

# Utilization of Outpatient Care Services in Odisha: Factors Determining the Choice of Public or Private Health Care Facility

Journal of Health Management  
17(3) 381–393  
© 2015 Indian Institute of  
Health Management Research  
SAGE Publications  
sagepub.in/home.nav  
DOI: 10.1177/0972063415589244  
<http://jhm.sagepub.com>



Sarit Kumar Rout<sup>1</sup>

## Abstract

**Background:** Comparative studies analysing the user's perception about the services and reasons for selecting a public or private facility are crucial for improving service delivery. In India, there is considerable debate regarding public versus private sector. In this context, this study examines the factors determining utilization of either public or private health care institutions in Odisha.

**Methods:** The study is based on primary data collected from the outpatients visiting public and private health care institutions in the two districts of Odisha. Information on socio economic status (SES) and patient's perception on service delivery were collected through a questionnaire. Association between health care utilization either from a public or private facility and the predictor variables—SES and facilities related variables was determined using multivariate logistic regression analysis.

**Results:** A higher proportion of patients belonging to the low SES utilized public facility than the private facility. The scheduled tribes (STs) were five times more likely to visit public facility than the general caste (OR = 5.042, CI = 1.0538–24.130). Physical accessibility was main the reason to access a public facility. However, quality of care remained a major constraint in the public facility. Due to quality reasons, patients were 50 per cent less likely to utilize a public facility (OR = 0.506, CI = 0.289–0.886).

**Conclusion:** This study concludes people from the low SES are more likely to visit a public health facility than private. However, due to quality reasons the likelihood of visiting a public health facility is reduced significantly. Further, people incur expenditure out of their pocket on drugs and diagnostic tests in the public health system. Therefore, only physical access may not ensure higher utilization unless quality is ensured to protect the interest of the poor in the public health care system.

## Keywords

Health care utilization, quality, access, socio economic status

<sup>1</sup> Associate Professor, Indian Institute of Public Health (IIPH), Bhubaneswar, Odisha, India.

## Corresponding author:

Sarit Kumar Rout, Indian Institute of Public Health (IIPH), Bhubaneswar, 2nd & 3rd floor, JSS Software Technology Park, E1/1, Infocity Road, Patia, Bhubaneswar 751 024, India.

E-mails: [saritrou@gamil.com](mailto:saritrou@gamil.com); [sarit.kumar@phfi.org](mailto:sarit.kumar@phfi.org)

## **Background**

Utilization of health care is determined by sociocultural and demographic factors as well as health care systems including health policy, resource and organizations. Several studies (Filippi et al., 2006; Gage & Calixt, 2006; Mohanty & Pathak, 2009; Navaneetham & Dharmalingam, 2002; Singh, Rai, Alagarajan & Singh, 2012; Sunil, Rajaram & Zottarelli, 1995) have examined the role of education, economic status, cost of health care, accessibility and availability of health care services in determining the utilization of maternal health care. Caste is an important factor in determining utilization of health care services in India and evidence suggests pregnant women from the scheduled caste (SC) and scheduled tribe (ST) households were less likely to have institutional delivery with assistance from skilled birth attendants (Nair, Ariana & Webster, 2012). Many a time, education, caste, income and cultural practices act as constraints for creating demand for health care (Ensor & Cooper, 2004). Therefore, the care that individuals consume is a function of their demographic, social and economic characteristics as well as those of the health systems (Haddad & Fournier, 1995).

How much an individual can pay and the pattern of payment mechanism, whether the patients pay from their own pocket or are insured, have a role in utilization behaviour of the patients. In India, financial reasons account for many not accessing health care. For instance, in Assam and Odisha, a large proportion of ailments were not treated due to financial reasons (Mahal et al., 2002). Another evidence (Sundari & Sharma, 2002) suggests that despite the presence of a health care facility nearby, a significant proportion of sample population does not seek treatment for all of their illness due to financial reasons, which is more among the old age population. Over the years, it is observed that there has been a significant decline in the dependence on public health care facility (NSSO, 2006). Among the reasons, (i) poor quality of care, (ii) lack of government facilities close by and (iii) long waiting time for services account for low utilization from government health care services (IIPS and Macro International, 2007).

Availability of doctors, beds and quality of services along with access defined by distance determine the utilization pattern. The role of geographical access sometimes has a greater influence on the utilization of maternal health services in rural India than the socio-economic factors (Kumar, Singh & Kaur, 1997; Sawhney, 1993).

Overall, the studies explain the socio-economic, cultural factors and health system functions in determining the utilization of health care services. However, the choice of either public or private health care services is related to quality, performance and accountability of the providers. In India, though the public sector assumes a critical role in providing health care services, in practice, the private sector is the dominant player. Therefore, the question is whether people access the private sector due to performance, easy access and quality. There is considerable debate regarding the public versus private sector. Therefore, comparative studies analyzing the user's perception on the services and reasons for selecting the public or private sector are crucial. However, there is limited evidence regarding factors determining the choice of public or private health care institutions. In this context, the present study is carried out to examine the socio-economic status (SES) of the patients visiting either public or private health care institutions. It examines various factors: physical access, free services, the behaviour of the doctors and staff influencing the decision to visit a public or private care institution.

## **Health Care Situation in Odisha**

The study was undertaken in Odisha, one of the most backward states in India. With around 37 per cent of its total population living below the official declared poverty line, the state has one of the lowest socio-economic indicators in comparison to India (DES, 2013). The health status indicators are below

the national average. For instance, it has the second highest infant mortality rate (IMR) of 57 per 1,000 live births against the national average of 44 (RGI, 2012). The maternal mortality ratio (MMR) is 258 per 1,00,000 live births against 212 for India (RGI, 2011). One of the major challenges is improving the health status of STs and SCs who constitute 39 per cent of the total population. The five most common diseases, which account for 70 per cent of patient load in the hospitals, are malaria, leprosy, diarrhoea, acute respiratory infections and scabies. In terms of utilization, the dependence on the public health care institutions is highest in the state, while this has declined in most of the states in India (NSSO, 2006). The public health system is facing several constraints due to inadequate doctors, staff and physical infrastructure (IIPS, 2010; MoHFW, 2011). Further, the low public health spending on health care, which has remained at 1 per cent of the state gross domestic product (SGDP) for the past several years (Rout, 2010), is one of the reasons for the abysmal conditions of the public health care system. In spite of this, the state shows a higher utilization from public health care system, which makes it a special case to study the utilization pattern and factors associated with the utilization of public or private health care institutions.

## Methods and Data

The study is based on primary data collected from the outpatients who utilized either public or private health care facility in the two districts of Odisha. The two districts were selected on the basis of the district human development index (HDI). One with the highest HDI and other close to the lowest HDI were selected. The two districts are, namely, Khurda and Koraput. The patients were selected from the health care institutions of the two districts. From the two districts, three community development blocks (administrative units below the district) were selected based upon the distance criteria. One municipality from each district was chosen purposively to examine the coverage of private health care institutions. Altogether, six blocks and two municipalities were selected from the two districts. The health care institutions were selected on the basis of following criteria. In India, there is one community health centre (CHC) for every one lakh people in the plain areas and for 80,000 people in the tribal areas. Approximately, there is one CHC in a block and accordingly six CHCs were selected for the study. In one of the blocks, except the CHC, a block primary health centre (PHC) was selected. More than 50 per cent of the PHCs were selected from the six blocks. Overall, six CHCs, one block level PHC, 13 PHCs, two district head-quarter hospitals and one subdivisional hospital were selected (Table 1). The private sector is limited in the state and is mainly found in urban areas. In the study area, they largely function as single-doctor clinics. Most of the doctors who run these centres are either working with the government or have retired from the government. For instance, Khurda has 23 private health care facilities and Koraput has 17 in the study area. The patients were selected both from the public and private health care institutions.

**Table 1.** Health Care Institutions Selected

District	PHC(N)	CHC/Block PHC	District Head Quarter Hospital	Sub-divisional Hospital
Khurda	6 (10)	4 (4)	1 (1)	
Koraput	7 (9)	3 (3)	1 (1)	1 (1)

**Source:** Author's calculations.

**Note:** Figures in parenthesis indicate total number of health care institutions in the six blocks selected for the study.

**Table 2.** Number of Outpatients Selected

District	Private	Public	Total
Khurda	101 (20.20)	399 (79.80)	500 (100)
Koraput	34 (11.49)	262 (88.51)	296 (100)
Combined	135 (16.96)	661 (83.04)	796 (100)

**Source:** Author's calculations.

**Note:** Figures in parenthesis indicate percentage of patients in public and private health care institutions.

From the public health care institutions, 35 per cent of the outpatients were selected randomly based on average patient visits in the two weeks preceding the survey as mentioned in the hospital records. From the private, emphasis was given to cover as many patients due to limited size of the private sector. Around 796 outpatients both from public and private facilities were selected for the study (Table 2). Data on the SES, distance and reasons for selecting public and private hospitals were collected through a questionnaire from the patients. Before administering the questionnaire, the consent of the patient was obtained regarding participating in the survey. The identity of the patient was kept secret during the data analysis process.

## Defining Predictor Variables

The caste of the patients was categorized as SC, ST, other backward caste (OBC) and other caste (higher caste). The education of the patients and highest qualification of the family were categorized as illiterates, upper primary level and high school and above.

The occupation of the patients was grouped into wage earners, self-employed, salaried and others (unemployed, housewives and student). Age was classified into four groups 0–5, 6–14, 15–58 and >58.

The landownership of the family was divided as landless, 0.1–2.5, 2.6–5 and >5. Households were divided into two groups on the basis of their access to toilets and without it. Access to drinking water facility was grouped as tap water, tube well and well. The households possessing the below poverty line (BPL) card and without it were divided into two groups.

The patient's perception was solicited on the attitude, behaviour of doctor and nurse and cleanliness of the hospital. Due to inadequate responses, the perception of the nurses was dropped from the analysis. The other two variables were classified as 1—satisfied and 0—not satisfied. Distance was grouped into three groups: up to 5 km, 5.1–10 and more than 10 km.

There were many reasons for selecting either public or private health care institutions. The responses were grouped as (i) distance to village, (ii) quality consisting of doctors behaviour and nature of treatment, (iii) free availability of medicine and treatments and (iv) others including referred by friends or relatives and lower-level facility, known to doctor, household poverty, less time or no time with the doctors in public hospitals.

The independent variables are grouped as SES variables—caste, education, profession of the head of household, whether household had a BPL card and access to safe drinking water and toilet facilities and facility-level (FV) variables—distance, perception on the doctor and cleanliness of the hospital and reasons for choosing a public or private facility. Here, the district was included as an explanatory variable and

was included with the FV in order to observe how the variations in the two districts—one developed and the other backward—explain the choice of a public or private health facility.

## Data Analysis

Association between utilization either from the public or private health care institutions and the predictor variables was determined by bi-variate and multivariate logistic regression analysis using STATA 11. The bi-variate analysis was performed to examine the nature of association between the dependent variable and various independent variables. The multivariate analysis was performed to examine which factors best explain the utilization of either public or private facility. The SES variables were treated as the main predictors in explaining the dependant variable and this was controlled with the facility-related variables. To examine the interaction of the independent variable with dependent variables, three scenarios were examined. In model I, only SES variables were included. In model II, the FVs were included. In model III, both SES and FVs were included to investigate which variables best explain the utilization of public or private facility.

The binary response of either visiting public or private facility and a set of predictor variables is defined by the logit function as follows.

$$\text{Logit } \pi = \log(\pi/1 - \pi) = \beta_0 + \beta X + \varepsilon.$$

The probability of visiting either public or private medical institutions is represented by  $\pi$  and the parameter  $\beta_0$  estimates the log odds in the outcome for the reference group, and the parameters  $\beta(X)$  estimate the differential in the log odds in the outcome for the different predictors. The results of logistic regression are presented by odds ratio with 95 per cent confidence interval (CI).

## Socio-economic and Demographic Profile of the Patients

The utilization pattern from either public or private health care institutions shows large variations across SES of the patients. In the public health facilities, a higher proportion of patients belonged to the low SES in comparison to the private. The percentage of illiterates was more in the public health care facility than in the private (Table 3). Relatively, a higher proportion of patients in the private health care institutions had completed high school and above than in the public. For instance, this was around 51 per cent in the private compared to 36 per cent in the public. Among the social groups, the share of SCs and STs was more in the total outpatients of public health care facility than in the private. The occupational pattern indicated that wage earners constituted 31 and 13 per cent in the public and private, respectively. More than 50 per cent of patients in the public health facility possessed the BPL card in comparison to 37 per cent in the private facility. Land is an important economic asset for the rural households and the land distribution showed a higher percentage of landless in both public and private facilities. This varied from 48 per cent in public to 54 per cent in the private. Age structure indicated that the highest percentage of patients belonged to the age group of 15–58 in both types of health care facilities.

Among the patients visiting the public health care facility, only 29 per cent had access to toilets and 7 per cent used supply water as a source of drinking water. In the private health care facility, more than 50 per cent had access to toilets and a relatively higher percentage, around 24 per cent, used tap water.

**Table 3.** Socio-economic Status of Patients in Public and Private Health Care Institutions

Socioeconomic Variables	Categories	Public (N)	Percentage	Private (N)	Percentage
Education of Patients	Illiterate	164	25.51	20	14.93
	Up to Upper Primary	245	38.1	46	34.33
	High School and above	234	36.39	68	50.75
	Total	643	100	134	100
Highest Education in the Family	Illiterate	54	8.17	3	2.22
	Up to Upper Primary	146	22.09	16	11.85
	High School and above	461	69.74	116	85.93
	Total	661	100	135	100
Age (years)	Up to 5	138	20.88	8	5.93
	6/14	104	15.73	10	7.41
	15/58	362	54.77	100	74.07
	>58	57	8.62	17	12.59
	Total	661	100	135	100
Caste	Scheduled Caste	152	23.1	15	11.28
	Scheduled Tribe	95	14.44	2	1.5
	Other Backward Caste (OBC)	197	29.94	45	33.83
	Other Caste (Higher Caste)	214	32.52	71	53.38
	Total	658	100	133	100
Profession	Wage Earners	202	30.56	18	13.33
	Self-employed	291	44.02	73	54.07
	Salaried	105	15.89	24	17.78
	Others	63	9.53	20	14.81
	Total	661	100	135	100
BPL	With BPL Card	369	56.42	50	37.31
	No Card	285	43.58	84	62.69
	Total	654	100	134	100
Land (Acres)	Landless	316	47.81	73	54.07
	Up to 2.5	217	32.83	24	17.78
	2.6-5	97	14.67	28	20.74
	>5	31	4.69	10	7.41
	Total	661	100	135	100
Toilet Facility	With Toilet	192	29.05	77	57.04
	No Toilet	469	70.95	58	42.96
	Total	661	100	135	100
Source of Drinking Water	Tap/Supply Water	48	7.26	32	23.7
	Tube Well	417	63.09	61	45.19
	Well	196	29.65	42	31.11
	Total	661	100	135	100

**Source:** Author's calculations.

**Table 4.** Facility-level Variables

Variables	Categories	Public (N)	Percentage	Private (N)	Percentage
Distance (km)	Up to 5 km	461	69.74	90	66.67
	5.1/10	76	11.5	12	8.89
	>10	124	18.76	33	24.44
	Total	661	100	135	100
Reasons for Selecting Public or Private	Nearer	384	58.09	17	12.59
	Good Doctors/Better Treatment	166	25.11	18	65.19
	Free medicine/Free Treatment	89	13.46	0	0.00
	Others*	22	3.33	30	22.22
	Total	661	100	135	100
Availability of Medicine (only Public)	Yes	279	42.21		
	No	382	57.79		
Perception on Doctor	Satisfied	545	82.45	125	92.59
	Not Satisfied	103	15.58	6	4.44
	No Response	13	1.97	4	2.96
	Total	661	100	135	100
Perception on Cleanness	Satisfied	422	63.84	107	79.26
	Not Satisfied	182	27.53	0	0
	No Response	57	8.62	28	20.74
	Total	661	100	135	100

**Source:** Author's calculations.

**Note:** Others include referred by friends/family members/hospitals.

### Facility Level Variables

Around 70 per cent in the public and 67 per cent in private hospitals travelled a distance up to 5 km to access services (Table 4). Most of the patients pointed out that distance (nearer to home) was the main reason for selecting a public health facility, whereas quality of treatment was the main reason for selecting a private facility. This was evident when 58 per cent of the patients mentioned nearer hospital as a reason for selecting a public hospital in comparison to 13 per cent in the private facility. In spite of two-thirds of the patients travelling a distance of up to 5 km to access a private health facility, many did not mention this as reason for choosing a private facility. The quality of the treatment was the main reason for visiting a private facility as pointed out by 65 per cent of the patients in comparison to 25 per cent in public facility. Further, it was observed that free medicine or free treatment was not a criterion for selecting a public hospital as only 13 per cent of the patients mentioned this as a reason.

The perception on the behaviour of doctor or nurse and cleanliness of the hospital varied between the public and private facility. In comparison to public hospitals, a relatively higher percentage of patients in the private hospitals were satisfied with the behaviour of the doctor. Similarly, more patients in the public hospitals were not happy with the hygienic conditions of the hospitals.

## Results

### Model 1

In comparison to a private facility, the SCs were two times more likely to visit a public health facility than higher caste (OR = 2.097, CI = 1.053–4.172) and STs were almost six times more likely to visit public health facility (OR = 5.720, CI = 1.270–25.750) (Table 5). Households with children in the 0–5 years of age group had higher a chance of visiting public facility (OR = 5.701, CI = 2.320–14.006). The other SES variables that were significant predictors in explaining the dependent variable were sources of drinking water and access to toilet facilities. Households with a well as a source of drinking water were two and half times more likely to visit public facility (OR = 2.574, CI = 1.341–4.940). Similarly, households without access to toilet facility had a higher chance of visiting a public facility than those having access to it (OR = 1.603, CI = 1.004–2.560). The occupation, distribution of land and educational attainments were not significant predictors in explaining the dependent variable.

**Table 5.** Association of Utilization of Outpatient Care Services from Public or Private Health Care Institutions and Select Independent Variables

Covariates	Scenario I			Covariates	Scenario II		
	Odds Ratio	95%CI			Odds Ratio	95%CI	
Highest education in family				Distance (>10 km)			
Illiterate	5.20 <sup>Ns</sup>	0.614	44.019	Up to 5 km	0.756	0.463	1.235
Upper Primary	1.353 <sup>Ns</sup>	0.693	2.643	5.1–10	1.040	0.477	2.264
<b>Education of patients (High School &amp; above)</b>				<b>Perception</b>			
Illiterate	0.749 <sup>Ns</sup>	0.371	1.514	Doctor	0.606 <sup>Ns</sup>	0.291	1.262
Upper Primary	1.015 <sup>Ns</sup>	0.614	1.675	Cleanliness	0.537 <sup>**</sup>	0.326	0.886
<b>Caste (Higher caste)</b>				<b>Reasons for Public or private (others (R))</b>			
SC	2.097 <sup>**</sup>	1.053	4.172	Nearer	6.088 <sup>*</sup>	3.191	11.612
ST	5.720 <sup>**</sup>	1.270	25.750	Quality	0.539 <sup>**</sup>	0.331	0.879
OBC	0.876 <sup>Ns</sup>	0.542	1.414	<b>District</b>			
<b>Age (15–58 Years)</b>				District	1.906 <sup>*</sup>	1.208	3.008
Up to 5	5.701 <sup>*</sup>	2.320	14.006				
6/14	2.320 <sup>**</sup>	1.100	4.892				
>55 years	1.070 <sup>Ns</sup>	0.551	2.078				
<b>Profession (Salaried)</b>							
Wage earners	0.827 <sup>Ns</sup>	0.371	1.884				
Self-employed	0.687 <sup>Ns</sup>	0.368	1.283				
Others	0.571 <sup>Ns</sup>	0.266	1.227				
<b>BPL (having BPL)</b>							
BPL	1.411 <sup>Ns</sup>	0.884	2.250				

(Table 5 Continued)

(Table 5 Continued)

Covariates	Scenario I		Scenario II	
	Odds Ratio	95%CI	Odds Ratio	95%CI
<b>Land (&gt;5 Acres)</b>				
Landless	0.879 <sup>Ns</sup>	0.379	2.037	
Up to 2.5	1.749 <sup>Ns</sup>	0.720	4.245	
2.6–5	0.814 <sup>Ns</sup>	0.551	2.078	
<b>Sources of Drinking water (tap water)</b>				
Tube Well	2.879*	1.56	2	5.308
Well	2.574*	1.341		4.940
<b>Toilet (with toilet facility)</b>				
No Toilet	1.603**	1.004		2.560

**Source:** Author's calculations.

**Notes:** Ns—Not significant, \* < 0.01, \*\* < 0.05.

(R) Others include referred by friends/family members/hospitals.

### Model II

The result showed that physical accessibility, patient's perception on cleanliness and district were significant determinants of utilization of a health facility (Table 5). Among various reasons, physical accessibility was the significant predictor in explaining the choice of a public facility. In comparison to private hospitals, patients were six times more likely to visit a public hospital due to physical accessibility (OR = 6.088, CI = 3.191–11.612). In public hospitals, patients were not satisfied with the hygienic condition. Due to this, patients were 47 per cent less likely to visit a public facility (OR = 0.537, CI = 0.326–0.886). Similarly, due to quality reasons, patients were 46 per cent less likely to visit a public hospital than a private hospital (OR = 0.539, CI = 0.331–0.879). The district was observed as an important explanatory variable and the odds of using a public health facility were high in the backward district (OR = 1.906, CI = 1.208–3.008) than the advanced district.

### Model III

Here, caste, age, household amenities, quality of treatment and physical distance were significant predictors in explaining the dependent variable (Table 6). In comparison to a private facility, the STs were five times more likely to visit public facility than general caste (OR = 5.042, CI = 1.0538–24.130). Children below 5 years were five times more likely to visit a public facility than in the age group of 15–58 years (OR = 4.881, CI = 1.918–12.424). Similarly, the odds of visiting a public hospital were high for the households with wells and tube wells as a source of drinking water in comparison with households with tapped water. For instance, households with a well as a source of drinking water were two and half times more likely to visit a public facility than a private facility (OR = 2.540, CI = 1.187–5.434). Similar odds were observed for households with tube wells as a source of drinking water.

Physical distance was an important predictor of explaining the utilization of health facility. In comparison to private facility, patients were five times more likely to visit a public facility when this is nearer

**Table 6.** Logistic Regression Model Showing Association of Utilization of Outpatient Care Services from Public or Private Health Care Institutions and Predictor Variables

Covariates		Odds Ratio	[95% Conf. Interval]	
Highest education in family (Ref-High School and above)	Illiterate	2.077	0.219	19.673
	Upper Primary	0.826	0.398	1.712
Education of patient (Ref-High School and above)	Illiterate	0.958	0.438	2.096
	Upper Primary	1.204	0.694	2.088
Social Groups (Ref Higher caste)	SC	1.801	0.846	3.832
	ST	5.042**	1.053	24.130
	OBC	0.877	0.518	1.485
Age (Ref 15–58 Years)	Up to 5	4.881*	1.918	12.424
	6/14	1.661	0.739	3.732
	>58 Years	0.963	0.452	2.048
Profession (Ref Salaried)	Wage Earners	0.985	0.414	2.314
	Self-employed	0.681	0.342	1.340
	Others	0.631	0.275	1.448
Ref-No BPL	BPL	1.316	0.785	2.204
Drinking Water (Ref Tap Water)	Tube well	2.542**	1.252	5.162
	well	2.540**	1.187	5.434
Toilet (Ref-toilet)	No toilet	1.473	0.871	2.849
Land (acres) (Ref-More than 5 acres)	Landless	0.795	0.313	2.016
	Up to 2.5	1.547	0.581	4.119
	2.6–5	0.828	0.309	2.216
Distance (>10 km)	Up to 5 km	0.884	0.494	1.582
	5.1–10	1.038	0.433	2.489
Perception	Perception on doctor	0.574	0.245	1.341
	Perception on cleanness	0.653	0.371	1.151
Reasons (Ref-others)	Nearer	5.141*	2.565	10.303
	Quality	0.506**	0.289	0.886
District (Ref-Advanced)	Backward	1.690 <sup>NS</sup>	0.985	2.980

**Source:** Author's calculations.

**Notes:** Ns—Not significant, \* < 0.01, \*\* < 0.05.

(OR = 5.141, CI = 2.565–10.303). In comparison to a private facility, patients were 50 per cent less likely to use public facility due to quality reasons (OR = 0.506, CI = 0.289–0.886). The district effect as an explanatory variable was marginal and had an insignificant role in explaining the decision to visit either a public or private facility. In model 2 (Table 5), the district effect was significant. However, its effect is reduced while controlling for the SES variables.

## Discussion

This study suggested that patients belonging to the low SES utilized public hospitals more than private hospitals. This was evident from a higher share of SCs, STs, daily wage earners, persons with BPL cards in the outpatients of the public hospitals than the private hospitals. It was further observed that the percentage share of SCs in the outpatient of public hospitals was greater than their share in the total population of the state. In a study related to who benefits from public expenditure, it was observed that hospital-based services either for outpatient or inpatient care are pro-rich. However, this depends upon the level of public services and for instance outpatient care at PHC and below is pro-poor (Mahal, Yazbeck, Peters & Ramana, 2001). The findings from another study (IHS, 2000) suggest that the poor are more likely to use the secondary-level facility and below in the remote areas. The benefit incidence analysis of public expenditure in Odisha shows that outpatient care is pro-poor and inpatient care is pro-rich (Acharya et al., 2011). This study, analyzing data from the two districts of Odisha, brings out similar findings, where for outpatient care, people from the low SES utilized public health facility more at the secondary level and below.

Unlike other large Indian states, Odisha shows an exception with higher utilization from public health care institutions both for inpatient and outpatient care (NSSO, 2006). This study, however, suggests that people from the low SES have a higher chance of utilizing from the public facility than private facility. Across the castes, the STs particularly are more likely to visit a public facility than a private facility. It is a fact that STs are socially and economically deprived to a large extent in comparison to other social groups in the state. Their low SES explains the reasons to visit a public facility. It is further observed that development indicators of the district are not a sufficient condition to determine the visit of a public or private facility. Despite the two districts varying significantly in terms of development indicators, the district effect is not dominant in the model.

Numerous studies have indicated poor quality of care in public hospitals. Inadequate infrastructure, limited availability of drugs, consumables and poor staff motivation are affecting the service delivery in the public hospitals (Mishra, Chatterjee & Rao, 2003; MoHFW, 2002; World Bank, 2001). This has led to a decline in the utilization from public health care services. This study showed that medicine is not adequately available in public hospitals and only 42 per cent of the patients received medicine. A higher proportion of patients justified their choice of private hospitals due to better treatment and good interpersonal communication of doctors and other staff. This is 65 per cent in private facility in comparison to 25 per cent in public facility. Surprisingly, the non-availability of the public sector is not a reason for choosing a private facility. The study shows that due to physical accessibility, patients are five times more likely to visit a public facility than a private facility. However, due to quality reasons, patients are 50 per cent less likely to visit a public facility. This suggests that a public facility may be available at an accessible distance; improving quality has remained a major constraint. This is similar to what was evident from another study that cited non-availability of services in the public sector and better quality in private as the main reasons for accessing private facility (Levesque, Haddad, Narayana & Fournier, 2006). One of the main findings of the study is that people utilized public facility due to easy access (physical distance) in a backward state of India.

It is a known fact that free services are provided at the public health facility to give financial risk protection to the poor. However, this study observes that patients do not recognize free treatment or supply of medicine as a reason to access public health facility. This was evident despite a majority of patients with low SES utilized public health facility. The higher utilization could be due to their situational disadvantages. This is similar to what was evident from another study where the poor are constrained by situational factors from utilizing the public sector (Levesque et al., 2006).

## Conclusion

Examining the utilization pattern and factors associated with it, this study identifies that people from the low SES especially the SCs and STs are more likely to visit a public facility than a private facility in the resource poor settings in India. One of the reasons for availing services from the public health facility is easy accessibility. However, due to quality reasons as suggested by the study, patients are less likely to visit a public health facility. This shows inadequate emphasis on quality of care, which is one of the main reasons for decline in the patient load in the public health system. This has further bearing in the provision of universal access to health care where the role of public health care is assumed significant in India. This study observes that in spite of a high percentage poor people visiting the public health care system, many of them spend out of their pocket on drugs and diagnostic tests. In a backward state, such as, Odisha, with a substantial percentage people living below the poverty line, the public health system needs to protect the interest of people who visit public hospitals.

## Acknowledgements

I sincerely thank to Dr K. V. Narayana, a Senior Fellow, Center for Economic and Social Studies (CESS), Hyderabad, who was my research supervisor, for his sincere guidance for the work. I acknowledge the technical support provided by Dr. Anup Karan, PHFI, for the technical support during preparation of the manuscript. I also thank to the Directorate of Health Services, Government of Odisha, and chief medical officers of the two districts, which facilitated the data collection process from the health facilities. My sincere thanks are due to all the patients and their relatives who participated in the survey. I am also thankful to the two anonymous reviewers who provided valuable suggestions on an earlier version of the article. The views expressed in this article are of mine and do not represent the official position of the organization that I am representing.

## References

- Acharya, D., Vaidyanathan, G., Muraleedharan, V.R., Dheenadayalan, D.S., & Dash, U. (2011). Do the poor benefit from public spending on healthcare in India? Results from benefit (utilization) incidence analysis in Tamil Nadu and Orissa. Retrieved 10 June 2013, from [http://r4d.dfid.gov.uk/PDF/Outputs/Equitable\\_RPC/India\\_BUIA.pdf](http://r4d.dfid.gov.uk/PDF/Outputs/Equitable_RPC/India_BUIA.pdf)
- Directorate of Economic and Statistics (DES). (2013). *Economic Survey 2012–13*. Planning and Coordination Department, Government of Odisha.
- Ensor, T., & Cooper, S. (2004). Overcoming the barriers to health services access; influencing the demand side. *Health Policy and Planning*, 19(2), 69–79.
- Filippi, V., Ronsmans, C., & Campbell, O.M. et al. (2006). Maternal health in poor countries: The broader context and a call for action. *The Lancet*, 368(9546), 1535–1541.
- Gage, A.J., & Calixt, M.G. (2006). Effects of the physical accessibility of maternal health services on their use in rural Haiti. *Population Studies*, 60(3), 271–288.
- Haddad, S., & Fournier, P. (1995). Quality, cost and utilization of health services in developing countries: A longitudinal study in Zaire. *Social Science and Medicine*, 40(6), 743–753.
- Institute of Health systems (IHS). (2000). *APVVP patient satisfaction survey 2000*. Report Series, Hyderabad: Institute of Health System.
- International Institute for Population Sciences (IIPS). (2010). *District level household and facility survey (DLHS-3), 2007–08: India*. Odisha, Mumbai: IIPS.
- International Institute for Population Sciences (IIPS) and Macro International. (2007). *National family health survey (NFHS-3) 2005–06: India–Volume I*. Mumbai: IIPS.
- Kumar, R., Singh, M.M., & Kaur, M. (1997). Impact of health centre availability on utilization of maternity care and pregnancy outcome in a rural area of Haryana. *Journal of Indian Medical Association*, 95(8), 448–450.
- Levesque, J.F., Haddad, S., Narayana, D., & Fournier, P. (2006). Outpatient care utilization in urban Kerala, India. *Health Policy and Planning*, 21(4), 289–301.

- Mahal, A. Singh, J., Afridi, F., Lamba, V., & Gumber, A. (2002). *Who benefits from public health spending in India—Results of a benefit incidence analysis for India*. New Delhi: National Council of Applied Economic Research.
- Mahal, A., Yazbeck, A.S., Peters, D.H., & Ramana, G.N.V. (2001). *The poor and Health care service use in India*. HNP Discussion Paper. Washington, DC: The World Bank.
- Ministry of Health and Family Welfare (MoHFW). (2011). *Bulletin on rural health statistics 2010*. New Delhi: MoHFW, Government of India.
- Ministry of Health and Family Welfare. (2002). *National health policy 2002*. New Delhi: MoHFW, Government of India.
- Mishra, M., Chatterjee, R., & Rao, S. (2003). *India health report*. New Delhi: Oxford University Press.
- Mohanty, S.K., & Pathak, P.K. (2009). Rich–poor gap in utilization of reproductive and child health services in India 1992–2005. *Journal of Biosocial Science*, 41(3), 381–398.
- Nair, M., Ariana, P., & Webster, P. (2012). What influences the decision to undergo institutional delivery by skilled birth attendants? A cohort study in rural Andhra Pradesh, India. *Rural and Remote Health*, 12, 2311. Retrieved 15 June 2013, from <http://www.rrh.org.au>
- National Sample Survey Organization (NSSO). (2006). *Morbidity Health Care, and The condition of the Aged, NSS 60th Round, January to June 2004*. New Delhi: Ministry of Statistics and Programme Implementation, Government of India.
- Navaneetham, K., & Dharmalingam, A. (2002). Utilization of maternal health care services in southern India. *Social Science and Medicine*, 55(10), 1849–1869.
- Office of the Registrar General India (RGI). (2011). *Special bulletin on maternal mortality in India 2007–09*. New Delhi: RGI.
- Office of the Registrar General India (RGI). (2012). *SRS Bulletin*, Vol. 47, No. 2. New Delhi: RGI.
- Rout, S.K. (2010). *Public expenditure on health care in Odisha: Focus on reproductive child health*. Health and Population Innovation Fellowship Programme. Working paper no. 12, New Delhi: Population Council.
- Sawhney, N. (1993). Management of family welfare programmes in Uttar Pradesh: Infrastructure utilization, quality of services, supervision and MIS. In M. Premi (Ed.), *Family planning and MCH in Uttar Pradesh (A review of studies)* (pp. 50–67). New Delhi: Indian Association for the Study of Population.
- Singh, P.K., Rai, R.K., Alagarajan, M., & Singh, L. (2012). Determinants of maternity care services utilization among married adolescents in rural India. *PLoS One*, 7(2), e31666.
- Sundari, R., & Sharma, A. (2002). Morbidity and utilization of health care services: A survey of urban poor in Delhi and Chennai. *Economic and Political Weekly*, 37(47), 4729–4740.
- Sunil, T.S., Rajaram, S., & Zottarelli, L.K. (2006). Do individual and program factors matter in the utilization of maternal care services in rural India? A theoretical approach. *Social Science and Medicine*, 62(8), 1943–1957.
- World Bank. (2001). *Raising the sights: Better health systems for India's Poor*. Health Nutrition, population Sector Unit, South Asian Region, Washington, DC: The World Bank.