

Decomposing Gender Differences in Healthcare Expenditure among Uninsured Older Adults in India and its States

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Abstract

Using Longitudinal Ageing Study data, the current paper endeavours to elucidate gender disparity in healthcare expenditure among uninsured older adults in India. Findings indicate wide disparity between uninsured male and female older adults in healthcare expenditure where male older adults are privileged. Also, for expenditure on different health items like medicine charges, hospital/nursing home charges, Operation theatre and surgery charges, tests and investigation charges, male older adults are benefited than their female counterparts. Result from Theil Decomposition Analysis reveals that between male and female older adults, inequality in healthcare expenditure is substantial as the between group component explains 19.2 percent of total inequality by the Theil index L. Likewise, there exists a huge gender disparity in healthcare expenditure between uninsured older adults, where the between group component explains 20 percent of total inequality by the Theil L index, which signifies gender is an important factor explaining inequality in healthcare expenditure among uninsured older adults. Evolving policies are needed to meet the healthcare needs of uninsured female older adults and to improve their social status as the composition of female older adults has shifted over the period and this vulnerable group is economically dependent on household members for their healthcare needs.

Key words: Healthcare expenditure, Inequality, Uninsured older adults, Decomposition analysis, Public policy

Introduction

Gender inequality has adverse impact on development goals as reduces economic growth. It hampers the overall well being because blocking women from participation in social, political and economic activities can adversely affect the whole society. In India women face numerous socio-economic, psychological and health related issues due to their increased vulnerability, as they are more likely to be widowed, have low economic security, lower educational attainment, less labour force experience (WHO, 2002). According to gender inequality index (GII), India ranks 126th among 146 countries, lagging far behind its regional neighbours. Discrimination against women and girls remains the most prominent form of inequality.

Further, the impact of an ageing population on healthcare expenditure is a concern of increasing importance for health policy in all the developed and developing countries over the period. Most of India's elderly are economically dependent and the healthcare cost is often a burden on the household members if the member is uninsured. Several studies proved that healthcare expenditure among older adults is high, however among them women are less privileged. The

Indian government has taken steps towards achieving universal health care through the implementation of the insurance schemes and a comprehensive health program aimed at providing healthcare facilities to women, children, and economically weak sections of society. However, household expenditure on healthcare is increasing. Keeping the aforesaid discussion in view, this paper makes an attempt to shed light on gender disparity in healthcare expenditure among uninsured older adults in India. The findings of the study may provide inside evidence to serve as the basis for the need of evolving policies to meet the healthcare needs of this vulnerable group.

Data and Methodology

Data

Longitudinal Ageing Survey in India (LASI) data (2020) is used to fulfil the objective of the study. The survey facilitates an improved comprehension of India's adult health problems and population aging processes and the design of appropriate evidence-based policies for adults and older people. The LASI is a full-scale national survey of scientific investigation of the health, economic, and social determinants and consequences of population aging in India. This study uses unit level data pertaining to older adults.

Methodology

Descriptive statistics and bivariate analysis are used to describe whether disparity exists in household healthcare expenditure among male and female older adults (60 years and above). Disparity in the distribution of healthcare expenditure among uninsured male and female older adults is measured with the *Theil decomposition Indices (1967)*. The Theil index's main attraction lies in its' decomposability that estimates the contribution of different groups to total inequality.

The Theil index is given by:

$$T = \sum_{i=1}^m \sum_{j=1}^{n_i} \left(\frac{y_{ij}}{Y} \right) \log \left(\frac{y_{ij}/Y}{1/n} \right) = \frac{1}{n} \sum_{i=1}^m \sum_{j=1}^{n_i} \left(\frac{y_{ij}}{\mu} \right) \log \left(\frac{y_{ij}}{\mu} \right), \quad (1)$$

Where, m = total population in all households, y_{ij} = per capita healthcare expenditure of household j in group i ($i=1, 2, \dots, m$; $j=1, 2, \dots, n_i$); n_i = total number of households in group i ($i=1, 2, \dots, m$); $Y = (\sum_{i=1}^m \sum_{j=1}^{n_i} y_{ij})$ = total healthcare expenditure of all households; $n = (\sum_{i=1}^m n_i)$ = total number of all households; and $\mu = \left(\frac{Y}{n} \right)$ = mean per capita healthcare expenditure for all households.

Theil Index T is decomposed into within-sex component and between-sex component as follows:

$$T = \sum_{i=1}^m \left(\frac{Y_i}{Y} \right) T_i + \sum_{i=1}^m \left(\frac{Y_i}{Y} \right) \log \left(\frac{Y_i/Y}{n_i/n} \right) = T_w + T_B \quad (2)$$

Where, Y_i = total healthcare expenditure of households in group i , n_i = total number of households in group i .

Theil index L is given by:

$$L = \sum_{i=1}^m \sum_{j=1}^{n_i} \left(\frac{1}{n} \right) \log \left(\frac{1/n}{y_{ij}/Y} \right) = \frac{1}{n} \sum_{i=1}^m \sum_{j=1}^{n_i} \log \left(\frac{\mu}{y_{ij}} \right) \quad (3)$$

Findings

Findings indicate that the average healthcare expenditure for hospital visits among insured older adults is negligible (₹3280). However, the average spending among uninsured older adults is substantial (₹57965) and there is a huge gap in average healthcare expenditure between male (₹70862) and female (₹48585) older adults (Figure 1). The above findings proved that there exists a strong disparity between male and female older adults in term of healthcare expenditure, and males are privileged though their proportion is very less as compared to female older adults.

Figure 1: Gender inequality in average healthcare expenditure among uninsured older Adults in India, 2020.

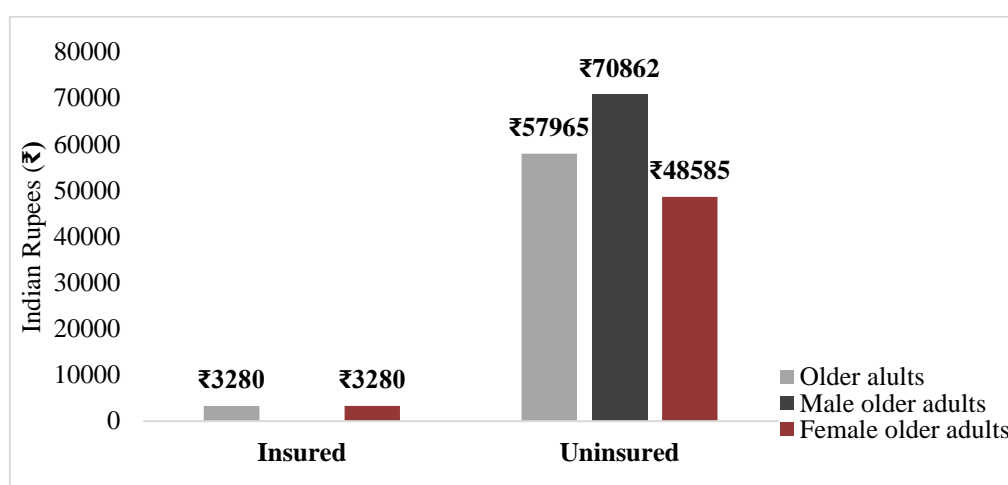


Table 1: Disparities in average healthcare expenditure for various health items among uninsured male and female older adults, 2020.

Types of expenditure	Uninsured Older adults	Uninsured Male older adults	Uninsured Female older adults
Average healthcare expenditure in ₹			
Health care provider's fees (consultation charges)	5176	5794	4796
Medicines from hospital	8935	11785	7034
Medicines from outside	5134	8607	2996
Tests/investigation	4541	5693	3833
Hospital and nursing home charges including bed charges, food	7855	6373	8767
Operation theatre charges, surgery charges and related expenses	7854	17122	2151
Blood, oxygen cylinder	3736	5498	2652
Transportation	5051	3833	5801
Expenses of the accompanying person(s) (food / accommodation)	3936	3011	4506
Expenditure not elsewhere reported (others)	2400	3147	1940
Total Healthcare expenditure	57965	70862	48585

Disparities in healthcare expenditure for various health items is considerable between uninsured male and female older adults (Table 1). Result shows that among male older adults the average expenditure on medicine is more than their female counterparts, whether it purchased from hospital (₹11785 for males and ₹7034 for females) or from outside (₹8607 for males and ₹2996 for females). Furthermore, male older adults are in higher side in average spending on tests/investigation than the female. For operation theatre charges, surgery charges and related expenses there exists a huge difference between male (₹17122) and female (₹2151) older adults. Likewise, among male adults the average expenditure on blood and oxygen cylinder and expenditure on other unreported health items is higher compared to the female older adults.

Findings from Decomposition Analysis presented in Table 2 depicts that the between group component explaining 19.2 percent of total inequality by the Theil index L, which indicates that gender is an important factor for explaining inequality in household healthcare expenditure among male and female older adults. For uninsured older adults, the between group contribution to the total inequality is more persistent as the between group contributions to total inequality is 20 percent by Theil L indices, which signifies that there exists a wide disparity between uninsured male and female older adults.

Table 2: Inequality decomposition in healthcare expenditure by gender among uninsured older adults in India, 2020.

Gender	All older adults				Uninsured older adults			
	Theil T	Theil L	GE(-1)	Gini	Theil T	Theil L	GE(-1)	Gini
Male older Adults	0.313	0.316	0.434	0.413	0.313	0.316	0.434	0.413
Female older adults	0.236	0.326	0.729	0.332	0.133	0.141	0.235	0.240
All	0.357	0.399	0.849	0.421	0.287	0.263	0.369	0.372
Within group	0.279	0.322	0.772		0.234	0.210	0.316	
% share	78.025	80.749	90.936		81.456	79.954	85.617	
Between group	0.079	0.077	0.077		0.053	0.053	0.053	
% share	21.975	19.251	9.064		18.544	20.046	14.383	

Conclusion

Gender discrimination is a major issue in all over India for which women are less privileged in all aspects particularly healthcare. Women usually have higher life expectancies than men due to biological and behavioural factors. Moreover, women's greater longevity often does not translate into healthier lives in many developing countries. Now a days role of health insurance is playing a major role to reduce the household burden for healthcare expenditure, especially for older adults. It is evident from the findings that healthcare expenditure for uninsured older adults is very high. However, female older adults are less privileged than their male counterparts. Looking to the scenario, the present paper suggests that Government should implement policies to address the healthcare needs of this vulnerable group and to improve their social status.

Note: Analysis for states is in process