

1 **“Prevalence of Common Physical Health Problems Among Senior Citizens in a Rural**
2 **Area of Rahata Taluka, Maharashtra: A Cross-Sectional Study”.**

4 **Abstract**

5 **Background:** Population aging is a global phenomenon, with a rapid increase in the elderly
6 population in India. Older adults are more vulnerable to various physical health problems due
7 to physiological and socio-economic factors.

8 **Objectives:** To assess the prevalence of common physical health problems among senior
9 citizens and to determine their association with selected socio-demographic variables.

10 **Methods:** A descriptive cross-sectional study was conducted among 150 senior citizens (≥ 60
11 years) residing in a selected village of Rahata Taluka using a purposive sampling technique.
12 Data were collected using a structured interview schedule and clinical assessment tools
13 including BMI measurement, blood pressure monitoring, vision testing, hearing assessment,
14 and urine sugar analysis. Descriptive and inferential statistics were used for analysis.

15 **Results:** The study revealed that vision problems (81%) were the most prevalent health issue
16 among senior citizens, followed by hearing problems (32%), hypertension (30%), and
17 diabetes mellitus (16%). Asthma (8%) and obesity (2%) were less prevalent. Treatment
18 compliance was high among participants with hypertension, diabetes, and obesity (100%),
19 whereas a large proportion of participants with hearing problems (81%) and asthma (76%)
20 were not receiving treatment. Most participants preferred government healthcare facilities
21 and a significant proportion lacked health insurance coverage.

22 **Conclusion:** The study concludes that common physical health problems, particularly vision
23 impairment, hearing loss, and chronic diseases, are highly prevalent among rural elderly
24 populations. Although treatment adherence is satisfactory for some conditions, there is a
25 significant gap in the management of sensory impairments and respiratory conditions.
26 Strengthening primary healthcare services, promoting regular screening, and improving
27 awareness are essential to enhance the health and quality of life of senior citizens.

28 **Keywords:** Elderly, Prevalence, Physical Health Problems, Rural Population, Cross-sectional
29 Study

31 **Introduction :**

32 Aging is a natural and irreversible biological process characterized by gradual decline
33 in physical and functional abilities. With advances in healthcare and improved living
34 conditions, life expectancy has increased significantly, resulting in a growing elderly
35 population worldwide^{4,5}. India is also experiencing a demographic transition, with the
36 proportion of individuals aged 60 years and above steadily rising².

37 According to national estimates, the elderly population in India constituted around 8.2% in
38 2011 and is projected to increase substantially in the coming decades³. This shift poses

significant challenges to the healthcare system, particularly in rural areas where access to health services is limited^{2,7}.

Elderly individuals are more susceptible to chronic conditions such as hypertension, diabetes mellitus, visual impairment, hearing loss, and obesity, which increase with advancing age^{1,5}. These conditions not only affect their quality of life but also increase dependency and healthcare utilization.

Despite this growing concern, there is limited evidence regarding the prevalence and determinants of health problems among rural elderly populations^{2,7}. Therefore, the present study was undertaken to assess the prevalence of common physical health problems and their association with selected socio-demographic factors among senior citizens in a rural area of Rahata taluka.

Materials and Methods

The present study adopted a quantitative research approach with a descriptive cross-sectional research design to assess the prevalence of common physical health problems among senior citizens. The study was conducted in a selected rural village of Rahata Taluka, Maharashtra. The study population comprised all senior citizens aged 60 years and above residing in the selected village.

A total of 150 senior citizens were included in the study using a non-probability purposive sampling technique. Participants who were aged 60 years and above, permanent residents of the selected village, available at the time of data collection, and willing to participate were included in the study. Those who were critically ill, not willing to participate, or visitors to the village were excluded.

Data were collected using a structured interview schedule and clinical assessment tools. The tool consisted of three sections. Section A included socio-demographic variables such as age, gender, marital status, religion, education, occupation, type of family, dietary pattern, hobbies, socio-economic status, health insurance, health-seeking behavior, and exercise habits. Section B consisted of a checklist to assess the self-reported history of common physical health problems including obesity, hypertension, diabetes mellitus, asthma, hearing problems, and vision problems, along with information regarding duration and treatment status. Section C included objective clinical assessment of selected health problems: body mass index (BMI) was calculated using standard procedures and classified according to World Health Organization guidelines; blood pressure was measured using a sphygmomanometer and classified as per American Heart Association guidelines; vision was assessed using Snellen's chart; hearing was evaluated using the whisper voice test; and urine sugar was tested using Urostix.

Prior to data collection, ethical clearance was obtained from the Institutional Ethics Committee of PIMS (DU). Formal permission was also obtained from the Block Development Officer of Rahata Taluka and the Sarpanch of the selected village. Written informed consent was obtained from all participants after explaining the purpose of the study. Confidentiality and anonymity of the participants were maintained throughout the study.

Data collection was carried out by the investigator through house-to-house visits. Each participant was interviewed using the structured schedule, followed by clinical assessment of physical health parameters.

The collected data were coded, tabulated, and analyzed using descriptive and inferential statistics. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to summarize the data. Inferential statistics, specifically the Chi-square test, were used to determine the association between the prevalence of physical health problems and selected socio-demographic variables. A p-value of less than 0.05 was considered statistically significant.

Result :

A total of 150 senior citizens participated in the study. The majority of participants belonged to the age group **71–75 years (33%)**, while only **10.41% were aged above 80 years**.

With regard to gender distribution, most of the participants were **male (67%)**, whereas **34% were female**. A large proportion of the participants were **married (87.5%)**, and **12.5% were widowed**. In terms of religion, the majority of participants were **Hindu (83.33%)**, followed by individuals from other religions (**8.33%**). Regarding educational status, **37.5% had primary education**, **35.5% had non-formal education**, and only a small proportion (**2.08%**) had education at graduate level or above. Occupationally, nearly half of the participants were **farmers (45.83%)**, while a small percentage were involved in **service (4.5%)**. Most participants belonged to **joint families (57.25%)**, whereas **43.75% lived in nuclear families**. Dietary patterns showed that an equal proportion of participants followed a **vegetarian diet (50%)** and a **mixed diet (50%)**. In relation to physical activity, **45.83% of participants reported regular exercise**, while **20.83% reported never engaging in exercise**.

Self Reported Health Problems:

The distribution of self-reported health problems and treatment status is presented in Table X. **Vision problems** were the most commonly reported condition (**81%**), followed by **hearing problems (32%)** and **hypertension (30%)**. The prevalence of **diabetes mellitus** was **16%**, while **asthma (8%)** and **obesity (2%)** were less common.

Regarding treatment status, **all participants with hypertension, diabetes mellitus, and obesity were receiving treatment (100%)**. In contrast, treatment uptake was considerably lower for **hearing problems (19%)** and **asthma (24%)**, indicating substantial unmet healthcare needs in these conditions. Among participants with **vision problems**, **84% were receiving treatment**, while a smaller proportion (**16%**) were not.

Table 3: Prevalence of Health Problems Among Senior Citizens (N = 150)

S/N	Health Problem	Previously Diagnosed (%)	Newly Detected (%)	Total Prevalence (%)
1.	Obesity	11 (7.3%)	2 (1.3%)	13 (8.6%)
2.	Hypertension	30 (20%)	13 (8.6%)	43 (28.6%)

3.	Diabetes Mellitus	17 (11%)	5 (3.3%)	21 (14%)
4.	Asthma	8 (5%)	2 (1.3%)	10 (6.6%)
5.	Hearing Problem	17 (11%)	23 (15.3%)	40 (26.6%)
6.	Vision Problem	38 (25%)	27 (18%)	65 (43.3%)

114

115 The prevalence of health problems among senior citizens is presented in Table 3. The
 116 findings indicate that **vision problems had the highest total prevalence (43.3%)**, followed
 117 by **hypertension (28.6%)** and **hearing problems (26.6%)**. The prevalence of **diabetes**
 118 **mellitus was 14%**, while **obesity (8.6%)** and **asthma (6.6%)** were less common among the
 119 study participants.

120 A considerable proportion of cases were **newly detected during the study**, particularly for
 121 **hearing problems (15.3%)** and **vision problems (18%)**, suggesting that many elderly
 122 individuals were previously undiagnosed. Newly detected cases of **hypertension (8.6%)** and
 123 **diabetes mellitus (3.3%)** also indicate gaps in routine health screening.

124 Previously diagnosed cases were higher for **vision problems (25%)** and **hypertension**
 125 **(20%)**, reflecting some level of awareness and healthcare utilization. However, the presence
 126 of newly detected cases highlights the need for **regular screening and early diagnosis**
 127 among the elderly population.

128 **Association of Health Problems with Demographic Variables:**

129 The association between selected health problems and socio-demographic variables was
 130 analyzed using the Chi-square test. The findings revealed that **obesity had a statistically**
 131 **significant association with age ($\chi^2 = 10.57$), education ($\chi^2 = 9.25$), occupation ($\chi^2 = 6.56$),**
 132 **diet ($\chi^2 = 11.85$), and exercise ($\chi^2 = 12.95$).** However, no significant association was found
 133 between obesity and gender ($\chi^2 = 0.76$).

134 Similarly, **hypertension showed a statistically significant association with age ($\chi^2 =$**
 135 **10.57), education ($\chi^2 = 9.25$), diet ($\chi^2 = 11.85$), and exercise ($\chi^2 = 12.95$),** while no
 136 significant association was observed with gender ($\chi^2 = 0.76$).

137 In the case of diabetes mellitus, **a significant association was observed with age ($\chi^2 = 7.39$),**
 138 **education ($\chi^2 = 11.3$), diet ($\chi^2 = 6.03$), and exercise ($\chi^2 = 12.3$).** However, gender was not
 139 significantly associated with diabetes mellitus ($\chi^2 = 0.75$).

140 Overall, the analysis indicates that **age, education, diet, and exercise were consistently**
 141 **associated with major health problems**, whereas **gender did not show a significant**
 142 **association with any of the selected conditions.**

143 **DISCUSSION :**

The present study assessed the prevalence of common physical health problems among senior citizens in a rural area of Rahata taluka and examined their association with selected socio-demographic variables.

In the present study, the majority of participants belonged to the age group of 71–75 years, indicating improved survival among the elderly population. Similar findings have been reported in rural-based studies where the younger-old age group constitutes the largest proportion of elderly individuals^{8,9}. The higher proportion of males in the present study is also consistent with earlier findings from rural Indian settings⁹.

The findings of the present study revealed that **vision problems had the highest prevalence (43.3%)**, which is consistent with previous research indicating that visual impairment is one of the most common health problems among the elderly¹⁰. This may be due to untreated cataracts, refractive errors, and limited access to ophthalmic care services in rural areas. Recent studies have also emphasized that sensory impairments remain highly prevalent and under-addressed among elderly populations^{12,13}.

The prevalence of **hypertension (28.6%)** observed in the present study is comparable with findings from other studies conducted in India^{8,9}. The presence of **newly detected cases (8.6%)** highlights the hidden burden of hypertension in rural populations, where routine screening is often inadequate. This is supported by recent literature indicating a high prevalence of undiagnosed chronic conditions among elderly individuals^{8,11}.

Similarly, the prevalence of **diabetes mellitus (14%)** in this study aligns with recent studies showing an increasing burden of non-communicable diseases among the elderly in India^{9,11}. The identification of newly diagnosed cases (**3.3%**) further supports the need for early detection and screening strategies.

The study also identified a considerable prevalence of **hearing problems (26.6%)**, with a significant proportion of newly detected cases (**15.3%**) and low treatment uptake. This finding is consistent with earlier and recent studies which indicate that hearing impairment is often neglected despite its significant impact on quality of life and communication^{10,12}.

The prevalence of **obesity (8.6%)** and **asthma (6.6%)** was relatively lower compared to other conditions. This may be attributed to the physically active lifestyle of rural populations, especially those engaged in agricultural work. However, recent evidence suggests that even low levels of such conditions contribute to the overall burden of morbidity among elderly populations^{14,13}.

A notable strength of the present study is the identification of **newly detected cases of hypertension, diabetes, and sensory impairments**, indicating a substantial proportion of undiagnosed health problems. This is consistent with reports from the World Health Organization, which highlight that a large proportion of chronic

diseases among elderly populations remain undiagnosed, particularly in low-resource settings¹⁴.

The present study also demonstrated that **age, education, dietary habits, and physical activity were significantly associated with major health problems**, which is supported by recent studies highlighting the influence of socio-demographic and lifestyle factors on elderly health outcomes^{9,11}. Increasing age was associated with higher prevalence of chronic conditions, reflecting the biological aging process.

Educational status showed a significant association with several health conditions, indicating that lower educational levels may limit awareness regarding disease prevention and management. Additionally, **diet and exercise were significantly associated with hypertension and diabetes**, emphasizing the role of lifestyle modifications in preventing chronic diseases.

In contrast, **gender did not show a significant association with most health problems**, which is consistent with findings from previous studies conducted in similar settings (9).

Overall, the findings of the present study indicate a considerable burden of both diagnosed and undiagnosed health problems among the rural elderly population. The high prevalence of sensory impairments and chronic diseases, along with newly detected cases, highlights the urgent need for **strengthening primary healthcare services, promoting regular screening, and implementing community-based interventions** to improve the health and quality of life of senior citizens.

Conclusion:

The present study concludes that **common physical health problems such as vision impairment, hypertension, hearing loss, and diabetes mellitus are highly prevalent among senior citizens in rural areas**. A significant proportion of cases were newly detected during the study, indicating a **hidden burden of undiagnosed conditions**.

The study also found that **age, education, dietary habits, and physical activity were significantly associated with major health problems**, while gender did not show a significant association. Although treatment compliance was good for certain conditions like hypertension and diabetes, there was a notable gap in the management of sensory impairments and respiratory conditions.

These findings highlight the need for **regular screening, early diagnosis, health education, and strengthening of primary healthcare services** to improve the health status and quality of life of the elderly population.

Limitations:

- The study was conducted in a single rural village, limiting generalizability
- Non-probability purposive sampling may introduce selection bias
- Self-reported data may be subject to recall bias

- Some conditions may be under- or over-reported

Recommendations:

- Organize regular geriatric health screening camps in rural areas
- Strengthen primary healthcare services for early detection
- Promote health education on lifestyle modification
- Improve access to eye and hearing care services
- Encourage health insurance coverage among elderly

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