

Original Article

A CROSS SECTIONAL STUDY ON PATTERN OF HEALTH CARE SEEKING BEHAVIOR AND OUT-OF-POCKET HOUSEHOLD EXPENDITURE ON CURATIVE MEDICAL CARE IN RURAL CENTRAL INDIA

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ABSTRACT

Introduction: Effective health care policies and programmes depend on health care seeking behaviour & out-of-pocket household expenditure.

Methodology: It is a community based cross-sectional study done in rural area of Seloo block of Wardha district, Maharashtra. Multistage sampling technique was adopted to select study villages. Among the study villages 25% households were selected by systematic sampling method. Sample size was 300 household (unit of study) to study the out-of-pocket household expenditure on curative medical care, in contrast 1319 members (unit of study) of total household were interviewed to know the pattern of health care seeking behavior. Data on socio-demographic profile, morbidity profile, health care seeking behaviors and curative medical care expenditure were collected. Study period was from July 2008 to June 2009.

Results: About half (50.13%) of the patients during their illness gave first preference to private practitioners. Significant difference between variables (age distribution & education) and health care seeking behavior was noted. More of productive age group participants prefer to go to Private Practitioners 210 (58.33%), Chemist shops 110(82.71%), Tertiary hospitals 40 (83.33%) and Rural hospitals 11(84.62%) than dependents age group. More of secondary schooled personal preferred to go to Chemist shops 81(60.90%), primary health center 38(74.51%) and tertiary hospitals 30 (62.50%) than others. From all the Households average out-of-pocket health care expenditure during last six month was Rs /- 418.72 ± 933.0 SD.

Conclusion: Reasons for seeking care in private practitioner to be sorted out so that same or better treatment may be obtained from public health care system with low expenses from competent and trained health care provider.

Keywords: Health care seeking behavior, Out-of-pocket household expenditure, curative medical care

INTRODUCTION

Health expenditure in India is 4.5 to 6.0 % of Gross Domestic Product (GDP); of this expenditure nearly 70% comes from household.¹ Public financing on health in India is 0.9% of GDP (2001-2002), while in terms of per capita expenditure it is Rs. 120.00 (2003-2004).² Kerala is the leading state in terms of health indicators and accounts for the highest household financing, around Rs. 1700 per annum; while in Maharashtra it was Rs. 800 / annum on health.¹ There are various sources of finance in health sector in India, the primary source of public financing is general tax and non tax revenue while another method are user fees, out-of-pocket expenditure, donation, etc.³ World Bank study on India concluded that out-of-pocket healthcare expenditure pushes 2.2% of the population below poverty line each year.⁴

Illness has two effects on the household, firstly the immediate loss of income due to the absence from work and secondly large out of pocket expenses to cover the necessary medical care. Costly health care also deters people from using the health services thereby prolonging their health problems.^{5,6} In rural area, this problem is further aggravated by poor quality and accessibility of the Government health services , forcing the individuals to visit the private sector.^{7,8,9} In fact, in many urban areas of various districts the large influx of rural population to the major hospitals, indicates the absence of similar facilities in the rural areas. Recent evidence indicates that in rural areas individuals accessing private practitioners often end up going to providers who are not legally qualified to dispense medication¹⁰ thus in terms of price, access and quality, the rural Indians are probably much worse off than their urban counterparts. Hence this study was undertaken to know the pattern of health care seeking behavior of rural people and also to find out the out-of-pocket household expenditure on curative medical care.

METHODS:

Study Setting: The study was carried out in a rural area of Seloo block of Wardha district, Maharashtra. **Study Design:** It was a community based cross-sectional study. **Sampling method and sample size:** Multistage sampling technique was adopted to select study villages. In first stage: out of eight blocks of Wardha district, Seloo block was selected by lottery method. In

second stage: Zadasi PHC (primary health center) was randomly selected out of the five PHCs in Seloo block. In the third stage: four Sub-centers (Takali, Wadgaon, Yelakeli and Surgaon) out of eight Sub-centers of Zadasi PHC were randomly selected. In fourth stage: one village was randomly selected from each Sub-center. Thus Yelakeli, Wadgaon, Barkhedi and Surgaon were selected for study. A total 1200 household were available in four study villages, out of these 25% household were selected by systematic sampling method for study, thus the final sample size was 300 household (94 from Yelakeli, 81 from Wadgaon, 73 from Barkhedi and 52 from Surgaon) to study the out-of-pocket household expenditure on curative medical care and to know the pattern of health care seeking behavior all members of each household were included (1319 participants, out of 1333). **Data collection:** Approval from the Institutional Ethical Committee was obtained to proceed for the study and also written consent obtained from head of the households. Social workers were trained by supervisor for data collection. For out of pocket expenditure respondents were head of the households. For health care seeking behavior respondents were all participants except children <15 years and persons > 65 years of age, for those data was collected from head of the households. Person not willing, not giving consent or the selected household found locked on three consecutive visits were excluded. Data was collected by using a pre-tested interview schedule; schedule consists of variables related to socio-demographic profile, morbidity profile, health care seeking behaviors and curative medical care expenditure. Morbidity among any household member in preceding six months from the time of data collection was recorded. Data related to direct cost (Doctor fees, Drug charges, Hospital charges) and indirect cost (Transport, Loss of wages) were collected. Information was collected by interview techniques in Hindi language. Confidentiality was maintained. Data quality was checked by cross checking 5% of total household by supervisor. **Study period:** One year from July 2008 to June 2009.

STATISTICS:

Non parametric tests were applied to test for any statistically significant differences between variables (gender distribution, age distribution, social class and education) and health care

seeking behavior. Average and standard deviation was calculated for direct and indirect expenditure of household on curative medical care. Direct expenditure was calculated by adding- Doctor consultancy fees, Drugs/medicine charges and Hospital charges (investigation charge, hospital charge, surgery, special diet). While indirect expenditure was calculated by adding- transport cost (sick person + accompanying person) and loss of wages (sick person + accompanying person). Total expenditure was calculated by adding direct and indirect expenditure.

RESULT

Socio-demographic profile: Out of 1333 participants from 300 households in study area we included 1319 participants & 288 households, of which 674(51.09%) participants were males and 645(48.91%) females. Majority of participants 867(65.73%) belonged to productive age group (15-64 year). Total dependency (persons above 65 years of age and children below 15 years of age) was found to be 452(34.27%). Most of them 1171(88.78%) participants were literate (a participant age \geq seven years and he or she can read and write with understanding in any language)¹¹, 112(8.49%) illiterate and 36(2.73%) were less than seven year of age. {Male literacy was 661(99.39%) and female literacy was 510(82.52%), 9 males and 27 females were < 7 years of age}. Amongst literate majority 750(64.04%) were educated up to secondary school. Majority of study households were belonged to class IV 140(46.7%), followed by class III 88(29.3%) socio-economical status as per Modified Prasad's classification.¹²

Morbidity profile: Out of 1319 study participants, 718(54.43%) had morbidity during last six months. Among them 241(33.56 %) had only once, 375(52.23%) had twice, 98(13.65 %) had three times, 4(0.56%) had four or more than four times illness during last six months. On an average, patients experienced 2.5(\pm 1) times illness in last six months.

Table 1 shows about half 360(50.13%) of the patients during their illness gave first preference to private practioners followed by chemist shops 133(18.53%).

Table 1: First visit Preference to health care provider during illness by patients

Health care seeking behavior	Total (%)
Private practitioners	360(50.13)
Chemist shops	133(18.53)
District hospitals	65(09.06)
Primary health centers	51(07.10)
Tertiary hospitals	48(06.68)
Home treatment	35(04.87)
Rural hospitals	13(01.82)
Anganwadi workers	04(00.56)
Not taken treatment	09(01.25)
Total number of patients	718

Table 2 and 3 Shows no statistically significant difference between gender distribution and health care seeking behavior. Statistically significant difference between age distribution and health care seeking behavior was noted. More of productive age group participants prefer to go to Private Practitioners 210(58.33%), Chemist shops 110(82.71%), Tertiary hospitals 40(83.33%) and Rural hospitals 11(84.62%) than dependents. Only productive age group participants prefer to go Anganwadi workers 3(100%).

Table 2: Preference for first visit to health care provider by patients during illness as per their gender

Health care seeking behavior	Total (N=718)	Male (n=413) (%)	Female (n=305) (%)	*P-value
Private practitioners	360	214(59.44)	146(40.56)	0.297
Chemist shops	133	77(57.89)	56(42.11)	0.923
District hospitals	66	36(54.54)	30(45.46)	0.607
Primary health center	51	31(60.78)	20(39.22)	0.624
Tertiary hospitals	48	24(50)	24(50)	0.276
Home treatment	35	17(48.57)	18(51.43)	0.273
Rural hospitals	13	9(69.23)	4(30.77)	0.388
Anganwadi workers	3	00	3(100)	**0.076
Not taken treatment	9	5(55.55)	4(44.45)	**0.579

*Each row was compared against other rows pulled together; **Fisher exact test was applied

Table 3: Preference for first visit to health care provider by patients during illness as per their age distribution

Health care seeking behavior	Total (N=718)	<15 years (n=203) (%)	15 to ≤ 64 years (n=470) (%)	≥ 65 years (n=45) (%)	*P-value
Private practitioners	360	124 (34.45)	210 (58.33)	26 (7.22)	0.0002
Chemist shops	133	16 (12.03)	110 (82.71)	7 (5.26)	0.00001
District hospitals	66	22 (33.33)	41 (62.12)	3 (4.55)	0.569
Primary health center	51	17 (33.33)	29 (56.86)	5 (9.81)	0.330
Tertiary hospitals	48	8 (16.67)	40 (83.33)	00	0.016
Home treatment	35	14 (40)	17 (48.57)	4 (11.43)	0.083
Rural hospitals	13	2 (15.38)	11 (84.62)	00	**0.001
Anganwadi workers	3	00	3 (100)	00	**0.0001
Not taken treatment	9	00	9 (100)	00	**0.001

*Each row was compared against other rows pulled together; **Fisher exact test was applied

Non significant difference between social class and health care seeking behavior was noted. Significant difference between education status and health care seeking behavior was noted for preference to chemist shops, primary health center, tertiary hospitals and home treatment. More of secondary schooled personal preferred to go to chemist shops 81(60.90%), primary health center 38(74.51%) and tertiary hospitals 30(62.50%) than others.

Table 4: Preference for first visit to health care provider by patients during illness as per their social class

Health care seeking behavior	Total (N=718)	SC-I (n=50)	SC-II (n=86)	SC III (n=201)	SC IV (n=327)	SC V (n= 54)	*P-value
Private practitioners	360	20 (5.56)	45 (12.5)	92 (25.56)	177 (49.16)	26 (7.22)	0.205
Chemist shops	133	07 (5.26)	11 (8.27)	36 (27.07)	68 (51.13)	11 (8.27)	0.428
District hospitals	65	06 (9.23)	06 (9.23)	26 (40)	25 (38.46)	02 (3.08)	0.119
Primary health center	51	06 (11.76)	04 (7.84)	10 (19.61)	26 (50.98)	05 (9.81)	0.317
Tertiary hospitals	48	05 (10.42)	09 (18.75)	14 (29.16)	15 (31.25)	05 (10.42)	0.218
Home treatment	35	02 (5.71)	06 (17.14)	10 (28.57)	13 (37.15)	04 (11.43)	**1.362
Rural hospitals	13	00	02 (15.39)	09 (69.23)	01 (7.69)	01 (7.69)	**5.382
Anganwadi workers	04	02 (50)	01 (25)	00	01 (25)	00	**1.439
Not taken treatment	09	02 (22.22)	02 (22.22)	4 (44.45)	01 (11.11)	00	**1.438

Figure in parenthesis indicated percentage; *Each row was compared against other rows pulled together; **Fisher exact test was applied

Table 5: Preference for first visit to health care provider by patients during illness as per their literacy

Health care seeking behavior	Total (N=718)	Education				*P value
		Illiterate (n=53)(%)	Secondary (n=485) (%)	Higher secondary (n=116) (%)	Graduation&above (n=64) (%)	
Private practitioners	360	25 (6.94)	244 (67.78)	63 (17.50)	28 (7.78)	0.563
Chemist shops	133	10 (7.52)	81 (60.90)	21 (15.79)	21 (15.79)	0.020
District hospitals	65	03 (4.61)	48 (73.85)	09 (13.85)	05 (7.69)	0.678
Primary health center	51	05 (9.80)	38 (74.51)	05 (9.80)	03 (5.89)	**0.002
Tertiary hospitals	48	04 (8.33)	30 (62.50)	09 (18.75)	05 (10.42)	**0.0008
Home treatment	35	02 (5.71)	26 (74.29)	05 (14.29)	02 (5.71)	**0.0007
Rural hospitals	13	00	10 (76.92)	03 (23.08)	00	**4.393
Anganwadi workers	04	04 (100)	00	00	00	**3.091
Not taken treatment	09	00	08 (88.89)	01 (11.11)	00	**2.384

*Each row was compared against other rows pulled together; **Fisher exact test was applied

Among the total household average out-of-pocket health care expenditure during last six month was Rs.418.72, of which Rs.40.94(9.78%) paid for Doctor Fees, Rs.229.17(54.73%) paid only for drugs/medicine/consumable items, Rs.17.66 (04.22%) paid for Hospital charges, Rs.45.56 (10.88%) for transport and Rs.85.39(20.39%) because of loss of wages.

Table 6: Out-of-pocket Health care expenditure at household level

Cost (in Rs.)	Visits to health care provider for curative medical services (Average (±SD), median, Range)				
	Once	Twice	Thrice	Four or more	For all
*DC: Doctor fees	40.06 (±66.9), 30, 0-600	41.15 (±75.6), 30, 0-600	55.88 (±95.5), 30, 0-300	95 (±73.7), 100, 0-180	40.94 (±69.4), 30, 0-600
DC:(Medicines &CI)	216.61 (±486.0), 60, 0-5000	243.43 (±639.2), 60, 0-5000	442.94 (±990.3), 40, 5-3000	620 (±926.6), 225, 30-2000	229.17 (±536.5), 60, 0-5000
DC: Hospital charges	12.78 (±88.1), 00, 0-1050	26.13 (±133.3), 00, 0-1000	118.53 (±331.7), 00, 0-1000	-	17.66 (±110.0), 00, 0-1050
Total direct cost	269.45 (±551.8), 90, 0-5200	310.71 (±766.3), 90, 0-6200	617.35 (±1405.4), 70, 5-4300	715 (±941.4), 365, 30-2100	287.77 (±631.2), 90, 0-6200
IC: Transport	41.51 (±140.0), 00, 0-2000	52.19 (±203.0), 00, 0-2000	135.88 (±328.7), 10, 0-1000	15 (±19.1), 10, 0-40	45.56 (±159.9), 00, 0-2000
IC: Loss of wages	66.57 (± 254.8), 00, 0-5000	153.15 (±591.7), 00, 0-5000	209.41 (±722.1), 00, 0-3000	-	85.39 (±357.5), 00, 0-5000
Total indirect cost	108.08 (±313.6), 20, 0-5400	205.34 (±687.6), 10, 0-5400	345.29 (±802.9), 40, 0-3200	15 (±19.1), 10, 0-40	130.95 (± 424.5), 20, 0-5400
GT(DC + IC)	377.53 (±768.0), 140, 0-8400	516.05 (±1306.5), 140, 0-9700	962.64 (±1910.4), 130, 5-5300	730 (±948.0), 385, 30-2120	418.72 (± 933.0), 140, 0-9700

All figures are * DC: Direct cost, CI: Consumable items, IC: Indirect cost, GT: Grand total; Responses to questions were influenced by level of understanding and knowledge of the participants

DISCUSSION

In our study half (50.13%) of the patients during their illness gave first preference to private practitioners followed by chemist shops (18.53%). Similar finding observed by future health systems (FHS) research¹³ reported majority (64.7%) of the patients who sought treatment, consulted either a village doctor or a drug seller at some point of treatment. But another study conducted by Satyajit C on "health seeking behavior of aged population of a rural Block in West Bengal" showed only (13.4%) sought care from Private providers.¹⁴

A study conducted by Vaishnavi D et al on "health care seeking behavior of elderly in Tamil Nadu"¹⁵ revealed elderly females had better health care seeking behavior ($p < 0.05$) than men but in our study no statistically significant difference observed between gender distribution and health care seeking behavior. In the same study Vaishnavi D et al revealed overall (79%) of the aged persons sought care for their ailments. In our study 45 (6.27%) were aged ill patients, amongst them 41 (91.11%) sought care for their ailments and remaining 4 (8.89%) have taken home treatment. Vaishnavi D et al study also showed fully dependent were less likely to seek care ($p < 0.05$) similarly in our study dependent were less likely utilizes the private services compared to productive age group participants.

Health care seeking is a dynamic process and determined by certain socio-demographical factors. These factors influence the decision to take any action or visiting any health care

providing agency. A study conducted by Grover et al¹⁶ revealed (16.7 %) from class -V, (33.3 %) from class -IV and (57.9 %) from class-III were seeking care from Private allopathic practitioner. Our study shows 26 (48.14%) from class-V, 177 (54.12%) from class-IV, 92 (45.77%) from class-III, 45 (52.32%) from class-II and 20 (40%) from class-I seek care from Private practitioners. A study by Tanimola et al¹⁷ revealed that there was no significant difference across educational status in the type of health facility [public {135 (44.85%)} and private {166 (55.15%)} out of total 301] patronized. In our study 360 (50.13%) of the patients during their illness gave first preference to private practitioners and we observed no significant difference across educational status and preference to private practitioners but we also observed significant difference across educational status and preference to Primary health center (public).

Finding observed by Sodani et al¹⁸ in rural area of Rajasthan was that, household spent Rs. 931.7 on health care per year and consumer expenditure survey shows Indian household spent Rs. 905/- per annum out-of-pocket on health which were almost similar with our study (Rs. 418.72 in six month). Srivastava et al¹⁹ reported mean out-of-pocket expenditure on neonatal illness was Rs. 547.5 in urban area of Lucknow. Average expenditure on health of household visiting once to health care provider was Rs. 377.53/-, similarly average expenditure of household visiting to four or more than four times to health care facilities was found to be Rs. 730, it shows visiting once to health care

provider spent less money than those visiting to multiple times.

CONCLUSION

Most of the participants gave first preference to private practitioner irrespective of their social and education status. But limitation of this study is that we do not know the reasons for seeking care in private practitioner. Productive age group participants utilises both private and public facilities more. Pattern of care seeking among the socio-economic classes indicate no significance differences. Only illiterates seek treatment from Anganwadi workers. Average out-of-pocket health care expenditure by household during last six month was high (Rs /- 418.72 ± 933.0 SD) because of expenses required for drugs and consumable items was very high (contributes 54.73% of total expenses), also expenses required for indirect cost [transportation and loss of wages (contributes 31.27 % of total expenses)]. This excess burden of health care can also be alleviated to a great extent by a carefully thought out health insurance system, though not necessarily only a private one. The role of private and public sector in covering the entire population is an area that needs a lot more thought and research.

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