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ORIGINAL ARTICLE

Morbidity Pattern Among Elderly in the Village Adopted Under Family Adoption Survey

S. Dhamodharan,[1] M. Janaki,[2] K. Ramesh[3] and M. Madhumitha[4,*]

[1]*Associate Professor, Department of Community Medicine, Government Dharmapuri Medical College, Dharmapuri, Tamilnadu*
[2]*Associate Professor, Department of Community Medicine, Government Villupuram Medical College and Hospital, Villupuram, Tamilnadu*
[3]*Associate Professor, Department of physiology, Government Villupuram Medical College, Villupuram, Tamilnadu*
[4]*Associate Professor, Community Medicine, Kanyakumari Government Medical College, Kanyakumari, Tamilnadu*

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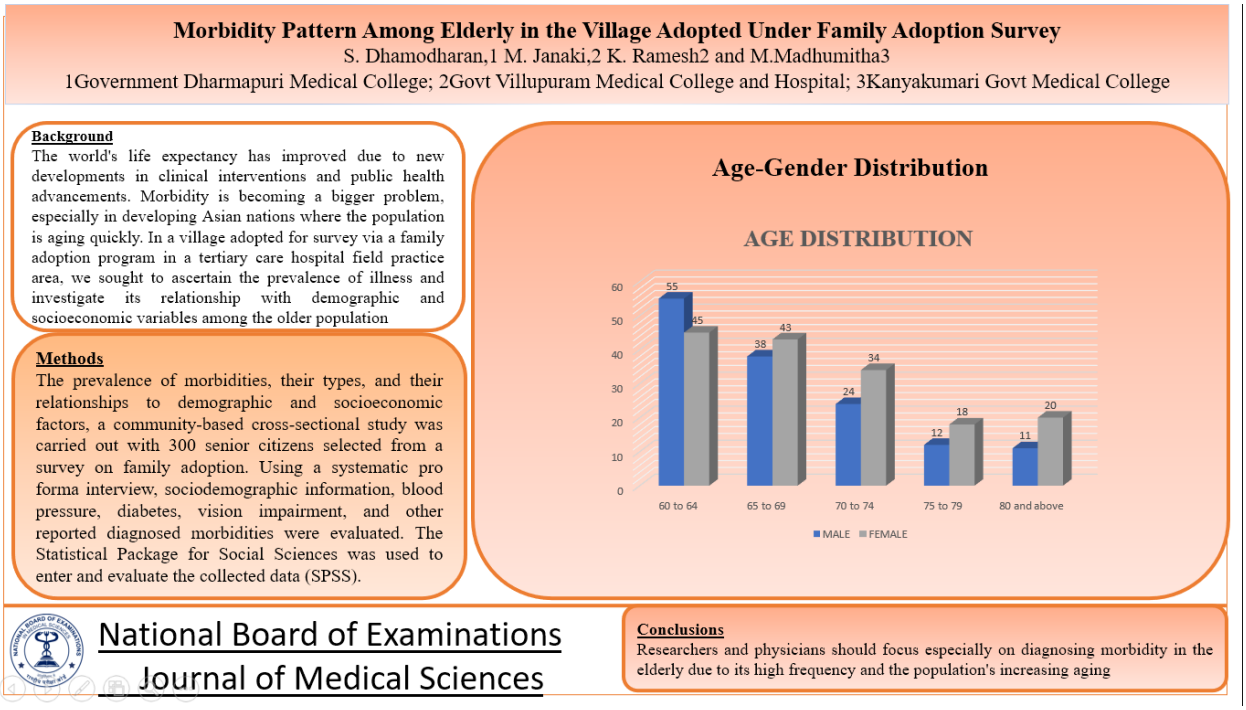
Abstract

Background: The world's life expectancy has improved due to new developments in clinical interventions and public health advancements. Morbidity is becoming a bigger problem, especially in developing Asian nations where the population is aging quickly. In a village adopted for survey via a family adoption program in a tertiary care hospital field practice area, we sought to ascertain the prevalence of illness and investigate its relationship with demographic and socioeconomic variables among the older population. **Material & Methods**: The prevalence of morbidities, their types, and their relationships to demographic and socioeconomic factors, a community-based cross-sectional study was carried out with 300 senior citizens selected from a survey on family adoption. Using a systematic pro forma interview, sociodemographic information, blood pressure, diabetes, vision impairment, and other reported diagnosed morbidities were evaluated. The Statistical Package for Social Sciences was used to enter and evaluate the collected data (SPSS). **Results:** The largest percentage (32.9%) of the 300 senior people were in the 60–64 age range. A total of 783 specific morbid disorders were noted among the 300 study participants. Some of the individuals complained more than one morbid condition which is multiple morbidity. the prevalence of cataract and eye related disorders was highest among the older population (63.6%) followed by Hypertension (45%), Stress and psychological illnesses were around 29.3% followed by hearing impairment (23.6%) and musculoskeletal disorders like low back ache and generalized myalgia were around 21.6% among the elderly. **Conclusion:** Researchers and physicians should focus especially on diagnosing morbidity in the elderly due to its high frequency and the population's increasing aging.

Keywords: Morbidity, Family adoption, elderly, quality of life in elderly

*Corresponding Author: M. Madhumitha
Email: dr.m.madhumitha@gmail.com

Graphical Abstract



Introduction

The WHO was invited to spearhead the UN Decade of Healthy Ageing, which was announced by the UN General Assembly in 2021–2030. For ten years, governments, civil society, international agencies, professionals, academia, the media, and the corporate sector will work together as part of the UN Decade of Healthy Ageing to promote longer and healthier lives [1].

Globally, the number of adults aged 60 and above is expected to roughly double between 2015 and 2050, reaching around 2.1 billion people [2]. Chronic illness prevalence has become a public health concern in low- and middle-income countries, with major implications for primary and secondary care physicians [3]. The burden of morbidity is rapidly increasing in India due to longer lifespans and increased exposure to risk factors for chronic diseases [4]. Many people refer to India's current health situation as "dismal" or "disturbing." The condition in the majority of the country is concerning, with the exception of a few states that have fared reasonably well, such as Kerala, Goa, and Tamil Nadu. India faces the risk of falling short of the Millennium Development Goals' health targets if current trends continue [5]. The unresolved agenda of infectious diseases, emerging lifestyle-related non-communicable diseases, and unfinished communicable diseases are all part of India's "Triple burden of diseases," which is a result of industrialization and the persistent health status disparity between and within States and Union Territories (due to various economic, social, and political factors) [6].

All countries have tremendous hurdles in ensuring their health and social systems are ready to take advantage of this demographic shift. By 2050, 80 percent of

older people will live in low- and middle-income countries. Compared to earlier times, the population is aging much more fast presently. Between 2015 and 2050, the proportion of adults over 60 will nearly double, rising from 12% to 22% [7].

Common conditions in older adults include diabetes, depression, dementia, chronic obstructive pulmonary disease, chronic neck and back pain, osteoarthritis, cataracts, hearing loss, and refractive errors. As people age, they are more likely to experience several conditions at once. Another feature of older age is the emergence of a variety of complex health conditions called geriatric syndromes. Conditions like frailty, stumbles, dementia, pressure ulcers, and urine incontinence are often caused by a variety of underlying factors.

Material and methods:

In the field practice area of Govt. Dharmapuri Medical College Hospital, 300 elderly people aged 60 and over participated in family adoption survey camps over the course of three months, from June 2024 to August 2024, in the village of Athagapadi in the Dharmapuri district of Tamil Nadu, a state in south India.

Sample size: $n = \frac{Z_{1-\alpha}^2 pq}{d^2}$ N= 266
10% non-responding error 266+26.6 =292.6
So round off 300

The sample size 300 was calculated based a similar study Pathak et al. the expected proportion of elderly 46 with precision of 6 % the level of significance was taken as 5%

The study was cross-sectional. There were 8457 people living in this village as of the 2021 census, 4871 of them were men and 3586 of whom were women. Approximately four Family Adoption survey medical camps were held in order to enhance the village residents' health care. During the study period, the camps were held, offering health education and promotion services in addition to health screening and referral services.

All participants who attended the Health camp and completed the family adoption survey and were 60 years of age or older were included in the study after providing their informed consent. In every instance, anthropometric measurements (height and weight), clinical examination (including blood pressure, eye examination using Snellen chart for refractive error, cataract screening, hearing impairment, and blood sugar examination), and demographic data were documented. To gather demographic data, a personal interview was conducted with each participant in the study. Trained researchers used an electronic weighing scale with a ±100 gram inaccuracy to weigh each patient.

A portable stadiometer was used to measure the height using a traditional method, with an accuracy of 0.1 cm. The body mass index was calculated as weight in kilos divided by height in meters squared. BMIs of ≥ 23 and ≥ 25 were considered overweight and obesity, respectively. Obesity: >25 kg/m^2, Overweight: 23.0-24.9 kg/m2, Normal BMI: 18.0-22.9 kg/m2) [8].

Statistical analysis

A Microsoft Excel spreadsheet was used to enter the acquired data. IBM SPSS

Version V.27 was utilized to describe the distribution of morbidity profiles among the study population, and descriptive tables were created to further explain the findings. Using descriptive analysis, the prevalence and pattern of morbidity among older adults with different background characteristics were reported. The significance of the relationships between sociodemographic factors and morbidity was investigated using the chi-square test and percentages.

Ethical and financial consideration:

This study involved all camp attendees, who were informed of the goal of data collection and gave their signed informed consent. The Institutional Ethics Committee gave their approval to the project. As part of the logistics support, the Institution supplied all the supplies, labor, and other resources required to run the camps (Table 1).

Results:

Table 1. The Study Population's Age-Gender Distribution

Age groups (in years)	Male		Female		Total	
	No.	%	No.	%	No.	%
60- 64	55	38.5	45	27.8	100	32.9
65 - 69	38	27.3	43	27.2	81	27.0
70 -74	24	16.8	34	21.0	58	19.1
75 - 79	12	8.4	18	11.1	30	9.8
Above 80	11	9.1	20	13	31	11.0
Total	140	100	160	100	300	100

Three-quarters (32.9%) of the 300 elderly participants in this study were in the 60–64 age range. A significant percentage of the elderly (11.0%) were 80 years of age or older. There were 160 females (53.1%) compared to 140 males (46.9%) (Figure 1 and Table 2).

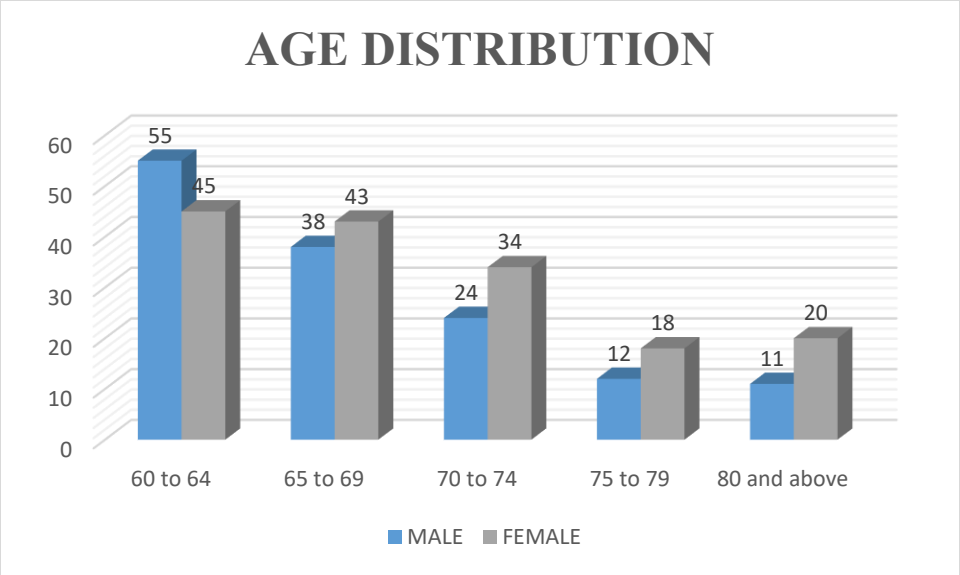


Figure 1: Age-gender distribution

Table 2. Elderly people's educational status

Category	Male		Female		Total	
	No.	%	No.	%	No.	%
Illiterate	69	49.2	134	83.7	203	67.6
Literate (No formal schooling)	29	21	10	6.2	40	13.2
Primary school	30	21.7	14	9.3	44	15.2
High school and above	12	8.4	2	1.9	14	4.9
Total	140	100	160	100	300	100

The survey found that 203 (67.6%) of the elderly were illiterate, 40 (13.1%) were literate but had not attended formal school, and 44 (15.2%) had completed primary school. Just 14 people (4.9%) had completed high school or above. The female illiteracy rate was higher than the male illiteracy rate, which was approximately 83.7% and 49.2%, respectively (Figure 2 and Table 3).

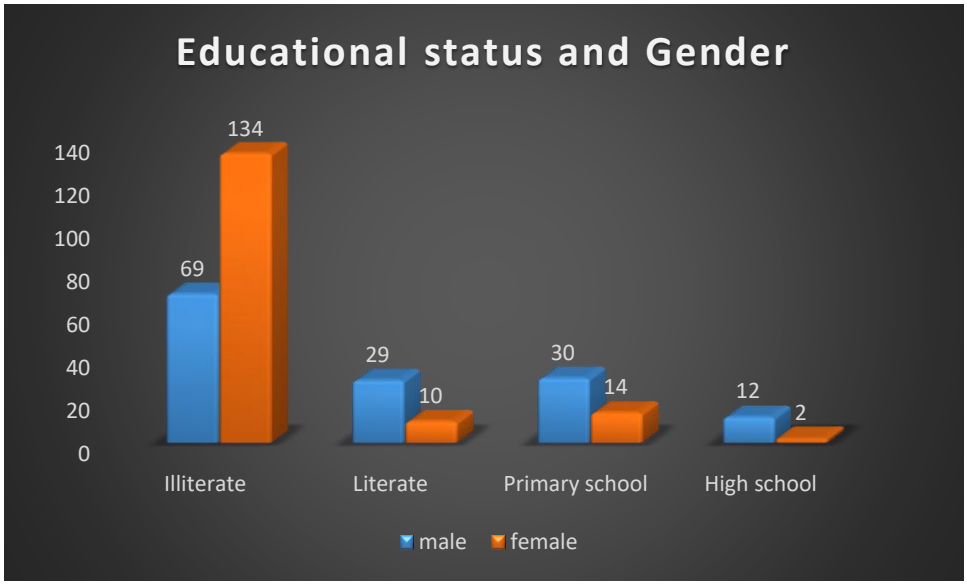


Figure 2. Educational status and gender wise distribution

Table 3. Morbidity Profile and Gender Among the Elderly

S.No	MORBIDITY	Male (n=140) No. (%)	Female (n=160) No. (%)	Total (n=300) No. (%)
1	**Cataract and Refractive error**	88 (61.5)	103(63.6)	191 (63.6)
2	**Hypertension**	72(50.3)	63 (38.9)	135 (45)

3	**Respiratory illnesses**	48(33.6)	55(34.6)	103 (34.3)
4	**Stress and insomnia**	37(26.6)	51(31.5)	88 (29.3)
5	**Hearing Impairment**	24(16.8)	48 (29.6)	72 (23.6)
6	**Low back ache and Myalgia**	34(24.5)	31 (19.1)	65 (21.6)
7	**Diabetes mellitus**	22 (15.4)	18 (11.7)	40 (13.3)
8	**GERD and Loss of appetite**	25 (17.5)	14(8.6)	39(12.8)
9	**Anemia**	14 (10.5)	18 (11.1)	32 (10.6)
10	**Genitourinary disorders**	6 (4.1)	12 (7.4)	18 (5.9)

Amongst 300 study participants total 783 specified morbid conditions were recorded. Some of the individuals complained more than one morbid condition which is Multiple morbidity. The pattern of specific health issues among the elderly population is displayed in the table. It was found that the older population had the highest prevalence of cataract and eye-related disorders (63.6%), followed by hypertension (45%), stress and psychological illnesses (about 29.3%), hearing impairment (23.6%), and musculoskeletal disorders (such as generalized myalgia and low back pain) (about 21.6%). Men were 15.4% more likely than women to have diabetes mellitus (11.7%), with the prevalence being slightly greater among study participants who were female. This study found that women were much more likely than men to have hearing impairment (29.6% vs. 16.8%).

Discussion

The most important health care issue is probably morbidity, which has many negative effects. This study assessed the frequency and correlates of morbidity and disease-specific multiple morbidity in older individuals in India. This study's prevalence of morbidity differs from that of other nations; this could be due to differences in socioeconomic status, the age pyramid, how cases of morbidity are reported, and the health care system. Previous research carried out in different regions of India demonstrated that the prevalence of morbidity varied by state.

One study in South India found that one-third of the population had morbidity [9], while another in Odisha found that fewer than one third of the population had multiple morbidity, with one-third of women and one-fourth of men having multiple morbidities [10]. In Germany, for example, a prior study found that 62% of older adults over 65 had multiple morbidity [11], and in Sweden, 55%

of adults over 77 had multiple morbidity [12]. A study conducted in Ghana revealed that 38.8% of outpatients had several morbidities [14], while a study conducted in Brazil reported that 29% of older individuals had morbidity [13].

Conclusion

This study among elderly has highlighted a high prevalence of morbidity and identified common existing medical problems like cataract, hypertension, respiratory illnesses, insomnia, deafness, hearing impairment, diabetes, anemia and Genito urinary problems. As there is a rapid expansion of elderly population, there is an urgent need to develop and promote geriatric health care services in the developing countries like India and to provide training to health care providers to manage the commonly existing health problems among geriatric in the country.

Statements and Declarations

Conflicts of interest

The authors declare that they do not have conflict of interest.

Funding

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