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Original research article

Morbidity profile of elderly population in field practice area of department of community medicine, Andhra Medical College, Visakhapatnam

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Abstract

Aim and Objectives: To Assess the morbidity profile of the elderly population in the field practice area of Community Medicine Department, Andhra Medical College, Visakhapatnam. To know the socio demographic profile of elderly population, To Assess the morbidity among elderly population.
Methods: This cross-sectional, observational study was carried out at Simhachalam Rural Health Training Center (RHTC), which is a part of the Andhra Medical College's Community Medicine Department. Population in Simhachalam rural health training centre between December 2013 to November 2015. Age of 60 years or older in the RHTC area, with a sample size of 600.
Results: The study population has a mean age of 67.23 years and an SD of 6.8. Ages 60 to 65 made up the majority of the older population, 317 (52.8%). Only 2.3% of the participants in the study were beyond 85. The majority of study participants, 368 (61.4%), are from a backward caste, while 23.6% are from the Open category and 15% are from a scheduled caste. The survey participants showed no evidence of any other caste category. Hindus made up the majority of the study's 530 participants (88.3%). Muslims made up just 10 (1.6%) of the study participants. The majority of the 351 study participants (58.5%) were married. The majority of the women (59%) were widowed. This suggests that women generally live longer than men. About 71 (11.8%) of research participants had completed elementary school, and 64 (10.7%) had completed middle school. There were 98 or so illiterates (16.3%). The majority of participants in the current study (89.5%) were unemployed. 10% or so were employed.
Conclusion: Morbidity was not significantly correlated with gender, education level, or socioeconomic situation. So, regardless of gender, education level, or socioeconomic status, health care for the elderly should be made available to everyone. The present study found no issues with daily living activities because 95-98% of participants could do them on their own. The majority of the female participants in instrumental daily living activities were still reliant on others for things like using the phone (80%), getting around (96%) and handling money (86%). Empowering elderly women in these areas is crucial.
Keywords: Morbidity, socio economic status, females, education

Introduction

Elderly or old age consists of ages nearing or surpassing the average life span of human beings. The boundary of old age cannot be defined exactly because it does not have the same meaning in all societies. Government of India adopted 'National Policy on Older Persons' in January, 1999. The policy defines 'senior citizen' or 'elderly' as a person who is of age 60 years or above.

The medical study of the ageing process is called gerontology and the study of diseases that afflict the elderly is geriatrics. The United Nations World Assembly on Ageing, held at Vienna in 1982, formulated a package of recommendations which gives high priority to researchrelated to developmental and humanitarian aspects of ageing (United Nations, 1987). The plan of action specifically recommended that "International exchange and research cooperation as well as data collection should be promoted in all the fields having a bearing on ageing, in order to provide a rational basis for future social policies and action. Special emphasis should be placed on comparative and cross-cultural studies in ageing".

The phenomenon of population ageing is becoming a major concern for the policy makers all over the world, for both developed and developing countries, during last two decades. But the problems arising out

of it will have varied implications for underdeveloped, developing and developed countries [1].
Hence study on this subject would provide valuable information and be useful in policy making.

Methodology

This cross-sectional, observational study was carried out at Simhachalam Rural Health Training Center (RHTC), which is a part of the Andhra Medical College's Community Medicine Department. Population in Simhachalam rural health centre between December 2013 to November 2015. Age of 60 years or older in the RHTC area, with a sample size of 600.

Sampling Technique: Three sub centers (Adavivaram1, Lakshminagar and Indiranagar) were selected by lottery method out of twelve subcentres of RHTC and required sample has been equally distributed among three sub centers that is 200 per sub center. House to House survey was done in each sub center till the required sample is achieved.

Inclusion Criteria: Elderly population equal to or more than 60 years willing to participate in the study.

Exclusion Criteria: Elderly 60years and above not willing to participate and very sick elderly.

Results

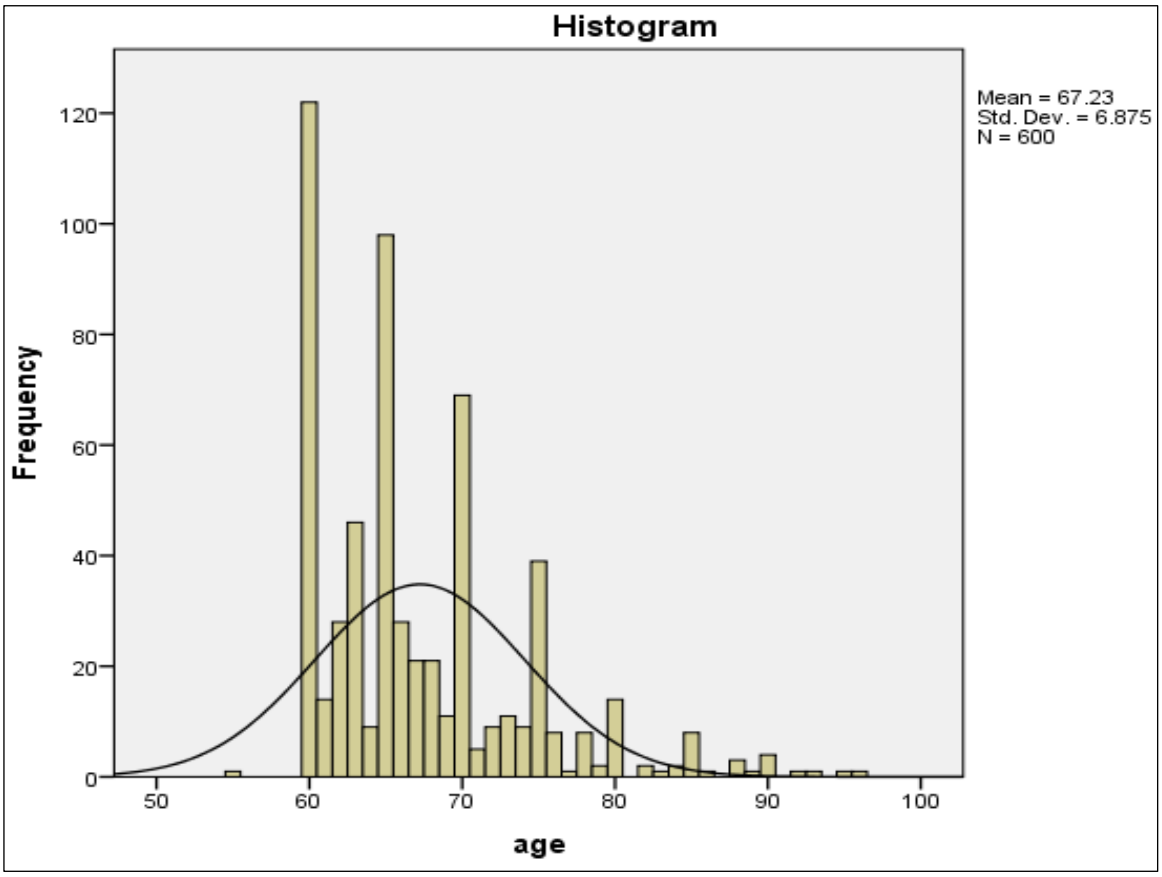

Fig 1: Histogram showing age wise distribution of study participants

In the present study, the study participants belong to the age group 60yrs and above. The mean age of the study population is 67.23yrs with SD of 6.8.

Table 1: Gender wise distribution of study participants according to Age

Sex	Age Category				Total (%)
	60-65yrs	66-75yrs	76-85yrs	>85yrs	
Male (%)	89(28.1)	101(45.29)	24(52.17)	7(50)	221(36.8)
Female (%)	228(71.9)	122(54.71)	22(47.83)	7(50)	379(63.1)
Total (%)	317(52.8)	223(37.2)	46(7.7)	14(2.3)	600(100)

- Majority of elderly were in the age group of 60 -65 years 317 (52.8%), among them 89 (28.1) were males and 228 (71.9%) were females followed by 223(37.2%) in the age group of 66-75 years 101(45.29%).

- Only 2.3% of study participants were >85yrs of age.

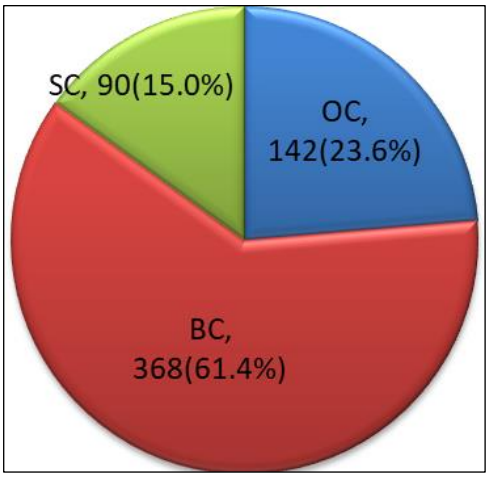

Fig 2: Pie diagram showing caste wise distribution of study participants

Majority 368(61.4%) of the study participants belongs to backward caste and 23.6% belong to Open category followed by 15% study participants belong to scheduled caste.No other caste category was observed among the study participants.

Table 2: Gender wise distribution of study participants according to Religion

Religion	Male (%)	Female (%)	Total (%)
Hindu	205(92.8)	325(85.8)	530(88.3)
Christian	14(6.3)	46(12.1)	60(10)
Muslim	2(0.9)	8(2.1)	10(1.67)
Total	221(100)	379(100)	600(100)

Majority 530(88.3%) of the study participants were Hindus and 10% were Christians. Among males about 93% were Hindus and among females about 86% were Hindus. Only 10 (1.6%) study participants were Muslims.

Table 3: Gender wise distribution of the study participants according to Marital status

Marital status	Male (%)	Female (%)	Total (%)
Married	194(87.4)	157(41.4)	351 (58.5)
Widowed	25 (11.6)	222(58.6)	247 (41.1)
Single	2 (1.0)	0 (0%)	2 (0.4)
Total	221 (100)	379 (100)	600(100)

- Majority 351 (58.5%) of the study participants were married. About 88% of males were married and only 41% of females were married.
- Majority of the female were widowed (59%). This indicates that females live longer than their male counterparts.

Table 4: Distribution of study participants according to Education of the head of the family

Education	Frequency	%
Illiterate	98	16.3
Primary school certificate	71	11.8
Middle school	64	10.7
High school	178	29.7
Intermediate	61	10.2
Graduate	119	19.8
Profession	9	1.5
Total	600	100.0

- In the present study majority (29.7%) of the head of the families had high school education and around 21% studied graduation and above.
- About 71(11.8%) had Primary school education and 64(10.7%) had middle school education. Around 98 (16.3%) were Illiterates.

Table 5: Gender wise distribution of study participants according to Education status

Gender	Education							Total (%)
	Illiterate	Primary	Middle school	High school	Intermediate	Graduate	Profession	
Male (%)	43 (19.5)	48 (21.7)	27 (12.2)	64 (28.9)	15 (6.8)	21 (9.5)	3 (1.4)	221 (100)
Female (%)	219 (57.8)	87 (23.0)	37 (9.7)	25 (6.6)	9 (2.4)	2 (0.5)	0	379 (100)
Total (%)	262 (43.7)	135 (22.5)	64 (10.7)	89 (14.8)	24 (4.0)	23 (3.8)	3 (0.5)	600 (100)

- In the present study majority (29.7%) of the head of the families had high school education and around 21% studied graduation and above.
- About 71(11.8%) had Primary school education and 64(10.7%) had middle school education. Around 98 (16.3%) were Illiterates.

Table 6: Gender wise distribution of study participants based on Occupation of the participants

Occupation	Sex		Total (%)
	Male (%)	Female (%)	
Unemployed	184(83.3)	353(93.1)	537(89.5)
Un skilled worker	16(7.2)	24(6.3)	40(6.7)
Semiskilled worker	4(1.8)	0	4(0.7)
Skilled worker	10(4.5)	2(0.5)	12(2.0)
Clerical	3(1.4)	0	3(0.5)
Semi profession	1(0.5)	0	1(0.2)
Profession	3(1.4)	0	3 (0.5)
Total	221(100)	379(100)	600 (100)

In the present study most of the participants were unemployed (89.5%). Only about 10% were employed.

Table 7: Distribution of study participants according to total family Income (Modified Kuppuswamy Socio-Economic classification 2012)

Total Family income (Rs)/month	Frequency	Percent
<1600	31	5.2
1601-4809	93	15.5
4810-8009	161	26.8
8010-12019	108	18.0
12020-16019	64	10.7
16020-32049	111	18.5
>32050	32	5.3
Total	600	100.0

In the present study 31(5.2%) study participants are getting a total family income of Rs <1600/- per month. Majority of the study participants are getting a total family income of Rs 4810-8009 per month.

Table 8: Gender wise distribution of study participants according to Socio-Economic Class (Modified Kuppuswamy Socio-Economic classification 2012)

Socio-Economic Class	Male (%)	Female (%)	Total (%)
Upper Middle	22(10.0)	36(9.5)	58(9.7)
Lower Middle	82(37.1)	137(36.1)	219(36.5)
Upper Lower	104(47.1)	181(47.8)	285(47.5)
Lower	13(5.8)	25(6.6)	38(6.3)
Total	221(100)	379(100)	600(100)

In the present study according to modified Kuppuswamy‘s Socio-Economic Scale, majority of the study participants 285(47.5%) belong to upper lower category followed by 219(36.5%) lower middle category. Only few 38(6.3%) belong to lower class.

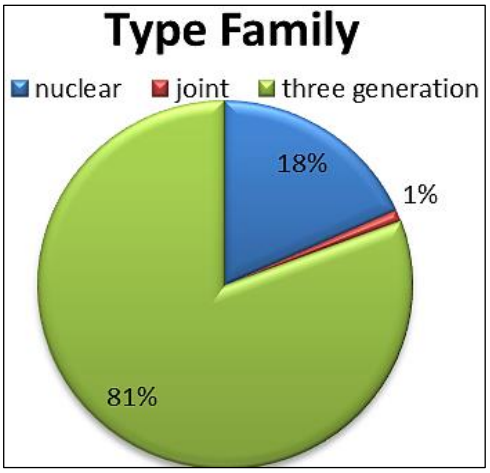

Fig 3: Distribution of study participants according to Type of family

- Majority of the study participants 484(81%) belong to Three generation families followed by 110(18.0%) of elderly belong to Nuclear families.
- Only 6(1%) belong to joint family.

Table 9: Gender wise Distribution of study participants according to their Living arrangement

Living arrangement	Male (%)	Female (%)	Total (%)
Staying with spouse	44(19.9)	66(17.4)	110 (18.3)
Stay with children Or other family members	177(80.1)	312(82.3)	489 (81.4)
Stays single or with other than family members	0(0)	1(0.3)	1 (0.3)
Total	221(100)	379(100)	600 (100)

In the present study 110(18.3%) were staying with their spouse and majority 489 (81.4%) of study participants are living with children and grand children.

Table 10: Gender wise distribution of study participants according to presence of morbidity

Morbidity	Male (%)	Female (%)	Total (%)
Present	171(77.4)	273(72.0)	444(74)
Absent	50(22.6)	106(28.0)	156(26)
Total	221(100)	379(100)	600(100.0)

In the present study majority 444(74%) of the study participants were suffering from one or other morbidity. Among males 77% and in females 72% were having one or other Morbidity.

Table 11: Distribution of study participants according to system wise morbidity

System	Male (%)	Female (%)	Total (%)
Visual problems	162(37.4)	272(62.6)	434(100)
Musculoskeletal problems	126(27)	248(73)	374(100)
Cardio vascular problems/hypertension	103(36.3)	181(63.7)	284(100)
Dental problems	74(37.8)	127(62.2)	201(100)
Endocrine/type2 diabetes	75(43.4)	98(56.6)	173(100)
Ear Nose Throat/hearing loss	61(41.2)	87(58.8)	148(100)
Gastro intestinal problems	60(40.3)	82(59.7)	142(100)
Anaemia	35(27.8)	91(72.2)	126(100)
Skin problems	36(38.7)	57(61.3)	93(100)
Central Nervous system/Cerebro vascular problems	29(40.3)	43(59.7)	72(100)
Respiratory problems	32(45.1)	39(54.9)	71(100)
Genitourinary problems	11(50)	11(50)	22(100)
Malignancies	1(17)	5(83)	6(100)

Majority of the study participants 434(72.3%) had visual problems, followed by Musculoskeletal 374(62.3%), Cardiovascular/HTN 284(47.3%), 201(33.5%) Dental problems, 73(28.8%) Endocrine/DMproblems, 148(24.7%) ENT/Hearing loss, 142(23.7%) Gastrointestinal, 126(21%) Anaemia, 93(15.5%) Skin problems, 72(12%) CNS, 70.8(11.8%) Respiratory problems 22.2(3.7%), 1% suffering with Genitourinary problems and Malignancy.

Table 12: Gender wise Distribution of study participants according to Eye morbidity

Eye morbidity	Male (%)	Female (%)	Total (%)
Defective vision/Presbiopia	152(68.8)	225(59.4)	377(62.8)
Cataract	55(24.8)	146(38.5)	201(33.5)
Refractive error	22(9.9)	32(8.4)	54(9.0)
Corneal opacity	0(0)	3(0.8)	3(0.5)
No eye problems	59(26.7)	107(28.2)	166(27.7)

 # one person can give multiple responses

- Majority (72.3%) of the study participants were having one or more eye problems.
- About 69% of males and 59% of females have defective vision/presbiopia.
- Majority 38.5% of the female study participants were suffering with cataract, while 24.8% of the Male participants were suffering from cataract.

Table 13: Gender wise distribution of study participants according to Musculoskeletal problems

Musculoskeletal problems	Male (%)	Female (%)	Total (%)
Arthritis	69(31.2)	172(45.4)	241(40.2)
Myalgia	44(19.9)	75(19.8)	119(19.8)
Back ache	46(20.8)	108(28.5)	154(25.7)
Cervical Spondylitis	5(2.3)	4(1.1)	9(1.5)
Others	3(1.4)	9(2.4)	12(2.0)
No Musculoskeletal problems	95(43)	131(34.6)	226(37.7)

- About 62% of the study participants had Musculoskeletal problems. Most common musculoskeletal problem was arthritis 241(40%) followed by back ache 154 (25.7%) and myalgia 119(20%).
- Musculoskeletal problems were more among females 65.4% when compared to males 57%.

Table 14: Gender wise distribution of study participants according to cardiovascular (CVS) problems

CVS problems	Male (%)	Female (%)	Total (%)
HTN	93(42.1)	180(47.5)	273(45.5)
IHD/Post MI	18(8.1)	11(2.9)	29(4.8)
OTHERS	2(0.9)	1(0.5)	3(0.5)
No CVS problems	118(53.4)	198(89.6)	316(52.7)

- Cardio Vascular problems were seen in 47.3% of the study population.
- Hypertension was the most common 273(45.5%) cardiovascular problem. About 42% of males and 48% of females were Hypertensive.
- About 5% of the study participants were suffering from IHD/Post MI. This problem was more in males (8%) as compared to females (3%).

Table 15: Gender wise distribution of study participants according to Dental problems

Dental problems	Male (%)	Female (%)	Total (%)
Dental caries	38(17.2)	70 (18.5)	108(18.0)
Chewing problems	25(11.3)	34(9.0)	59(9.8)
edentulous	29(13.1)	42(11.0)	71(11.8)
Others	0(0)	5(1.3)	5(0.8)
No dental problems	147(66.5)	252(66.5)	399(66.5)

- Most common dental problem in the study population was dental caries108 (18%).
- Among males 17.2% were having dental caries and in females 18.5% were having caries teeth.
- Chewing problems and edentulous were about 2% more in males than females.

Table 16: Gender wise Distribution of study participants according to Endocrine problems

Endocrine problems	Male (%)	Female (%)	Total (%)
Diabetes Mellitus	75(33.9)	92(24.3)	167(27.8)
Thyroid diseases	0(0)	9(2.4)	9(1.5)
Others	0(0)	2(0.5)	2(0.3)
No endocrine problems	146(66.1)	281(74.1)	427(71.2)

- Among study subjects 173(28.8%) had one or more endocrine problems and most common endocrine problem was Diabetes Melites167(27.8%).
- Diabetes was more among males 34% as compared to females 24%.
- Thyroid disorder was seen only in female (2.4%) study participants.

Table 17: Gender wise distribution of study participants according Ear Nose Throat morbidity

Ear problems	Male (%)	Female (%)	Total (%)
Impaired hearing	61(27.6)	85(22.4)	146(24.3)
CSOM	0(0)	2(0.5)	2(0.3)
No ear problems	160(72.4)	292(77.1)	452(75.3)

- The analysis shows that out of 600 study subjects 146 (24.3%) had impaired hearing.
- About 28% of males and 22% of females had impaired hearing.

Table 18: Gender wise Distribution of study participants according to Gastrointestinal problems

GI disorders	Male (%)	Female (%)	Total (%)
Constipation	43(19.5)	49(12.9)	92(15.3)
Hemorrhoids	2(0.9)	7(1.8)	9(1.5)
Acid Peptic Disease	26(11.8)	43(11.3)	69(11.5)
Others	1(0.5)	1(0.3)	2(0.3)
No GI problems	161(72.9)	297(78.4)	458(76.3)

- About 24% of the study population had gastro intestinal problems. Common GI problem among study population was constipation 92(15%) followed by Acid Peptic disease 69(11.5%).
- Constipation was more in males 43(20%) than females 49(13%).

Table 19: Gender wise distribution of study participants according to Anaemia

Anaemia	Sex		
	Male (%)	Female (%)	Total (%)
Anaemia present	35(15.8)	91(24.0)	126(21.0)
No Anaemia	186(84.2)	288(76.0)	474(79.0)
	221(100)	379(100)	600(100)

- Among the study participants 126(21%) had anaemia.
- Anaemia was more among females 24% as compared to males (16%).

Table 20: Gender wise distribution of study participants according to skin problems

Skin conditions	Male (%)	Female (%)	Total (%)
Pyoderma	5(2.3)	9(2.4)	14(2.3)
Fungal disease	6(2.7)	8(2.1)	14(2.3)
Other skin problems (dermatitis, eczema)	27(12.2)	43(11.4)	70(11.7)
No Skin problems	185(83.7)	322(85.0)	507(84.5)

- About 16% of the study population had skin problems.
- Fungal infections (2.3%) and Pyoderma (2.3%) were commonest skin problems in the study population.

Table 21: Gender wise distribution of study participants according to Central Nervous System (CNS) morbidity

CNS problem	Male (%)	Female%	Total (%)
Memory impairment	18(8.1)	29(7.7)	47(7.8)
Seizures	2(0.9)	1(0.3)	3(0.5)
CVA	8(3.6)	7(3.2)	15(2.5)
Others	2(0.9)	6(1.9)	8(1.3)
No CNS problems	192(86.9)	336(88.7)	528(88.0)

- Among study population 12% had problems related to CNS.
- Most common CNS problem was memory impairment (8%) both in male and female subjects.
- About 2.5% of the study participants were suffering from CVA's (residual paresis/paralysis) and 0.5% were suffering with Seizure disorders.

Table 22: Gender wise distribution of study participants according to Respiratory problems

Respiratory problems	Male (%)	Female (%)	Total (%)
Tuberculosis	2(0.9)	2(0.5)	4(0.7)
COPD	23(10.4)	17(4.5)	40(6.7)
Asthma	8(3.6)	16(4.2)	24(4)
Others	8(3.6)	11(2.9)s	19(3.2)
No respiratory problems	189(85.5)	340(89.7)	529(88.2)

- Around 11.8% of the study participants had respiratory problems.
- Most common respiratory problem was COPD 40 (6.7%) followed by Bronchial Asthma 4%.

Table 23: Gender wise distribution of study participants according to Genitourinary problems

Genitourinary problems	Male (%)	Female (%)	Percentage (%)
Dysuria/Incontinence	9(4.1)	5(1.3)	14(2.3)
Others	2(0.9)	6(1.6)	8(1.3)
No Genitourinary problems	210(95.0)	368(97.1)	578(96.3)

- About 4% of the study subjects had genito urinary problems.
- Most common genito urinary problem among study subjects was 14(2.3%) dysuria/incontinence.

Table 24: Distribution of study participants according to Sex and morbidity

Sex	Morbidity		Total (%)
	Present	Absent	
Male (%)	171(77.4)	50(22.6)	221(100)
Female (%)	273(72.0)	106(28.0)	379(100)
Total (%)	444(74.0)	156(26.0)	600(100)

Chi-square value = 2.07, df = 1, p = 0.150,

Any kind of morbidity present in males was among 171 subjects and in females was among 273 subjects and this difference was not statistically significant.

Table 25: Distribution of study participants according to age and morbidity

Age category	Morbidity		Total (%)
	Present (%)	Absent (%)	
60-65yrs	183(57.7)	134(42.3%)	317(100)
66-75yrs	201(90.1%)	22(9.9%)	223(100)
76-85yrs	46(100)	0	46(100)
>85yrs	14(100)	0	14(100)
Total (%)	444(74)	156(16)	600(100)

Chi-square value = 94.4, df=3, P = 0.001

- As the age increase the presence of morbidity also increases, this association was statistically significant.

Table 26: Distribution of study subjects according to SES class and Morbidity

SES class	Morbidity		Total (%)
	Present	Absent	
upper middle	45 (75%)	15 (25%)	60 (100%)
lower middle	161(73.5%)	58(26.5%)	219(100)
upper lower	209(73.3%)	76(26.7%)	285(100)
lower	26(72.2%)	10(27.8%)	36(100)
Total (%)	441(73.5%)	159(26.5%)	600(100)

Chi-square= 0.475, df = 3, P = 0.92,

In our study presence of morbidity was not significantly associated with socio economic class.

Table 27: Distribution of study participants according to Education and Morbidity

Education	Morbidity		Total (%)
	Present	Absent	
Illiterate (%)	186(70.9)	76(29.1)	262(100)
Primary school (%)	102(75.5)	33(24.5)	135(100)
Middle school (%)	51(79.7)	13(20.3)	64(100)
High school (%)	65(73.0)	24(27.0)	89 (100)
Intermediate (%)	19 (79.2)	5 (20.8)	24(100)
Graduate (%)	20(87.0)	3 (13)	23(100)
Profession (%)	1(33.3)	2(66.7)	3(100)
Total (%)	444(74.0)	156 (26.0)	600(100)

Chi-square = 7.49, df= 6, P = 0.82,

Educational status of the study population was not significantly associated with morbidity in the present study.

Table 28: Distribution of study participants according to Activities of daily living

Activity	Dependent n(%)	Partially dependent n(%)	Independent n(%)
Bathing	1(0.2)	18(3)	581(96.8)
Dressing	2(0.3)	17(2.8)	581(96.8)
Toilet use	1(o.2)	17(2.8)	582(97.0)
Moving about	1(0.2)	18(3)	581(96.8)
Grooming	0	17(2.8)	583(97.2)
Feeding	0	16(2.7)	584(97.3)
Mobility	2(0.3)	19(3.2)	579(96.5)
Stairs	4(0.7)	25(4.2)	571(95.2)
Activity	Incontinent	Occasional accident	Continent
Bowels	1(0.2)	3(0.5)	596(99.3)
Bladder	2(0.3)	3(0.5)	595(99.2)

- Majority of the study participants (95 to 99%) were independent and able to perform their Activities of Daily Living.
- Only few were partially dependent for activities like bathing 18(3%), for dressing17 (2.8%), for toilet use 17 (2.8%).

Table 29: Distribution of study participants according to Gender and ADL

ADL	Sex		Total (n=600)	X^2	P
	Male (n=221)	Female (n=379)			
	n (%)	n (%)	n (%)		
Bathing	214(96.8)	367 (96.8)	581(96.8)	1.81	0.405
Dressing	215(97.3)	366 (96.6)	581 (96.8)	0.55	0.756
Toileting	214 (96.8)	368 (97.1)	582 (97.0)	1.73	0.420
Transfer	214 (96.8)	367 (96.8)	581 (96.8)	1.81	0.405
Grooming	215 (97.3)	368 (97.1)	583 (97.2)	0.89	0.55
Feeding	215 (97.3)	369 (97.4)	584 (97.3)	0.95	1.0
Bowels	219 (99.1)	377 (99.4)	596 (99.3)	1.73	0.42
Bladder	218 (98.6)	377 (99.4)	595 (99.2)	1.3	0.52
Stairs	209(94.5)	362 (95.5)	571(95.2)	0.80	0.66

- About 95 to 99 % of the elderly were independent in performing activities of daily living.
- More females were partially dependent when compared with males.

Table 30: Distribution of study participants according to Age and Activities of Daily Living

ADL	Age Category					P value
	60-65yrs n = 317 (%)	66-75yrs n=223 (%)	76-85yrs n= 46 (%)	>85yrs n=14 (%)	N=600(%)	
Bathing	311(98.1)	215(96.4)	43(93.5)	11(78.6)	580(96.7)	0.06
Dressing	311(98.1)	215(96.4)	43(93.5)	11(78.6)	580(96.7	0.06
Toilet use	312(98.4)	215(96.4)	43(93.5)	11(78.6)	581(96.8)	0.03
Move about	311(98.1)	215(96.4)	43(93.5)	11(78.6)	580(96.7)	0.06
Grooming	312(98.4)	216(97.3)	43(93.5)	11(78.6)	582(97.0)	0.009
Feeding	312(98.4)	217(95.9)	43(93.5)	11(78.6)	583(97.2)	0.007
Mobility	311(98.1)	214(96.0)	43(93.5)	10(71.5)	579(96.5)	0.002
Stairs	309(97.5)	211(94.6)	41(93.5)	9(64.3)	570(95.0)	0.0001
Bowels continence	317(100)	219(98.2)	46(100)	14(100)	592(98.7)	0.341
Bladder continence	317(100)	220(98.6)	45(97.8)	13(78.6)	581(92.8)	0.000

Majority of the study subjects about 95% to 98% were able to do Activities of daily Living independently. Certain activities like toilet use, grooming, feeding, mobility and climbing stairs were having statistically significant association (p= <0.05) with age of the individual.

Table 31: Distribution of study participants according to SES and ADL

	ADL	Chi-square value	P
SES	Bathing	1.840	0.934
	Dressing	3.546	0.78
	Toilet use	1.813	0.936
	Move about	1.84	0.934
	Grooming	0.427	0.935
	Feeding	0.285	0.963
	Mobility	3.49	0.79

	Stairs	10.13	0.11

- Chi square test was done for ADL and socio economic class (SES) according to modified kuppuswamy SES scale and it was found that they were not significantly associated.

Table 32: Gender wise distribution of study participants on performance of IADL

IADL	Sex			
	Male=221	Female=379	Total=600	P-value
	n (%)	n (%)	n (%)	
Administering own medication	219(94.6)	354(93.4)	573(95.5)	0.567
Grocery shopping	193(87.3)	309(81.5)	502(83.7)	0.064
Preparing meals	170(76.9)	299(78.9)	469(78.2)	0.573
Using telephone	122(55.2)	74(19.5)	196(32.7)	0.001
Driving and transportation	65(29.4)	16(4.2)	81(13.5)	0.001
Handling own finances	116(52.5)	51(13.5)	167(27.8)	0.001
House keeping	200(90.5)	343(90.5)	543(90.5)	0.999
Bed Making	199(90)	353(93.1)	552(92.0)	0.178
Laundry	195(88.2)	345(91.0)	540(90.0)	0.271

- Majority of study subjects 95.5% were able to administer their own medication, 83.7% were able to do grocery shopping, 78.2% were able to prepare meals by themselves.
- About 32.7% were able to use telephone,13.5% were able to drive, 27.8% were able to handle their own finances.
- About 90.5% were able to do housekeeping, 92% were able to do bed making and 90% were able to do laundry activities.
- More male were able to use telephone, handle own finances, and transportation than female counterparts and this difference is statistically significant.
- More females were able to do bed making, preparing meals and laundry than males and this difference was not statistically significant.

Table 33: Distribution of study participants according to Instrumental Activities of Daily Living and AGE

IADL	Age Category					
	60-65 n(%)	66-75(%)	76-85(%)	>85(%)	Total (%)	P value
	317(52.8)	223(37.2)	46(7.7)	14(2.3)	600(100)	
Administering own medication	308(97.2)	206(92.4)	41(89.1)	8(57.1)	563(93.8)	0.001
Grocery shopping	294(92.7)	175(78.5)	28(60.9)	5(35.7)	502(83.6)	0.001
Preparing meals	276(87.1)	164(80.8)	27(58.7)	2(14.3)	469(78.2)	0.001
Using telephone	95 (30.0)	80(35.9)	18(39.3)	4(28.6)	197(32.8)	0.32
Driving and transportation	38(12.0)	36(16.1)	6(13)	0	81(13.5)	0.28
Handling own finances	79(24.9)	71(31.8)	16(34.8)	0	167(27.8)	0.03
House keeping	301(94.9)	195(87.4)	40(86.9)	7(50.0)	543(90.5)	0.001
Laundry	300(94.6)	199(89.2)	34(73.9)	7(50.0)	539(90.0)	0.001
Bed making	304(95.9)	200(89.7)	41(89.1)	6 (42.9)	551(91.8)	0.001

- In the age group 60-65 years majority 97.2% of study subjects were able to administer their own medication, in the age group76-85 years 89.1% were able to administer their own medication where as in the age group above 85 years only 57.1% were able to administer their medication
- In the age group 60-65 years majority 92.7% were able to do grocery shopping where as in the age group 76-85 years 60.9% were able to do grocery shopping.
- Similarly, in the age group 60-65 years 24.9%were able to handle their own finances, 94.9% were able to perform the activities of housekeeping, and 94.6%were able to perform laundry activities.
- In the age group 76-85 years 34.8% were able to handle own finances, 86.9% and 73.9% were able to perform the activities of housekeeping and laundry respectively.
- Significant statistical association was found between the age of elderly and most of the instrumental activities of daily living (p=0.001). It was observed that as the age increases there is decrease in activities. As the age progresses the degenerative changes leads to decrease in various body functions.
- Chi square was done for the Age of elderly with IADL shows that there was significant statistical difference for the activities like administering own medication, grocery shopping, preparing meals, bed making and laundry.
- Significant association was found between the sex of elderly and certain instrumental activities of daily living, ($p<0.001$).
- Significantly more number of studied males were able to use telephone, do driving and transportation and able to handle own finances than elderly females.
- Significantly more number of studied females were able to perform activities like preparation of meals

housekeeping, bed making and laundry activities than males.

Table 34: Distribution of study participants according to Socio economic status and IADL

SES	IADL	Chi square value	P
.	Administering own medication	1.643	0.650
	Grocery shopping	0.436	0.933
	Preparing meals	2.219	0.528
	Telephone use	39.344	0.001
	Driving/Transport	8.532	0.036
	Handling own finance	21.052	0.001
	Housekeeping	4.004	0.261
	Bedmaking	5.221	0.156
	Laundry	8.552	0.036

- Significant association was found between the sex of elderly and certain instrumental activities of daily living, ($p<0.001$).
- Significantly more number of studied males were able to use telephone, do driving and transportation and able to handle own finances than elderly females.
- Significantly more number of studied females were able to perform activities like preparation of meals housekeeping, bed making and laundry activities than males.

Discussion

The study is discussed comparing the results of the study with various other similar studies.

Age

In the present study majority 317 (52.8%) of the study participants belongs to the age group of 60-65 years among them 89 (28.1%) were males and 228(71.9%) were females. Our study findings correlate with the findings of a similar study done by Lena *et al*., [6] in 2009, Muralidhar MK *et al*., [7], 2014 in Karnataka and Vandana Nikumb *et al*., [8] in 2015 study in Urban Navi Mumbai where major fraction of the population are in the age group of 60-69 years.

In our study mean age of the study participants was 67.23 with SD of 6.8.Similar findings were observed in Bhawalkar J.S *et al*., [9] study done 2009 where the mean age was 66.33 years with SD 6.7 and Vandana Nikumb *et al*., [8] in 2015 where mean age of study participants was 66.61 years with SD 6.54.

Sex

In the present study majority 379(63.17%) of the study participants were females the ratio of male to female elderly was 1:1.58. Our study findings correlate with the findings of a similar study done by Vandana Nikumb *et al*., [15] 2015 in an urban area at Navi Mumbai where were more number of females 110 (68.8%) & study done by Bhawalkar J.S *et al*., [9] 2013 in urban area of Pune with females 898(55.3%), Jadhav VS *et al*., [10] 2012 in the field practice area of Rural Health Centre at Aurangabad with females 328 (52.48%).

Religion

In the present study majority were Hindus i.e. 530 (88.3%) followed by Christians 60 (10%) and Muslims 10 (1.7%) which are similar with that of the findings of Syed Qadri *et al*., [13] (90%) done in north India 2013, Shiva Kumar S *et al*., [11] study (74%) done in Arehalli village of Hassan district Karnataka in 2013 and MK Muralidhar *et al*., [7] study (78%) in 2014.

Literacy status

In the present study 262(43.7%) were Illiterates, constituting 43(19.5%) males & 219(57.7%) females. Around 338(56.3%) were Literates, constituting 178(80.5%) males & 160(42.3%) females. Among the study participants 135 (22.5%) had studied upto primary school, followed by high school 89(14.8%), middle school 64(10.7%), Intermediate 24 (4%), graduates 23(3.8%) and 3(0.5%) were professional.

In the present study, Majority of the female participants (57.7%) were illeterates which are similar with that of findings in studies done by Sanjiv Kumar Barman *et al*., [12] study (59.37%) done in an urban community of Bihar 2014, MK Muralidhar *et al*., [7] study (68.4%) done in a rural community of costal Karnataka 2014.

Marital status

Among 600 study population maximum 351(58.5%) were married. Out of 247 (41.1%) widowed, 222 (90%) were females as compared to 25(10%) males. Similar findings were observed in a study conducted by Syed Qadri [13] and SK Ahluwalia *et al*., 2013 in an epidemiological study conducted among rural elderly of North India, out of 660 respondents majority were married (60.81%).

In a similar study by MK Muralidhar *et al*., [7] 2014 on morbidities among elderly in a rural community of costal Karnataka, out of 276 elderly about 165(60%) were married, 104 (37.68%) were widowed, 4(1.4%)

had divorced and 3 (1%) of them were unmarried.

Living arrangement

In the present study coming to living arrangement among 600 elderly studied, 110(18.3%) are staying with spouse alone, 489 (81.5%) are staying with children or other family members and only 1(0.2%) was staying single.

Similar findings were seen in study done by SK Ahluwalia *et al*., 2013 in an epidemiological study conducted among rural elderly of North India, out of 660 respondents <1% were staying alone.

Type of family

Among 600 study participants majority 484 (80.7%) belong to three generation family, 110(18.3%) belong to Nuclear family and 6(1%) were in joint family.

In a study done on elderly in urban Mysore, Karnataka, India by Shraddha K *et al*., [14] 2012 observed 48.9% belong to Nuclear family and 34.8% belonged to three generation family. In another study findings of morbidity profile of geriatric population in an urban community Bihar by Sanjiv Kumar Barman *et al*., [12] 2014 showed 40% belong to Nuclear family and 23.7% belonged to three generation family.

In the present study only 1% belongs to joint family. Contrary to our study findings around 72.7% of the elderly are in joint family in an epidemiological study on quality of life among rural elderly of North India by Syed Qadri *et al*., [13] 2013 and 75% In an another study on morbidity profile of elderly in Arehalli village of Hasan district by Shivakumar S *et al*., [11] 2013 and 92.7% belong to joint family in study done by Rajshree Bhatt *et al*., [15] in Ahemadabad 2011.

Socio economic status

In the present study analysis shows 323(53.8%) of subjects belong to lower and upper lower class, 219(36.5%) lower middle, 58(9.7%) upper middle class and there was no one in upper class.

Similar findings were observed in studies done by S.V. Kumble *et al*., in 2012 (34.6%), Shraddha K *et al*., [14] (64.8%) in 2012 in urban population of Mysore, Vandana Nikumb *et al*., [8] 2015 (97.5%) in an urban area at Navi Mumbai where majority of the elderly were from lower and upper lower class.

In our study none of the elderly belongs to upper class. Similar findings were observed in Vandana Nikumb *et al*., [8] 2015 and Sanjiv Kumar Barman *et al*., [12] 2014 in an urban Bihar.

Occupation

In the present study of 600 elderly 537(89.5%) were unemployed and 63(10.5%) were employed. Among males, unemployed were 184(83.3%) and among females 353(93.1%) were unemployed. Unskilled workers were 40(6.7%). Skilled workers were12(2%), semiskilled workers were 4(0.7%), 3(0.5%) were clerical, business or shop owners. Semi profession1 (0.2%) and 3(0.5%) were professionals. There were no females in semiprofessional or professionals.

Similar findings were seen in a study done by Shraddha K *et al*., [14] 2012 done among elderly in urban population of Mysore where 68.8% of the respondents were unemployed.

Contrary to our study findings only 10.00% were unemployed in a study done by Sanjiv Kumar Barman *et al*., [12] 2014 in urban community in Bihar, 18.2% were not working in an epidemiological study on quality of life among rural elderly population of North India by Syed Qadri *et al*., 2013 [13].

In a study of morbidity profile of geriatric population in an urban community in Bihar by Sanjiv Kumar Barman *et al*., 2014 [12], It was observed that out of 160 elderly studied 30 (18.75%) of them were working as agricultural labour in the field, 38 (23.75%) has their own business, 56 (35.00%) were daily wage earners or daily laborers. 20 (12.50%) belong to the other group (cobbler, canning worker, mattress making, etc.) and 16 (10.00%) were not having any occupation due to physical disability.

In an epidemiological study on quality of life among rural elderly population of North India by Syed Qadri *et al*., 2013 [13] shows that among 660 elderly 359(54.4%) were Household, 85(12.9%) agriculture, 36(5.6%) doing business, 7(1.06%) service, 30(4.5%) were unskilled labour, 24(3.6%) skilled labour and 119(18.2%) were not working.

In a similar study on morbidity pattern among elderly in urban population of Mysore by Shraddha K *et al*., 2012 [14] observed that out of 526 elderly 68.8% of the respondents were unemployed followed by 16.2% unskilled worker, 5.9% semiskilled worker, 5.7% semi-professional and 3.4% skilled worker. None of the elderly belongs to professional occupation and semi-professional was mainly comprised of businessmen.

Above table indicates that about a third of the female and 58% of the male population were unemployed. In all category of occupation, proportion of male respondent was higher than female respondent except in the category of skilled worker which was found to be 4.7% among both genders.

Presence of morbidity

In the present study 72% of the study subjects had one or the other morbidity, which when compared with another study done in Visakhapatnam by Srinivas P.J. *et al*., [16] was 64%,and in another study by Krishnamachari Srinivasan *et al*., [17] 2010A total of 85 per cent of the respondents reported current medical problems.

Morbidity profile

In the present study of 600 elderly, system wise morbidity shows highest number of study participants 434(72.3%) had visual problems, followed by Musculoskeletal 374(62.3%), Cardiovascular/HTN 284(47.3%), 201(33.5%) Dental problems, 73(28.8%) Endocrine/DM-2 problems, 148(24.7%) ENT/Hearing loss, 142(23.7%) Gastrointestinal, 126(21%) Anaemia, 93(15.5%) Skin problems, 72(12%) CNS, 70.8(11.8%) Respiratory problems 22.2(3.7%),1% suffering with Genitourinary problems and Malignancy.

This findings were comparable with study done by Krishnamachari Srinivasan *et al*., 2010 [17], Hypertension 49.4%, Diabetes 32.3%, Arthritis 28%, Coronary artery disease 27.9%, Genitourinary diseases 28%, Gastrointestinal diseases 16.6%, Respiratory diseases 15.4%, Dermatological diseases 13.5%, Stroke 5.6%, Tuberculosis 3.9%, Kidney diseases 3.1%, Epilepsy 2.2%.

In another study done by Surekha Kishore *et al*., [18] in an RHTC they found, Hypertension was the most common problem (41.4%), followed by musculoskeletal problems (36.8%), respiratory problems (36.1%) and psychosocial problems (28.8%).

Contrary to the present study, the study done by Narayan V *et al*., (2013) [19] majority of the elderly patients suffered from chronic obstructive pulmonary disease (COPD) (20.72%), Ischaemic heart disease IHD (19.6%), cataract & diminished vision (13.9%), arthritis (6.2%), diabetes mellitus (4.32%), cancer (3.2%), hemiplegia (3%) & a host of miscellaneous diseases (29.15%).The difference may be because the present study was field based and the study done by Naryan *et al*., was Hospital based study.

Visual problems

In the present study 433.8(72%) ocular morbidity was the most common morbidity affecting two third of the study population. Similarly (71%) Ocular morbidity was observed in a study done by Piramanayagam *et al*., [20] in 2013 in South India.

Visual problems due to Cataract and refractive errors were seen in 42.5%.

Contrary to our study findings much higher morbidity was observed in a study done by Shiva Kumar *et al*., (83%) [11] in 2013 done in Hassan district in Arehalli village.

The most common cause of diminished vision in India, Cataract contributed to 32.17% in the present study of which males 65(29.4%) and females are 128(33.8%) and was comparable with study done by Rahul Prakash *et al*., 34.7% [21] males and 60% females had cataract.

Proportion of females (33.8%) were more compared to males (29.4%). Similarly higher occular morbidity due to cataract was observed in females (38.7%) in a study done by Jadhav *et al*., [10] in 2012 in Paithan in Aurangabad.

In the present study cataract contributed to 32.17% whereas it was much higher (46.3%) in Vandana Nikumb *et al*., [8] study done in 2015 and 61.25% in a study done by Sanjiv Kumar Barman *et al*., [12] 2014 done in Kishanganj, Bihar.

Musculoskeletal problems

In the present study about 62% hadMusculoskelatal problems which is similar to the study done by Mrinal Ranjan Srivastava *et al*., [22] 65.7% of males and 75.4% of females had musculo skeletal problems.

Arthritis was the major musculoskeletal Problem contributing to 241(40.2%) In the present study whereas it was much higher 89 (55.6%) in a study done by Vandana Nikumb *et al*., [8] in 2015 and 75% in a study done by Shivakumar S. *et al*., [11] 2013, in Arehalli Village of Hassan District.

Contrary to our study findings it was less 16.22% in Muralidhar *et al*. [7] study in 2014, 21.25% in Sanjiv Kumar Barman *et al*., [12] in 2014, 19.2% in Piramanayagam A *et al*., [20] study in 2013, 24.7% in S. V. Kamble *et al*., [23] study in 2012.

Cardiovascular problems

In the present study Hypertension 284(47.3%) was one of the common morbidity affecting nearly half of the study population which was the main culprit for cardiovascular problems. Among them majority were females (63.7%).

Similar findings were observed in, study done by Rahul Prakash *et al*., [21] 48% had hypertension, MK Muralidhar *et al*., [7] study done in 2014 where more than half of the study population had hypertension (56.8%) of which proportion of females (78%) were more when compared with males (36%).

Similar findings were observed 50.63% were hypertensive in a study done by Sanjiv Kumar Barman *et al*., [12] 2014, 44.5% in Syed Qadri *et al*., [13] study done in 2013, 44.7% in Piramanayagam A *et al*., [20] study done in 2013, 40% in Shiva Kumar *et al*., [11] study in 2013, and the overall prevalence of hypertension was 65% in study done by Sushma Tiwari *et al*., [24] 2010.

Dental problems
In the present study 201(33.5%) of the study participants had dental problems whereas it was much high 62.2% in Syed Qadri, SK *et al*., [13] study done in 2013.
In the present study dental caries was present in 18% in the study participants.
Whereas it was 21.9% in Vandana Nikumb *et al*., [8] study done in 2015 and it was almost double 40% in Sanjiv Kumar Barman *et al*., [12] study done in 2014.

Endocrine problems
In the present study 28.8% of the study participants had diabetes mellitus. Similar findings were observed in a study done by Vandana Nikumb *et al*., [8] in 2015 where 28% were having diabetes among Geriatric Population in an Urban Area and 27.49% in a study done by MK Muralidhar *et al*., [7] in 2014 among Elderly in a Rural Community of Coastal Karnataka.
Our findings do not correlate with the study findings of Barman *et al*., in 2014 where only 15% had diabetes done among geriatric population in an urban community of Kishanganj, Bihar & 9% in a study done by Syed Qadri *et al*., [13] in 2013 in northern India, 3.7% in a study done by Piramanayagam A *et al*., [20] in 2013 south India.

ENT/Hearingloss
In the present study 142(23.67%) elderly were having impaired hearing, whereas it was 10.6% in Vandana Nikumb A *et al*., [8] done in 2015., 27% elderly were having impaired hearing as major ENT problem in a study done by Shivakumar S. *et al*., [11] in 2013.
In the present study 85(22.4%) of women were suffering from reduced hearing, similar to the study done by Piramanayagam A *et al*., [20] in 2013 where 69(24.3%) women were suffering from reduced hearing.

Gastrointestinal problem
In the present study 142(23.7%) were having GIT problems. In contrast it was 36.4% in Srivastava *et al*., study done in 2013.
In our study 60(27.2%) males and 82(21.6%) females had GIT in contrast 41.6% of elderly males and 36% of elderly females had gastrointestinal problems in Mrinal Ranjan Srivastava, *et al*., [22] study done in 2013.
In the present study 11.5% had Acid peptic disease in contrast 22.2% were suffering with Acid peptic disease in Syed Qadri, *et al*., [13] study in 2013.

Anaemia
In the present study 126(21%) had pallor whereas it was 17.8% in a study done by Piramanayagam A *et al*., [20] in 2013.
In contrast it was much higher (63.75%) in a study done by Sanjiv Kumar Barman *et al*., [12] in 2014 and 30.8% in Singh Nirankar *et al*., [25] study in 2012.
In the present study 15.8% of male participants and 24.0% female participants had anaemia compared to study done bySanjiv Kumar Barman, *et al*., [12] 2014 which showed 45(28.12%) males and 57(35.63%) females had anaemia.

Skinproblems
In the present study 15.5% elderly had skin problems where as it was 4.2% in a study done by Piramanayagam A, *et al*., [20] in 2013, 3.52% in Jadhav V.S, *et al*., [10] study in 2012,9% in Shivakumar S. *et al*., [11] study in 2013.

Central nervous system problems
In present study 72(12%) elderly were having CNS problems. About 8.1% males and 7.7% female elderly had memory impairment, whereas it was 41(13.80%) among males and 27(8.23%) among females were having senescent forgetfulness in a study done by Jadhav V.S. *et al*., [10] in 2012.
In our study 8 (3.6%) of males and 7(1.8%) of female elderly were suffering with CVA whereas it was 14 (4.5%) men and 7 (2.5%) women were affected in a study done by Piramanayagam A, *et al*., [20] in 2013, 18(6.06%) males and 11(3.35%) females suffered from Hemiplegia in a study done by Jadhav V.S, *et al*., [26] in 2012.

Respiratory problems
In the present study 71(11.8%) elderly were had respiratory problems similar findings 11.9% were observed in a study done by Vandana *et al*., [8] 2015, 12.8% in Piramanayagam A, *et al*., [7] study in 2013, 10.3% in Nirankar *et al*., [25] 2012.
In the present study 4% of the study subjects had Bronchial Asthama and similar finding were seen in study done by S V Kamble *et al*., [23] prevalence of asthma (2.6%) and chronic bronchitis (2.4%).
In the present study 3(0.5%) elderly were having T.B. similar findings were observed in a study done by 0.7% in Piramanayagam A, *et al*., [20] study in 2013.0.5% in Nirankar *et al*., [25] 2012.
In the present study 4% had Bronchial Asthma, similar findings 5% were observed in Shiva Kumar S. *et*

al., [26] 2013, 3.2% in Piramanayagam A, *et al*., [20] study in 2013, 6.6% in Nirankar *et al*., [25] 2012.

Genitourinary problems

In the present study 22(3.7%) elderly were having genitourinary problems similar findings 4,5% were observed in Piramanayagam A, *et al*., [20] study done in 2013.Whereas much higher prevalence was found 8% in Shivakumar S. *et al*., [11] study in 2013. Low prevalence 1.7% was found in Shraddha K, *et al*., [14] study in 2012.

In the present study More men 11 (4.1%) were affected by genitourinary problems compared to women 11 (1.3%). Similar findings were observed in Piramanayagam A, *et al*., [20] study in 2013 where 6.2% males and 3.2% females had genitourinary problems.

In the present study 14(2.3%) had incontinence similar findings (1.7%) were observed in Piramanayagam A, *et al*., [20] study done in 2013,0.9% in Shraddha K, *et al*., [14] study in 2012.

Malignancy

In the present study 6(1.0%) subjects were suffering with malignancy.

In our study 0.8% of females had malignancy whereas it was 2(1.62%) in MK Muralidhar, *et al*., [7] study in 2014. In contrast 3.04% females were suffering with cancer in Jadhav V.S. *et al*., [10] study in 2012.

Activities of daily living

In the present study about 95-99% of the study participants were independently performing Activities of Daily Living which is comparable to study done by MK Muralidhar *et al*., [7] 2014, 89% of the study subjects were independent in performing ADL activities and study done by (Indarjeet Singh Gambhir *et al*.,) [26] 2014, 92.8% were independent in performing ADL activities and there were 60% respondents independent in doing ADL activities in a study done by Mohan Chandra Dolai *et al*., (2013) [27].

In the present study with respect to Activities of Daily Living (ADL), 96.8%of the elderly were able to do bathing independently. Only 3.2% were depending on their family members for taking bath. In contrast 79% were independent and 21% were found to be dependent for bathing in Harindersekhon *et al*., [28] study in 2014.

In the present study with respect to Activities of Daily Living (dressing up), majority (96.8%) of the elderly were able to dress up independently. In contrast only 80% were able to do it independently in Harinder Sekhon *et al*., [28] study in 2014.

In the present study with respect to going to toilet, majority 582 (97%) were able to manage independently. In contrast only 77% were able to do it independently in Harinder Sekhon *et al*., [28] study in 2014.

In the present study, 581(96.8%) of the elderly were independently able to move from one place to another where as it was observed only 80% of the elderly in Harinder Sekhon *et al*., [28] study done in 2014.

In our study only few (2.7%) of the elderly were seeking assistance from family members for taking food. Contrary to our study findings this was observed in 23% in Harinder Sekhon *et al*., [29] study.

In a study on physical and mental health status and functional ability of geriatric population in an urban area of Delhi: A community-based cross-sectional study done by Meera Dhuria *et al*., [29] (2014) reveal that out of total 250 subjects, 176(70.4%) were found to be independent with regard to ADLs.

In the present study increasing in age is associated with ADL dependency which is similar to study done by Krishnamachari Srinivasan *et al*., [17] 2010 disablement was significantly associated with age.

Instrumental activities of daily living

With respect to Instrumental Activities of Daily Living in the present study 573 (95.5%) were able to self-administer their medicines, only 37(6.2%) seeking help from others.

In our study 83.7% able to do grocery shopping, 78.2% able to prepare meals,13.5% were able to drive, 27.8% were able to handle own finances.

Out of 250 elderly majority of the subjects (N=177, 70.8%), were dependent with regard to instrumental activities of daily living (Meera Dhuria *et al*., [29]) and in study done by Mohan Chandra Dolai *et al*., [27] 83.93% respondents were dependence on IADL.

About 19.8% elderly have decreased IADL with 12.8% in a single activity, 6% in two activities, 1% in three activities and 0.1% in four activities. Aclinico-epidemiological study of cognitive function status of community-dwelling elderly Indarjeet Singh Gambhir *et al*., (2014) [26].

In the present study only males 44.8% of males and 80.5% were unable to use telephone as compared to the study done by Meera Dhuriai *et al*., [29] (Delhi 2014) where proportion of males and females who had difficulty in using the telephone was 71.2 per cent and 73.7 per cent respectively.

In the present study 70.6% of males and 95.8% of females had difficulty in moving and transport as compared the study done by Meera Dhuria *et al*., [29] (Delhi 2014) (61.8%) females (42.4%) males had difficulty in walking around.

In the present study 12.7% of males and 18.5% of females had difficulty in grocery shopping as compared with the study done by Meera Dhuriai *et al*., [29] (Delhi 2014).

Grocery shopping was a difficult task for (28.8%) males and (61.0%) of females.

In the present study 5.4% males and 6.6% females had required help in taking their own medication as

compared with study done by Meera Dhuria *et al*., [29] (Delhi 2014)25.4% of males in dependent category required help in taking their own medications whereas 43.2% of females were totally dependent for the same on others.
In the present study 47.5% males and 86.5% females were having dependency in managing their money (counting and keeping an account) as compared with study done by Meera Dhuriai *et al*., [29] (Delhi 2014) showing the dependent males 20.3% and 46.6% females.
In all the instrumental activities of daily living the females were significantly more dependent as compared to males.

Conclusions

The majority of the elderly were "young old" people between the ages of 60 and 65. Targeting this group should be the main focus of the plans and initiatives in the health sector. Since women made up the majority of the study population, their gender distribution accurately reflects that of the rest of the nation. Additionally, this suggests that senior ladies should be the focus of health security and policy. The elderly should not only receive discounts, but also have access to geriatric clinics at their doorstep as 20% of senior couples were living alone and without immediate support from young people. In the current study, visual problems (72%) musculoskeletal issues (62%), and hypertension (47%) were at the top of the list; as a result, these issues must be addressed before any other geriatric issues. Gender, education, and socioeconomic level did not significantly correlate with the presence of morbidity. Therefore, health care for the elderly should be made available to everyone, regardless of gender, education, or socioeconomic level. In the current study, daily living activities were not an issue because 95-98% of participants could do them on their own. The majority of the female participants in instrumental daily living tasks were still reliant on others for things like phone use (80%), transportation (96%), and handling funds (86%), thus it is crucial to empower elderly women in these areas.

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