCE descriptive statistics and bivariate analysis are used and to understand the role of demographic and socio-economic factors into gender gap in HCE Oaxaca-Blinder decomposition method is used. It is found in this study that there is huge difference between health expenditure for male and females.

(Saikia, Moradhvaj and Bora), this paper examines the major morbidities and effect of gender on major morbidity-related HCE. Mean health expenditure (MHE) by gender among various demographic and socio-economic subgroups has been calculated to examine the gender discrimination in health expenditure. Authors here tries to look into the socio-demographic factors resulting into gender gaps and emphasized that women have less power to bargain on their needs due to lack of property ownership, lack of income earning means, lack of community support, and ongoing social norms and perceptions. Thus, the gender differential in HCE in India is perhaps the result of powerful synergies between socio-economic status and patriarchal values.

Results and Discussion

Gender disparity in HCE is varied among the all-India states. There is significant difference exist between the medical expenditure on males and females during stay at hospital.

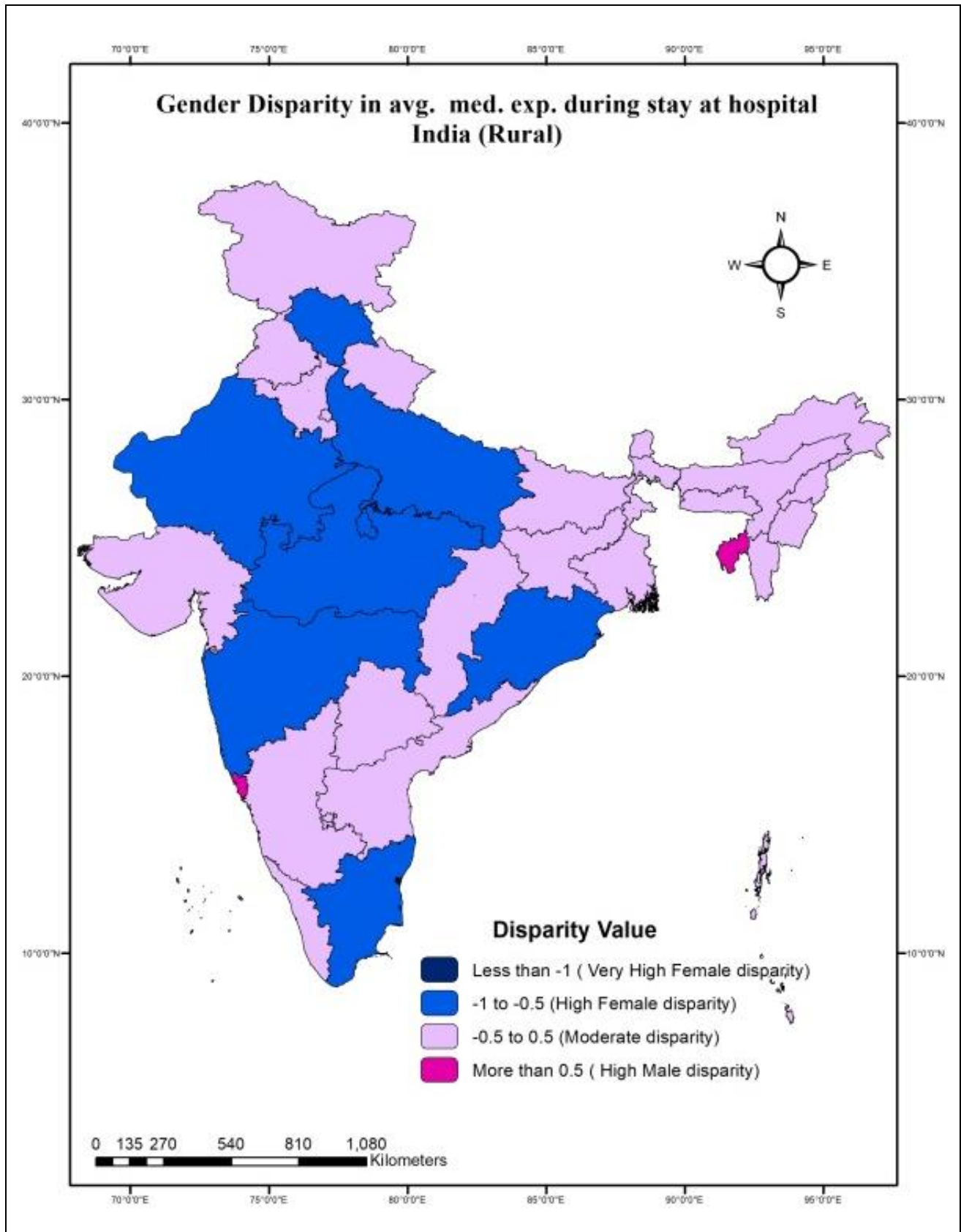


Fig 1

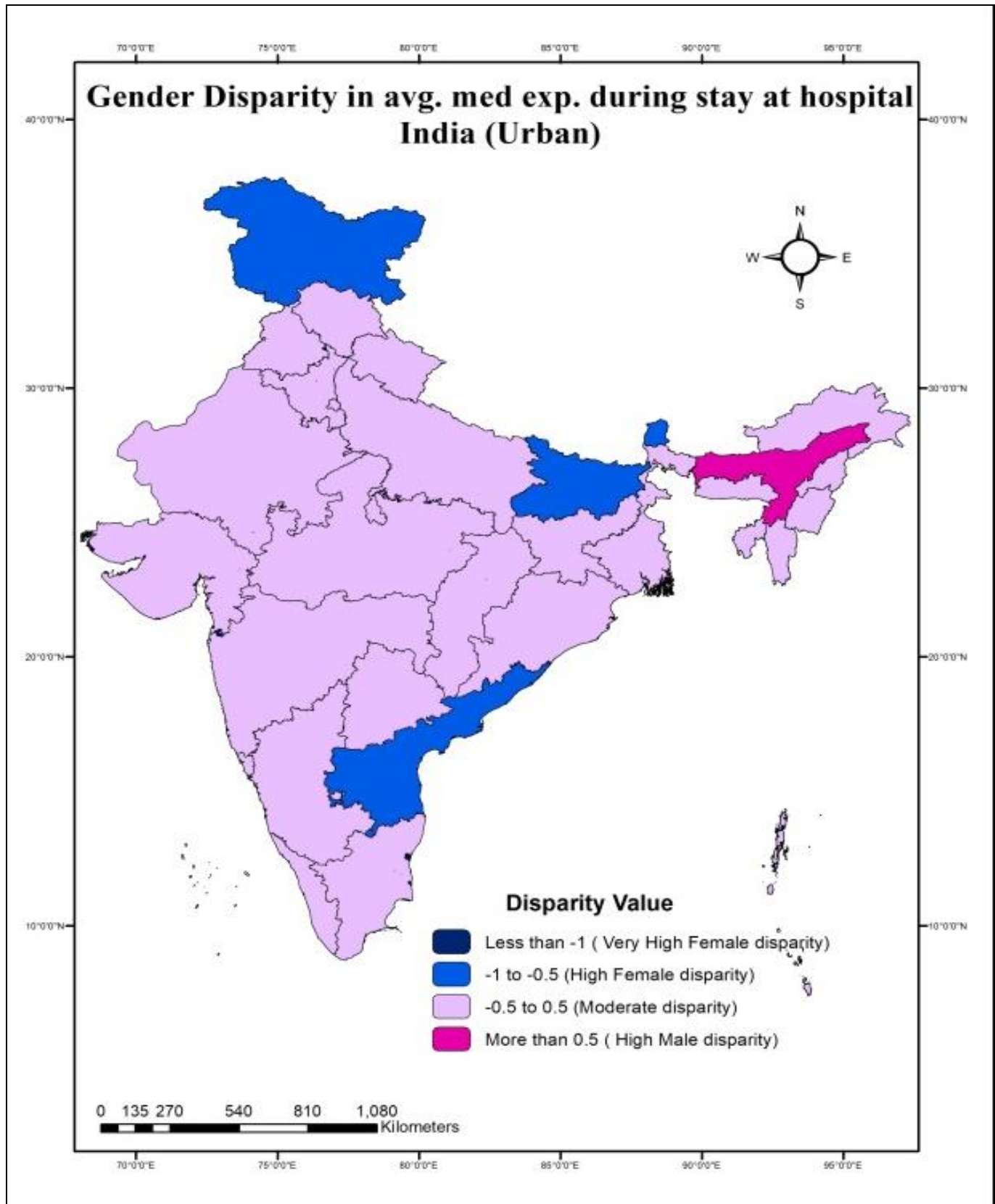


Fig 2

In the case of rural areas there is moderate to high female disparity prevailing in most of the states with some states showing different trends towards direction of disparity

namely, Goa and Tripura where males are facing disparity towards HCE. Whereas in urban areas gender gap in average medical expenditure is significantly low in most of the states,

except few such as J&K, Bihar and Andhra Pradesh where high female disparity is highly prevailing and Assam is the only state with its urban parts showing high male disparity in HCE.

Other medical expenditure on account of hospitalisation includes attendance charges, personal medical appliances, blood, oxygen, etc. According to NSS survey 71st round on health in India, out of total medical expenditure, about 72% in

rural and 68% in urban areas was made for purchasing medicine for non-hospitalised treatment. Moderate disparity between male and females in average other medical expenditure is observed in the rural parts of the country, in the urban counterparts there are some states where high female disparity can be seen such as Bihar, Chhattisgarh and Tamil Nadu and rest all the states gives a satisfying picture upto some extent.

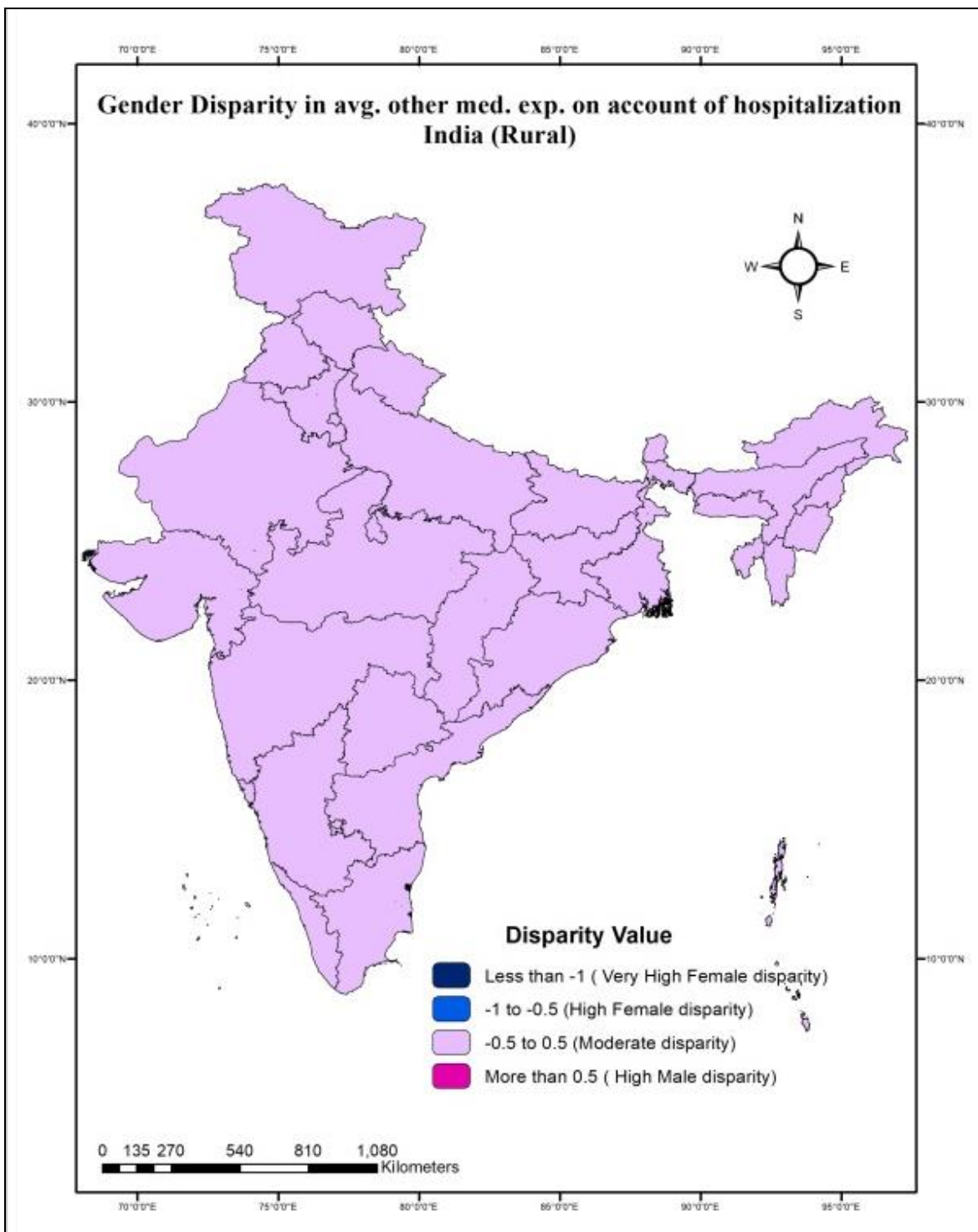


Fig 3

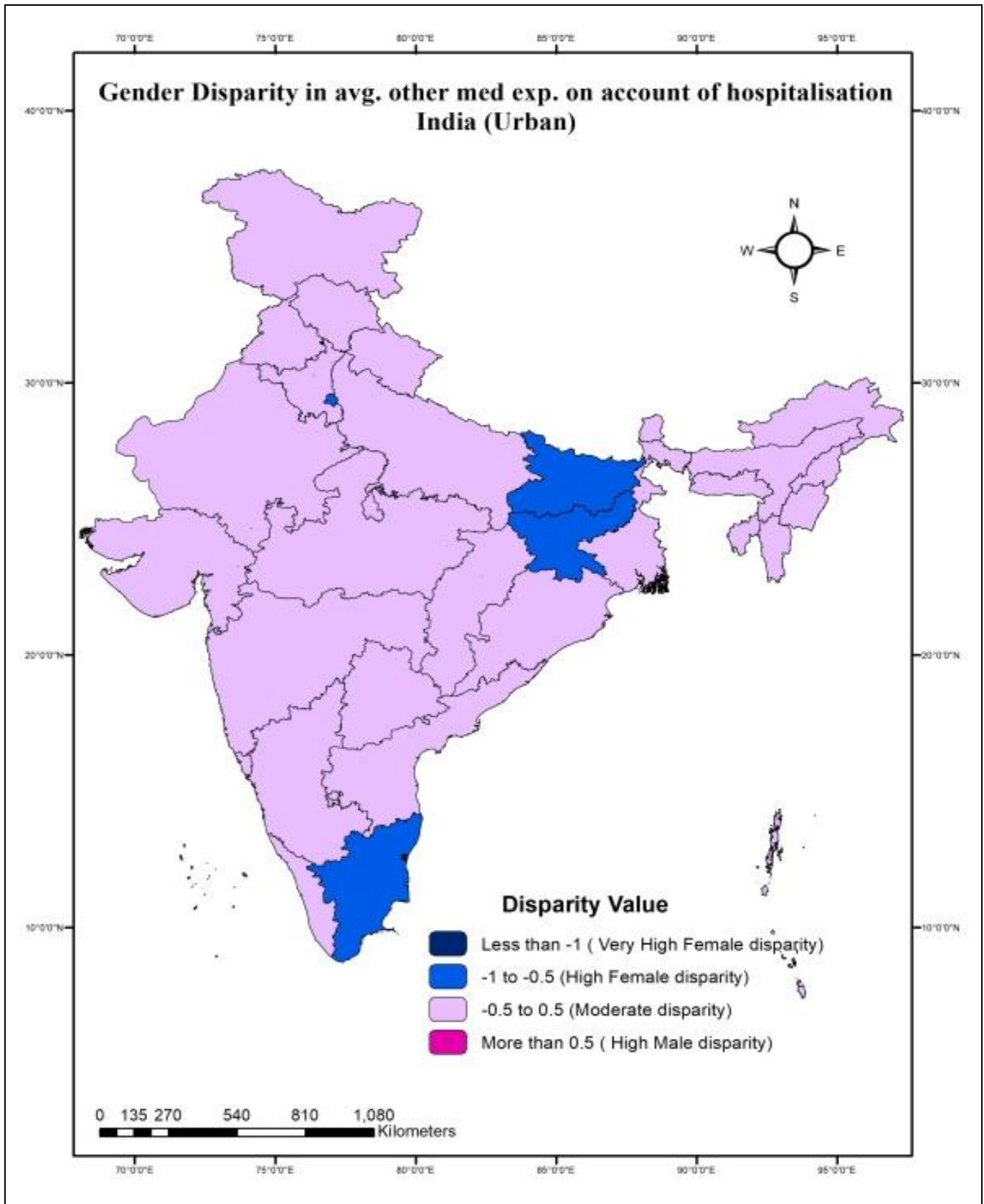


Fig 4

Total medical expenditure includes all the expenses incurred by the households during stay at hospital and all the other

medical expenditure during treatment of the ailment. Gender disparity can be seen in the rural parts of some of the western

and central states including Jharkhand, where female are facing highly disparity on the account of health expenditure. Other parts of the country are showing moderate gender gap in health expenditure.

On the other hand, urban parts of most of the states are experiencing less significant gap in gender on HCE except a few, Jammu & Kashmir, Bihar and Andhra Pradesh.

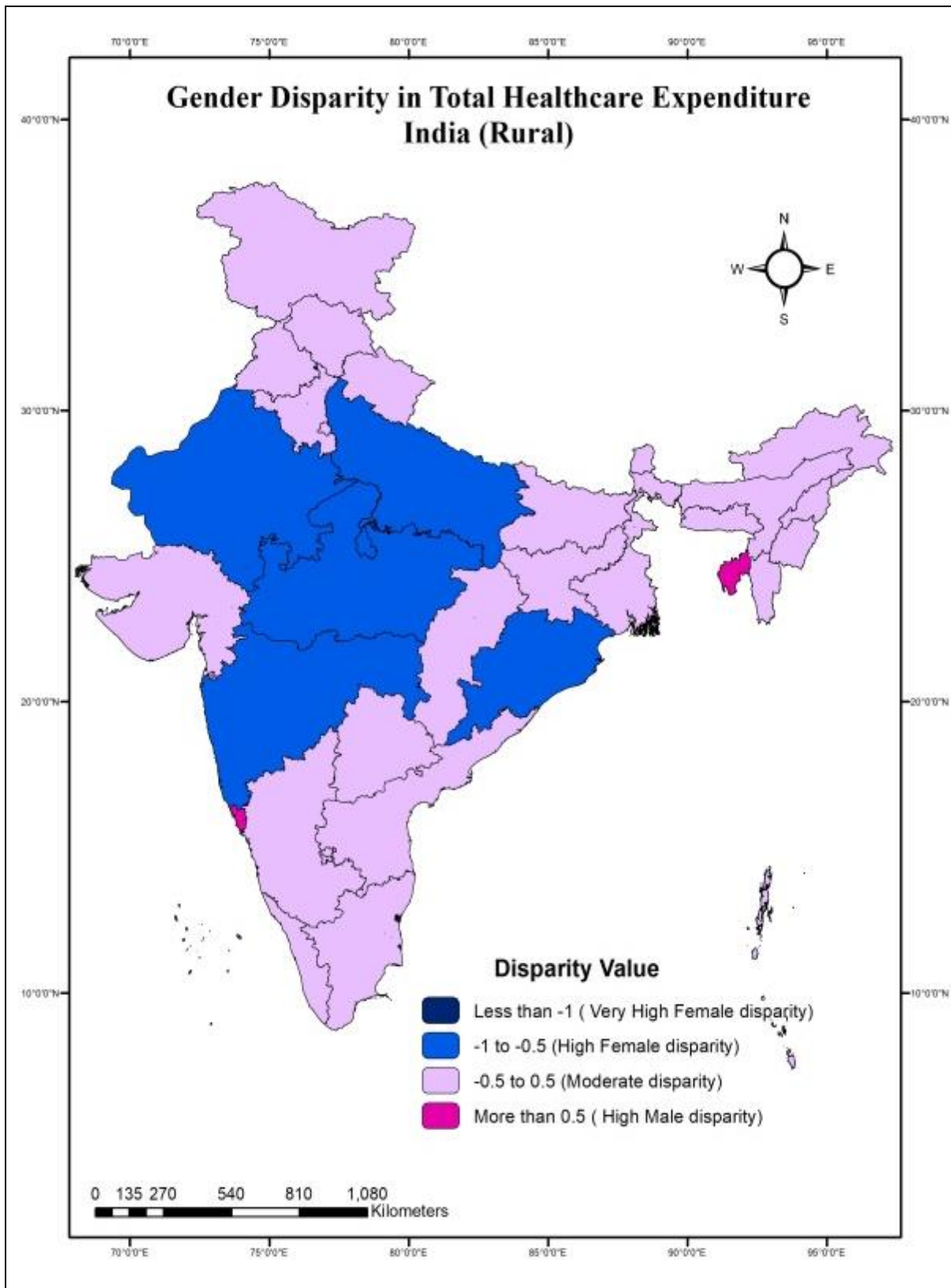


Fig 5

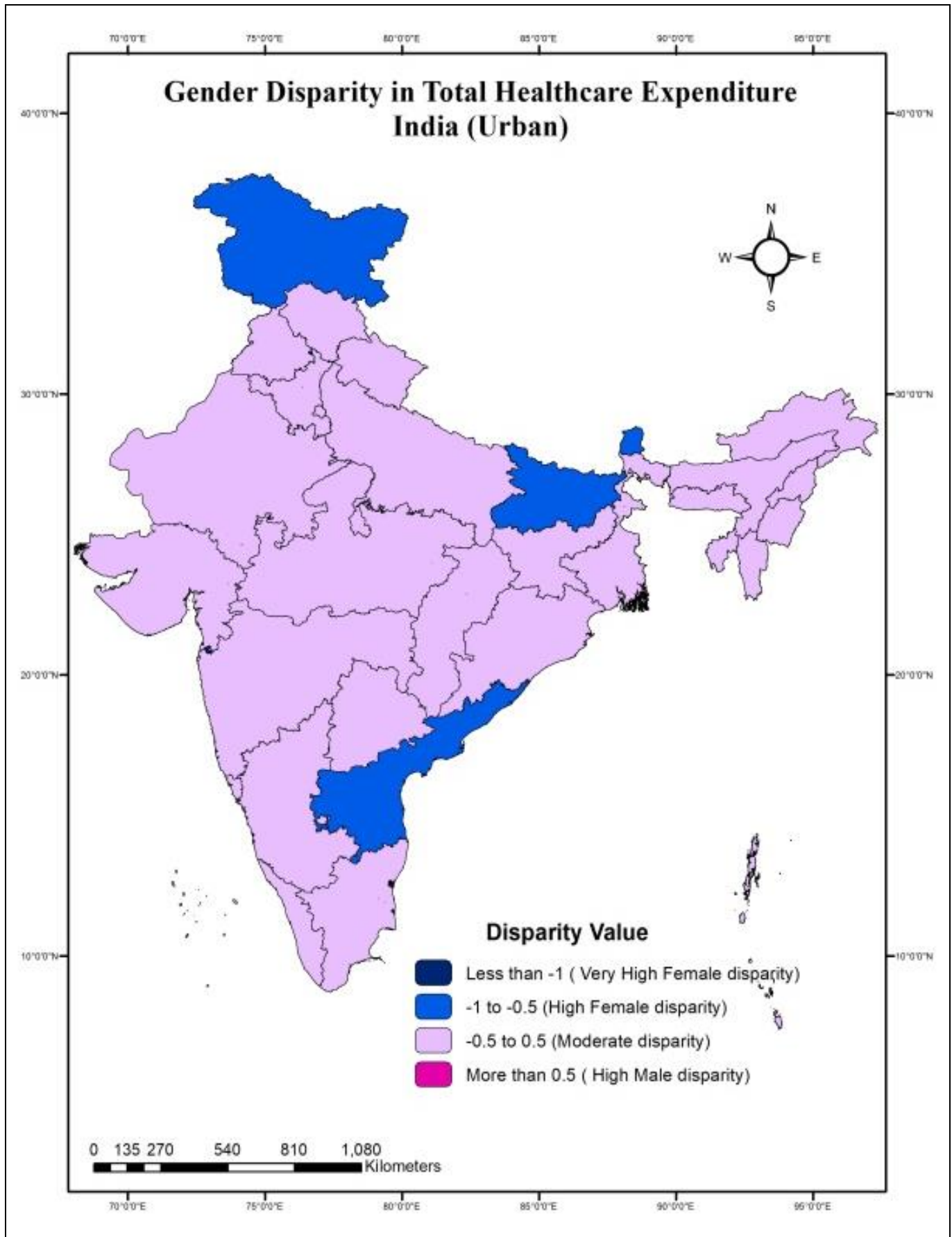


Fig 6

Direction and extent of gender disparity observed in healthcare expenditure varied among various parts of the country. To understand the role of gender in healthcare services and expenditure allocation of resources within household and public sphere should be examined. It has been observed that males get admitted in hospitals more frequently for their treatment than compared to females.

Table 1: Gender Disparity Value in Healthcare Expenditure in India

	Urban	Rural
Avg. med exp. During stay at hospital	-0.27	-0.30751
Avg. other med exp. on account of hospitalisation	-0.23	-0.15
Total expenditure	-0.26	-0.29

It has been seen that gender discrimination is a major reason for the disparity faced by women in the health care related issues.

In rural areas, the traditional practices and social norms related to women's mobility, status and their roles are still highly practiced which leads to the observed extent of gender disparity in the major parts of the country.

Conclusion

Gender discrimination observed in healthcare expenditure varied among all the states of India. There is significant difference between the gender disparity existing in rural and urban areas. Higher gender disparity in healthcare expenditure can be seen in bigger states like Madhya Pradesh, Rajasthan, Uttar Pradesh, Maharashtra, Karnataka, Bihar and Odisha than compared to north-eastern and southern states. Gender discrimination in the health related expenditures can be reduced by women empowerment through better education, improving their status and most important by bringing change in gender attitude of the society.

Table 2: Gender Disparity in Health Care Expenditure Across States in India

ST_NM	Avg. med exp. During stay at hospital		Avg. other med exp. on account of hospitalisation		Total expenditure	
	Rural	Urban	Rural	Urban	Rural	Urban
Andhra Pradesh	-0.38	-0.80	-0.33	-0.25	-0.37	-0.75
Arunachal Pradesh	-0.06	-0.37	-0.06	-0.23	-0.06	-0.35
Assam	-0.09	0.54	-0.22	0.16	-0.12	0.50
Bihar	-0.21	-0.73	-0.09	-0.84	-0.19	-0.71
Chhattisgarh	0.26	-0.31	0.15	-0.34	0.25	-0.31
Goa	1.19	-0.27	0.35	-0.20	1.14	-0.27
Gujarat	0.24	-0.32	-0.35	-0.36	0.19	-0.33
Haryana	-0.43	-0.16	-0.11	-0.11	-0.40	-0.16
Himachal Pradesh	-0.52	-0.21	-0.23	-0.36	-0.48	-0.22
Jammu & Kashmir	-0.38	-0.96	0.28	-0.36	-0.29	-0.90
Jharkhand	-0.28	-0.34	-0.26	-0.51	-0.28	-0.37
Karnataka	0.02	-0.18	0.39	-0.14	0.08	-0.18
Kerala	-0.24	-0.40	-0.11	-0.32	-0.23	-0.40
Madhya Pradesh	-0.69	-0.15	-0.16	-0.25	-0.64	-0.16
Maharashtra	-0.77	-0.50	-0.22	-0.45	-0.68	-0.49
Manipur	-0.13	0.07	-0.20	-0.32	-0.14	0.05
Meghalaya	0.22	0.03	0.08	-0.01	0.17	0.02
Mizoram	0.34	0.25	-0.13	-0.10	0.10	0.20
Nagaland	-0.19	0.24	-0.10	0.46	-0.16	0.29
Odisha	-0.82	-0.14	-0.30	-0.17	-0.67	-0.14
Punjab	-0.42	0.27	-0.10	0.01	-0.36	0.23
Rajasthan	-0.76	-0.11	-0.27	-0.21	-0.73	-0.12
Sikkim	-0.21	-0.74	-0.20	-0.44	-0.21	-0.71
Tamil Nadu	-0.50	-0.20	-0.17	-0.96	-0.38	-0.45
Telangana	-0.30	-0.41	-0.22	-0.29	-0.29	-0.40
Tripura	0.63	-0.41	-0.05	-0.47	0.56	-0.42
Uttar Pradesh	-0.73	-0.37	-0.44	-0.31	-0.67	-0.36
Uttarakhand	-0.30	-0.09	-0.22	-0.22	-0.29	-0.10
West Bengal	0.17	-0.29	0.01	-0.48	0.15	-0.31
Andaman & Nicobar Island	-0.28	-0.27	-0.12	0.43	-0.26	-0.21
Chandigarh	-1.50	-1.95	0.29	-1.56	-0.90	-1.83
Dadara & Nagar Havelli	-0.07	-1.05	0.26	-0.34	-0.02	-1.00
Daman & Diu	-1.26	-0.57	0.39	-0.31	-0.89	-0.56
NCT of Delhi	0.13	-0.31	-0.11	-0.64	0.11	-0.43
Lakshadweep	-0.78	0.26	-0.34	-0.55	-0.64	-0.03
Puducherry	-0.51	-0.63	-0.53	-0.42	-0.51	-0.61
All	-0.31	-0.27	-0.15	-0.23	-0.29	-0.26

References

1. Mehrotra Dr Manisha, Ms Saumya Chand. An Evaluation of Major Determinants of Health Care Facilities for Women in India. *IOSR Journal of Humanities and Social Science (JHSS)* 2.5, 2012, 1-9.
2. Gender: Is It A Barrier For Access To Healthcare In India?. n.d.
3. Kapoor Mudit. Missing female patients: an observational analysis of sex ratio among outpatients in a referral tertiary care public hospital in India. *BMJ* (n.d.), 2019.
4. Maharana Barsharani, Laishram Ladusingh. Gender Disparity in Health and Food Expenditure in India among Elderly. *International Journal of Population Research*, 2014.
5. Mishra, Hemanta Kumar, Dr. Ratnawali, Rama Nishad. Gender differences in accessing health care facility in India, a scoping review. *Studies in Indian Place Names (UGC Care Journal)* 40.3, 2020, 6898-6907.
6. Moradhvaj, Nandita Saikia. Gender disparities in health care expenditures and financing strategies (HCFS) for inpatient care in India. *Population Health* 9, 2019.
7. Moradhvaj. Gender Disparity in Intra-Household Health Care Expenditure: Empirical Evidence from India, 2018.
8. Rout Himanshu Sekhar. Gender Inequality In Household Health Expenditure: The Case Of Urban Orissa. *Nagarlok*. 2006; 3(8):344-48.
9. Saikia Nandita, Moradhvaj, Jayanta Kumar Bora. Gender Difference in Health-Care Expenditure: Evidence from India Human Development Survey. *PLoS ONE*, 2016, 11(7).
10. WHO. Women and Health: Today's Evidence Tomorrow's Agenda, 2009.