

A STUDY ON MORBIDITY PATTERN, HEALTH CARE UTILIZATION AND HEALTH EXPENDITURE IN A URBAN COMMUNITY OF KOLKATA

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Abstract:

Introduction: In a hugely populated country like India the ever escalating expenditure on health both in terms of direct and indirect costs are the most common obstacles for the poor people to obtain appropriate, affordable, adequate and timely treatment. **Objective:** To find out the morbidity pattern and health care utilization as well as health expenditure of the people in a selected urban community of Kolkata. **Methodology:** This cross-sectional study was undertaken in a ward of Kolkata Municipal Corporation within the service area of Urban Health Centre, under AIIHPH, Kolkata.. Sample size was determined assuming the prevalence of morbidity to be 50% with allowable error of 10% and using the formula $n = 4pq/l^2$. 100households were chosen by simple random sampling with a total population of 455. House to house interview was conducted using a pre-designed, pre-tested schedule for a period of 2 months. **Result:** The result showed that majority of the people(59.2%) consulted private practitioners during their illness and health insurance coverage was poor(22.9%). Expenditure on health care service was significantly associated with per capita income, occupation and health seeking behaviour. **Conclusions:** The present study indicates that there should be improvement in government health care service as well as provisions for easy, low cost and flexible health insurance policy.

Keywords: Morbidity pattern, Health care utilization, Health expenditure, Health Insurance

Introduction:

In a country like India with a huge population catering of health and medical service is not easy. Moreover health expenditure is increasing by leaps & bounds .Research in medical field continues

unabatedly adding to novel drugs and diagnostic tests in our armoury to fight successfully against various diseases. While this has enhanced the capacity of medical science in various spheres, it cannot be denied that this has led to rapid escalation of

health expenditure. The new drugs developed by the pharmaceutical companies are priced beyond the reach of the majority who need them most. It was observed that over 40% of hospitalised Indians borrow heavily or sell assets to cover hospital expenses and more than 25% of them fall below poverty line because of hospital expenses.² The cost of health expenditure includes besides cost related to direct treatment, cost of travel related to treatment and relevant loss of wages and other related factors influencing it.

Direct & indirect costs are among the most commonly mentioned obstacles to adequate health seeking behaviour of the poor for obtaining prompt and adequate treatment, treatment compliance and access to preventive measure. Even if direct costs are affordable or if medical services are free, indirect costs (for transport, special food, under the counter' fees) can limit access to treatment or lead patients to interrupt therapies.

With the rapid industrialization and globalization of economy there has been a marked improvement in the purchasing capacity of certain section of the society. This has led to the demand for more sophistication in the health services aggravating its cost. In contrast a large section of people continue to live in extreme poverty. For them it is impossible to get quality health care unless there is some external assistance.

Unfortunately community based research enlightening this aspect of health care is grossly insufficient. However as the gap between “Bharat” and “Shinning India” continues to widen, focus on health seeking behavior and health expenses have become the need of the hour. It is with this idea the researcher decided to carry out study on morbidity, health care utilization and health expenditure in a selected urban community of Kolkata.

Objectives:

1. To study the sociodemographic characteristics of the study population .
2. To find out the morbidity, health care utilization pattern, health insurance coverage among the study population
3. To determine the association of sociodemographic factors and health seeking behavior with health expenditure.

Materials & Methods:

Study Settings: The study was done in Ward 82 under UHC&TU, Chetla.

Time Line: The time line of study was from 03.03.2014 to 30.04.2014.

Study variables:

- Socio demographic - 1.Age
2. Sex
3. Religion
4. Type of family
5. Education
6. Occupation
- Socioeconomic -1. Per capita income
2. Health expenditure
- Morbidity – 1. Within last 15 days
2. Chronic illness
- Health seeking behaviour

Sample Design

The study area was Ward 82 within the service area of UHC&TC, Chetla. There were about 1336 households in this area. Out of these 100 households were chosen by simple random sampling. Total population covered = 455.

Sample Size

Since very few studies have been done with regard to health expense in the community we calculated the sample size assuming prevalence of morbidity to be 50 % and allowable error 10%.

Sample size= $4PQ/D^2 = 4 \times 50 \times 50 / 10 \times 10 = 100$ households.

- Inclusion Criteria** - 1. Families in which any individual was suffering from any illness within last 15 days
2. Families in which any member was suffering from chronic illness.

Exclusion Criteria - Unwilling families

Study Design

The study was descriptive in nature and cross sectional in mode of data collection through interview.

Study Tools

A pre-designed pretested schedule.

Study Techniques

Interview

Method of data collection

An interview schedule was prepared and pretested. 100 households were selected by Simple Random Sampling. Relevant background information was obtained for each individual in the family, ex- age, sex, education, occupation & per capita income. They were questioned on the disease they had suffered during the last 15 days or whether suffering from any chronic illness which requires regular medications.

Relevant questions were asked regarding management of such illness ex- disease episodes, doctor consulted, cost of treatment including associated cost like travel cost, loss of wages of the involved family members.

Statistical analysis & plan

Data were analyzed using SPSS 20 & one-way ANOVA has been applied accordingly

Ethical Issues

The participants were made aware of the nature & purpose of the study. They were informed about the anonymity & confidentiality of the information & data provided by them would be used solely for academic purposes. Even if they refused, they would continue to receive the same medical benefits as they were enjoying previously.

Table 1: Distribution of study population according to socio-demographic pattern

Variable	Frequency(%)
Age n=455	
≤15	73(16)
16-59	337(74.1)
≥60	45(9.9)
Sex n=455	
Male	228(50.1)
Female	227(49.9)
Education n=455	
Illiterate – class IV	141(31)
Class V- Secondary	246(54.1)
HS and above	68(14.9)
Religion n=455	
Hindus	439(96.5)
Others	16(3.5)
Type of family n=100	
Nuclear	51(51)
Joint	49(49)
Occupation n=455	
Unemployed/Retired	64 (14.1)
Student/Homemaker	209(45.9)
Manual Labourer	36(7.9)
Skilled Labour	56(12.3)
Service /Business	90(19.8)

Per capita income n=455	
≥ 5156	24(5.3)
2578-5155	120(26.4)
1547-2577	154(33.8)
773-1545	147(32.3)
<773	10(2.2)

Table 1 shows the sociodemographic characteristics of the study population. Majority of the study subjects (74.1%) belonged to the age group 16-59years and 9.9% of them were elderly. The population had an identical sex distribution and an overwhelming majority (96.5%) was Hindus. Education status was poor with 31% studied up to class IV or below and only 14.9% reaching the level of HS or above.

About 60% of the study subjects were economically dependent and 19.8% were either employed in service or engaged in business. The rest were either skilled or manual labours. The socioeconomic status as determined by percapita income based on modified BG Prasad scale reveals that most of the population belonged to the middle income group (social class II,III and IV) and only 5.3% belonged to social class I.

Table2: Distribution of study population on the basis of morbidity (n=455), health-seeking behaviour (n=142), insurance coverage (n=455)

Variable	Frequency (%)
Morbidity	n=455
Present	142(31.2)
Absent	313(68.8)
Health-seeking behaviour	n=142
Medicine shop	10(7.04)
Pvt. Practitioner	84(59.15)
Govt.Doctor	48(33.80)
Insurance	n=455
Present	104(22.9)
Absent	351(77.1)

Out of 455 subjects morbidity was recorded in 142 (31.2%) individuals. 59.2% of the morbid population consulted the private practitioners during their illness. 33.8%

relied on the Government doctors while 7% took medicines from over the counter. 22.9% had some sort of medical insurance coverage

Table 3: Association of independent variables with mean health expenditure as determined by one- way ANOVA

Variable	Mean Health Expenditure ± SD	Sig.
PCI		
≥5156	419.16±165.55	F=11.211
2578-5155	298.31±381.19	p=.000
1547-2577	173.94±181.30	
773-1546	184.78±126.75	

<773	40.00±0.00	
Education		
0- IV	200.86±291.93	F=.865
V-Secondary	223.84±235.92	p=.422
HS and above	247.34±178.90	
Occupation		
Unemployed/Retired	208.41±234.88	F=3.047
Student/Housewife	232.11±261.89	p=.017
Manual labour	124.63±102.50	
Skilledlabour	293.69±334.37	
Service/Business	193.59±178.18	
Health seeking Behaviour		
Govt. Doctor	154.18±139.70	F=12.26
Pvt. Practitioner	372.07±336.31	p=.000
Medicine Shop	91.11±77.74	

This table shows that mean health expenditure in social class 1 is 419.16±165.55 while those in social class V is 40.00±0.00. This implies that those who are high up in the social ladder as determined by their per capita income are spending more on health as compared to those having low per capita income and this association is statistically significant (p=.000). While determining morbidity we have taken a recall period of 15 days and this could lead to the coincidental association between occupation and health expenditure (p=.017). To comment on whether occupation is really contributing to increased health expenditure we require a larger sample. Health seeking behaviour of the people is an important determinant of health expenditure and people going to the private practitioners are spending more on health (372.07±336.31). Hence there is a significant association between health seeking behaviour and spending on health (p=.000). However the study has failed to demonstrate any significant association between educational status and health expenses (p=.422). This could be due to universal concern for health irrespective of their educational background.

Discussion

In a longitudinal study conducted in a rural setting in Jalgaon, Maharashtra on 70 families with 256 persons researchers found that more than ¾ ths of the study population (77.7%) were ill during the study year.¹ However Rajaratnam et al. observed a prevalence of 42.7% in rural Tamilnadu in a cross sectional study.⁴ In the present study 31.2% of the study population were suffering from some morbidity during the study period.

In their study in Jalgaon Sadhukhan et al. showed that health expenditure of the community was observed to be 4.3% of their income with an annual figure of 1576 per family, 431 per person and 242 per episode. The expenditure was observed to be significant with income and education. They used t-test and Anova in SPSS 16 version.¹ Using similar statistical tests the present researchers have found significant association of Health expenditure with Per-capita income, Occupation and health-seeking behaviour. In rural Tamilnadu Rajaratnam observed that only income was significantly associated with health expenditure.⁴ Rahaman however observed that both income and education in Indian

states were significantly associated with health expenditure. The differences could be attributed to the difference in the study settings and also study designs.

The present study has certain strengths in that here 15 day recall period has been used in contrast to one month recall period in the study done in Jalgoan¹. However the sample size was small and affected by some outliers.

Conclusion

The present study was done in an area inhabited mostly by the poorer sections of the community. However even when signs of poverty were looming large people were found reluctant to use the government facilities. Various factors including excessive waiting time at the service delivery points, indifferent attitude of the staffs dealing with health care services and non -availability of medicines were the predominant factors which might lead to such a behavior. The health care personnel should show more empathy and understanding towards the sick. The government on its part should formulate and implement policies aimed to remove the common obstacles for the poor people to obtain appropriate, affordable, adequate and timely treatment for any morbidity. Preventive and promotive services should be catered in such a way that more and more people from the marginalized section of the society can participate in it.

While the present study has revealed that there is a high out of pocket payments in the event of an illness even among the poor, most of them are not aware of the existence of health insurances. The Rastriya Swasthaya Bima Yojna (RSBY) has been in vogue since 2007 but has failed to make inroads in this section of society. Awareness continues to be in a dismal state leading to

the failure of this coveted scheme at an area where it should have been more successful. There is an urgent need to disseminate sufficient and adequate information regarding the existing health insurance schemes designed to serve the poor and vulnerable sections of the society.

The present study has highlighted some of the issues concerning the health expenditure in a small sample. However in view of the paucity of studies on health expenditure and considering the heterogeneity of different regions of India and its regional specifications there is an urgent need to conduct more community based studies on health expenditure to enable the health policy makers and administrators to develop equitable, affordable and quality health services to the poorer sections of the society.

References

1. BeraT , Sadhukhan SK, Premendran JS.A longitudinal study on health expenditure in a rural community attached to Mahatma Gandhi Institute of Medical Sciences, Sewagram, Maharashtra.IJPH2012;56;65-68.
2. Mission document, NRHM .MOHFW, Govt. of India.p3.
3. Chandrasekhar CP, Ghosh J. Health Expenditure in India: Business Line. Chennai, 2006.p.1.
4. Rajaratnam J ,Abel R , Duraisamy S, John KR. Morbidity pattern, Health care utilization and per capita Health Expenditure in a rural population of Tamil Nadu. Natl. Med. J India 1996; 9:252-62.
5. Rahaman T. Determinants of Public Health Expenditure: Some evidence from Indian States. Appl. Econ. Lett 2008; 15: 853-7.