

A Cross Sectional study on Health Profile and associated socio-demographic factors in an Urban Geriatric Population

Rupam Kumar¹, Kanishka Kumar², Usha Ranganthan³

1. Assistant Professor, Community Medicine, B.R.D. Medical College, Gorakhpur
2. Assistant Professor, General Medicine, AIIMS, Gorakhpur
3. Professor & Head, Community Medicine, G.G.M.C., Mumbai

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I. Introduction :

India became a part of 'greying nation' i.e. nation with more than 7% of population above 60 years in 2001.⁽¹⁾ Ageing is a natural process without an absolute beginning point at any given stage of life.⁽²⁾ However for practical purposes, most nations consider the age of retirement as the cut-off to declare an individual as a senior citizen. Most often the presentation of diseases in elderly are atypical as the 'weaker' organs are vulnerable and differ from the newly affected organ, thus altering the clinical presentation of the common disease. Musculoskeletal system and lower urinary tract are most commonly the 'weaker' organs in addition to the brain. Therefore, it's not uncommon to see an elderly suffering from pneumonia presenting with confusion and urinary incontinence rather than high fever and cough.⁽³⁾ This study aims to describe the health status using morbidity indicators and find an association with socio demographic factors if there exists any of the elderly living in an urban community.

Materials & Methods: Approval for conduction of study was taken from the Institutional Ethics Committee and Board of Research Society Committee. The study area was visited to informally interact with few members from the community in order to build rapport with the study population. The study was conducted among the families living in the staff quarters of class III and class IV workers within the campus of a tertiary care hospital. Houses of every building of the staff quarters were visited starting from room no 1 till the last room of the building. All eligible elderly fulfilling the inclusion criteria, present at the time of visit to each house were recruited in the study. Any elderly who were found to be not staying in the campus for the last one year and merely visiting their family/friends in the campus at the time of visit were not enrolled. The total sample identified were 143 study subjects of whom 3 did not give consent and 2 were unavailable at the time of visit. Therefore, a total of 138 was taken as sample size. After recruitment, an informed consent was taken from every individual in their local language. One-to-one interview was conducted using a semi-structured questionnaire validated by subject experts. Statistical analysis : Data thus collected was compiled & analysed using Microsoft Excel 2019 (16.0.12026.20334) 32-bit. Descriptive statistics were used to describe the socio-demographic profile, health status and health seeking behaviour of study subjects with appropriate tabular and graphical representations. Association between different variables was tested by Chi-square test and Fisher Exact test when the value of 20% of cells of expected frequencies were <5 at the level of 0.05 significance.

Results: In this study, the aged population was divided into three groups. Group 1 consisted of a study population whose age ranged from 60 years to 69 years. Anyone who had completed 69 years and was even a day older than 69 was considered in group 2. Group 2 study population ranged from 70 to 79 years and Group 3 comprised all who were above 79 years. Table 1 comprehensively describes the socio-demographic details of the study population. Mean age of all study subjects was 67.4 ± 7.9 years. Out of 138 respondents 52 (38%) were male and 86 (62%) were females. Only 4% of males in contrast to 35% females were illiterate. More females (79%) were widowed as compared to males (27%) in the study population. Among all males, only 4 (8%) were employed at the time of the study and the rest 92% were retired. Three-fourth of the respondents reported having an independent source of income like pension, salary, self-employment viz. business, farming and beneficiaries of government schemes and all of them were included in 'self'. Twenty-two females (26%) were solely dependent on family members for their finances whereas only 8 males (15%) were without personal income.

The health profile is depicted in Table 2. Among those who reported using habit-forming substances, the most common was chewable tobacco by 38% of males and 70% females followed by drinking by 19% of

males. One in every ten males admitted to be current smokers. Almost three-quarters of the study population of group 1 and group 2 had musculoskeletal disorders whereas as high as 91% of study subjects in group 3 (80 and above) were suffering from musculoskeletal problems. A higher number of females (84%) than males (65%) suffered from musculoskeletal problems at the time of study. Pain of knee joint was the commonest cause of musculoskeletal pain with 55% respondents complaining of knee joint pain followed by back pain (35%) and pain in neck and shoulders (14%). A quarter of study subjects complained of multiple sites of musculoskeletal pain. Thirty-eight (28%) respondents were hypertensives and 22 (16%) were diabetics. Six (4%) were suffering from both diabetes and hypertension in this study. Ischaemic heart diseases were present in 6% of subjects. Table 3 lists other morbidities in which 14% respondents recorded hypercholesterolemia, urinary incontinence and flatulence in males and prolapse, depression and insomnia in females. And 35% of respondents were without any existing diagnosed morbidity. Sixty-five percent of elderly population had at least one morbidity. Among the respondents with morbidities, 45% had only one morbidity. Six percent had 3 or more existing morbidities. Majority (68%) study participants had undergone at least one surgery in their lifetime. The commonest surgery undergone by the study population was cataract removal (43%). Hysterectomy was conducted in 28% of females. Common surgeries included hernia surgery, kidney and gall stone removal, and appendectomy. Others here include tympanoplasty, tonsillectomy, intestinal obstruction surgery in all study participants and mastectomy in females only.

Most common cause of fall in elderly is due to imbalance. In this study, 20 (14%) respondents had a history of fall in the last one year. Eighteen (21%) females in contrast to 2 (4%) males gave a positive history of fall which was statistically significant. Although the history of fall was given only by 14% of the study population, 29% of them said that they faced difficulty in moving around on a daily basis mainly due to physical disability. Almost half of widows admitted to having negative feelings. Gender significantly influenced the presence of pessimistic feelings. More females admitted to having pessimistic feelings.

Figure 1 represents the findings of general examination. Figure shows that 8% of males while 37% of females had pallor and the difference was statistically significant. Of all the findings on general examination, 26% of elderly population had pallor and 10 (7%) respondents had oedema. Greater number of males (12) than females (2) had loss of tooth i.e. total 6% of subjects were edentulous. Four (3%) had cataract and clubbing and dyspnoea was present in 1% of subjects each.

Discussion: The age and gender distribution of the study population was similar to other studies viz. that of Warbhe Priya A. et. al.⁽⁴⁾ with a majority in the age group of 60 to 69 years and more females than males. This is in sync with national demography.⁽¹⁾ This study reported that more females are illiterate which is a similar finding in other studies like that of Shraddha K. et. al.⁽⁵⁾ and Rupali A. Patle et. al.⁽⁶⁾. Like many previous studies, more females were widowed as compared to males even in the study population and the difference was found statistically significant. This indicates longer life-expectancy for females which is in line with the national averages. Employment status is an indicator of economic independence which enhances the motivation to seek health care. More number of females who were employed currently were working in the unorganised sector like baby-sitting and domestic help. It was observed that 38 (44%) females were never ever gainfully employed in their lifetime in contrast to males who were 100% gainfully employed resulting in a wide gap and significant difference in the health profile amongst males and females.

Health morbidities highlighted that non-communicable disease burden is most prevalent in the geriatric population of urban settings. High usage of chewable tobacco was reported in females probably due to a common practice observed of using tobacco in the form of "Misri" for brushing their teeth. Musculoskeletal disorders was a common finding among the study population which increases with advancing age. The study conducted by Dhananjay Kumar et. al.⁽⁷⁾ also reported that more females complain of musculoskeletal disorders than males similar to this study. The burden of hypertension and diabetes was high in the study population probably due to infrequent visit to healthcare and non-compliance to medications. All the 4 females of 80 years and above included in the group of abnormal Body-Mass Index were underweight. This may be due to their pessimistic feelings towards life resulting in poor appetite and poor health seeking behaviour. Females in the other two groups included in the abnormal BMI group consisted of both overweight and underweight pointing towards the double-edged burden of malnutrition in elderly population. Johansson J. et. al.⁽⁸⁾ also reported that the odds ratio of falling in women was 1.49 similar to the finding in this study. Elderly should supplement their diet if and when necessary and as prescribed by a nutritionist or a medical practitioner in order to prevent deficiencies or treat them if they have already occurred.

Conclusion: Geriatric population (60 years and above) is one of the vulnerable populations when it comes to their economic, social and health conditions. It thus emphasises the need to establish a supportive environment for the inevitable process of ageing. This study has highlighted that although it is assumed that facilities in the urban sector are always better and are better sought for, however in vulnerable populations, it is common to find under-utilisation of all kinds of resources and thereby landing into poorer health conditions. Geriatric population is one such vulnerable population. Comprehensive evaluation at regular intervals of

geriatric patients reporting to any level of health care service provider shall aid for better provision of health services. Special attention must be given to nutritional status of elderly population and must be supported with appropriate diet. Special emphasis on early diagnosis viz. tracking of blood pressure through opportunistic screening should be done to prevent and better control chronic disease and for providing suitable treatment to elderly in a cost-effective manner. Regular counselling sessions of the elderly to alleviate pessimistic feelings and to generate a need for a healthier life-style must be initiated.

Annexures:

Table 1: Demographic details

		Male (n=52)	Female (n=86)	Pearson's Chi square	P value
Sociodemographic					
Age	60 - 69	36 (69)	52 (60)	1.45	0.48
	70 -79	10 (19)	18 (21)		
	80 years and above	6 (12)	16 (19)		
Literacy					
Literacy	Illiterate	2 (4)	30 (35)	17.53	<0.00
	Literate	50 (96)	56 (65)		
Marital status					
Marital status	Married	38(73)	18(21)	36.55	<0.00
	Widowed	14 (27)	68 (79)		
Employment status					
Employment status	Retired	48 (92)	36 (42)	<0.00 (Fischer's exact test)	<0.00
	Retired but employed in unorganised sector	4 (8)	12 (14)		
	Never ever employed	0 (0)	38 (44)		
Gainful employment					
Gainful employment	Gainfully employed at some time	52 (100)	48 (56)	<0.00 (Fischer's exact test)	<0.05
	Never employed	0 (0)	38 (44)		

Numbers in parentheses are percentages

Table 2 : Gender differences in health profile

		Male (n=52)	Female (n=86)	Pearson's Chi square	P value
Substance Use	Tobacco chewing present	20 (38)	60 (70)	13.03	<0.00
	Tobacco chewing absent	32 (62)	26 (30)		
Health Morbidities					
Health Morbidities	Musculoskeletal pain	34 (65)	72 (84)	6.12	<0.05
	No musculoskeletal pain	18 (35)	14 (16)		
Blood Pressure					
Blood Pressure	Normal BP	26 (50)	52 (61)	10.72	<0.05
	Prehypertensive	16 (31)	8 (9)		

	Hypertensives	10 (19)	26 (30)		
Pallor	Pallor present	4 (8)	32 (37)	14.64	<0.00
	Pallor absent	48 (92)	54 (63)		
History of Fall	Fall	2 (4)	18 (21)	7.63	<0.05
	No fall	50 (96)	68 (79)		
Pessimistic feelings	Present	12 (23)	34 (40)	3.95	<0.05
	Absent	40 (77)	52 (60)		
Body Mass index (BMI)	Underweight	0 (0)	20 (23)	14.14 (Fischer's exact test)	<0.00
	BMI normal	30 (58)	38 (44)		
	Overweight	22 (42)	28 (33)		

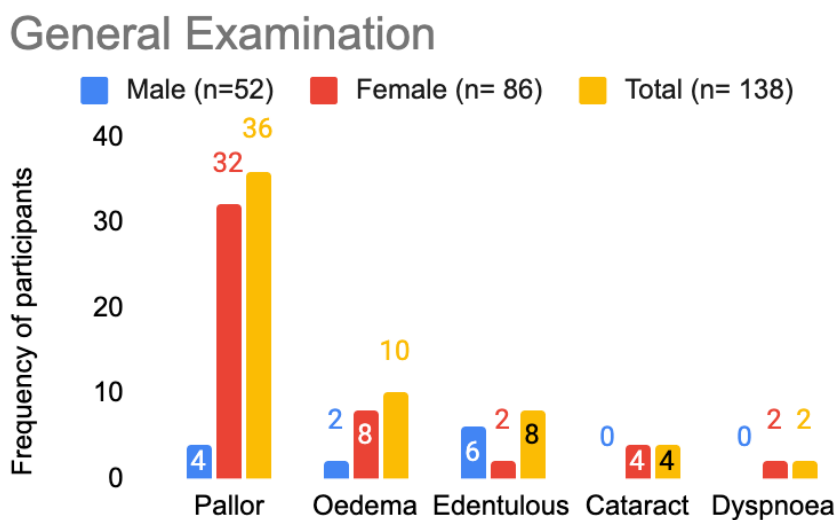
Table 3 : List of common ailments & surgeries

		Males	Females
Ailments	Musculoskeletal disorders	34 (65)	72 (84)
	Hypertension	14 (27)	24 (28)
	Diabetes	8 (15)	14 (16)
	IHD	4 (8)	4 (5)
	Acidity	2 (4)	6 (7)
	Asthma	6 (12)	0 (0)
	Skin infection	0 (0)	4 (5)
	Others	8 (15)	12 (14)
Surgeries	No Surgeries	18 (35)	26 (30)
	Hip/Knee replacement	0 (0)	4 (5)
	Cataract removal	24 (46)	36 (42)
	Angioplasty	4 (8)	0 (0)
	Hernia	2 (4)	4 (5)
	Kidney/ Gall bladder stones	4 (8)	2 (2)
	Hysterectomy	NA	24 (28)
	Family planning (NSV in males/ TL in females)	4 (8)	4 (5)

	Appendicectomy	4 (8)	2 (2)
	Others	6 (12)	2 (2)
	Undergone at least 1 surgery	34 (65)	60 (70)

Numbers in parentheses are percentages

Figure 1: Findings of general examination



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