Int.J.Curr.Microbiol.App.Sci (2019) *8*(4): 1445-1452

International Journal of Current Microbiology and Applied Sciences
***ISSN: 2319-7706* Volume 8 Number 04 (2019)**
Journal homepage: http://www.ijcmas.com

Original Research Article https://doi.org/10.20546/ijcmas.2019.804.169

Age Wise Distribution of Diseases among the Geriatric Population of Sirsa Distric, Haryana, India

Mamta Rani[1]* and Pinky Boora[2]

[1]Department of Home Science, CMG GCW, Bhodiakhera, Fatehabad, India
[2]Department of Foods and Nutrition, COHS, CCS HAU, Hisar-125004, India

**Corresponding author*

Keywords

Ageing, Climate, Diabetes, Heart disease, Osteoarthritis

Article Info

Accepted:
12 March 2019
Available Online:
10 April 2019

A B S T R A C T

Aging can be described as a progressive deterioration of the physical and mental functions resulting in decline in both the capacity of body to maintain homeostatic balance as well as the adaptation of the individual of various stressors of internal and external environment of morbidity and mortality. A sample of three hundred respondents out of which 150 were from urban and 150 from rural area, aged above 60 years and above was selected randomly. The data on required aspects was collected through valid questionnaire schedule. Majority of the respondents (33.33%) were suffering from cataract in the age group of 61 to 70 years followed by 23.67 per cent respondents (28.26% rural and 28.67% urban) and 2.00 per cent respondents (2.67% rural and 1.33% urban) who were in the age group of 71 to 80 years and 81 to 90 years, respectively. Majority of the respondents (19.67%)suffering from diabetes were from age group of 61 to 70 years while 9.00 per cent respondents were in the age group of 71 to 80 years. Maximum number of respondents suffering from diseases (cataract, blood pressure, asthma, diabetes, heart disease and osteoarthritis) was in the age group of 61 to 70 years.

Introduction

Ageing is normal, natural, inevitable, biological and universal phenomenon (Mudey *et al.*, 2011). Aging is multi-dimentional change involving the physical, psychological as well as social aspects for an individual. Ageing is generally defined as "a process of deterioration in the functional capacity of an individual that results from structural changes, physiological changes and ongoing accumulation of chronic pathological processes and reduced efficiency of the adaptive mechanism to environmental factors with advancement of age". Both the number and proportion of older persons are growing in all countries; the trends are likely to continue unabated. Ageing of the population is occurring throughout the world, more rapidly in developing countries. Globally, the number of persons aged 60 and above is expected to more than double by 2050 and more than triple by 2100, increasing from 901 million in 2015 to 2.1 billion in 2050 and 3.2

billion in 2100. Sixty-six per cent of the increase between 2015 and 2050 will occur in Asia (UN, 2015; WHO, 2015). The elderly population is diverse in terms of its resources, needs and abilities. As the overall number of elderly increasing, a corresponding rise in numbers of older persons with disabilities is increasing which means dependency in carrying out activities which are essential to independent living, including tasks needed for self-care at home and social role in community. The problems associated with aging of population are that of the absence of the facilities as well as lack of various securities such as lack of social, familial, economical, health and spiritual or emotional securities. Elder should not ensure just their survival rather they must sustain their productivity and enjoy reasonable standard of life. The importance and vulnerability of elderly population has been recognised in recent years and there is lack of studies in this field in the region.

The main objectives of this study include to assess the distribution of diseases among geriatric respondents. And also to assess treatment seeking behaviour of geriatric respondents

Materials and Methods

Selection of the respondents

The present study was conducted on geriatric population in the age group of above 60 years. Three hundred elderly respondents (above 60 years) were selected randomly from Sirsa district. The two blocks i.e. Sirsa rural and Sirsa urban in Sirsa district, were selected purposively. Out of these, four villages viz. Darbi, Moriwala, Rasulpur and Sikanderpur from Sirsa Rural block and Farm Colony, Harivishnu Colony Khairpur, MC Colony and Shah Satnam Colony area from Sirsa urban block were selected randomly. To draw a sample of both urban and rural areas, 150 respondents from urban and 150 respondents from rural area were selected.

Variables and their measurements

A variable is a set of value that forms a classification. A value is anything which can be predicted. Considering ability of the variables in accordance with the objectives of the study, a series of independent variables were included for the present investigation. The age, sex, occurrence of disease, age at the appearance of disease, treatment of disease, status of disease (under control with medical treatment or not) daily activity, number of diseases were measured as the independent variables.

Statistical analysis

The qualitative data were quantified according to the standard methods. The qualitative and quantitative data were tabulated to draw meaningful inferences. The data was analysed with the help of percentage, mean and standard deviation.

Results and Discussion

Distribution of disease (s) and risk factors among the geriatric respondents

The geriatric respondents were asked about various chronic diseases among urban and rural respondents. Cataract was more prevalent among rural (58.00%) respondents than that of urban respondents (53.33%). Seventy four percent of urban respondent and 40.67 per cent of rural respondents were suffering from blood pressure problem while 42.67 per cent respondents (59.33% rural and 26.00% urban) were not facing any kind of Blood Pressure issue. Table 1 (Fig. 1) represents that majority of the respondents (93.67%; 94.00% rural and 93.33% urban)

were not having Asthma disease, whereas 6.00 percent rural and 6.67 percent urban respondents suffering from Asthma.

Two per cent rural respondents and eleven per cent urban respondents were suffering from renal calculi while 80 per cent (98.00% rural and 78.00 urban) respondents didn't renal calculi. It was observed that 17.33 per cent rural and 34.00 per cent urban respondents were suffering from Diabetes mellitus, whereas 74.33 per cent respondents (82.67% rural and 66.00% urban) were free from Diabetes mellitus. Heart disease was more common among urban respondents (28.67%) than that of rural respondents (19.33%). Seventy six percent respondents didn't reported heart disease. It was reported that 18.00 percent rural and 40.67 percent urban respondents were having other disease while most of the respondents (70.67%; 82.00% rural and 59.33 urban).

Chaudhary *et al.,* (2013), Bhardwaj and Bhardwaj (2016), khushaboo *et al.,* (2015), Kalaiselvi *et al.,* (2016), Karanth and Thalanjeri (2016) reported the similar results which indicated that majority of the respondents were suffering from non-communicable disease such as hypertension, cataract, heart disease, diabetes and osteoarthritis. The consequence of poor dietary regime was reflected in terms of increase in degenerative disease. Degenerative disease are the most common diseases affecting older persons are all diet affected and micronutrient deficiencies are often common in elderly people due to a number of factors such as their reduced food intake and lack of variety in food they eat and later restrictions by doctors. Neglect in nutrition, lack of personal hygiene and care, more preference towards young members act as contributing factors for precipitation of these diseases. Environment and genetics play a major role in its development.

Age wise distribution of disease among geriatric respondents

Among the 300 respondents the time of onset of any disease was different among the respondents. Data in the Table 2 represented that majority of the respondents (33.33%; 33.33% rural and 33.33% urban) were suffering from cataract in the age group of 61 to 70 years followed by 23.67 per cent respondents (28.26% rural and 28.67% urban) and 2.00 per cent respondents (2.67% rural and 1.33% urban) who were in the age group of 71 to 80 years and 81 to 90 years, respectively. Majority of the respondents (41.33%; 23.33% rural and 59.33% urban) were suffering from blood pressure were in the age group of 61 to 70 years, followed by 12.67 per cent respondents (12.67% rural and 12.67% urban) and 3.33 per cent respondents (4.67% rural and 2.00% urban) those were suffering from blood pressure in the age group of 71 to 80 years and 81 to 90 years, respectively.

Asthma was found in maximum number of respondents (2.33%) at the age of 61 to 70 years while in minimum number of respondents (1.00%) at the age of 81 to 90 years of age. Majority of the respondents (19.67%; 13.33% rural and 26.00% urban) suffering from diabetes were from age group of 61 to 70 years while 9.00 per cent respondents were in the age group of 71 to 80 years. Heart disease was occurring at the age of 61 to 70 years of age among the most of respondents (35.67%; 17.33% rural and 18.00% urban) whereas 6.33 per cent respondents (2.00% rural and 10.67% urban) in the age of 71to 80 years, respectively. It was observed that most of respondents suffering from osteoarthritis (18.00%; 11.33% rural and 24.67% urban) were observed in the age group of 61 to 70 years while 9.33 per cent respondents (4.00% rural and 16.00% urban) were found in the age group of 71 to 80years of age.

Tyagi (2007) stated that higher values of blood pressure in elderly witness a relatively high level of anxiety and stress among the elderly. The redistribution of fat in favour of central obesity is found to be responsible for increase cardiovascular diseases (CVD), diabetes, osteoarthritis and other disorders. The female were found to belong to high risk as compared to males. In post-menopausal women the prevalence of centralized fat distribution increases in CVD risk.

Prevalence and medicinal treatment status of the diseases among geriatric respondents

Data presented in the Table 3 represented the number of respondents whose disease were under control with or without medical treatment and whose disease were not in control even with regular medical treatment. Among the cataract patients (n=167) 1.00per cent respondents (1.15% rural and 2.30% urban respondents) were regulating the diseased conditions with medicine and 1.00 per cent respondents (2.30% rural and 1.25% urban respondents) were under control without any medicine. It was observed that 49.67 per cent respondents (90.80% rural and 80.50% urban respondents) were not under control but taking medical treatment while 4.00 per cent respondents (5.75% rural and 8.75% urban respondents) were not under control and not using any medicine. Out of 55.67 per cent respondents 50.67 per cent respondents were taking medicine and 5.00 per cent respondents were not taking medicines to control the severity disease.

Among the patents of blood pressure (57.33%) 0.63 per cent rural respondents were controlling the disease with medicine and 4.92 per cent urban respondents were not using any medicine and disease was under control. It was observed that 14.33 per cent respondents (34.42% rural and 19.81% urban respondents) were taking medicine and not under control whereas 41.67 per cent respondents (29.67% urban and 59.01% rural and 80.18% urban respondents) were not in control and not taking any kind of medicines. Among the 57.33 per cent respondents suffering from blood pressure 14.67 per cent respondents were taking medicine and 42.67 per cent respondents were not taking medicines to control the diseased level.

The asthma patients (n=20) 1.00 per cent respondents (11.11% rural and 18.18% urban respondents) were controlling the severity of the disease with medicine while 0.33 per cent respondents were controlling the disease without medicine. It was observed that 3.33 per cent respondents (66.67% rural and 36.36% urban respondents) were not under control even with the intake of medicines while 2.00 per cent respondents (22.22% rural and 36.36% urban respondents) were not taking medicine and they were not under control level of disease. Among the diabetic patients (n=77) only 2.67per cent respondents (7.69% rural and11.76% urban respondents) were controlling the diseased condition with medicine while 1.67 per cent respondents (7.69% rural and 5.88% urban respondents) were under control without any medical treatment.

Out of 25.67 per cent diabetic patients 18.33 per cent respondents were taking medicine and 7.33per cent respondents were not taking medicines to control the diseased level.

Twenty four per cent respondents (19.33% rural and 28.67% urban respondents) were suffering from heart disease, out of that 10.34 per cent rural respondents and 7.65 per cent urban respondents were taking medical treatment to control the level of severity of disease and 0.67 per cent respondents (3.45% rural and 3.33% urban respondents) were under the control level without any medical treatment.

Table.1 Prevalence of disease (s) and risk factors among the geriatric respondents

(N=300)

Diseases	Rural (n=150)		Urban(n=150)	
	Yes	No	Yes	No
Cataract	87 (58.00)	63 (42.00)	80 (53.33)	70 (23.33)
Blood Pressure	61 (40.67)	89 (59.33)	111 (74.00)	39 (26.00)
Asthma	9 (6.00)	141(94.00)	11(6.67)	139 (93.33)
Renal Calculi	3 (2.00)	147 (49.00)	33 (22.00)	117(78.00)
Diabetes	26 (17.33)	124 (82.67)	51 (34.00)	99 (66.00)
Heart Disease	29 (19.33)	121 (8.67)	43 (28.67)	107 (71.33)
Osteoarthritis	27 (18.00)	123 (82.00)	61(40.67)	89 (59.33)

Values in parentheses indicate percentage

Table.2 Age wise distribution of diseases among geriatric respondents

(N=300)

Diseases	Rural (n=150)		Urban (n=150)	
	Yes	No	Yes	No
Cataract	87 (58.00)	63 (42.00)	80 (53.33)	70 (46.67)
61-70 yrs	50 (33.33)	-	50 (33.33)	-
71-80 yrs	43 (28.26)	-	28 (28.67)	-
81-90 yrs	4 (2.67)	-	2 (1.33)	-
Blood Pressure	61 (40.67)	89 (59.33)	111 (74.00)	39 (26.00)
61-70 yrs	35 (23.33)	-	89 (59.33)	-
71-80 yrs	19 (12.67)	-	19 (12.67)	-
81-90 yrs	7 (4.67)	-	3 (2.00)	-
Asthma	9 (6.00)	141(94.00)	11(6.67)	139 (92.33)
61-70 yrs	5 (3.33)	-	6 (4.00)	-
71-80 yrs	2(1.33)	-	4(2.67)	-
81-90 yrs	2(1.33)	-	1(0.67)	-
Renal Calculi	3 (2.00)	147 (49.00)	33 (22.00)	117(39)
61-70 yrs	3 (2.00)	-	26 (17.33)	-
71-80 yrs	-	-	6 (4.00)	-
81-90 yrs	-	-	1 (0.67)	-
Diabetes	26 (8.67)	124 (82.67)	51 (34.00)	99 (66.00)
61-70 yrs	20 (13.33)	-	39 (26.00)	-
71-80 yrs	6 (4.00)	-	12(8.00)	-
81-90 yrs	-	-	-	-
Heart Disease	29 (9.67)	121 (40.33)	43 (28.67)	107 (35.67)
61-70 yrs	26 (0.67)	-	27 (18.00)	-
71-80 yrs	3	-	16 (10.67)	-
81-90 yrs	-	-	-	-
Osteoarthritis	27 (18.00)	123 (82.00)	61 (40.67)	89(59.33)
61-70 yrs	17 (11.33)	-	37 (24.67)	-
71-80 yrs	5(3.33)	-	24 (16.00)	-
81-90 yrs	1(0.67)	-	-	-

Values in parentheses indicate percentage

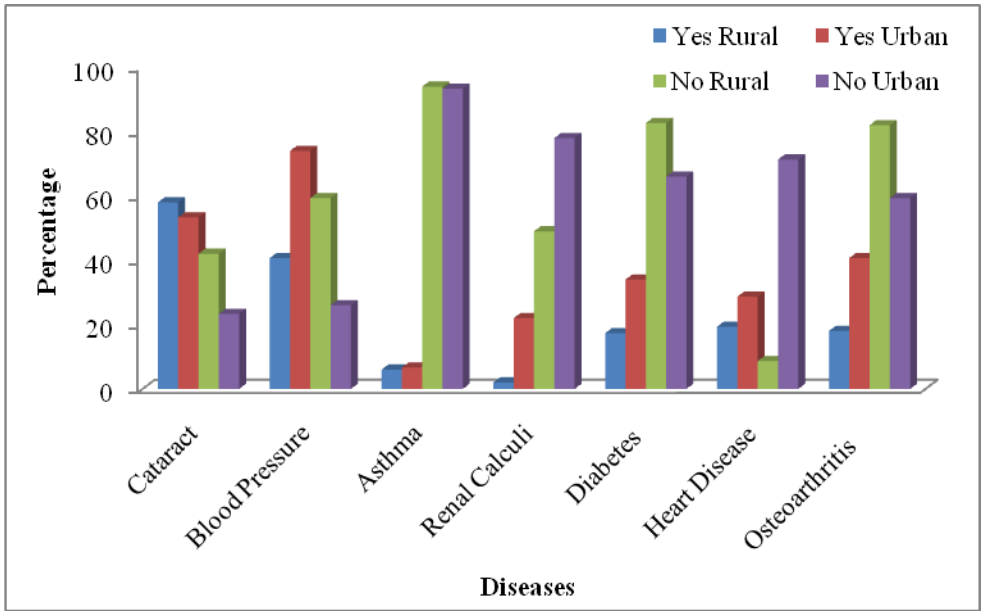
Table.3 Prevalence and medical treatment status of the disease (s) and risk factors in geriatric respondents

(N=300)

Diseases	N	Rural (n=150)					Urban (n=150)					Status (%)	
		Total	Under control		Not under control		Total	Under control		Not under control			
			UM	NUM	UM	NUM		UM	NUM	UM	NUM	UM	NUM
Cataract	167 (55.67)	87 (58.00)	1 (1.15)	2 (2.30)	79 (90.80)	5 (5.75)	80 (53.33)	2 (2.50)	1 (1.25)	70 (87.50)	7 (8.75)	152 (50.67)	15 (5.00)
Blood pressure	172 (57.33)	61 (40.67)	1 (0.63)	3 (4.92)	21 (34.42)	36 (59.01)	111 (74.00)	-	-	22 (19.81)	89 (80.18)	44 (14.67)	128 (42.67)
Asthma	20 (6.67)	9 (6.00)	1 (11.11)	-	6 (66.67)	2 (22.22)	11 (7.33)	2 (18.18)	1 (9.09)	4 (36.36)	4 (36.336	13 (4.33)	7 (2.33)
Renal calculi	36 (12.00)	3 (2.00)	-	-	2 (5.56)	1 (2.78)	33 (22.00)	-	3 (9.00)	26 (78.79)	4 (12.12)	28 (9.33)	8 (2.67)
Diabetes	77 (25.67)	26 (17.33)	2 (7.69)	2 (7.69)	20 (76.92)	2 (7.69)	51 (34.00)	6 (11.76)	3 (5.88)	27 (52.94)	15 (29.41)	55 (18.33)	22 (7.33)
Heart disease	72 (24.00)	29 (19.33)	3 (10.34)	1 (3.45)	19 (65.52)	6 (20.69)	43 (28.67)	2 (7.65)	1 (3.33)	32 (74.41)	17 (39.53)	37 (12.33)	25 (8.33)
Osteoarthritis	88 (29.33)	27 (9.00)	1 (3.70)	7 (25.93)	12 (44.44)	7 (25.93)	61 (40.67)	5 (8.20)	8 (13.11)	35 (57.38)	18 (29.51)	53 (17.67)	35 (11.67)

Values in parentheses indicate percentage UM: Under Medical treatment, NUM: Not Under Medical treatment

Fig.1 Prevalence of disease (s) and risk factors among the geriatric respondents



Seventeen per cent respondents (65.52% rural and 74.41% urban respondents) were not under control level of disease with the use of medicine while 7.67 per cent respondents (20.69% rural and 39.53 % urban respondents) were not under control level of disease and not taking any kind of disease to control it. It was observed that 37 respondents (12.33%) were taking medicine to control the heart disease level while 25 (8.33%) respondents (8.33%) were not taking any kind of medicine to control the condition of the heart disease.

Eighty eight respondent were suffering from osteoarthritis, out of them 2.00 per cent respondents (3.70% rural and 8.20% urban respondents) were controlling the severity level by use of medicines while 5 per cent respondents (25.93% rural and 13.11% urban respondents) were not taking any kind of medicine, were under control level. Twelve rural respondents (44.44%) and 35 urban respondents (57.38%) were taking medicine but not under control level while 7 rural (25.93%) and 18 urban respondents (29.51%) were not taking any kind of medical treatment to control the level of disease. It was observed that out of 88 patients 17.67 per cent respondents were taking medical treatment and 11.67 per cent respondents were not taking any kind of medical treatment to control the severity of disease. Majority of the respondent were taking medical treatment to control severity of disease (cataract, asthma, renal calculi, diabetes, heart disease and osteoarthritis). Chaudhary *et al.*, (2013) observed that treatment seeking behavior was more prevalent for heart diseases (90%) and diabetes (92%) as compared to others viz. visual problems (20%), joint complains (54%) and memory loss (13%).Majority of the respondents (71%) went for the health check-up as and when required while only 29 per cent of them visit the health facility for the regular check-up and most of the people don't go for regular health check ups.

In conclusion, majority of rural and urban respondents were suffering from blood pressure (57.33%) followed by 55.67per cent (cataract), 29.33 per cent (osteoarthritis), 25.67 per cent (diabetes), 24.00 per cent (heart disease), 12.00 per cent (renal calculi) and 6.67 per cent (asthma). Maximum number of respondents suffering from diseases was in the age group of 61 to 70 years. Majority of the respondent were taking medical treatment to control severity of

disease (cataract, diabetes, heart disease and osteoarthritis). Changing Environmental conditions, contaminated foods (Residual wastes and pesticides) and changing life style along with socio-demographical factors (nuclear families) are the key factors affecting health status of elderly. Hence, there is urgent need to emphasis geriatric nutrition and health care services and social support along with emotional care.

References

Bartwal, J., Rawat, C.M.S. and Awasthi, S. 2016. Nutritional status of elderly in rural areas of Haldwani, Nainital district of Uttarakhand. *Int. Journal of Community Med. Public Health*, 3: 687-691.

Bhardwaj, T. and , Bhardwaj, S. 2016. Health needs of the elderly in rural area of Lalitpur district of Uttar pradesh. *Indian Journal of Gerontology*, 30(3), 321-355.

Chaudhary, M., Khandhedia, S., Dhaduk, K., Unadkat, S., Makwana, N. and Dipesh, P.2013.Morbidity pattern and treatment seeking behavior of geriatric population in Jamnagar city India. *Journal of Research in Medical and Dental Science,*1 (1), 12-16.

Kalaiselvi, S., Arjumand, Y., Jyalakshmy, R., Gomathi, R., Pruthu, T. and Palanivel, C. 2016. Prevalence of under-nutrition, associated factors and perceived nutritional status among elderly in a rural area of Puducherry South India. *Archives of gerontology and Geriatrics*, 65, 156-160.

Karanth. H. and Thalanjeri, P. 2016. A retrospective study of morbidity pattern in geriatric women of coastal Karnataka. *International Journal of Medical Sciences and Public Health*, 5(10), 2146-2149s.

Khushaboo, T., Neeru, B., Verma, A. and Sheikh, S.2017. Nutritional status and dietary pattern in elderly people of Trans Yamuna area of Allahbaad. *Worlds Journal of Pharmacy and Pharmaceutical Sciences*, 4(10), 1142-1155.

Mundey, A., Ambekar, S., Goyal, R. C., Agarekar, S. and Wagh, V. V. 2011. Assessment of quality of life among rural and urban elderly population of Wardha district, Maharashtra, India. *Ethno Med*, 5(2), 89-93.

National Institute on Aging, National Institutes of Health. United States: NIH Publication. 2011. Global Health and Ageing.

NFHS. 2000. National Family Health Survey Mumbai. India: International Institute of Population Sciences and ORC Macro.

Sheoran, O.P. and Pannu, R. S.1999. Statistical package for agricultural work."O.P. Stat" College of Agriculture, Kaul, CCS HAU, Hisar.

Tyagi, R. 2007. Body composition and nutritional status of institutionalized and non institutionalized senior citizens. *Intensive course in Biological Anthropology*. 1st summer school of the European anthropological association, 16-30 June, Prague, Czech Republic, EAA Summer School eBook, 1, 225-231.

UN. 2015. United Nations, Department of Economic and Social Affairs, Population Division. World Population Prospects: The 2015 Revision, Key Findings and Advance Tables. Working Paper No. ESA/P/WP.241.

WHO. 2015. World report on ageing and health.

How to cite this article:

Mamta Rani and Pinky Boora. 2019. Age Wise Distribution of Diseases among the Geriatric Population of Sirsa Distric, Haryana, India. *Int.J.Curr.Microbiol.App.Sci.* 8(04): 1445-1452.
doi: https://doi.org/10.20546/ijcmas.2019.804.169