Morbidity Pattern among the Elderly People Living in a Southern Rural India - A Cross Sectional Study

Ashok kumar T, Sowmiya KR, Radhika G.

ABSTRACT

Introduction: It is essential to plan for care services for the elderly people in the era of population ageing. Morbidity assessment plays a major role in planning care services. Objectives: To assess the morbidity pattern among the elderly people and to identify factors influencing morbidity among them.

Materials and Methods: 305 elderly people aged 60 years and above were selected from seven villages around proposed PSG Geriatric Day Care Centre by using the sampling method “Probability Proportional to Size”. Results: The most common morbidity identified among them were Eye problems (62.6%) Hypertension (44.3%) Respiratory diseases (34.1%), Psychological distress and symptoms (29.2%) and musculoskeletal disorders (23.6%). Conclusion: Since there is high morbidity load among the rural elderly, hence it is recommended that we need to provide them with elderly-friendly primary geriatric care services. Greater, targeted efforts are needed to identify at-risk elderly people living in the community and to provide services (e.g. home care, community based rehabilitation services) that may reduce the burden of unmet need.

Key Words: Morbidity, Elderly, Rural India, Care Services

Introduction:

All over the world the life expectation of people is increasing. Population ageing is the result of demographic transition with reduction in fertility leading to decline in the proportion of young in the population and at the same time there is increasing longevity. Unfortunately, the rapidity of population ageing is expected to continue to outpace social and economical development in developing countries particularly in countries like India. Today, worldwide there are 600 million persons aged 60 and over; this total will double by 2025 and will reach virtually two billion by 2050 when there will be more people aged 60 and over than children under the age of 15. Most of them will be living in developing countries which are often least prepared to meet the challenges of rapidly ageing societies. In other words WHO says “Developing countries will become old before they become rich while industrialized countries became rich while they were growing old.”

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The UN defines a country as ‘ageing’ where the proportion of people over 60 reaches 7 per cent. In India, currently 7.8% of the population are elderly and it is expected that this will reach 12.6% in 2025.² There are limited social security systems only available to elderly and most of these Social Security Systems are for the Organized Sectors especially living in rural areas, Help age India³ says 90% of older persons are from the unorganized sector, with no social security at the age of 60. The assessment of morbidity pattern and its determinants will help the in the application of intervention, both medical and social, to improve the health status and thus quality of life of elderly people.⁴

**Objectives**

1. To assess the morbidity load and morbidity pattern among the elderly people living aged 60 years and above and
2. To identify factors influencing the morbidity pattern among them

**Materials and Method**

This study analysis done from the study conducted to assess the needs of the elderly⁵, which is a cross sectional study and the study was conducted for a period of one year from July, 2005 to June, 2006. **Study area:** Seven villages coming under the field practice area of PSG Rural Health centre, Vedapatti served as the study area. These villages are planned to be covered by “PSG Geriatric Day Care Centre”. Subjects were clinically evaluated based on the steps given by the “Handbook on Health Care of the Elderly: A Manual for Physician in Primary and Secondary Health Care Facilities”⁶ i.e. by their reported illness (Existing diagnosis), medication held by the subjects, history and clinical examination. The physical equipments used were Stethoscopes, B.P. Apparatus and Snellen’s Chart (for illiterate, Snellen’s E Chart) has been used to assess the morbidity status of the elderly. Blood pressure was measured in lying down position using mercury type sphygmomanometer twice in each individual at an interval of 30 minutes. Elderly with systolic blood pressure of 140 mmHg or more and / or diastolic blood pressure of 90 mmHg or more were considered as hypertensive. Snellen’s Chart (E Chart) was used to assess the visual acuity. Those who were unable to read were further examined for cataract and corneal opacity.

**Results**

In the present study, out of 305 elderly, Females were more in number 162(53.1%) than male (143(46.9%)). 160(52.5%) elderly people were currently married. Remaining 134 (44.6%) were widowed, 7(2.3%) were separated and divorced and 2(0.7%) were never married. This study revealed that 204 (66.9%) elderly people were illiterate, while 40 (13.1%) were literate without formal schooling and 46(15.1%) of the elderly had gone through primary school education. Only 15 (4.9%) had under gone high school and above.
Table 1: Morbidity Pattern

<table>
<thead>
<tr>
<th>S. No</th>
<th>Physical Health Condition</th>
<th>Male (n=143)</th>
<th>Female (n=162)</th>
<th>Total (n=305)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No. (%)</td>
<td>No. (%)</td>
<td>No. (%)</td>
</tr>
<tr>
<td>1</td>
<td>Eye Problems*</td>
<td>80 (61.5)</td>
<td>103 (63.6)</td>
<td>191 (62.6)</td>
</tr>
<tr>
<td>2</td>
<td>Hypertension</td>
<td>72 (50.3)</td>
<td>63 (38.9)</td>
<td>135 (44.3)</td>
</tr>
<tr>
<td>3</td>
<td>Respiratory diseases**</td>
<td>48 (33.6)</td>
<td>56 (34.6)</td>
<td>104 (34.1)</td>
</tr>
<tr>
<td>4</td>
<td>Psychological distress and symptoms</td>
<td>38 (26.6)</td>
<td>51 (31.5)</td>
<td>89 (29.2)</td>
</tr>
<tr>
<td>5</td>
<td>Musculoskeletal disorders***</td>
<td>24 (16.8)</td>
<td>48 (29.6)</td>
<td>72 (23.6)</td>
</tr>
<tr>
<td>6</td>
<td>Cognitive Impairment</td>
<td>35 (24.5)</td>
<td>31 (19.1)</td>
<td>66 (21.6)</td>
</tr>
<tr>
<td>7</td>
<td>Diabetes mellitus</td>
<td>22 (15.4)</td>
<td>19 (11.7)</td>
<td>41 (13.4)</td>
</tr>
<tr>
<td>8</td>
<td>Acid peptic disease</td>
<td>25 (17.5)</td>
<td>14 (8.6)</td>
<td>39 (12.8)</td>
</tr>
<tr>
<td>9</td>
<td>Anemia</td>
<td>15 (10.5)</td>
<td>18 (11.1)</td>
<td>33 (10.8)</td>
</tr>
<tr>
<td>10</td>
<td>Genitourinary diseases</td>
<td>6 (4.1)</td>
<td>12 (7.4)</td>
<td>18 (5.9)</td>
</tr>
<tr>
<td>11</td>
<td>Deafness</td>
<td>7 (4.9)</td>
<td>9 (5.6)</td>
<td>16 (5.2)</td>
</tr>
<tr>
<td>12</td>
<td>Oral lesions (Dental caries and oral carcinoma)</td>
<td>5(3.5)</td>
<td>7(4.3)</td>
<td>12(3.9)</td>
</tr>
<tr>
<td>13</td>
<td>Stroke</td>
<td>2(1.4)</td>
<td>1(0.62)</td>
<td>3(0.99)</td>
</tr>
</tbody>
</table>

* Eye problems include cataract, corneal opacity

** Respiratory diseases include Chronic Obstructive Airway Diseases (COAD) and Pulmonary Tuberculosis

*** Musculoskeletal disorders include Osteoarthritis, Rheumatoid arthritis, Kyphosis and Spondylitis

The above shows the most common morbidity identified among them were eye problems (62.6%), hypertension (44.3%), respiratory diseases (34.1%), psychological distress and symptoms (29.2%) and musculoskeletal disorders (23.6%).

About half of the subjects (50.4%) were diagnosed as having 1-3 morbidities and 34.8% of elderly having 4-6 morbidities. There are few (8.9%) elderly people having more than 6 morbidities. A small number (5.9%) of elderly is free from disease.

**Discussion:**

It was found that 63% of elderly were suffering from one or more eye problems, which is slightly lower than Prakash R et al. They found 70% of their sample had one or more eye problems. The lower prevalence in the present study can be due to the different to inclusion criteria used for eye problems. The present study included only cataract, corneal opacity and refractive errors. Most of the morbidities are common among elderly people aged more than 75 years, female gender, respondent who lived alone. Hypertension is one of the major chronic conditions affecting elderly people. It can occur at any age, but the risk increases with age. This study found that 44% of the elderly were suffered from hypertension. This is consistent with the findings in other studies.4,7,9
Musculoskeletal disorders including arthritis, one of the commonest disorders affecting elderly and the causative factors leading to them are poorly understood. The current study found nearly one fourth (23.6%) of the elderly are affected by these disorders and osteoarthritis ranked first among these disorders. These findings are slightly higher than the study done by Prakash R et al\textsuperscript{7}, but this prevalence is lower than the study done by Kamalesh Joshi et al\textsuperscript{4} and K.R. Rani et al\textsuperscript{9}. Similar to other studies,\textsuperscript{4, 10, 13} the present study has also identified women are more prone to this disorder. Greater, targeted efforts are needed to identify at-risk elderly people living in the community and to provide services (e.g. home care, community based rehabilitation services) that may reduce the burden of unmet need.

**Conclusion and Recommendation:**
Since there is high morbidity load among the rural elderly, hence it is recommended that we need to provide them with elderly-friendly primary geriatric care services. There were large number of undiagnosed diseases (Hypertension, Cataract etc..) and so there is a need for starting simple screening programs among the elderly like blood pressure measurement, eye camp for cataract screening, simple blood investigations to detect diabetes and anemia and oral cavity examination-for detection of pre-cancerous lesion in mouth, taking pap smear -a simple procedure of detecting early cancer cervix.

**Limitation of this study:**
In the present study the morbidity status of the elderly was assessed based on self reported illness, history and clinical examination of them. No screening test using the laboratory investigation was done. Therefore some of the morbidities which could be identified by screening tests might be missed.

**References:**


Conflict of interest: None