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Ensuring Equity in Health Care – An Analysis of Urban Odisha

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Abstract:
The whole health care system in urban Odisha operates as a dual care system with both the public and the private care services existing side by side. The over flooding of patients in the public health care system due to demand far exceeding the available supply forces them to seek private services. The unregulated private sector in most cases acts as sources of exploiting the patients financially. The matter of concern is the expanding inequity in the accessibility due to the unregulated private sector co-existing with shrinking and overburdened public sector which is further aggravating these inequities. Healthcare facilities are skewed towards the urban centres, thus affecting the accessibility of the rural and remote areas of the state particularly for tertiary healthcare. An analysis is made here for studying the extent of a patient centred health services in Odisha. To achieve this purpose, we make an attempt to measure patient perceptions of quality in health care in urban Odisha.

Keywords: *Accessibility, equity, healthcare, quality, utilization*

1. Introduction

'Health' is of intrinsic value not only at the individual level, but also at aggregate level. This is because it not only influences the socioeconomic and political life of the individual, but also has an effect on the society in the way the individual interacts with his surroundings. So it is valued in many developed countries by giving it high priority. Acquiring health capital depends on array of factors among which more important ones are availability, accessibility, equity and utilization of health care services and their distribution. Ensuring 'equity in health' requires minimizing the disparities in health and its determinants which are avoidable. The healthcare resources has to be allocated based on need and not the underlying social advantages and disadvantages like the individual's socioeconomic status,gender,age ethnicity etc. which affects his accessibility and utilization of health care.

The analysis of health care delivery focuses on whether there is 'equal treatment for equal need', irrespective of socioeconomic position. If utilization of healthcare is influenced by socioeconomic position like income even after controlling for other social features like age, gender, health status etc. rather than need than it is inequitable. Similarly the 'spatial accessibility' is an important determinant of healthcare utilization in the sense that its symmetric distribution ensures higher utilization controlling for other features.Lack of geographical accessibility results in delay in treatment which in turn result in low health status. This also has a significant effect on economic accessibility in terms of the cost of accommodation and transport expenses during the process of treatment resulting in their non-utilization in most cases.

The utilization behavior of the patients in the Urban areas of Cuttack and Bhubaneswar are examined here, which are used to represent the entire urban population of Odisha in particular. After examining the various determining factor of utilization, it is reflected that need (measured in terms of health status) is not always a determining factor in health care utilization. It is more often determined /influenced by other prior determined factors like socioeconomic status, income level, geographical accessibility, lack of local health care availability, etc. which, all play a more significant part in determining the health care utilization and accessibility. Socioeconomic differences in health services access across may increase the existing health inequalities. Thus, understanding the factors affecting inequalities in access is essential in understanding the broader goal of health equity.

The main challenge which the health care delivery system faces everywhere is to make them consumers' oriented, which can be achieved only by identifying the concerned factors which adversely affects the satisfaction of the patients when they choose a healthcare centre. The utilization of health care is significantly influenced by the patients' perception of the quality of healthcare.

This paper makes an attempt to study the extent of the existence of the patient centered health services in Urban Odisha. To achieve this purpose, we make an attempt to measure patient perceptions of quality in health care in Odisha.

2. Objective

The main objective of the present study is to identify the factors influencing the patients' choice of a centre as well as determine the various aspects of the perceived quality which have large effects on patient satisfaction.

3. Hypothesis

1. Healthcare accessibility and utilization is determined by many demand and supply side factors and is not always based on need of the patient.
2. There exists inequity in healthcare accessibility and utilization in urban Odisha.

4. Methodology

This paper, based its findings on a Cross sectional survey of patients at public and private health care centres of Odisha which comprised of District hospitals, private hospitals and clinics, nursing homes, Community Health centres, etc. Structured questionnaires were prepared and data were collected from the patients or their attendants regarding their choice of centres and their perceived satisfaction.

The sample units for this purpose consists of the household represented by the concerned patients who were approach at different location of their treatment like District hospitals, Private hospitals and clinics and Community health centres. The data has been collected on each stratum directly from the field through direct interview with the patient or their attendants as was possible in that situation. The second approach was resorted to only in those cases where the patient was unable to respond because of the ongoing treatment.

Then the data were compiled on the basis of verification of the questionnaire. For the purpose of analysis the paper has been divided into 3 sections. Section I describes in brief the profile of the patients based on their socioeconomic characteristics. Section II analyses the demand and supply side factors influencing the patients' choice for a centre. And section III analyses the patients' perception of quality in the chosen centre based on certain parameters.

4.1. Section-I Social Status of the Sample Household

The following is a brief description of the profile of the sample households to which the consumer of the healthcare belongs. Social Status is one of the important factors which influence the health care accessibility of the people. The social profile of the sampled households based on different criteria like sex, religion, educational qualification, marital status etc. are given below. These factors operate on the demand side and have significant influence on the patients' choice of a centre much ahead of their actual accessibility.

Age group (in years)	Sex		Total
	Male	Female	
0-20 years	8	2	10
21-40 years	25	26	51
41-60 years	16	8	24
61-80 years	10	5	15
81-100 years	0	0	0
	59	41	100

Table 1: Sex Profile of the Sampled Household
Source: Primary Data

The sample consisted of a normal distribution of males and females over the entire age groups with the highest percentage of males(25%) and females(265) concentrated in the productive age group of 21-40 years and tapering down both ways in the higher and lower age groups(Table 1).It shows zero percentage of people in the age group 81-100 years which may be firstly because usually these are patients who are chronically ill and as a result of the feasibility of data collection and in keeping with the health care centres norms these section has got omitted. However, this also shows the decreasing longevity of the population at large.

Among the sample collected, Hindu represents almost 82% of the population with the rest being patient from Muslim, Christian and Persian population. Again, among the Hindu population, the general category represents 60 percent of the population while it is very less for the other category like SCs, STs and OBCs. This is also because most of this other section within the Hindu population usually get free treatments in the Primary health centres or get treated by local quacks or vaids.

Age group(in years)	Married (males)	Unmarried (males)	Married (females)	Unmarried(females)	Total
0-20	0	8	1	1	10
20-40	16	9	16	10	51
40-60	16	0	7	1.3	24
60-80	9	1	5	1	15
80-100	0	0	0	0	0
Total	41	29	17	13	100

Table 2: Marital Status of the Sample Household in Percentage.
Source: Primary Data

Table 2 shows the Marital Status of the sampled household. Married males constitute 41% of the population while unmarried males represent 29% of the population. Similarly married females constitute 17% while unmarried females constitute 13% of the sampled households.

Income group	Illiterate	Under/upto matric	Above matric to graduation	Above degree to PG	Above masters /technical	Total
0-2 lakhs	14	11	5	0	0.66	31
2-4 lakhs	4	10	5	9	0.66	38.66
4-6 lakhs	1	3	10	5	0.66	19.66
6-8 lakhs	0	1	2	3	1	7
8-10 lakhs	0	0	0	1	3	4
Total	19	25	32	18	6	100

Table 3: Educational Status–Categorized in Terms of Income Group (In %)
Source: Primary Data

Educational status of the sampled household categorized on the basis of income shows a higher percentage of illiterates in the income group 0-2 lakhs while the percentage of literates is high in the other income groups (Table 3).

Bhubaneswar	Cuttack	From outside to BSR/CTC	Total
31	49	20	100

Table 4: Location of Households of the Patient (In %)
Source: Primary Data

40 percent of the sampled household is from Cuttack while 31 percent is from Bhubaneswar (Table 4). Again in the overall sampled households about 20 percent of the population represents patients who had migrated from outside these two cities to access the health care facilities. The possible explanation of this can be that these two cities have developed into Health Hubs with all the modern facilities available which might be the reason of non-requirement of patients to migrate outside to access these facilities. However, this would be a exaggeration of the actual picture in the sense that it is overshadowing the fact that high health care cost of accessing these facilities which are again inflated when combined with transport, stay and accommodation costs of the patients and attendants etc such that they would rather choose to access inferior local health care facility and leave the outcome on chance.
The social status of the individuals measured in terms of these features like the gender, marital status, employed or unemployed, his educational qualification, location of the household etc influences his choice of a centre when faced with healthcare need. Apart from these his position in the family, household income, the type of family etc also plays influencing role. The sample consisted of 69% of nuclear families and 31% of Joint families. Similarly, 40% of the population showed their earning from services as the major source of income followed by pension and business. Some other sources found were earnings from rent, past savings, farming etc.

4.2. Section-II Demand and Supply Side Factors Influencing Choice of a Healthcare Centre
The following section analyses some demand and supply side factors working behind the choice of a health care centre by the inpatients. The need for healthcare (determined by the health status) is not always the determining factor of its access and utilization. It is influenced by many other demand and supply side factors. The demand side factors have more influence in determining the choice for a healthcare centre much ahead of the supply side factors. This includes the income of the patients, his household income, size of the family, number of dependents in the family, position of the patient in the family, age and sex of the patient, the type and severity of illness etc. The broad parameters of social class of a patient are his income and household income .This two variables assumes a proper explanation because 'income' broadly includes earned income(regular for salaried class while fluctuating for business class) , past savings, borrowings or insurance. This is again classified as out-of-pocket sources which includes all the other modes of payment of a patient other than the insurance. In the context of 'household income', though it also includes the same components, distinction is essential between them as sources of finance. This is particularly so in case of patients who are dependent and have no source of income themselves. It is an important determining factor of the feasibility of the cost of treatment of the patient. More than one earning member in the household increases the overall household income over the individual income. This is also true for old age patients and children. The point to be worth marking here is its effect on the choice of a health care centre by a patient. This is where a patient would have chosen a centre of low cost based on his own individual income but because of the overall high household income, he is able to access a better centre. Obviously, the reverse also holds that the household income may be high but because of low individual income, one chooses a low cost centre. This distinction obviously hints at the latent inequality in the accessibility of health care. Once these constraints are overcome and a healthcare centre is to be accessed, it is influenced by the supply side factors like spatial factors, the cost of treatment, dealing and behavior of the physician and other staff members, prior knowledge about the centre or any alternative centre, cleanliness and hygiene of the healthcare centre, insurance etc.

Demand side factors(a)	Yes	No	Neutral
Age of the patient	62	33	5
Sex of the patient	28	71	1
Religion of the patient	40	60	0
Marital status of the patient	75	25	0
Educational level of the patient	41	59	0
Job status of the patient	48	52	0
Number of members in the family	55	45	0
Type of family-Nuclear/Joint	45	55	0
Regular/Fluctuating source of income	31	69	0
Annual Household Income	55	45	0
Supply side Factors(b)	**Yes**	**No**	**Neutral**
Religion of the provider	9	91	0
Fees charged by the provider	71	29	0.6
Sex of the provider	79	21	0
Waiting time for the encounter with the doctor	73	24	3
Distance covered to avail the service	75	25	0
Dealing and Behaviour of the provider	86	13	0.6

Table 5: Demand and Supply Side Factors for Utilization of Health Care (In Percentage)
Source: Primary Data

Table 5 analyses the demand and supply side factors found to influence the utilization of health care in urban Odisha.Among the demand side factors, marital status (75%), age of the patient (62%), number of members in the family (55%) and household income (55%) were found to be important demand side factors influencing the choice for a healthcare centre in case of inpatients. Married persons (male biased) was found to be given priority over non-married persons. Similarly, the patients belonging to the productive age group were found to be given more preference than persons in the older age group. Number of members in the family influenced the choice not only in terms of determining the overall position of the patient in the family but also indirectly through its impact on the economic accessibility due to its influence on the household income. This was more observed in case of joint families relative to nuclear families.

As far as religion of the provider is concerned as a factor 91 percent of the population had no concern for the religion of the provider while 9 percent said that religion do influence their choice of the health care provider. On further analysis of these cases it was seen that they belong to the minority community who preferred to choose a doctor of their community or to visit that centre where they have the information that a doctor of their religion community is available. Sex of the provider also influences the choice in about 79 percent of the population which include the women related diseases while majority prefer male doctors. However, 21 percent of the population responded that sex of the provider has no role to play in the choice of their health care centre. The distance covered to avail the health care service influences the choice in 75 percent of the population as this spatial factor has other associated costs with them like the cost of transport, accommodation of the attendants etc which swells up the already high health care expenses. While 25 percent said that distance has no role to play in choosing a health care centre. These are people who either are near the health care centres or they also include those for whom the distance does not matter more than the patient and they are usually the financially well-to-do patients. However, this category also included patients who are not financially strong, but they had to travel out of their local places to access the health care facilities because of a lack of such services in their own local places. Similarly, 86 percent of the population considers the dealing and behaviour of the provider to be an important factor influencing their choices while 13 percent responded negatively to this factor and 1 percent was neutral in approach to this as a factor. Fees charged from the provider and waiting time for the first encounter with the doctor were also found to be important factors influencing the choices of a health care provider by the patients.

Proximity to the health care centre is considered a major factor contributing towards the health of the population. Distance from the health care centre plays an important part in influencing the choice of a patient to access the provider not only because of the time constraint in case of emergency care but also because of the other associated costs like that of transport, accommodation costs of the attendants like on foodings etc .This obviously inflates the already high cost of treatment which are unpredictable. To emphasize, because of the uncertainty of the cost of treatment, the patient attempts to economize the predictable costs in terms of minimizing the costs associated with spatial factor wherever possible. Similarly, in case of emergency many patients were found to choose a centre accessible in the minimum time constraint irrespective of the cost factor. But, here it is also to be mentioned that we also got many cases where the attendants were forced voluntarily or involuntarily to take their patient away to other affordable centres after the preliminary emergency treatment because they were unable to bear the high cost in the spatially accessible health care centre.

Distance covered to access the health care centre	Percentage of Households
Less than 2.5 km	21
Above 2.5 km to 10 km	38
Above 10 km to 50 km	21
Above 50 km to 100 km	7
Above 100 km to 500 km	10
Above 500 km	3
Total	100

Table 6: Spatial Accessibility of Indoor Patients (In %)
Source: Primary Data

Table 6 presents the percent of households in terms of the distance from the health care centre they have accessed. It shows that 21 percent of the households have access to the health care centre within a distance of 2.5 km while 38 percent have accessibility over 2.5 km but within 10 km. similarly, another 21 percent have to cover a distance of more than 10 km to 50 km to access the facility. The matter to mark is that 13 percent of the populations have to travel more than 100 km and above to access the health care facility. Or we can also see that almost 40 percent of the population do not have access to health care facility within a distance of 10 km which presents the spatial factor as a major cause of inequity in health care facility. This represents the population from the periphery of Cuttack and Bhubaneswar and also from other part of Odisha, outside the cities of Cuttack and Bhubaneswar who have no proper health care facilities in their own locational habitats thus pointing towards the skewed distribution of quality health care centres in Odisha.

4.3. Section III Patients' Perception of Quality in the Chosen Healthcare Centre

A healthcare centre has to take care of the patients' satisfaction if it has cater to the actual need of its clients. The patients' perception of quality is determined not only by the treatment procedures but also the associated facilities which makes up the whole experience healthcare treatment. This includes the staff behavior, availability of drugs and other tests facilities within accessible distance, hygiene of the healthcare centre and sanitation facilities, etc. The situation becomes all the more matter of concern when the consumers' are found to be dissatisfied due to the deplorable condition of the treatment procedures in spite of incurring a high healthcare cost. This is again not to overlook the condition of the public healthcare centres' approach committed to the healthcare well-being of the public at large. This section attempts to assess the patients' satisfaction in the chosen healthcare centre based on certain selected parameters.

Income group	Satisfied	Unsatisfied	Adjust
0-2 lakhs	11	13	6
2-4 lakhs	27	11	0
4-6 lakhs	19	0	0.6
6-8 lakhs	6	1.3	0
8-10 lakhs	4	0	0
Total	67	26	7

Table 7: Satisfaction of the Patient with the Treatment Given Based on Income Group (Government + Private) (In %)
Source: Primary Data

Table 7 analyses percent wise the satisfaction which the patients receive with the treatment given based on an income group of the overall government and private sector. It shows that overall 67 percent of the population is satisfied with the protocol of treatment given to them while 26 percent of the population is unsatisfied with the treatment procedure they receive. Again among the overall population, 7 percent of the population responded that they just adjust with what they receive.

Income group	Satisfied	Unsatisfied	Adjust	Total
0-2 lakhs				
Govt	2	11	5	18
Pvt	9	3	0.6	13
2-4 lakhs				
Govt	5	5.3	0	10
Pvt	23	6	0	29
4-6 lakhs				
Govt	2	0	0	2
Pvt	17	0	0.6	17.6
6-8 lakhs				
Govt	0	0.6	0	0.6
Pvt	6	0.6	0	6.6
8-10 lakhs				
Govt	0	0	0	0
Pvt	4	0	0	4
Total	68	26.5	6	100

Table 8: Satisfaction of the Patient with the Treatment Given in Public and Private Healthcare Centres (In %)
Source: Primary Data (Govt.-Government, Pvt-Private)

Table 8 reflects the satisfaction of the patients across the different income groups categorized in terms of government and private sector. It shows a higher percent of patients unsatisfied with the government sector in the lowest income group of 0-2 lakhs which also is the highest consumer of public sector health care. And in every income group a higher percent of the population is satisfied with the private sector health care. Though overall a higher percent of the population (68 percent) seems to be satisfied with the protocol of treatment given to them but this picture is highly skewed towards the private sector and more consumer of the government health sector being dissatisfied with the treatment they receive.

Income Group	Unhygienic condition	Misman agement	High cost factor	Financially ruined	Adjust-because no local facilities	Average facilities	Satisfied	Total
0-2 Lakhs	10	3	6	1.3	0.6	2	8	
2-4 Lakhs	1.3	1.3	7.3	0	1.3	5	23	
4-6 Lakhs	0.6	0	0.6	0	0.6	0	17	
6-8 Lakhs	0	1.3	0	0	0	0	6	
8-10 Lakhs	0	0	0	0	0	0	4	
Total	12	5	14	1.3	3	7	58	100

Table 9: Dissatisfaction of Patients Due to Reasons Other Than Treatment Based on Income Group (In %)
Source: Primary Data

Table 9 gives the percent of patients classified on income group who are dissatisfied due to reasons other than the treatment procedures. The parameters that have been used to judge this, are the hygienic conditions, mismanagement, high cost factors, average facilities, etc. The table shows that 12% were dissatisfied due to unhygienic condition of the sanitation and other facilities, 5% for mismanagement of the staff members, 14% for the high cost of treatment in the chosen centre. Again 1.3% of the sampled population said that they were financially ruined after the episode of illness treatment as they were unable to bear the cost. 3% of the population said that they had to adjust with the dissatisfying condition of the centre because there are no local facilities available. 7% found the facilities at the chosen healthcare centre to be of average quality. An overall 42% of the population was found to be unsatisfied due to several reasons as stated above in the chosen healthcare centre. The matter was of more concern because of the high cost of treatment not proportionate to the quality of services offered in the chosen healthcare centres.

5. Main Outcomes

The study finds wide ranging inequities in the accessibility of health care by patients. These inequities already exist due to the socioeconomic and socio-demographic factors operating on the demand and supply side affecting the choice of the health care clients. The unregulated private sector in most cases acts as sources of exploiting the patients financially. The matter of concern is the expanding inequity in the accessibility due to the unregulated private sector co-existing with shrinking and overburdened public sector which is further aggravating these inequities. The patients were found to be biased towards the private healthcare sector due to their easy accessibility in terms of spatial coverage. A higher percentage of patients were found to be unsatisfied with the public healthcare sector in the lower income group which is also the highest consumer of this sector. In every income group a higher percentage of the patients were found to be satisfied with the private sector. In overall, though a higher percentage of the population seemed to be satisfied with the protocol of treatment given to them, but this is found to be highly skewed towards the private healthcare sector and

more consumers of the government healthcare sector being dissatisfied with the treatment they receive. Several factors were identified behind this dissatisfaction. The matter of concern is the high cost of treatment not proportionate to the quality of services offered in the chosen healthcare centres.

6. Suggestions/Recommendations

1. Healthcare facilities are skewed towards the urban centres, thus affecting the accessibility of the rural and remote areas of the state particularly for tertiary healthcare. This can to a large extent provided with more facilities of community healthcare centres so as to make healthcare, economically and geographically accessible.
2. Public sector investment in healthcare should be adequately increased in the state. Public Healthcare at Tertiary level should be improved at par with Private healthcare facilities so as to divert only those well to do patients who find the very high cost private healthcare facility affordable voluntarily. This way of marketing, healthcare would not be regressive as it would be based on the ability-to-pay principle.
3. Private Healthcare sector should be adequate monitored so as to prevent the unethical practices in the form of unnecessary tests and drug prescriptions. This would go a long way in reducing the overall cost of treatment.

7. Conclusion

The whole health care system in urban Odisha operates as a dual care system with both the public and the private care services existing side by side. The overflooding of patients in the public health care system due to demand far exceeding the available supply forces them to seek private services. The unregulated private sector in most cases acts as sources of exploiting the patients financially. The matter of concern is the expanding inequity in the accessibility due to the unregulated private sector co-existing with shrinking and overburdened public sector which is further aggravating these inequities. The need of the hour is expansion of the public health services with cost sharing provisions which should be so designed to make patients conscious as well as help the authority to generate at least a part of the total revenue so as to ensure the quality. This is to simultaneously operate with a regulated private sector made to compete with an efficient public sector which would ensure accountability of the later. This would only ensure an effective health care system, giving the consumers a choice to choose a centre based on their health care need and no deterrents so as to achieve 'equity' in health care.

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