



## ORIGINAL RESEARCH ARTICLE

### STUDY OF THE HEALTH STATUS OF GERIATRIC AGE GROUP IN CHITWAN DISTRICT OF NEPAL

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#### ABSTRACT

Retirement, change in housing, illness or death of spouse greatly affect the physical and mental well-being of the geriatric person. This study aims to find out the health status of geriatric age group in chitawan district of Nepal. A cross sectional study was carried out among 300 geriatric people where 15.7% of the geriatric were living alone, 50.3 % and 39.7% of geriatrics gave history of regular use of tobacco and alcohol respectively. Co-morbidities were found in 63% of geriatrics who suffered from 2 or more diseases. In Total 44% were found to have Ophthalmic problems, 23% were found to have ENT problems, 5.33% were found to mental disorders, 33% were found to have CVS problems, 43% were found to have GI problems, 15.67 % were found to have Metabolic disorder. The study highlighted a high prevalence of morbidity and health related problems in geriatric age groups.

**Key words:** Chitwan, Disease, Geriatrics, Health status, Life style, Morbidity.

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#### INTRODUCTION

The Geriatric population is defined as population aged 60 years and above. Population aging and the growing number of elderly persons are most important demographic changes to emerge in the final decades of the twentieth century. Today, worldwide, there are around 600 million persons aged 60 years and above. It is estimated that this total will double by 2025 and will reach virtually two billion by 2050<sup>1</sup> and the vast majority of them will be in the developing world. Geriatrics is the branch of medicine that deals with the diseases of old age. Geriatrics involves treating acute illnesses as well as managing the rehabilitative and long-term care of the aged.

In Nepal, people above 60 years are considered as elderly. According to the census of 2011, 9.1 percent among the total population was covered by the people above the age of 60 years that was only 6.5 percent in 2001. The elderly population in Nepal is growing steadily at the rate of 3.39% per year. It is projected that the proportion of the elderly population will be

doubled in 2017 on the basis of that we can say that Nepal is already in the process of population ageing with the demographic transition period. As the relative size of the population of elderly is continuously increasing the elderly dependency rate computed for different time periods shows increasing trend from 7.5% in 1911 to 12.01% in 2011<sup>2</sup>.

Older people are veteran and have good experiences in different fields of activities. They can well lead the community but it is true that childish nature goes on increasing in old age. So, they fail to take care of their health. They also become unable to give priority to their health. They suffer from many kinds of diseases like Asthma, Stomach problem, Hypertension, Diabetes, Prolapsed Uterus, Ulcer, Body Pain, Digestive Disorder, Bone Fracture and many other diseases. Family member like son, daughter, son in law, daughter in law, brother, wife etc. must be responsible for their health because they are unable

to care themselves due to their physical, mental and economic weakness<sup>3</sup>.

The growing number of elderly population is becoming one of the great social challenges over the past few years. Nuclear family, urbanization, modernization and social strains like poverty and economic insecurity are eroding the family support system leaving old people to take care of themselves. They are thus seen as a burden on family's scarce resources. We are facing bitter reality that the population of older people is increasing day by day on the one hand and on the next, this population is fighting against various problems like insecurity, hate from family and society, under care for food, lodging, clothing, medicine and treatment. In one of the study it was found that Senior citizens have Asthma and Hypertension as the major health problems. A study conducted in the old people's home at Kathmandu reported almost 10% of the residents suffered with arthritis. An equal number of the residents were found affected by various infections that included eye, chest, urinary tract, cellulites and fungal infections. Other general problems that were observed included hernia, uterine prolapse, fracture, prostate enlargement, indigestion, fever, body-ache, joint pain, stomach pain, constipation, cough, allergies, pulmonary cancer, piles and varicose veins<sup>4</sup>.

Regarding the health of elderly: Jeshtha Nagarik Swasthachar Sewa Karyakram Karyanyowan Nirdeshika 2061BS (Senior Citizens Health Facilities Program Implementation Guideline, 2061BS) was adopted by the council of ministers on 2061 Bhadra, which attempts to provide medical facilities to the old age people. The government has provision to establish Jeshtha Nagarik Swasthachar Kosh (Senior Citizens Health Facilities Fund) in each district. The government allocates some fund each year for each district for the purpose. Following the "Senior Citizens Health Facilities Program Implementation Guideline, 2061BS", the poverty affected elderly people are provided free medicine and treatment up to NRs.2000 at a time in all 75 districts from the fund. The Government has proclaimed through the budget speech of fiscal year 2066/ 67 that the government will provide free health service for heart and kidney patient of 75 years and above age. The fiscal year (2066/67) budget also has provision to establish one health center for the elderly "Aarogya Aashram" in each of the five development regions of the coun-

try. Now the government has launched Free Health Service Program and the elderly can also be benefited from the programme<sup>5</sup>.

The aged feel a sense of social isolation because of disjunction from various bonds such as, working relationships, diminish of relatives and friends, mobility of children to far off places for jobs. The situation of the elderly still worsens when there is presence of chronic diseases, physical incapacity and financial stringency. The present study is to understand the health problems of geriatric and analyze them. Objective of our study is the situational analysis of the health profile and health related problems of the geriatrics living in Chitwan district.

## MATERIALS AND METHODS

The cross sectional study was carried out in Chitwan district as increased trend of modernization is affecting the life style and behaviors of people and less attention is being paid towards the geriatric care. Bharatpur Municipality was selected purposively in Chitwan district. The present study was conducted from October 2012 to October 2013. Altogether 300 geriatrics, from 150 households selected randomly, more than 60 years of age were included in study. Equal numbers of male and female were taken and from a household only one male and one female were taken. Predesigned, pretested questionnaire was used for the study.

Prior written consent was taken from the concerned authority. Before data collection, informed consent was obtained from each respondents. Each individual in the study was subjected to personal interview and general clinical examination and findings were recorded on proforma. Informations related to chronic diseases, if present, were reported based on their reports of investigation done by their physician/doctor or file of patient. Data entry and data analysis was done in Epi-info software version.

## RESULT

Out of 300 respondents, equal numbers of male and female were taken (male 150, female 150). 134(44.6%) were in age group 60-65 years, 77 (25.7%) were in age group 66-70 years, 62(20.7%) were in age group 71-75 years, 27(9%) were in age group >75 years. 39.7% of the geriatric were literate and 66.7% of the geriatric were living with their family. (Table 1)

	Characteristics	Variables	Number	Percentage
1	Sex	Male	150	50
		Female	150	50
2	Age group	60-65 years	134	44.6
		66-70 years	77	25.7
		71-75 years	62	20.7
		>75 years	27	9
3	Marital Status	Married	199	66.3
		Widower/widow	97	32.2
		Divorced	2	0.7
		Unmarried	2	0.7
4	Literacy	Literate	119	39.7
		Illiterate	181	60.3
5	Socio-economic status	High	59	19.7
		Middle	110	36.7
		Low	131	43.6
6	Living Condition of household	Alone	47	15.7
		With other family members	200	66.7
		With spouse	53	17.6

It was found that 81.7 % of the persons were vegetarian, 50.3% of the respondents reported that they were the current tobacco user whereas 39.7% of the geriatric were consuming alcohol. 64.3% of the subjects were involved in yoga and religious activities daily. Co-morbidities were found in 63.33 % of geriatric who suffered from 2 or more diseases.

**Table 2: Personal and Behavioral characteristic of respondents**

	Characteristics	Variables	Number	Percentage
1	Food Habit	Vegetarian	245	81.7
		Non-vegetarian	55	18.3
2	Time spent on yoga and religious activities	Always	193	64.3
		Sometimes	101	33.7
		Rarely	6	2
3	Consumption of tobacco	Always	151	50.3
		Never	149	49.7
4	Consumption of alcohol	Always	119	39.7
		Never	181	60.3
5	Co-morbidities	1 disease	100	33.33
		2 disease	165	55
		3 disease	15	5
		>3 disease	10	3.33

**Table 3: Distribution of respondents as per Ophthalmic problems**

S.N.	Type of Ophthalmic Problems N= 134	Male (n=150)	Female (n=150)	Total (n=300)
1	Total Blindness	3 (2)	1 (0.7)	4 (1.3)
2	Blur Vision	14 (9.3)	31 (20.67)	45 (15)
3	Cataract	31 (20.67)	25 (16.67)	56 (18.67)
4	Defective Eye sight	8 (5.33)	8 (5.33)	16 (5.33)
5	Diabetic Retinopathy	5 (3.33)	2 (1.33)	7 (2.33)
6	Glaucoma	1 (0.67)	3 (2)	4 (1.33)
7	Night Blindness	2 (1.33)	0 (0)	2 (0.66)
	<b>Total</b>	<b>62 (41.33)</b>	<b>70 (46.67)</b>	<b>132 (44)</b>

In total 132(44%) of the geriatrics were found to be suffering from Ophthalmic problems includes problems of cataract (18.67%), Blur vision (15%) and others. (Table 3)

**Table 4: Distribution of respondents as per ENT problems.**

S.N.	Types of ENT Problems N= 69	Male (%)	Female (%)	Total (%)
1	Deafness	12 (8)	5 (3.33)	17 (5.67)
2	Partial Deafness	11(7.33)	14 (9.33)	25 (8.33)
3	Chronic Tonsillitis	3 (2)	5 (3.33)	8 (2.67)
4	Otitis Media	6 (4)	7 (4.67)	13 (4.33)
5	Migrane	0 (0)	6 (4)	6 (2)
	<b>Total</b>	<b>32 (21.33)</b>	<b>37 (24.67)</b>	<b>69 (23)</b>

In total 69(23%) of the geriatrics were found to have ENT problems including 25 (8.33% partial deafness, 17 (5.67%) deafness and others. (Table 4)

**Table 5: Distribution of respondents as per Mental Disorder**

S.N.	Types of Mental Disorder N= 16	Male (%)	Female (%)	Total (%)
1	Depression	4 (2.67)	5(3.33)	9 (3)
2	Forgetfulness	4 (2.67)	3 (2)	7 (2.33)
	<b>Total</b>	<b>8 (5.33)</b>	<b>8 (5.33)</b>	<b>16 (5.33)</b>

Out of total 300 respondents, 16(5.33%) of them reported to have mental disorder which includes Depression and forgetfulness.

**Table 6: Distribution of respondents - as per CVS problems**

S.N.	Types of CVS Problems N=99	Male (%)	Female (%)	Total (%)
1	MI	0 (0)	2 (1.33)	2 (0.67)
2	Hypertension	45 (30)	50 (33.33)	95 (31.67)
3	Low Blood Pressure	1 (0.67)	1 (0.67)	2 (0.67)
	<b>Total</b>	<b>46 (30.67)</b>	<b>53 (35.33)</b>	<b>99 (33)</b>

Out of total geriatrics, 99(33%) of them were found to be suffering from CVS problems including hypertension 95(31.67%) followed by MI and low blood pressure.

**Table 7: Distribution of respondents as per GI problems**

S.N.	Types of GI Problems N=129	Male (%)	Female (%)	Total (%)
1	Gastric Irritation	44 (29.33)	73 (48.67)	117 (39)
2	Duodenal Ulcer	1(0.67)	0 (0)	1 (0.33)
3	Gastric Ulcer	1(0.67)	0 (0)	1 (0.33)
4	Chronic Colitis	9 (6)	1 (0.67)	10 (3.33)
<b>Total</b>		<b>55 (36.67)</b>	<b>74 (49.33)</b>	<b>129 (43)</b>

Out of 300 respondents, 129(43%) were found to have GI problems, includes 117(39%) Gastric Irritation, 10(3.33%) chronic colitis and others.

**Table 8: Distribution of respondents as per Metabolic Disorder**

S.N.	Types of Metabolic Disorder N=47	Male (%)	Female (%)	Total (%)
1	IDD Goiter	1 (0.67)	1 (0.67)	2 (0.67)
2	Diabetes Mellitus	33 (22)	12 (8)	45 (15)
<b>Total</b>		<b>34 (22.67)</b>	<b>13 (8.67)</b>	<b>47 (15.67)</b>

Out of total 300 respondents, 47(15.67%) were found to have metabolic disorders including 45(15%) diabetes mellitus followed by IDD goiter.

**Table 9: Distribution of respondents as per Urinogenital problems**

S.N.	Types of Urinogenital Problems N= 115	Male (%)	Female (%)	Total (%)
1	UTI	20 (13.33)	22 (14.67)	42 (14)
2	Enlargement of Prostate gland	11 (7.33)	0 (0)	11 (3.67)
3	Frequent Micturition	25 (16.67)	18 (12)	43 (14.33)
4	Incontinence	10 (6.67)	5 (3.33)	15 (5)
5	Prolapsed Uterus	0 (0)	1 (0.67)	1 (0.33)
6	Renal Failure	0 (0)	1 (0.67)	10.33
7	Stones in Kidney	0 (0)	3(2)	3 (1)
<b>Total</b>		<b>66 (44)</b>	<b>49 (32.67)</b>	<b>115 (38.33)</b>

Among the total geriatrics, 115(38.33%) were found to be suffering from Urine genital problems includes UTI, enlargement of prostate gland, frequent micturition, incontinence and others.

**Table 10: Distribution of respondents as per Musculoskeletal Problems**

S.N.	Type of Musculoskeletal Problems N=107	Male (%)	Female (%)	Total (%)
1	Neuritis	14 (9.33)	18 (12)	32 (10.67)
2	Arthritis	30 (20)	34 (22.67)	64 (21.33)
3	Gout	5 (3.33)	6 (4)	11 ( )
<b>Total</b>		<b>49 (32.67)</b>	<b>58 (38.67)</b>	<b>107 (35.67)</b>

Nearly 107(35.7%) of the respondent had musculoskeletal problems including neuritis, arthritis and gout.

## DISCUSSION

Across the world, countries are experiencing population ageing. The growth rate of the elderly population is more rapid in developing countries like Nepal than in developed countries. Apart from demographic transitions, socio-economic and political changes together with increased individualism have altered living conditions of the elderly.

Education has great influence on the awareness of lifestyle which ultimately has an impact on the health and wellbeing in the elderly age. This study revealed that 39.7% of the geriatric people were literate. Similarly, Raju Siva reported that in India literacy was 53 per cent among elderly males and only 20 per cent among elderly females <sup>6</sup>. Our study shows 32.2% of geriatric were widow/widower. The loss of the spouse, loneliness among the elderly widows whose social network has already been reduced, affects the elderly widows' quality of life and they become more vulnerable to loneliness. In the study done by Carrie Steckl, it shows widows and widowers had a 66% increased chance of dying within the first three months after a spouse's death. Although social support buffers the effects of loneliness such as mental problems, depression, insomnia and hallucinations of the dead, widows have lower levels of social support than married individuals.

Co-morbidities (with 2 or more diseases) were common among 63.33% of geriatrics which is found quite high in the study done by Bhatia SPS and Swami HM <sup>7</sup>, where 91% had one or more health related problems. In our study total 132(44%) of the geriatrics were found to be suffering from Ophthalmic problems like cataract (18.67%), Blur vision (15%). For instance, in a study by Kaur et al. (1987) <sup>8</sup>, a majority of elderly persons reported poor eye sight (48 percent), Nair (1989) <sup>9</sup> found that 6 % of the respondents of are study were totally or partially blind.

Our study observed 69(23%) of the geriatrics were having ENT problems that includes 25 (8.33%) partial deafness, 17 (5.67%) deafness, similar result was found in the study done by Nair (1989) where about 3% hard of hearing. Compared to our study, where 16(5.33%) reported to have mental disorder which includes Depression and forgetfulness, higher prevalence rate of depression have been reported in Taiwanese community i.e., 21.2% in a study size done by Chong et al in our study <sup>10</sup>.

In this study 99(33%) geriatric were found to be suffering from CVS problems including hypertension 95(31.67%) followed by MI and low blood pressure whereas in a community based study carried out in South India by ICMR in 1984 <sup>11</sup>, among the major causes of morbidity enumerated Cardiovascular disorder was found (16.1%). A study done by Moharana PR et al., among the geriatric population in Chan-

digarh, showed the prevalence of hypertension as 51% and diabetes as 36% <sup>12</sup>. In our study 47(15.67%) were found to have metabolic disorders including 45(15%) diabetes mellitus followed by IDD goiter. This is much contrast to the finding in the study done by Chhetri MR in urban and rural areas of Kathmandu valley where overall diabetes prevalence of 25.9% was detected <sup>13</sup>.

Our study has found 115(38.33%) geriatric to be suffering from Urinogenital problems including UTI, enlargement of prostate gland, increased frequency of micturition, incontinence and others which is found much more higher than the study conducted in rural area of Varansi district and Rajasthan where prevalence of genito urinary disorder was 5% and 2% respectively <sup>14,15</sup>.

Our study has shown that 107(35.7%) of the respondent had musculoskeletal problems including neuritis, arthritis and gout whereas in the study conducted by Deepak Sharma et.al, the most frequent health problem was musculoskeletal problem affecting 220 (55%) elderly <sup>16</sup>.

## CONCLUSION

Increased life expectancy, rapid urbanization and lifestyle changes have led to an emergence of varied problems for the elderly in Nepal. Although this study has mainly focused on the health issues of the geriatrics, it must be remembered that complete health care to the geriatrics is possible only by comprehensive and multidisciplinary approach. The study has also shown certain specific factors that influence the health status among the geriatrics. Drawing up a policy statement in welfare of an ageing population should be followed.

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