



Health Service Utilisation and Out of Pocket Expenditure Pattern in a Defined Rural Population of Tumkur, India

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ABSTRACT

Introduction: Universal health coverage: The provision of, and access to, high-quality health services; and financial risk protection for people who need to use these services¹. Through this study we want to assess where we stand in terms of health service utilization and out of pocket expenditure in view of universal health coverage. The research was conducted to study socio demographic profile of the population; to know health service utilization pattern of the population; and to assess the out of pocket expenditure towards health care.

Methodology: It is a Cross-sectional study conducted in Tumkur district of Karnataka 2014 -15. Structured questionnaire was used to collect the data by interview method. Data was entered in Microsoft Excel and analysed using Epi Info™ 7.1.1.14.

Results: The Private health services were one of the major sources of overall health services Mean out of pocket expenditure was 744 Rs. The mean out of pocket expenditure for Out Patient care, for chronic illness, In patient care was 135, 44 and 117 Rupees respectively. Medicines are the major part of out of pocket expenditure.

Conclusion: The Private health Care services were one of the major sources of health services followed by Government. Medicine was the major component for which the money was spent.

Keywords: Health service utilization, out of pocket expenditure, Universe health coverage, rural population, India

INTRODUCTION

Universal health coverage: the provision of, and access to, high-quality health services; and financial risk protection for people who need to use these services¹. "Health services" means methods for promotion, prevention, treatment, rehabilitation and palliation, encompassing health care in communities, health centers and hospitals¹.

In India availability of health services from public and private sectors taken together are quantitatively inadequate². There is growing reliance on private providers which currently serves 78% of outpatients and 60% inpatients².

Out of pocket expenditure is any direct outlay by households, including gratuities and in-kind payments, to health practitioners and suppliers of

pharmaceuticals, therapeutic appliances, and other goods and services whose primary intent is to contribute to the restoration or enhancement of the health status of individuals or population groups³.

In India health expenditure is largely out of pocket (70%) while Public expenditure on health is only 1.2% of the GDP. 70% of the health expenditure is out of pocket 70% of all household expenditure goes to buying medicines from the private market⁵. Over 65% of India's population does not have access to essential medicines⁶. Drugs, diagnostic tests and medical appliances account for more than half of out-of-pocket expenditures⁷.

Indian health system has registered remarkable achievements since independence in various key health indicators⁸. However, many remains desired with major weaknesses in healthcare organization,

financing, and provision of health services⁹. Through this study we want to assess where we stand in terms of universal health coverage.

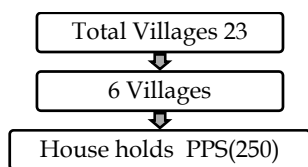
This study aims at assessing the present situation regarding the health service utilization and out of pocket expenditure pattern in a defined rural population. His research was conducted to study socio demographic profile of the population; to know health service utilization pattern of the population; and to assess the out of pocket expenditure towards health.

METHODOLOGY

It is a Cross - sectional study. This study was done in Tumkur district of Karnataka. The study area is rural field practice area of Sri Siddhartha Medical College, Tumkur, consisting of 23villages (total population of 8170) six villages were chosen randomly from 23 villages. Six villages were Ballagere, Cholapura, Gangonahalli, ThimmaSandra, Vaderapura, Ballagerekaval. Multi stage sampling method was used. Sampling units were households.

In the first stage 6 villages were selected by simple random sampling method in second stage. Households were selected from list of selected six villages by probability proportion to size and simple random sampling

Figure 1: Sampling methodology adopted in the study



*PPS - Probability proportionate to Size.

Sample size: Sample size was calculated by using the formula: $n = 4pq/d^2$ Where in n = sample size z (at 95% confidence interval) = 1.96 ; $z^2 = 3.84$; P is proportion of utilization of services in rural area 65% ¹⁰(according to the NFHS3 Data); and q is 1-p i.e 35%,d is allowable error 10% of p = 6.5 $n = 4 \times 65 \times 35 / (6.5)^2$. Estimated sample size - 215Households, rounded off to 250 Households. Though the sample size was 250 households, data collection was from 305 households.

Probability proportional to Size for each village was calculated by Total number of households in the village/total number of households' × sample size

Table 1: List of villages under the study

Village	Total number of households	Sampled houses
Ballagere	208	90
Cholapura	89	38
Gangonahalli	98	42
Thimmasandra	66	28
Vaderapura	95	42
Ballagere kaval	25	10

Ballagere: $208/581 \times 250 = 90$ households. Out of 208 houses 90 houses were chosen randomly using random number table. Though the sample size was 250 households, data collection from 305 households was done. All the selected households were included in the study. Households which were locked even after second visit were excluded. The study was conducted between November 2013 and April 2015. The Present study was approved by ethical committee of Sri Siddhartha medical college, Tumkur.

As a first step, selected houses were visited. Written Informed consent was taken. Interview was done using Structured open ended questionnaire .The data thus collected was entered in the Micro-soft excel and was analysed using Epi Info™ 7.1.1.14 software.

RESULTS

80% of the study population were Hindus, 15% were Muslims, 5% Christians by religion.

Among Hindus 57% of the families belonged to OBC (other backward castes) which included Vokkaligas which is a major caste, followed by general category 23%, Scheduled caste 14% and Scheduled tribe 6%. Modified B.G. Prasad 's scale ¹¹was used to determine the Socio economic status of the population under study . According to Modified B.G. Prasad's classification (April 2013)¹¹ Majority of them belong to class 4 (46%) and class 3(32%) followed by class 1(14%) and class 5(8%) Majority of them studied up to PUC (36%) and illiterates were 27%.The major family type was joint family 62%, 20% belonged to nuclear family followed by three generation family which is 19%..Mean family size is 3.5 (SD±1.1861)

Health service utilization patterns: Overall health service utilization included the OPD, IPD services including MCH services. Utilization of health services were from Private facilities (54%) for 164 House Holds,132 households utilized Government health service(43%) ,6(2%) House Holds utilized the services from both government and private services,3(1%) households utilized the services from Medical college.

Table 2: Sociodemographic profile of the study population (N= Total number of House Holds Under the study= 305)

Socio Demography	House Holds (%)
Religion	
Hindu	244(80)
Muslim	46(15)
Christians	15(5)
Caste	
Other Backward Castes	169(55)
Scheduled Caste	55(18)
General Category	54(18)
Scheduled Tribe	27(9)
Socio Economic Status*	
Class 1	3(1.5)
Class 2	26(9)
Class 3	98(32)
Class 4	141(46)
Class 5	25(8)
Education	
Illiterates	82(27)
Middle School	45(15)
High School	32(12)
Pre University	109(36)
Graduates	25(6)
Post Graduates	6(2)
Type of Family	
Joint Family	188(61)
Nuclear Family	60(20)
Three Generation	57(19)

*According to Modified B.G. Prasad's Classification¹¹

Table3: Utilization of MCH services by the study population (N =52)*

Type of service	Govt (%)	Private(%)	Med Coll(%)
Antenatal Care	32 (61)	15(29)	5 (10)
Place of delivery □	30(58)	11(21)	6(11)
Post Natal care	25 (48)	15(29)	12 (23)
Child Immunization	39 (75)	13(23)	1(2)

Govt=Government; Med Coll=Medical College

*N = grand total= 52 □ = 10 home deliveries

Table 4: Out of pocket expenditure towards health care per episode of illness

Expenditure head	Mean Expenditure n Rupees		
	Acute illness	Chronic illness	Hospitalization
Medicine	134.1	43.4	116
Consultation	67	34	30
Diagnostics	51	16	60
Transport	37	13	31

*per Household per episode of illness in Rupees

Utilization of different MCH services included ante natal care, delivery , post natal care services and immunization of infants.10% of them didn't utilize any health facility .90% utilised some form of health services for MCH care. Government health facilities were the major source of services (58%),

followed by private health facilities and medical college.

Mean out of pocket expenditure was 744 Rs. The mean out of pocket expenditure for OPD care, for chronic illnesses, in patient care was 135, 44 and 117 rupees respectively. Medicines are the major component for the out of pocket expenditure followed by consultation, diagnostics and transport

DISCUSSION

Religion: In this study Out of 305 households under the study 80% were Hindus, 15% were Muslims, 5% Christians which is similar to 2011 census report for India where 83% of the population were Hindu, 12% were Muslim, 3% are Christian, 1% are Jains, 1% are Buddhist, <0.1% are Sikhs, and remaining belong to other religions¹².In Karnataka the population consists of 84.2% Hindu, 12.9% Muslims, 1.9% Christian and others 1%¹².

Caste / Tribe: In this study 50% of the family belonged to OBC (other backward castes) which included vokkaligas which is a major caste, followed by general category 30% , Scheduled caste 12%, Scheduled tribe 8% which is similar to 2011 Census of India ,where Scheduled Castes and Scheduled Tribes constitute 23.5%according to district level data of census 2011 is 18.9% belong to Scheduled caste which is higher than this study finding where as scheduled tribe population constitutes 7.8% which is similar to our study findings¹².

Educational status: In this study, the majority were studied up to PUC (36%) and followed by illiterates (27%). Primary and middle school education was attained by 15% of them, 12% of them studied up to high school .Only 8% were graduates and 2% were Post -graduates. The findings are consistent with the current literacy rate of India is 74%¹².

In this study the mean house hold size is Mean = 3.5409 (SD±1.1861) .Mean house hold size according to NFHS-3 in rural areas was 4.9¹⁰.

Type of family: In the present study the major family type was joint family 62%, 20% belonged to nuclear family followed by three generation family which is 19%.Nuclear families in the rural areas according to NFHS-3 is 59.3% ¹⁰.

Health care service utilization: In the study by Jayakrishnan et al 70 % of the people sought health care from private facilities similar to our study findings where the major provider of health care services was private 53%.¹³ According to NHSCR analysis from NSSO of 2014 the major health care provider is private both for OPD (71%) and IPD (73%).¹⁴According to one more study conducted in Tamil Nadu the major health care provider was

government health service which is contrary to our study finding¹⁵.

Utilization of private facilities for MCH services varied from 73.2% to 43.2% in neighbouring state Andhra Pradesh¹⁶ which is major source of MCH service unlike this study where government health services were the major service provider.

Out of pocket expenditure for health care: Expenditure for OP treatment in the other study was Rs. 509 and for IP in patient care the amount spent was RS. 14,935. which is very high compared to the current study. In a study conducted in rural Puducherry by Archana R et al the out of pocket expenditure was comparatively less than the current study expenditure was 72 ± 143.6 , 135.7 ± 196.2 , 1340 ± 1192.9 Rupees respectively for acute and chronic health problems followed by hospitalization.¹⁷ In a study by Debasis average cost of treating the minor illness was between 319 to 350¹⁸Rs. Similar to the present study drugs accounted for 49% of the total health care expenditure in the study conducted by Jaya Krishnan et al.

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Limitations of the study: Purposive sampling, Information bias, Small study area.

CONCLUSION

Private health care services were the major service provider in this area. Out of pocket expenditure was incurred by people using government as well as private health services. Medicines were the major component for which the money was spent.

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