

# Utilization Of Health Care Services By Elderly Residing In Rural Health Training Centre Area Of Agartala Government Medical College, West Tripura : A Cross Sectional Study

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## Abstract

**Background:** Most of the elderly people are more vulnerable to diseases and death because their health issues which are often neglected. Very few elderly people residing in rural areas are utilizing the health care facilities.

**Objectives:** To estimate the proportion of elderly people residing in Rural Health Training Centre area of Agartala Government Medical College isutilizing the health care services and to determine the factors associated with the utilization of health care services.

**Methods:**This cross sectional study was carried out among 212 elderly residing in rural health training center area of Agartala Government Medical College for a period of two months. A Multi-stage sampling technique was followed for selection ofthe study subjects and data wereanalyzed by IBM SPSS Version 25. Statistical analysis was done by using Chi-square test and binary logistic regression.

**Result:** Out of 212 elderly study participants, 140 (66.03%) needed health care services in last one year. Among those who needed health care services,135 (96.42%)of them had utilized health care services while 3.58% study subjects needed health care service but did not utilize.The study also revealed that sex of elderly, ration card holding status and elderly people who were dependent on their children economically had significant association with the utilization of health care services among the study subjects.

**Conclusion:** There is need to generate more awareness programson geriatric related to health issues and also about services availability in the study area.

**Key-words:** Health Care Services utilization, Determinants, Elderly.

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Date of Submission: 10-01-2024

Date of Acceptance: 20-01-2024

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## I. Introduction:

Aging Population is one of the most important demographicevents in the 21st century. According to the UN, elderlypeople are those people whose age is 60 years andabove. Globally, the number of older persons is growing faster than the numbers of people in any other agegroup.<sup>1</sup>Bymidcentury, the world population of the geriatrics group of people will increase from 9% to 16%. In developed countries it may rise from 18% to 27% and in developing countries it may be double of 14%.<sup>2</sup> India already has crossed the bar with 8% population above 60 years of age as per census 2011 and is expected to rise above 20% by the year 2050and Tripura has got the highest percentage of elderly population (7.9%) among the north-eastern states according to census 2011.<sup>3,4</sup>Older people usually need higher amount of health services compared with other age groups and are more likely to experience complications and adverse events as a result of declines in physical and mental function, which might result in the increase of morbidity, disability, mortality, medical utilization and burden of care.<sup>5</sup>Utilization of health care services refers to accessibility and affordability of the household to avail services pertaining to health, particularly the poor household in which the elderly lived. In rural India, the reasons of not utilizing the healthcare facilities are unawareness, illiteracy, lack of facility available in their village.<sup>6</sup>

In order to address the felt needs of the elderly and to improve healthcare service delivery in rural areas, disaggregated information regarding the utilization of available services by the elderly and the potential factors that may influence utilization patterns need to be obtained.<sup>7</sup> Hence, a study was designed with the objectives to estimate the proportion of Geriatric population utilizing the health care services residing in Rural Health Training Centre area of Agartala Government Medical College, West Tripura and to determine the factors associated with utilization of the health care services by them.

## **II. Materials & Method:**

This Community based cross-sectional study was conducted in the field practice area of Rural Health Training Centre of Agartala Government Medical College, West Tripura for a period of two months (from 1st May to 30th June 2021). Multi-stage sampling technique was adopted to select 212 elderly study subjects aged 60 years or above. Elderly people who were unavailable after three successive visits and not willing to participate in the study were excluded from this study. Sample size was calculated as,  $n = [(Z_{1-\alpha/2})^2 \times p \times q] \div (l)^2$ , considering the prevalence of healthcare utilization by elderly people (65%)<sup>6</sup> at 5% level of significance with an allowable error (l) of 10%. So, the minimum required sample size for this study was calculated as 205. There were 13 Sub Centers in Rural Health Training Centre Area (Mohanpur CHC) of Agartala Government Medical College West Tripura. Simple Random Sampling (SRS) method was applied in all the stages of selection of study sample. At the First stage, 4 Sub Centers were selected and in Second stage, one village from each Sub Centre was selected. At the final stage, from these selected villages, houses of the eligible subject were chosen by SRS method and only one eligible elderly member was approached to participate in the study. If there were more than one elderly member in one household at the time of data collection, only one subject was selected by lottery method. A pre-designed, pre-tested, structured interview schedule, containing socio-demographic information, health care utilization and chronic illness has been used to collect the required information. House of the eligible candidate was identified with the help of ANMs and ASHAs of the villages. Details about the study had explained to the families before the start of the interview and informed consent for participation in this study was also obtained. The study was conducted after getting approval from the Institutional Ethics Committee of Agartala Government Medical College. Data analysis has been done by IBM SPSS Version 25. Descriptive statistics were expressed as frequencies, percentages, mean, and standard deviation. Association between socio demographic factors and utilization of health care services was calculated through Chi-square test and binary logistic regression. P-value < 0.05 was considered statistically significant.

## **III. Results:**

In this study, a total 212 participants were interviewed from the 4 villages (53 participants from each village) and information was collected on socio demographic factors and on utilization of health care services by the elderly people in last one year. It is evident that highest proportion of study subjects were in the age group of 60-65 years (63.2%) with mean age of  $66.7 \pm 8.5$  years. Details of socio demographic profile of the study participants are shown in **Table No.1**. In the present study out of 212 study participants, 140 (66%) needed health care in last one year. Among the elderly people who were in need of health care, among them 96.4% had utilized the health care services, while rest 3.6% elderly has not utilized the health services though they needed it. (**Figure1**)

Those who utilized health services in last one year, among them 53.3% accessed it from Govt. institution and 38% visited private clinic/hospital, 6% from chemist shop, 1.4% from quack and 1.3% took domiciliary treatment. Majority (84.5%) had visited outpatient care/ day care health centre and 26% were admitted in hospital in the last one year. Only 22% elderly participants got free of cost medicine from Govt. facility/ hospitals. NCD clinic facility was accessed by 26.6% of elderly and only 22% participants received health awareness talk in last one year by health staff. Out of all participants, 75.5% of elderly participants were suffered from chronic illness. Allopathic system (88.2%) was their preferred system followed by Ayurveda and Homeopathic system of medicine 9.4% and 1.4% respectively. Financial crisis was the most common reason for not utilizing health care services reported by the study participants. They also had mentioned that long waiting time in the hospital and because of non-serious ailment they didn't utilized health care services.

The study also revealed that sex of elderly ( $p=0.000$ ), ration card holding status ( $p=0.003$ ) and elderly people who were dependent on their children economically ( $p=0.0002$ ) had significant association with the utilization of health care services among the study subjects (**Table 2**)

## **IV. Discussion:**

Untreated morbidity and the health-seeking behaviour depends upon several underlying factors such as availability, affordability and accessibility of healthcare, healthcare consciousness of the people, the responsiveness and fees charged by health care service providers, and long waiting time to seek treatment. Having a pre-existing morbid condition in India found that a notable proportion of elderly people were not utilizing the available health facilities.<sup>8</sup>

In the present study, 66% of the elderly population was in need of health care services in last one year. Among the elderly people who were in need of health care, among them 96.4% had utilized the health care services, while rest 3.6% elderly has not utilized the health services though they needed it. Agarwal Nipun et al<sup>6</sup> found that 65% of the elderly population had utilized health care services in the rural area of Bareilly, Uttar Pradesh while LB Gurung et al<sup>9</sup> in their study revealed that 84.4% elderly were utilizing the health care

services. Whereas a study done in Ethiopia reported that only 49.6% of the study participants have utilized health care services.<sup>5</sup>

Our study revealed that majority (53.3%) of the study subjects had accessed health care services from Govt. institution. This finding was in contrast with the observation of Sowmya Bhat et al<sup>10</sup> study in rural area of Mangalore where most of the elderly avail services from private sector. This difference may be due to the fact that Govt. health facilities are accessible and affordable to our study subjects. On the other hand, Mangalore has a good network of outreach health centers which are attached to various medical colleges and these centers provide services which are accessible and affordable to people, especially in rural area.<sup>10</sup>

Whereas a similar study conducted by Maroof Mohd. et al<sup>11</sup> in the field practice area of RHTC and UHTC in Aligarh found that majority (53.4%) of the elderly preferred UHTC/RHTC for health care services followed by the private facility (13.1%), others (12.2%), and least utilized was the government facility (8%). A different observation was reported in a study conducted by in rural India, Haryana.<sup>12</sup> Another study conducted by Syed Qadri et al<sup>13</sup> among the rural population of Northern India reported that majority (92.7%) of the subjects do not generally seek health care from government source which differs from the result of the present study. However Surekha Kishore et al<sup>14</sup> study reported a similar finding with our study observation.

Most of the subjects in the present study opined that allopathic (88.2%) was the most preferred system which was found similar with a study done in a rural setting in Central Kerala.<sup>15</sup> Some other studies also reported similar observation.<sup>11, 16, 17, 18</sup>

In our study, the most common reason for not utilizing the health care services was a financial problem which was found consistent in a study done in Assam<sup>18</sup> but Shalender Baliet al<sup>12</sup> study revealed that long distance (38%) was the most common reason for not utilizing the health care services. A study done in Nepal revealed that monthly family income and belief on traditional healing system are the factors for not utilizing the health care facilities by the elderly population.<sup>9</sup>

In present study, we identified factors i.e. sex, ration card holding status and elderly people dependent on their children economically were predictors for utilization of health care services. This finding was different from the observation of 75th round of the National Sample Survey (NSS) during July 2017 – June 2018.<sup>19</sup> This difference may be due to the fact that both urban and rural elderly were included in that study whereas in our study only rural elderly population were included. Another study had shown that elderly people with education beyond primary school level and belonging to upper socioeconomic status had a statistically significant association with better healthcare utilization.<sup>7</sup> This finding was also not similar with our study result. Man Jiang et al<sup>20</sup> study reported that predisposing factors including age, gender, pension income level, source of income, and marital status were statistically associated with utilization of health services. These results were also found not consistent with our study findings.

The limitation of the study is that the result of our study may not be generalizable to all elderly people residing in Tripura as well in India as the study was conducted only in Rural Health Training Centre area of Department of Community Medicine, Agartala Government Medical College, West Tripura and in this study, some degree of recall bias may introduce since data was collected from the elderly and based on the self-reported data.

## **V. Conclusion & Recommendations:**

The study revealed that elderly people who needed health care services, majority of them utilized it. Government health facilities were the preferred site for accessing the services. Financial problems, long waiting hours and not serious ailments were the reason for not utilizing health care services. Factors like Sex, ration card holding status and elderly dependent economically on their children by utilization of health care services were found to have significant determinants. There is a need to conduct health care awareness in the community to focus on health conditions and services available to elderly as well as issues related to ageing. More elaborate study with larger sample size could be done in the future.

**Acknowledgement:** Our sincere thanks to all participants who were participated in the study.

**Conflict of interest:** There are no conflicts of interest involved in the study.

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**Table 1: Socio demographic profile of the study subjects (n= 212)**

Variables	Frequency (n)	Percentage(%)
<b>Age group</b>		
60- 65 Years	134	63.2
65-70 Years	34	16.0
70-75 Years	17	8.0
75-80 Years	17	8.0
80 years and above	10	4.7
<b>Sex</b>		
Female	94	44.3
Male	118	55.7
<b>Religion</b>		
Hindu	202	95.3
Christian	10	4.7
<b>Literacy</b>		
Illiterate	81	38.2
Sakshar	54	25.5
Primary	49	23.1
Secondary	27	12.7
Higher secondary	1	0.5
<b>Caste</b>		
General	38	17.9
SC	77	36.3
ST	61	28.8
OBC	36	17.0
<b>Marital status</b>		
Currently married	133	62.7
Unmarried	2	0.9
Divorced/Separated/Widowed	77	36.3
<b>Occupation</b>		
Govt. service	5	2.4
Private job	1	0.5
Not working/ Retired	123	58.0
Agriculture worker	25	11.8
Businessman & Self employed	23	10.8
Others	35	16.5
<b>Socio Economic Status (BG Prasad Scale), 2021</b>		

Class I	7	3.3
Class II	20	9.4
Class III	39	18.4
Class IV	70	33.0
Class V	76	35.8
<b>Type of Family</b>		
Nuclear	77	36.3
Joint	135	63.7
<b>Ration card holder</b>		
APL	71	33.5
BPL	94	44.3
Adhoc BPL	37	17.5
Antodaya	10	4.7
<b>PMJAY/RSBY beneficiary</b>		
No	93	43.9
Yes	119	56.1
<b>Dependent on children/other members economically</b>		
No	100	47.2
yes	112	52.8

Figure 1: Distribution of the study participants (n= 212) utilized health care services

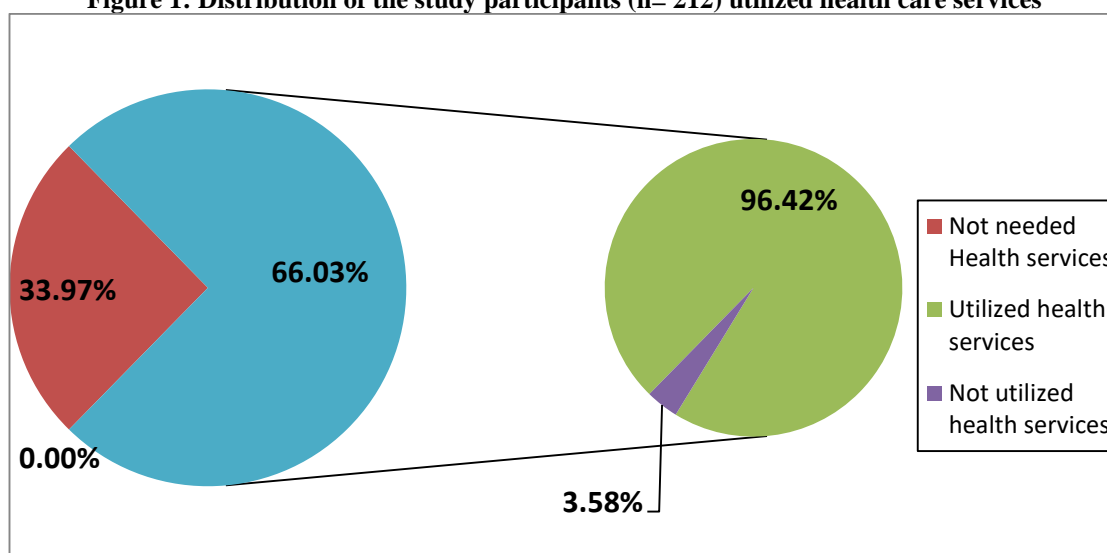


Table 2: Factors affecting utilization of health care services by elderly (n=140)

Characteristics	Utilization of health service		P value
	Yes n (%)	No n (%)	
<b>Sex</b>			
Female	40 (28.6)	14 (10.0)	<b>0.000</b>
Male	83 (59.3)	3 (2.1)	
<b>Age group</b>			
60 - 65 years	81 (57.9)	2 (1.4)	0.503
65 -70 years	21 (15.0)	2 (1.4)	
70 - 75 years	13 (9.3)	0 (0.0)	
75 -80 years	13 (9.3)	1 (0.7)	
80 years & above	7 (5.0)	0 (0.0)	
<b>Religion</b>			
Hindu	127 (90.7)	5 (3.6)	0.439
Christian	8 (5.7)	0(0.0)	
<b>Community</b>			
General	23(16.4)	1 (0.7)	0.903
SC	47(33.6)	1(0.7)	
ST	38 (27.1)	2 (1.4)	
OBC	27 (19.3)	1 (0.7)	
<b>Educational status</b>			
Illiterate	52 (37.1)	3 (2.1)	0.539
Sakshar	36 (25.7)	1 (0.7)	
Primary	32 (22.9)	0(0.0)	
Secondary & above	15 (10.7)	1 (0.7)	

<b>Occupation</b>			
Govt. service	3 (2.1)	0 (0.0)	0.752
Retired	84 (60.0)	4 (2.9)	
Agriculture worker	15 (10.7)	1 (0.7)	
Businessman & Self employed	11 (7.9)	0 (0.0)	
Others	22 (15.7)	0 (0.0)	
<b>Marital status</b>			
Currently married	86 (61.4)	3 (2.1)	0.941
Unmarried	2 (1.4)	0 (0.0)	
Divorced/Separated/Widowed	47 (33.5)	2 (1.4)	
<b>SES (BG Prasad scale)</b>			
Class I	4 (2.9)	0 (0.0)	0.362
Class II	13 (9.3)	0 (0.0)	
Class III	25 (17.9)	2 (1.4)	
Class IV	47 (33.5)	3 (2.1)	
Class V	46 (32.9)	0 (0.0)	
<b>Type of family</b>			
Nuclear	45 (32.1)	2 (1.4)	0.757
Joint	90 (64.3)	3 (2.1)	
<b>Ration card holder</b>			
APL	41 (29.3)	1 (0.7)	*0.003
BPL	61 (43.6)	2 (1.4)	
Adhoc BPL	28 (20.0)	0	
Antodaya	5 (3.6)	2 (1.4)	
<b>PMJAY/RSBY beneficiary</b>			
No	56 (40.0)	2 (1.4)	0.660
Yes	79 (56.4)	3 (2.1)	
<b>Dependent on children economically</b>			
No	42 (30.0)	13 (9.3)	0.0002
Yes	82 (58.5)	3 (2.1)	

Chi-Square/ Fisher's exact test. \* indicate P <0.05