# Study of Morbidity Profile of Elderly at Old Age Homes and Its Association with Disability

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*Abstract:*
*Introduction:-Health status is an important factor that has a significant impact on the quality of life of an elderly population. Evaluation of morbidity profile among elderly people and the impact of chronic conditions on functional disability will help in the application of intervention to improve the health status and quality of life of elderly Objectives:- To assess morbidity among elderly residing at old age homes and to determine relationship of  morbidity with disability  and socio-demographic factors. Material and methods: A descriptive cross sectional study was conducted among elderly people with age > 60 years residing at three old age homes in Amravati district, Maharashtra, India, over a period of five months. Data was collected by using predesigned and pretested questionnaire. Diagnosis was made on clinical examination, cross checking of medical records and medications held by the participants. Disability was assessed by using Rapid Disability Rating scale-2. Chi-square test of significance was used for statistical analysis. Analysis was done by using SPSS software Version 16. Results:-Most common form of morbidity was eye problems (61.8%) followed by musculoskeletal problems(53.9%), Anaemia(32.4%), HT(30.4%) etc. 64.7 % were having some form of disability. Morbidity and number of morbidities both were significantly associated with disability (p=0.000). Age was significantly associated with morbidity.(p= 0.000) Conclusions:- It is essential to have geriatric units with specialized professionals along with subsidized health care services in order to address geriatric morbid conditions in a proper manner. Regular health check-up camps should be organized at old age homes.*

*Keywords: Elderly, morbidity, disability, old age home*

## 1. Introduction

India is witnessing a rapid increment in aged population constituting 8.2% of the national population and  is projected to rise  to 12.4% by year 2026.(Jeyalakshmi, Chakrabarti and Gupta, 2011). Urbanization, modernization and globalization have changed the traditional concept of family in India, which was to provide social support to ill, dependent and older family  members (Kumar, Das and Rautela, 2012). In this dynamic era, where the aging of the population rapidly increasing in one hand and the erosion of joint family traditional practice and social values occurring on the other hand, the old age homes are becoming the place of choice for elderly.

Health status is an important factor that has a significant impact on the quality of life of an elderly population. Perceived health , chronic illness and functional status are major elements of health status in the elderly because perceived health declines with age and chronic health problems increase with age. Furthermore, there is a growing body of evidence indicating that older people are at risk for multiple co morbidities.(Gijsen R et al. 2001) Morbidity among elderly people has an important influence on their physical functioning and psychological well-being.  Majority of the studies on the elderly in India have focussed on the prevalence of health status but health related disability has been a neglected area of research in Indian gerontology (Ramamurti PV 2003) Evaluation of the morbidity profile among elderly people and its impact on functional disability is important as many disabilities due to morbidity are preventable and it will help in the application of intervention to improve health status and quality of life of elderly (Joshi K et al. 2003) So focus should not be only on reducing disease related morbidity and mortality, but on promoting optimal health and ensuring

disability-free years. With this background present study was conducted among elderly residing at old age homes in Amravati district with the objectives to assess morbidity profile of elderly residing at old age homes and to determine relationship of morbidity with disability and sociodemographic factors.

## 2. Material and Methods
A descriptive cross sectional study was conducted among elderly people with age > 60 years residing at three old age homes namely Matoshri , Madhuban and Sant Gadagebaba vruddhashram in Amravati district, Maharashtra, India over a period of five months from August 2014 to December 2014. Data was collected by using predesigned and pretested questionnaire. Various sociodemographic characteristics were recorded at the baseline. Diagnosis was made on the basis of clinical examination, cross checking of medical records and medications held by the participants. Disability was assessed using Rapid Disability Rating scale-2 ( Linn MW 1976). Analysis was done by using software SPSS version 16 and Chi-square test of significance was used. Ethical clearance was obtained from Institutional Ethical Committee .

All people >60 years of age who had given informed consent were included in the study and those  who refused to participate in the study and  absent at the time of interview were excluded. Thus, there were total 112 inmates in three old age homes, following inclusion, exclusion criteria 102 were enrolled in the study.

For study purpose, morbidity was defined as any deviation from normal physiological well being and disability was defined as inability to carry out activities relevant to age and sex.(park )

## 3. Results
Table-1 shows socio-demographic characteristics of study participants. Majority 28.4% of the inmates were in the age group of 60-65 years. Majority 51% were males. About 83.3% were  Hindu by religion. Amongst females 36.3% were widow and amongst males, 31.4% were widower. Majority(36.3%) were illiterate followed by primary education (35.3%). More than half of the inmates, i.e. 52% were having no source of money at all and those who were getting some money only 23.5% were getting less than 500 per month. Table -2 and graph-1 shows morbidity profile of the study population. Out of 102, 86 (84.3%) were having one or more morbidities while 16(15.7%) were having no morbidity thus prevalence of morbidity among elderly was 84.3%.  Majority 61.8% were having eye problems-cataract(25.5%), refractive error (43.1%),   others (24.6%) followed by musculoskeletal problems 53.9% , anaemia 32.4%,hearing impairment 32.4%,hypertension, GIT problems, psychiatric problems, dental problems, urinary problems, diabetes mellitus, respiratory problems, CNS problems, neuropathy, skin problems, cardiovascular problems, anorectal problems and  others 8.9% ( BPH 3.9 %, prolapsed uterus 1%, hernia 2%, Obesity 1%,hypo/hyperthyroidism 1%.). Out of the sufferer, 32.4% were not taking any sort of treatment because of financial reason and those who were taking treatment only 15.7% were taking regular treatment. Most of the inmates (41.9%) were taking allopathic treatment. (Figure-2) When disability was assessed using Rapid Disability Rating Scale -2 , 44.1% were having no disability and 64.7% were having some form disability of which,19.6% had minimal disability,35.3% had minimal disability,1% had a severe disability. Table-3When morbidity was associated with disability, significant association was found (p=0.000), Table-4 number of morbidities was also significantly associated with disability (p=0.000).Amongst sociodemographic factors, only age were significantly associated with morbidity.

## 4. Discussion
Prevalence of morbidity in our study was 84.3%. Similar prevalence was found in Study conducted by (Shrinivasan et al. 2010) ( Bhatia SPS et al. 2007) among elderly. Another study conducted by (Asadullah Md et al.. 2012)  among elderly at old age homes showed prevalence of morbidity 92.2% which was higher than our study. Most common form of morbidity was eye problems 61.8% followed by musculoskeletal problems 53.9%, anaemia 32.4%.Other studies (Venkatorao T et al.. 2005)  (Srivastava et al. 2010 ) ( Parry SH et al. 2008)( Narapureddy B et al.. 2008) also reported ocular disorder as the commonest health problem followed by musculoskeletal problem in their studies. In our study, age was significantly associated with morbidity means as the age advances, health problems increases, similar findings were reported in (Srivastava K et al.. 2010) (Goel P.K.2003 ) In our study, 64.7% were having some form disability, in another study by Joshi K et al.. disability was present in 87.5% elderly. Morbidity and number of morbidity both were significantly associated with disability in our study means any health problem can lead to disability and as number of morbidities increases disability increases. Our findings corroborates with the other studies( Joshi K et al. 2003)(Kabir ZN et al.. 2003) (Fuchs Z et al.). Limitations of the study are that there are increased chances of misreporting of information by the respondents as geriatric  epidemiologists says that misreporting might increase with age.

## 5. Conclusions
84.3% were having one or more morbidities. Most common form of morbidity was Eye problems, 61.8%, followed by musculoskeletal problems, 53.9%, anaemia 32.4%. 64.7% were having some form of disability. Morbidity as well as number of morbidities were significantly associated with disability (p=0.000).With these findings, we conclude that  it is essential to have geriatric units with specialized professionals along with subsidized health care services in order to address geriatric morbid conditions in a proper manner. Regular health check-up camps should be organized at old age homes. Insurance scheme that would enable the elderly to meet their medical expenses should be implemented. Health problems of elderly should be tackled with psycho- social intervention.

## 6. Acknowledgment

## 7. References

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**Annexure**

| Socio-demographic characteristics | Number | Percentage |
|---|---|---|
| **Age** | | |
| 60-65 | 29 | 28.4 |
| 66-70 | 21 | 20.6 |
| 71-75 | 19 | 18.6 |
| 76-80 | 22 | 21.6 |
| >80 | 11 | 10.8 |
| **Sex** | | |
| M | 52 | 51 |
| F | 50 | 49 |
| **Religion** | | |
| Hindu | 85 | 83.3 |
| Buddhist | 17 | 16.7 |
| **Marital status** | | |
| Married | 26 | 25.5 |
| Widow | 37 | **36.3** |
| Widower | 32 | **31.4** |
| Divorced/Separated | 04 | 3.9 |
| Unmarried | 3 | 2.9 |
| **Education** | | |
| Illiterate | 37 | 36.3 |
| Primary | 36 | 35.3 |
| Middle | 16 | 15.7 |
| Secondary | 12 | 11.8 |
| Graduate | 1 | 1 |
| **Monthly income** | | |
| Nil | 53 | 52 |
| ≤500 | 24 | 23.5 |
| >500 | 25 | 24.5 |

*Table 1: Socio-demographic profile of study participants*

| Morbidity | Number | Percentage |
|---|---|---|
| **Eye problems** | **63** | **61.8** |
| Cataract | **26** | **25.5** |
| Refractive errors | **44** | **43.1** |
| Others(Pterygium) | **25** | **24.6** |
| | | |
| **Musculoskeletal problems** | **55** | **53.9** |
| Arthritis | **31** | **30.4** |
| Spondilytis | **1** | **1** |
| Osteoporosis | **1** | **1** |
| Fractures | **7** | **6.7** |
| Others | **32** | **31.4** |
| (backache,myalgia,joint pain) | | |
| | | |
| **Anemia** | **33** | **32.4** |
| | | |
| ENT problems | 32 | 31.4 |
| Hearing impairments | 33 | 32.4 |
| | | |
| **Hypertension** | 31 | 30.4 |
| | | |
| **GIT problems** | 25 | 24.5 |
| Gastritis | 4 | 3.9 |
| Constipation | 12 | 11.8 |
| Diarrhea | 2 | 2 |

| | | |
|---|---|---|
| Anorexia | 5 | 4.9 |
| Abdominal pain | 5 | 4.9 |
| Others | 2 | 2 |
| **Psychiatric problems** | 23 | 22.5 |
| Irritability | 4 | 3.9 |
| Insomnia | 15 | 14.7 |
| Psychosis | 1 | 1 |
| Bipolar disorder | 1 | 1 |
| Others(feeling loney,lack of conc) | 12 | 11.8 |
| **Dental problems** | 22 | 21.6 |
| **Urinary problems** | **17** | **16.7** |
| Increase frequency of micturition | 7 | 6.9 |
| Burning micturition | 3 | 2.9 |
| Stress incontinence | 2 | 2 |
| Urge incontinence | 3 | 2.9 |
| Others | 3 | 2.9 |
| **Diabetes Mellitus** | 11 | 10.8 |
| **Respiratory problems** | **11** | **10.8** |
| URTI | 2 | 2 |
| Asthma/COPD | 7 | 6.9 |
| Tuberculosis | 1 | 1 |
| Others | 1 | 1 |
| **CNS problems** | **8** | **7.8** |
| CVE/Hemeparesis | **5** | **4.9** |
| Epilepsy | **1** | **1** |
| Others | **2** | **2** |
| **Neuropathy** **Tingling numbness** | **8** | **7.8** |
| **Skin problems** | **8** | **7.8** |
| Pruritus | **7** | **6.9** |
| Scabies | **2** | **2** |
| Sebaceous cyst | **1** | **1** |
| Pigmentation of both hands | **1** | **1** |
| **Cardiovascular problems** | **6** | **5.9** |
| **Anorectal problem** | **4** | **3.9** |
| **Others** | **9** | **8.9** |
| BPH | **4** | **3.9** |
| Prolapse uterus | **1** | **1** |
| Hernia | **2** | **2** |
| Obesity | **1** | **1** |
| Hypo/hyperthyroidism | **1** | **1** |

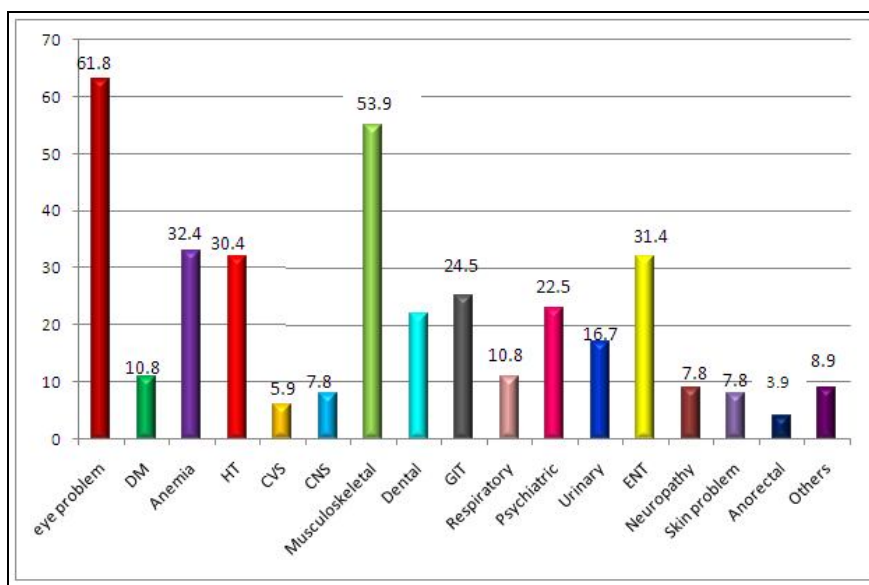*Table 2: Morbidity profile of elderly people*

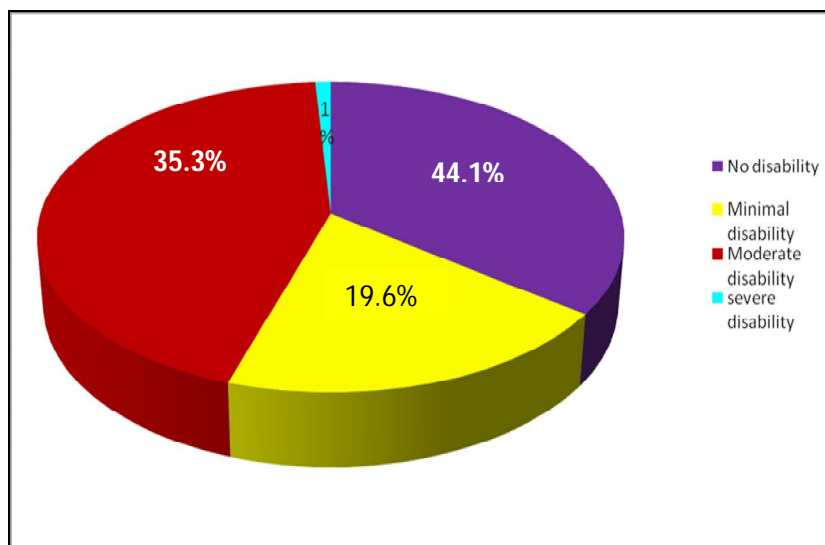*Figure 1: Morbidity profile of study population at old age homes*



*Figure 2: Distribution of elderly according to disability status*

| Morbidity status | Disability status | | |
|---|---|---|---|
| | Present | Absent | Total |
| **Present** | **64** | **22** | **86** |
| **Absent** | **2** | **14** | **16** |
| **Total** | **66** | **36** | **102** |

*Table 3: Association of morbidity with disability*
*χ2=22.64,     df=1,    p=0.000*

| Number of morbidities | Disability status | | |
|---|---|---|---|
| | Present | Absent | Total |
| **0** | **2** | **14** | **16** |
| 1-3 | 17 | 20 | 37 |
| 4-6 | 35 | 2 | 37 |
| >6 | 12 | 0 | 12 |
| Total | 66 | 36 | 102 |

*Table 4: Association of number of morbidities with disability*
*χ2= 45.81 ,  df=3,    p=0.000*