

CARE SEEKING BEHAVIOR OF THE RURAL OLDER ADULTS IN ODISHA: FINDINGS FROM THE AHSETS STUDY

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Abstract

Background: The aim of this study is to assess the care seeking behavior for pre-hospitalization and hospitalization among the rural older adults in Tigriria block, Cuttack district of Odisha. **Materials and Methods:** This study was cross-sectional in design, carried out among 725 older adults residing in rural community dwellings in the block of Tigriria, Cuttack district, Odisha. Self-reported questionnaire on care seeking behavior was administered to the participants. Statistical analysis was performed using “R” software. **Result:** A total of 175 (24.14%) older adults had suffered from any form of illness in last one month. Among them, 138 (78.86%) participants had visited health care “once” in last one month followed by 13 (7.43%) and 12 (6.86%) participants who visited “twice” and “thrice” respectively. Majority participants (90.28%) reported illness lasting for less than a month and most of the participants (68.57%) preferred government health care for treatment. In last one year, 77 (10.62%) older adults had hospitalized due to different health issues. Around 71.42% of the participants preferred government health care for hospitalization. **Conclusion:** The frequency of illnesses among rural community older adults found to be high while their healthcare seeking behaviors are less. Availability, accessibility, and affordability of public healthcare facility should be improved to prevent, timely diagnosis and cure of the diseases.

INTRODUCTION

Population distribution of high-income countries began to shifting towards older age and a major change is experiencing among low and middle-income countries (LMIC). Researchers have predicted that global geriatric population (> 60 years) will increase to 22% by 2050 and most of them (around 80%) will be from lower and middle-income countries (LMIC).^[1,2] In India, approximately 65% of its population reside in rural areas, while some studies have predicted an equal distribution of population between rural and urban areas by 2050.^[3,4] According to Census 2011, Odisha contributes to 9% of the geriatric population of whole country and around 86.3% of them reside in rural areas.^[1]

The elderly population growth will bring a high burden of morbidity and mortality across the country. The common social barriers in access to health for the Indian elderly include gender and other aspects of social inequality like religion, caste, socioeconomic status, and stigma. Physical barriers include declining mobility, decreasing social engagement, and the limited reach of the health care facility. In addition, reduced affordability of health care due to limitations in income, employment, and assets, and limited financial protection such as health insurance offered for health expenditures act as economic barriers in the Indian scenario.^[5] It was found that 60% of total elderly requiring hospitalisation access private health care and the frequency is high in urban region.^[6]

Elderly population are not homogeneous, they consist of different age groups, belong to different socio-economic groups, and differ based on their health status. They are most vulnerable and high risk groups in terms of health status and their health care-seeking behavior.^[2] As per the current statistics for the elderly in India, it is predicted a new set of medical, social, and economic problems that could arise if a timely initiative in this direction is not taken by program managers and policymakers.^[6,8] The following study was carried out as a part of “Assessment of the Health Status of the Elderly in Tigiria block: a Syndemic approach (AHSETS)” study among 725 rural elderly participants. The AHSETS study aimed to evaluate multiple health parameters among rural elderly such as multimorbidity, frailty, cognitive impairment, respiratory health, functional dependency, elder abuse, care seeking behavior etc. and analyzed the association among them along with the risk factors.^[9,10] The aim of this study is to assess the care seeking behavior for pre-hospitalization and hospitalization among the rural older adults in Tigiria block, Cuttack district of Odisha.

MATERIALS AND METHODS

This study is cross-sectional in design, carried out among 725 older adults (age>60 years) residing in rural community dwellings in the block of Tigiria, Cuttack district, Odisha. There are 52 revenue villages under Tigiria block which cover a population of 74639.^[11] Assuming the multimorbidity prevalence of 20% among the elderly with +4% absolute precision, 95% confidence level, 10% non-response/data loss and a design effect 1.6 due to clustering, the sample size rounded off to 725. Participants were selected based on Probability Proportional to Size (PPS) method from 30 clusters (village as a cluster). The inclusion criteria for this study were: the participants must be a resident of Tigiria block, age more than or equal to 60 years, participants who were conversant and apprehensible, and those who provided informed consent. Elderly people above 60 years who were seriously ill, bedridden or unwilling to participate were excluded from the study.

A pre-tested, semi-structured questionnaire was administered to participants to collect information on their self-reported care seeking behavior. For pre-hospitalization, the first question was; Did you have any sickness in last one month? The answer will be closed ended that is either “yes” or “no”. Only those participants who responded “yes” has to answer the other questions such as “status of the ailment, duration of ailment, whether treatment taken for ailment, number of visits to health care, type of preferred health care, who accompanied to the health care, total spent on treatment and who paid for the treatment”. Similarly, for the Hospitalization the first question was “have you

ever been hospitalized in last one year? and those who responded “yes” has to answer the questions such as “Ailment for hospitalization, duration of hospitalization, type of health care, type of ward, who took you to the hospital, who stayed with you in the hospital and who paid for the treatment”. Information on status of availing of health insurance was collected. Socio-demographic data were collected following standard census of India operational definitions. Socio-economic status (SES) was assessed using the per capita household income method outlined in the updated BG Prasad tool.^[12] Economic Dependency was assessed as minimum monthly income as per central government of India’s cut-offs from any source, including pension along with decision-making capacity to use this amount.^[13]

Data extraction and data wrangling was done using MS Excel prior to the analysis and “R” software version 4.0.3 was used for analysis. Cross tabulation and chi-square test was run for categorical variables. A p-value of less than equal to 0.05 was taken as statistically significant for hypothesis testing.

RESULTS

A total of 725 rural older adults participated in the cross-sectional study among which 48% (n=347) were females. 64% (n=463) of the participants were younger elderly (60-69 years) and most (78.2%) were not working currently. Most (57.2%) of the older adults were belonging from joint family while a similar frequency of population was from the lower SES group. Out of 725 participants, a total of 175 (24.14%) older adults had suffered from any form of illness in last one month out of which 2 participants did not seek to any health care. The details of visit to health care by the study participants visited to health care in last one month are provided in [Table 1].

A total of 138 (78.86%) participants had visited health care “once” in last one month and 13 (7.43%) and 12 (6.86%) participants visited “twice” and “thrice” respectively. Behavioral factors affecting to frequency of visit to health care are enlisted in [Table 2]. Family history of hypertension showed significant association with frequency of visiting health care.

Care seeking behavior of the older adults in pre-hospitalization is tabulated in [Table 3]. Majority participants (90.28%) reported illness lasting for less than a month and most of the participants (68.57%) preferred government health care for treatment. The median duration of ailment was 4 days (IQR= 5 days).

Out of 725 participants, 77 (10.62%) older adults had been hospitalized in last one year due to different health issues. Around 71.42% of the participants preferred government health care for hospitalization. The details of the care seeking behaviors are provided in [Table 4].

For both pre-hospitalization in last one month and hospitalization in last one-year, older adults dwelling in rural community preferred government health care in majority of cases. Health care

preference and factors influencing preference are tabulated in [Table 5].

Table 1: Distribution of frequency of Health care visit based on socio-demographic characteristics of participants (N=725)

Attributes		Frequency of health care visit in past one month					P value
		Never	Once	Twice	Thrice	Total	
Sex	Female	245(70.6)	88(25.4)	7(2.0)	7(2.0)	347(47.9)	0.009*
	Male	307(81.2)	60(15.9)	6(1.6)	5(1.3)	378(52.1)	
Age group	60-69	360(77.8)	94(20.3)	4(0.9)	5(1.1)	463(63.9)	0.018*
	70-79	123(71.9)	37(21.6)	4(2.3)	7(4.1)	171(23.6)	
	80-89	61(77.2)	14(17.7)	4(5.1)	0	79(10.9)	
	>90	8(66.7)	3(25.0)	1(8.3)	0	12(1.7)	
Education	Illiterates	257(74.3)	76(22.0)	5(1.4)	8(2.3)	346(47.7)	0.209
	Primary	226(75.1)	65(21.6)	7(2.3)	3(1.0)	301(41.5)	
	Secondary	35(92.1)	2(5.3)	1(2.6)	0	38(5.2)	
	High school & Above	34(85.0)	5(12.5)	0	1(2.5)	40(5.5)	
Occupation	Not working	427(75.3)	120(21.2)	10(1.8)	10(1.8)	567(78.2)	0.774
	Laborer	42(77.8)	11(20.4)	0	1(1.9)	54(7.4)	
	Agriculture	83(79.8)	17(16.3)	3(2.9)	1(1.0)	104(14.3)	
Marital status	Never married	1(33.3)	2(66.7)	0	0	3(0.4)	0.111
	Widow/Separated	167(71.1)	58(24.7)	4(1.7)	6(2.6)	235(32.4)	
	Currently married	384(78.9)	88(18.1)	9(1.8)	6(1.2)	487(67.2)	
Family type	Single	45(84.9)	8(15.1)	0	0	53(7.3)	0.027*
	Nuclear	205(79.8)	39(15.2)	8(3.1)	5(1.9)	257(35.4)	
	Joint	302(72.8)	101(24.3)	5(1.2)	7(1.7)	415(57.2)	
Ethnicity	General	85(82.5)	14(13.6)	3(2.9)	1(1.0)	103(14.2)	0.091
	OBC	403(76.6)	107(20.3)	9(1.7)	7(1.3)	526(72.6)	
	ST	11(64.7)	6(35.3)	0	0	17(2.3)	
	SC	53(67.1)	21(26.6)	1(1.3)	4(5.1)	79(10.9)	
SES	Low	296(76.1)	76(19.5)	8(2.1)	9(2.3)	389(53.7)	0.790
	Lower-middle	162(74.7)	49(22.6)	3(1.4)	3(1.4)	217(29.9)	
	Upper-middle	74(78.7)	19(20.2)	1(1.1)	0	94(13.0)	
	Upper	20(80.0)	4(16.0)	1(4.0)	0	25(3.4)	
Drinking water source	Tap	129 (83.2)	22(14.2)	1(0.6)	3(1.9)	155(21.4)	0.064
	Hand pump	152 (71.4)	52(24.4)	3(1.4)	6(2.8)	213(29.4)	
	Well	271(75.9)	74(20.7)	9(2.5)	3(0.8)	357(49.2)	
Toilet Facility	Yes	399(77.0)	103(19.9)	7(1.4)	9(1.7)	518(71.4)	0.477
	No	153(73.9)	45(21.7)	6(2.9)	3(1.4)	207(28.6)	

*Statistically significant at alpha=0.05 level

Table 2: Distribution of frequency of visit based on behavioral and medical characteristics of participants (N=725)

Attributes		Frequency of Health care visit in past one month					P value
		Never	once	twice	Thrice	Total	
Smoking	Yes	64(75.3)	17(20.0)	2(2.4)	2(2.4)	85(11.7)	0.925
	No	488(76.2)	131(20.5)	11(1.7)	10(1.6)	640(88.3)	
Smokeless tobacco	Yes	158(78.2)	38(18.8)	3(1.5)	3(1.5)	202(27.9)	0.871
	No	394(75.3)	110(21.0)	10(1.9)	9(1.7)	523(72.1)	
Alcohol	Yes	31(86.1)	4(11.1)	1(2.8)	0	36(5.0)	0.402
	No	521(75.6)	144(20.9)	12(1.7)	12(1.7)	689(95.0)	
Family History of Diabetes	Yes	100(72.5)	36(26.1)	1(0.7)	1(0.7)	138(19.0)	0.174
	No	452(77.0)	112(19.1)	12(2.0)	11(1.9)	587(81.0)	
Family History of Hypertension	Yes	188(69.6)	69(25.6)	7(2.6)	6(2.2)	270(37.2)	0.015*
	No	364(80.0)	79(17.4)	6(1.3)	6(1.3)	455(62.8)	
Diabetes	Yes	66(75.0)	22(25.0)	0	0	88(12.1)	0.212
	No	486(76.3)	126(19.8)	13(2.0)	12(1.9)	637(87.9)	
Hypertension	Yes	181(71.8)	60(23.8)	6(2.4)	5(2.0)	252(34.8)	0.248
	No	371(78.4)	88(18.6)	7(1.5)	7(1.5)	473(65.2)	
BMI	Normal	379(76.7)	97(19.6)	9(1.8)	9(1.8)	494(68.1)	0.389
	Overweight	110(80.3)	24(17.5)	2(1.5)	1(0.7)	137(18.9)	
	Underweight	63(67.0)	27(28.7)	2(2.1)	2(2.1)	94(13.0)	

*Statistically significant at alpha=0.05 level

Table 3: Pre-hospitalization care seeking behavior of the study participants

Attributes		Sickness in past one month (Total=175)
Ailment status	Started within 1 month and ended	158 (90.28)
	Started within 1 month and continuing	9 (5.14)
	Started before 1 month and ended	1 (0.57)
	Started before 1 month and continuing	7 (4.0)

Treatment taken for ailment	Yes	173 (98.85)
	No	2(1.15)
Number of visits to healthcare	Once	148 (84.57)
	Twice	13 (7.42)
	Thrice	12 (6.85)
	Not visited	2 (1.15)
Type of Healthcare	Government	120 (68.57)
	Pharmacy	19 (10.85)
	Private healthcare	34 (19.42)
	Not visit	2 (1.15)
Accompanying Person	None	19 (10.85)
	Son/daughter	104 (59.42)
	Son/daughter in-law	10 (5.71)
	Spouse	24 (13.71)
	Relatives	16 (9.14)
	Not visit	2 (1.15)
Cost Spent on treatment	Minimum	0
	Maximum	12000
	Mean	809.2
Who paid	None	35 (20.0)
	Son/daughter	96 (54.85)
	Son/daughter in-law	5 (2.85)
	Spouse	22 (12.57)
	Relatives	15 (8.57)
	Not visit	2 (1.15)

Table 4: Distribution of characteristics related to seeking hospitalization in the past one year (N=77)

Attributes		Hospitalization in past one year (Yes=77, No=648)
Ailment for hospitalization	Diarrhea	23 (29.87)
	GIT	7 (9.09)
	Fever	8 (10.38)
	HTN	6 (7.79)
	Eye Problem	5 (6.49)
	CNS	3 (3.89)
	Sunstroke	3 (3.89)
	Typhoid	3 (3.89)
	Injury	3 (3.89)
	DM	2 (2.59)
	Joint pain	2 (2.59)
Duration of Hospitalization	Others	12 (15.58)
	≤5 days	63 (81.81)
	6-10 days	8 (10.38)
	≥11 days	5 (6.49)
Type of Healthcare	Don't know	1 (1.29)
	Govt.	55 (71.42)
	Staff at SC/PHC	4 (5.19)
	Private healthcare	17 (22.07)
Type of ward	Don't know	1 (1.29)
	Free	58 (75.32)
	Paying general	14 (18.18)
	Paying special	4 (5.19)
Who took you to the hospital?	Don't know	1 (1.29)
	Son/daughter	46 (59.74)
	Son/daughter in-law	9 (11.68)
	Spouse	15 (19.48)
Who stayed with you in the hospital	Relatives	7 (9.09)
	Son/daughter	33 (42.85)
	Son/daughter in-law	17 (22.07)
	Spouse	22 (28.57)
Who paid	Relatives	5 (6.49)
	None	4 (5.19)
	Son/daughter	54 (70.12)
	Son/daughter in-law	3 (3.89)
	Spouse	13 (16.88)
	Relatives	7 (9.09)

Table 5: Distribution of health care preference of study participants based on socio-demographic characteristics (N=173)

Attribute		Govt.	Pharmacy	Private	Total	P value
Sex	Female	66(64.7)	13(12.7)	23(22.5)	102	0.280
	Male	54(76.1)	6(8.5)	11(15.5)	71	
Age group	60-69	72(69.9)	8(7.8)	23(22.3)	103	0.230

	70-79	35(72.9)	7(14.6)	6(12.5)	48	
	80-89	11(61.1)	4(22.2)	3(16.7)	18	
	>90	2(50.0)	0	2(50.0)	4	
Education	Illiterates	58(65.2)	11(12.4)	20(22.5)	89	0.274
	Primary	56(74.7)	7(9.3)	12(16.0)	75	
	Secondary	1(33.3)	0	2(66.7)	3	
	High school & Above	5(83.3)	1(16.7)	0	6	
SES	Low	70(75.3)	7(7.5)	16(17.2)	93	0.339
	Lower-middle	36(65.5)	8(14.5)	11(20.0)	55	
	Upper-middle	10(50.0)	4(20)	6(30.0)	20	
	Upper	4(80.0)	0	1(20.0)	5	
Economic dependency	Dependent	91(66.9)	16(11.8)	29(21.3)	136	0.404
	Independent	29(78.4)	3(8.1)	5(13.5)	37	
Health insurance	Yes	68(78.2)	5(5.7)	14(16.1)	87	0.024*
	No	52(50.5)	14(16.3)	20(23.3)	86	

*Statistically significant at alpha=0.05 level

DISCUSSION

Among the 725 rural community dwelling older adults, a total of 175 participants experienced any form of sickness in last month. 98.85% of them sought healthcare (Govt. healthcare= 68.57%, Private=19.42%, Pharmacy=10.85%). Likewise, 77 participants had been hospitalized in last one year, out of which 71.42% preferred Government healthcare and 22.07% sought private health care. This high preference of public health care was also found in many of the studies.^[14,15,16,17,18] The commonest reasons for visiting public health care are availability of services and free care.^[19] Also high preference of private health care found in many of the studies which may be due to their availability and quality of care, and reduced access to Government health care facility.^[19] Pharmacies are the first point of contact for most of population found in a Nigerian study.^[20] Faith healers were also found to be first treatment of choice for most of the population and treatment was considered waste of money.^[21]

Elderly of younger age (60-69 years) were less likely to receive treatment than those in the older age group (90 years and above) which is also supported by another study in India whereas study by Patil et al. found the opposite.^[22] The reason may be due to younger age groups are not taking the illness seriously whereas among the older age groups their family may be insisting them for visit healthcare.

Elderly men are neglected in terms of treatment seeking than their female counterparts. A study by Barik et al. found the opposite of that among elderly of low monthly per-capita consumption expenditure (MPCE) households which is also supported by Patil et al study.^[22,23]

Elderly from scheduled tribe households are less likely to avail treatment than their other counterparts and it is also supported by a study of Barik et al.^[22] Lower levels of education, below poverty line, lack of availability of health care facilities and belief in spiritual healers might be the reason for inadequate healthcare seeking behavior.

Cost of care (27.6%) and out of pocket expenditure for health care expenses is found to be the reason for

decrease in frequency of health care access in rural elderly population of Assam and Tamilnadu.^[14,24,25]

Participants with lower education level had visited higher to health facility while studies found that significant association of elderly people with education beyond primary school level with better healthcare utilization.^[23,24,26] Educated people tends to access healthcare in time to prevent complications while most of the elderly in rural area are illiterates. Elderly of lower socio-economic group were more availing health facility where some studies found that elderly belonging to upper socioeconomic status had a statistically significant association with better healthcare utilization.^[24,26] Individual's income was also found to be significantly associated with the HSB (p value <0.05).^[15] Higher access of healthcare by high SES group might be because of affordability of healthcare cost but in this study, most of the population is belonging from below poverty line, so the data showing high access of healthcare by lower SES group.

The reduced visit to health care might be due to lack of health insurance among rural population which is also supported by some studies in rural South India.^[24,27] Factors such as: distance, non-availability of any accompanying person, lack of monetary support, and lack of information were found to be the main barriers behind delayed care seeking behavior.^[27]

For both outpatient visit and hospitalization, the healthcare bills were mostly paid by son or daughter of the elderly. Some studies in Congo and Nigeria found the same where the children (32%) followed by relatives/in-laws (14%) supports financially.^[15,28]

In this study, Gender, age, type of family and family history of hypertension were found to be associated with health care seeking. Studies found that age, social status of the person, gender, alcohol consumption, monthly income, marital status, family size, education level, authority of the elderly within the family, presence of complications and perceived severity about disease were considered as factors associated with health care seeking behavior.^[16,20,26,29,30,31]

Our study was limited to rural people of a single block of Odisha, India. Interpretation and

generalization of the results from this study need to be carefully made.

CONCLUSION

The illnesses among rural community older adults are high while their healthcare seeking behaviors are inadequate. The commonest reasons are poor accessibility, non-availability of health care professionals and facilities, belief in spiritual healers, lower SES and high cost of healthcare. Availability, accessibility, and affordability of public healthcare facility should be improved in rural areas for prevention, timely diagnosis and cure of the diseases.

Ethical considerations: Ethical approval was obtained from the institutional human ethics committee of ICMR-RMRC Bhubaneswar (Approval No- ICMR-RMRCB/IHEC-2019/022). Written informed consent was obtained from all participants and the national ethical guidelines for biomedical research were followed.^[32]

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