Original Research Article

Health status of elderly: a comparative study among urban and rural dwellers

V. R. Zare[1], Prashant Kokiwar[2]*, B. Ramesh[3]

[1]Assistant Professor, [2]Professor & HOD, [3]Lecturer in Statistics, Department of Community Medicine, Malla Reddy Institute of Medical Sciences, Suraram, Hyderabad, Telangana, India

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*Correspondence:
Dr. Prashant Kokiwar,
E-mail: pkokiwar@yahoo.com

ABSTRACT

Background: Due to advancement in the medical science, the life expectancy is showing an increase in every census. Hence there is also growing demand to have good quality of life among the elderly. The objective of the study was to assess and compare the health status of elderly in urban areas of Shapur and rural areas of Gummadidala.
Methods: A Community based cross sectional study was carried out in rural areas located at Gummadidala, Nallavelli, Anantharam and in urban areas located at Shapur, Kalavathinagar, Subashnagar among geriatric aged people above 60 years. Study was conducted over a period of eight months from August 2017 to March 2018.
Results: Overall almost all diseases were more common in rural elders compared to the urban elders except gynecological diseases. Among these hypertension, ear diseases, skin diseases, musculoskeletal disorders, psychological disorders, cancer and neurological diseases were significantly more common in rural elders than urban elders (p<0.05). Only gynecological diseases were significantly more common in urban women and this may be due to more percentage of hysterectomies among rural females.
Conclusions: Elderly people in the rural areas are more prone to suffer from diseases as compared to their urban counterparts.

Keywords: Health status, Elderly, Comparative study

INTRODUCTION

"Ageing is a natural process". "In the words of Seneca (roman philosopher)" "old age is an incurable disease." "Sir James Sterling Ross commented it as" "you do not heal old age, you protect it, you promote it, and you extend it". Old age cannot be prevented as it is natural to become old.[1]

Elderly people cannot be considered as burden on the society. They should be considered as valuable asset. They also play a vital role in the social and national development by sharing their experiences with young generation. Elderly form special group as their health problems are unique from that of the other age groups. [2]

Today we are experiencing more and more proportion of senior citizen in India. This is nothing but our success story in the field of health sciences. This increased number of elderly also put forward the challenges on the existing health care services of the country.[3]

"The Sample Registration System (SRS) in 2003 estimated that 7.2% of total populations were above 60 in India".[4] "This proportion has been estimated to quickly become 7.7% of the total population".[5]

"Recently it has been reported that elderly population in India is approximately hundred million forming 10% of the total population."[6]

Due to advancement in the medical science, the life expectancy is showing an increase in every census. Hence there is also growing demand to have good quality of life among the elderly. Government is paying special attention to the health status of the elderly. "World Health Organization is also concerned about the health of this group and is promoting the concept of healthy aging."[7]

"The elderly people mainly suffer from two types of health issues i.e. medical and psychosocial. Common medical problems include cardiovascular, musculoskeletal, visual, and gastrointestinal diseases etc., while common psychosocial problems include impaired memory and intelligence, anxiety, depression, rigidity of outlook, dependency & dissatisfaction with family members, earning and occupation".[8]

In light of above facts, the present study was conducted with the objective to assess and compare the health status of elderly in urban areas of Shapur and rural areas of Gummadidala.

METHODS

Study design

Community based cross sectional study

Study area

In rural areas located at Gummadidala, Nallavelli, Anantharam and in urban areas located at Shapur, Kalavathinagar, Subashnagar.

Study participants

Geriatric aged people above 60 years

Study duration

Study was conducted over a period of eight months from August 2017 to March 2018

Study population

Elderly people above the age of 60 years residing in the field practice area of Department of Community Medicine, Malla Reddy Institute of Medical Sciences, Hyderabad.

Ethical aspects

Institutional ethics committee permission of MRIMS was obtained. Informed consent was obtained from every subject. At the end of interview, study participants were given health education regarding risk factors of age related morbidities and its prevention.

Inclusion criteria

Inclusion criteria were elderly persons above 60 years of age; residing permanently in the field practice area; willing to participate in the study.

Exclusion criteria

Exclusion criteria were any elderly person found suffering from illness because of which he/she is not able to cooperate; not permanent residents of the field practice area.

Methodology

A questionnaire was prepared and it pilot tested before finalizing it.

- The questions were asked in their preferred language but prepared in English
- The questions included following: general identification data (bio data), housing, marital status, daily routines, total family members, SES (B. G. Prasad method), diseases in geriatric age.

Statistical analysis

The data was entered in excel sheets and analyzed. Open Epi ("statistical software version 3.01 updated on 2013/04/06") was used to calculate the Yates corrected chi square and p value. P value of less than 0.05 was considered as statistically significant.

RESULTS

Majority of the elderly were in the age group of 60-69 years in both the urban as well as rural areas. As the age increased the proportion of elderly decreased in both the areas. People above 80 years of age were more in rural (9%) compared to urban (1%). Males were more in urban and females were more in rural. Maximum were married in both the areas. Illiteracy was more in rural compared to the urban area.

Smoking was found significantly more common in rural areas than urban areas. Current alcohol users were also significantly more in rural areas than urban areas. But current tobacco chewers were equally distributed in both urban as well as rural areas. Beetle nut use was significantly more in rural areas.

Overall almost all diseases were more common in rural elders compared to the urban elders except gynecological diseases. Among these hypertension, ear diseases, skin diseases, musculoskeletal disorders, psychological disorders, cancer and neurological diseases were significantly more common in rural elders than urban

elders (p<0.05). Only gynecological diseases were significantly more common in urban women and this may be due to more percentage of hysterectomies among rural females.

Table 1: Distribution of study subjects as per the socio-demographic characteristics.

Socio-demographic characteristics		Urban area		Rural area		Total	
		Number	%	Number	%	Number	%
Age (years)	60-69	477	90	206	68	683	81.9
	70-79	047	09	096	23	114	13.7
	>80	006	01	020	09	026	03.2
Gender	Male	348	65	142	47	490	58.4
	Female	188	35	161	53	349	41.6
Marital status	Married	435	81.1	207	68.1	652	75.7
	Unmarried	011	02	003	01	014	01.6
	Widowed	080	15	084	28	164	18.8
	Divorced	0	0	006	02	006	0.7
	Separated	010	1.9	003	01	006	0.7
Literacy status	Illiterate	300	56	261	86	561	66.9
	Primary	171	32	27	9	198	23.6
	Secondary	43	8	11	4	54	6.4
	Higher	22	4	3	1	25	3

Table 2: Substance use among the elderly.

Substance use		Urban		Rural		Total		X^2	P
		Number	%	Number	%	Number	%		
Smoking	Never	376	71	185	61	561	67.3		
	Ex-smoker	53	10	42	14	95	11.4	3.831	0.02516
	Current smoker	101	19	76	25	177	21.3		
Alcohol	Never	291	55	73	24	364	43.7		
	Occasional	106	20	103	34	209	25		
	Ex drinker	69	13	30	10	99	11.9	47.88	0.0001
	Current drinker	64	12	97	32	101	12.1		
Tobacco chewing	Never	477	90	270	89	747	89.7		
	Ex chewer	5	1	3	7	8	1	0.01387	0.4531
	Current chewer	53	9	30	10	83	10		
Beetle nut use	Never	472	89	227	75	699	83.9		
	Ex user	16	3	12	4	28	3.4	29.06	0.0001
	Current user	42	8	64	21	106	12.7		

Table 3: Health status of the elderly.

Health status		Urban		Rural		Total		X^2	P value
		No.	%	No.	%	No.	%		
Hypertension	Yes	148	28	148	49	256	35.5	35.93	0.0001
	No	382	72	155	51	537	64.5		
Eye diseases	Yes	302	57	182	60	484	58.1	0.6323	0.2133
	No	228	43	121	40	349	41.9		
Ear diseases	Yes	42	8	61	20	512	12.4	25.4	0.0001
	No	488	92	242	80	730	87.6		
Oral cavity diseases	Yes	185	35	185	61	270	32.4		
	No	345	65	118	39	563	67.6		
Respiratory diseases	Yes	74	14	55	18	129	15.5	2.275	0.0657
	No	456	86	248	82	704	84.5		
Heart disease	Yes	21	4	18	6	39	4.7	1.276	0.1297
	No	509	96	285	94	794	95.3		
Gastro-intestinal diseases	Yes	138	26	88	29	226	27.1	0.7315	0.1956
	No	392	74	215	71	607	72.9		

Health status		Urban		Rural		Total		X^2	P value
		No.	%	No.	%	No.	%		
Diabetes	Yes	111	21	55	18	166	20	0.7747	0.1894
	No	419	79	248	82	667	80		
Skin diseases	Yes	5	1	9	6.3	24	2.9	3.918	0.0238
	No	525	99	284	93.7	809	97.1		
Musculoskeletal disorders	Yes	281	53	251	83	532	63.9	73	0.0001
	No	249	47	52	17	301	36.1		
Gynecological diseases	Yes	159	84.5	31	8.8	190	54.4	146.6	0.0001
	No	29	15.5	130	91.2	159	45.6		
Psychological disorders	Yes	11	2	24	8	35	4.2	14.94	0.0001
	No	519	98	279	92	798	95.8		
Cancer	Yes	5	1	9	3	14	1.7	3.645	0.0281
	No	525	99	294	97	819	98.3		
Neurologic diseases	Yes	0	0	5	2	5	0.7	6.274	0.0006
	No	530	100	297	98	827	99.3		
Hysterectomy	Yes	53	28.2	233					

DISCUSSION

In the present survey, maximum group of people were in age group of 60-69 years i.e. 90% in UHTC and 68% in RHTC. In a "study of morbidity profile among geriatric population in an urban area of Navi Mumbai" by Nikumb V et al [9] majority of the elderly (70%) was in the age group of 60-69 years. In a "cross-sectional study on morbidity pattern of elderly population residing in a rural area of Tripura" by Karmakar et al majority (52.7%) were between 60-70 years of age.[10]

Majority were males in UHTC (65%) and females in RHTC (53%). In the study conducted by Nikumb et al, there were more number of females 110 (68.8%) over the males 50 (31.3%).[9] In the study conducted by Karmakar et al females (51.9%) were more than males (48.1%).[10]

83% were married in UHTC and 68% in RHTC. In the study conducted by Nikumb et al, (76%) males and (50%) of females were married. 75.8% were married in a study conducted by Karmakar et al in rural area of Tripura.[9,10]

Non smokers in UHTC were (71%) and in RHTC (61%). Current smokers in UHTC were (19%) in RHTC (25%). In a "study of morbidity pattern among geriatric population in an urban area of Udaipur Rajasthan" by Prakash et al, 62.6% were non smokers, 22% were current smokers.[11] In a study of "morbidity profile of geriatric population in the field practice area of rural health training centre, Paithan of govt. medical college, Aurangabad" by Jadhav et al, 14.24% were smokers.

Current alcoholics in UHTC were (12%) in RHTC (32%). In Aurangabad study by Jadhav et al, 8.64% were alcoholics.[12] Current tobacco chewers were in UHTC (9%) in RHTC (10%). In Udaipur (urban) study by Prakash et al, 4.66% were tobacco chewers.[11] In Aurangabad (rural) study by Jadhav et al, 37.76% were

tobacco chewers.[12] Current beetle nut users were 8% in UHTC and 21% in RHTC.

Among the study population: status of hypertension was 28% in UHTC and 49% in RHTC. In a study on morbidity profile among elderly population in Vishakhapatnam by Srinivas et al status of hypertension was 18% in the UHTC area and 12% in the RHTC area.[13] Hypertension in the present study was more than that of Mundada et al study who found that the prevalence of hypertension was 12.3%.[14]

Eye disease distribution: We found that the prevalence of cataract was 32% in UHTC area & 47% in RHTC area, refractive errors prevalence was 29% in UHTC area & 9% in RHTC area. Diseases of eye were found to be as 13% in UHTC area, and 20% in the RHTC area in a study conducted by Srinivas et al.[13] Impaired vision was found to be lower than Rafiq et al study who observed it to be 38.8%

Ear disease distribution: CSOM was present in 1% of the geriatric population in UHTC area & RHTC areas respectively. Deafness was present in 7% of the geriatric population in UHTC area & 19% of the geriatric population in RHTC area. Deaf using hearing aids were 100% of the geriatric population in UHTC area & 98% of the geriatric population in RHTC area. Srinivas et al found that the prevalence of diseases of the ear was 4% of the geriatric population in UHTC, and 8% of the geriatric population in the RHTC area of their study.[13] Our study findings were found to be reporting higher than that of Hameed et al study, Mundada V et al study i.e. 7.2% & 10.3% respectively.[14,16]

Oral cavity disease distribution: Loss of tooth was present in 30% of the geriatric population in UHTC and 35% of the geriatric population in RHTC, tooth extraction was done by 2% of the geriatric population in UHTC & 10% of the geriatric population in the RHTC

areas, other dental problems constituted 2% of the geriatric population in the UHTC area & 5% of the geriatric population in the RHTC area, oral ulcers were found in 1% of the geriatric population in UHTC area & RHTC area. Kumar et al in their study among elderly population noticed that the dental problems prevalence overall was 16.4%.[17] This is higher than the findings of the present study.

Respiratory disease distribution: 5% of the geriatric population in UHTC area and 4% of the geriatric population in RHTC area were found to be suffering from tuberculosis. Asthma prevalence was 7% of the geriatric population in UHTC area, and 3% of the geriatric population in RHTC area. Prevalence of chronic bronchitis was 1% of the geriatric population in UHTC area and 2% of the geriatric population in RHTC area. Srinivas et al found that the prevalence of diseases of respiratory system was 4% both in UHTC & RHTC area in their study.[13] Hameed et al reported a very high prevalence of 28% of respiratory diseases in their study. Our findings are similar to findings of Kamble et al report.

Circulatory diseases prevalence was 3% of the geriatric population in UHTC area, and 4% of the geriatric population in RHTC area. GI tract diseases prevalence like acidity was found in 24% of the geriatric population in UHTC area, and 17% of the geriatric population in RHTC area. Constipation prevalence was 2% of the geriatric population in UHTC area and 3% of the geriatric population in RHTC area. Srinivas et al found that diseases of gastrointestinal tract was 2% of the geriatric population in both the UHTC & RHTC areas.[13]

Prevalence of diabetes mellitus was 21% of the geriatric population in UHTC area and 18% of the geriatric population in RHTC area. Srinivas et al found that endocrine & metabolic diseases were 8% of the geriatric population in urban, and 4% rural. Rafiq et al, and Hameed et al study reported lesser prevalence of diabetes i.e. 4% & 5.9% in UHTC & RHTC respectively compared to the findings of the present study.[13,15,16]

Musculoskeletal diseases: Osteoarthritis prevalence was 13% of the geriatric population in UHTC area and 58% of the geriatric population in RHTC area. Spondylitis was 1% of the geriatric population in UHTC area and 2% of the geriatric population in RHTC area. Srinivas et al found that diseases of musculoskeletal was 40% in UHTC area, and 38% in the RHTC area in their study.[13]

29% of the geriatric population in UHTC area and 18% of the geriatric population in the RHTC area had undergone surgeries of any kind. Gynecological diseases like per vaginal bleeding were observed in 15% of the geriatric population in UHTC, and 2% of the geriatric population in RHTC areas. White discharge was seen in 7% of the geriatric population in UHTC, and 5% in RHTC area. Uterine prolapse was seen in 2% females in

UHTC area and 3% in the RHTC area. Present study findings are higher than those observed by Kamble et al and Rafiq et al i.e. 2% & 2.2% respectively.[15,18] Psychological: mentally illness was noted in 1% of the geriatric population in RHTC area. Srinivas et al found that mentally illness was 0.6% in RHTC area in their study.[13]

Cancer was detected in 1% of the geriatric population in UHTC area and 3% in the RHTC area, which was similar to study conducted by Ghosh et al & Rafiq et al study.[15,19]

Neurological diseases like Parkinson's disease was seen in 2% of the geriatric population in RHTC area which is lower than study conducted by Ghosh et al, Hameed et al, Kamble et al, i.e. is 3%, 4.5%, & 4.7% respectively.[16,18,19]

CONCLUSION

Present study found that the addictions or substance use was more common among elderly of the rural areas as compared to their urban counterparts. Almost all diseases were more common in rural elders as compared to the urban elders and this was statistically significant in most of the diseases studied. This may be due to lack of proper health care facilities in the rural areas.

Recommendations

There are misbeliefs and lack of knowledge related to management of dog bite cases. As rabies is 100% preventable disease health education activity for the rural population to be taken for creating awareness about management of dog bite to prevent deaths occurring due to rabies.

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