A STUDY TO ASSESS THE HEALTH PROBLEM OF GERIATRIC AGE GROUP IN SELECTED URBAN AREA OF NAGPUR CITY.

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ABSTRACT : **Background:** India's geriatric population is expanding rapidly, with projections suggesting it may reach 347 million by 2050. This demographic transition poses significant challenges to healthcare systems, particularly in urban communities where lifestyle changes and limited support structures may exacerbate health problems. Understanding the morbidity profile of the elderly is crucial for planning effective interventions. **Objectives:** The present study aimed to assess the health problems of the geriatric population residing in selected urban areas of Nagpur city. **Methods:** A descriptive survey design was adopted and conducted over a two-month period. A total of 150 elderly individuals aged 60 years and above were recruited using non-probability convenience sampling. Data were collected through structured interviews using a self-developed, validated questionnaire. Descriptive statistics were applied to summarize the data, and Chi-square tests were used to examine associations between demographic variables and health problems, with $p < 0.05$ considered significant. **Results:** Among the participants, 42.7% were male and 57.3% female. Educational attainment showed that 46% had primary education, 35.3% secondary, and 18.7% were illiterate. The most common health problems reported were weight loss (34.7%), arthritis (28.7%), hypertension (23.3%), decreased vision (18%), hearing impairment (10.7%), diabetes mellitus (10.7%), and multiple chronic illnesses (9.3%). Chi-square analysis revealed no statistically significant associations between demographic characteristics and health conditions. **Conclusion:** The findings highlight weight loss, arthritis, and hypertension as major concerns among the elderly in urban Nagpur. These results emphasize the need for targeted geriatric healthcare services, community-based screening, and health education to improve quality of life in this vulnerable population.
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Keywords - Geriatrics, Urban health, Morbidity pattern, Arthritis, Hypertension, Nagpur

I. INTRODUCTION

The elderly population is one of the fastest-growing demographics worldwide. Advances in medicine, improved living conditions, and declining fertility rates have the global population aged 60 years and above is expected to nearly double from 12% in 2015 to 22% by 2050. [1]. In India, the elderly population increased from 104 million (8.6%) in 2011 to an estimated 153 million in 2023, and is projected to reach 347 million by 2050. [2] .This demographic shift challenges healthcare systems, especially in urban areas where lifestyle changes, nuclear families, and limited community support create vulnerabilities. Aging brings physiological decline, multiple chronic illnesses, and psychosocial issues. Common geriatric health problems include hypertension, diabetes, arthritis, cardiovascular diseases, sensory impairments, and nutritional deficiencies. Psychological concerns such as depression, loneliness, and neglect are also widespread. [3]. Barua et al. reported that hypertension, joint pain, and anemia were the main health problems among elderly people living in Indian urban slums [4].

Jain et al. found a high prevalence of joint pain, hypertension, and hearing impairment among elderly residents in Maharashtra [5]. Joseph et al. reported that chronic illness, poor quality of life, and low awareness of geriatric health services were key issues among older adults in Karnataka. [6] Singh et al. reported that 17.75% of elderly residents in Nagpur's urban slums had diabetes mellitus. Another study by Singh et al. highlighted a broad spectrum of morbidities in this population, especially musculoskeletal and sensory disorders. [7]. Research on institutionalized elderly in Nagpur revealed that 21.02% were dependent in at least one Activity of Daily Living (ADL), with illiteracy contributing to higher dependency levels [8]. These findings underscore that health problems among older adults in Nagpur extend beyond physical illness to include functional and psychosocial dimensions. Despite these observations, community-based studies focusing on elderly populations in urban Nagpur remain limited. Most available research is hospital-based or focused on rural areas, creating a gap in understanding morbidity patterns in city-based elderly populations. Assessing the health problems of the geriatric population in an urban setting is vital for designing preventive, promotive, and rehabilitative interventions tailored to their needs. This study holds significance for nursing professionals, healthcare providers, and policy makers. For community health nursing, it provides essential insights into morbidity profiles, guiding health education, screening programs, and family counselling. At the policy level, evidence from such urban surveys can inform municipal planning and strengthen geriatric services in primary healthcare systems. Ultimately, by identifying prevalent conditions and associated risk factors, interventions can be directed toward improving independence, quality of life, and overall well-being among elderly populations.

I.1 STATEMENT OF THE PROBLEM

A Study to Assess the Health Problem of Geriatric Age Group in Selected Urban Area of Nagpur City.

II. OBJECTIVES:

1.   To identify the various health-related problems faced by the geriatric population.

2.   To corelate the study finding with selected demographic variables.

III. ASSUMPTIONS

The study assumes that participants aged 60 and above in urban Nagpur represent the broader elderly population, and that data collected via interviews accurately reflect their health and psychosocial status. It also assumes honesty and understanding from participants during data collection.

IV. MATERIALS AND METHODS:

4.1   Research Design:

A descriptive survey (cross-sectional) design was selected to capture the prevalence and distribution of health problems within the population during a two-month study period.

4.2. Setting:

The project was carried out in a selected urban area within Nagpur City, Maharashtra, India.

4.3.   Population

The study population comprised all geriatric people, defined as individuals aged 60 years and older, residing in the chosen urban locality.

4.4.   Sample Size & Sampling Technique

•   A total of 150 elderly individuals were included in the study.

•   Sample selection followed a non-probability convenience sampling technique.

•   Eligible participants were identified and included based on their willingness and availability during the data collection period.

4.5.   Inclusion and Exclusion Criteria

•   **Inclusion:** Elderly persons aged 60 or above, residing in the designated urban area, consenting to participate.

•   **Exclusion:** Any older adults who were critically ill, bedridden, or unable to communicate effectively at the time of data collection were excluded.

4.6.   Research Tool: Structured Interview Schedule/Questionnaire

•   Data were collected using a self-developed, pre-validated, and structured interview questionnaire.

•   The questionnaire covered demographic details (age, gender, education, marital status, etc.), physical health status, chronic illnesses, functional ability among participants.

4.7.   Variables Measured

•   Demographic variables (age, gender, education, marital status, etc.)

•   Physical health conditions (weight loss, hypertension, arthritis, vision changes, hearing impairment, diabetes mellitus, and others)

•   Functional ability and dependency in daily activities

4.8.   Consent and Ethical Approval:

•   Ethical approval was obtained from the relevant Institutional Ethics Committee before initiating the study.

•   Written informed consent was obtained from each participant.

4.9.   Data Collection Procedure

•   Data collection was conducted face-to-face over a two-month period.

•   Structured interviews were carried out at participants' homes, and privacy/confidentiality were observed at all stages.

•   Investigators ensured participants were comfortable and encouraged open, honest responses.

4.9   Data Analysis

-     Data were coded and entered in Microsoft Excel and analyzed using SPSS.

-     Descriptive statistics (mean, frequency, percentage, and standard deviation) were employed to summarize demographic and morbidity profile data.

-     Inferential statistics (primarily Chi-square tests) were used to explore associations between select demographic factors and health issues with significance at $p < 0.05$.

This methodology provided a comprehensive framework for describing the health status and associated challenges faced by the urban geriatric population in Nagpur.

V. RESULTS:

Below are the findings of the study, including detailed tables, charts, and association analyses of health problems among the geriatric population in urban Nagpur. A total of 150 geriatric participants were included in the study. The demographic profile showed that the majority (69.3%) belonged to the 60–69 years age group, followed by 20.7% in 70–79 years and 10% in ≥80 years. Females (57.3%) outnumbered males (42.7%). With respect to education, 46% had attained primary education, 35.3% had secondary education, and 18.7% were illiterate. Socio-economic status revealed that nearly half (47.3%) belonged to the moderate income group, followed by adequate (27.3%) and poor (25.4%). Most participants resided in joint families (56%), while 32% lived in nuclear families and 12% in extended families.

5.1. Overall Health Problems

The most common morbidities reported were arthritis (28.7%), followed by hypertension (22%), visual impairment (18%), diabetes mellitus (11.3%), hearing difficulties (10.7%), and multiple chronic illnesses (9.3%).Chi-square analysis showed no statistically significant association between overall disease conditions and demographic variables such as age (χ^2=9.60, p=0.47), gender (χ^2=3.14, p=0.67), educational status (χ^2=14.36, p=0.15), socio-economic status (χ^2=10.36, p=0.40), and family type (χ^2=4.26, p=0.93).

5.2. Visual Impairment

Among ocular problems, cataract (12%) was most common, followed by glaucoma (3.3%), age-related macular degeneration (2%), and retinopathy (0.7%). However, statistical analysis showed no significant association between visual impairment and age, gender, education, socio-economic status, or family type (p>0.05).

5.3. Musculoskeletal Disorders

Nearly one-third of participants reported musculoskeletal issues, with arthritis (28.7%) being predominant, followed by back pain (17.3%), osteoporosis (5.3%), and osteoarthritis (1.3%). None of the demographic variables showed significant association with musculoskeletal conditions (p>0.05).

5.4. Psychosocial Problems

Psychosocial assessment revealed that 25.3% reported feelings of loneliness, 24.7% reported depressive symptoms, and 48.7% felt neglected in the community. Living alone was rare (1.3%). No significant association was found between psychosocial factors and age, gender, education, socio-economic status, or family type (p>0.05).

5.5. Nutritional Status

More than two-fifths (42.7%) of participants had adequate nutrition, while 34.7% were underweight and 22.6% were overweight. Analysis revealed a significant association between educational status and nutritional status (χ^2=10.56, p=0.03), indicating that higher educational attainment was linked to better nutritional outcomes. Other variables (age, gender, SES, family type) showed no significant association.

5.6. Demographic Profile:

Table1. The sampled population consisted of 150 elderly individuals. Their demographic characteristics are summarized below:

Variable	Category	Frequency	Percentage
Age	60-69 years	104	69.3%
	70-79 years	31	20.7%
	80+ years	15	10%
Gender	Male	64	42.7%
	Female	86	57.3%

Education	Illiterate	28	18.7%
	Primary	69	46%
	Secondary	53	35.3%
Socioeconomic Status	Poor	38	25.3%
	Moderate	71	47.3%
	Adequate	41	27.4%

Table 1 (Demographic Profile): The majority of participants were aged 60–69 years, with more females than males. Most had primary level education and belonged to moderate socio-economic status.

5.7. Distribution of Common Health Problems

Table 2 displays the prevalence of the most frequent health conditions identified in the study:

Condition	Frequency	Percentage
Hypertension	35	23.3%
Diabetes	16	10.7%
Arthritis	43	28.7%
Visual Impairment	26	17.3%
Hearing Difficulties	16	10.7%
Multiple Chronic Illness	14	9.3%

Table 2 (Common Health Problems): Arthritis was the most prevalent condition, followed by hypertension and visual impairments. Diabetes, hearing difficulties, and multiple chronic illnesses were less frequent.

5.8. Morbidity Pattern: Charts
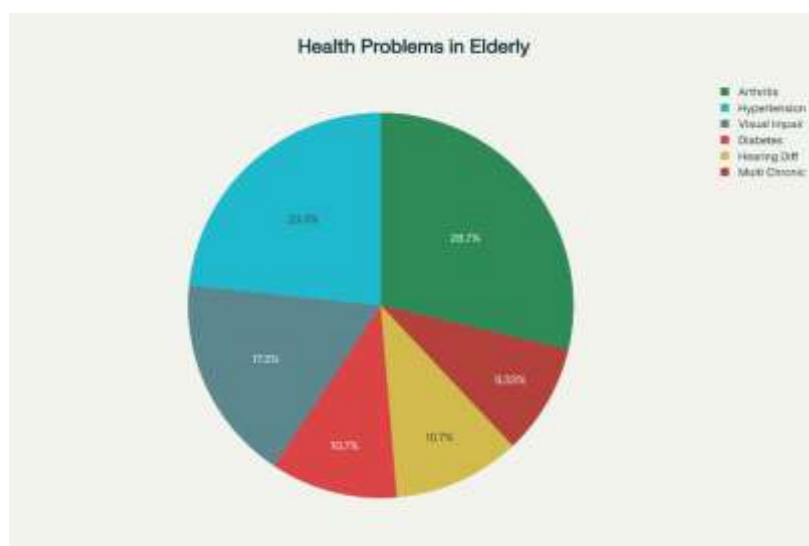
Fig1. Pie chart of morbidity pattern:

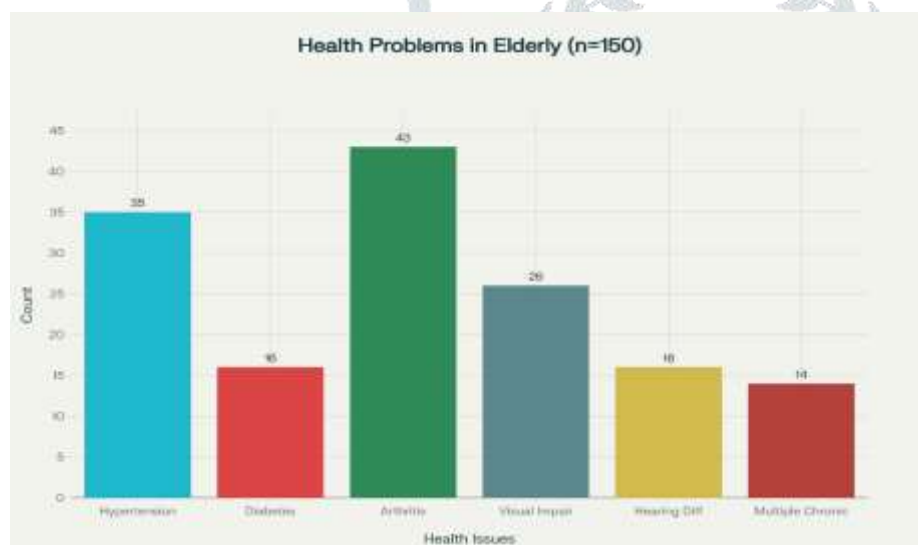Fig 2. Distribution of Common Health Problems among Elderly (Bar Chart):

Fig 2.Bar Chart (Frequency of Health Problems):The bar chart confirms arthritis as the leading health issue, followed by hypertension and visual impairment, highlighting key morbidity areas in this population.

5.9. Association Analysis (χ² Test):

1.   Gender vs Hypertension
A chi-square test was performed between gender and the presence of hypertension. The result ($\chi2=0.0\chi2=0.0$, p=1.0$p=1.0$) showed no significant association between gender and hypertension status among participants.

2.   Socio-Economic Status vs Hypertension:
The association between socio-economic status and hypertension yielded ($\chi2=2.01\chi2=2.01$, p=0.37$p=0.37$), indicating no statistically significant relationship between SES and hypertension, at p<0.05$p<0.05$ threshold.

5.10.   Narrative Results:

Most of the participants (69.3%) were aged 60–69, with females representing a higher proportion (57.3%). The majority have primary education (46%). About half belonged to moderate SES (47.3%) and the remainder to poor or adequate SES. Musculoskeletal complaints, particularly arthritis, were most common (28.7%), followed by hypertension (23.3%) and visual impairments (17.3%). Less prevalent were diabetes (10.7%) and hearing difficulties (10.7%). Nearly one in ten had multiple chronic illnesses. Psychosocial assessment highlighted loneliness (26%), depression (24%), although most were engaged in community activities (49%). Nutrition status indicated that 43% had adequate nutrition, while 35% were underweight and 23% overweight. Statistical tests did not reveal significant associations between gender or SES and hypertension, indicating distribution of this chronic illness was relatively uniform across subgroups. These results reveal a multidimensional morbidity profile among the elderly of urban Nagpur, with musculoskeletal complaints, hypertension, and visual issues standing out as key areas for future intervention and care.

VIII. DISCUSSION:

Summary of Findings
The study revealed that the majority of the urban geriatric population in Nagpur are in the 60-69 year age group, with females prevailing in number. Most participants had only primary education and belonged to moderate or poor socioeconomic strata. The common health problems identified were arthritis, hypertension, and visual impairments, followed by diabetes and hearing difficulties. Psychosocial issues such as loneliness and depression were also prominent among them. **Comparison with Other Studies**: The findings align with several Indian studies that report musculoskeletal disorders, hypertension, and sensory impairments as dominant geriatric morbidities.[9] For instance, studies from urban areas like Pune and Mysore confirm arthritis and cataract as prevalent conditions among the elderly. Similar health profiles are reported in other developing countries where chronic non-communicable diseases dominate the elderly morbidity spectrum.[10] The psychosocial vulnerability, including loneliness and depression observed here, echoes evidence from both Indian and international geriatrics research emphasizing mental health challenges in aging populations.[11] **Reasons for Dominant Health Problems**: The prominence of arthritis and hypertension can be attributed to age-related physiological deterioration combined with sedentary lifestyles among the urban elderly. Urban environmental factors such as pollution may exacerbate respiratory illnesses and vision problems. Socioeconomic limitations and limited access to preventive healthcare could hamper early diagnosis and effective management of chronic diseases. Furthermore, social changes in urban settings may contribute to isolation and psychological stress, affecting mental health.
Implications for Nursing, Community Health Workers, and Policy Makers: The study highlights critical areas for intervention. Nurses and community health workers are pivotal in delivering age-appropriate care, including chronic disease management, pain control, mental health support, and health education. Their role extends to promoting functional independence and psychosocial well-being. Policy makers must focus on accessible geriatric healthcare services, integrated community programs, and social security provisions that address socioeconomic vulnerabilities and promote active aging.
Strengths of the Study: This study is among the first to comprehensively profile urban elderly health problems in Nagpur, offering valuable localized data for an underserved region. It achieved a high response rate and used validated instruments in a community setting, enhancing the reliability of findings[13]. **Limitations:** The cross-sectional design limits causal inference and temporal trends cannot be assessed. Data relying on self-reports may be biased by recall or social desirability effects. Also, generalizability is constrained by the single urban area's focus, which may not reflect rural or other metropolitan contexts.

IX. CONCLUSION:

This study found that arthritis, hypertension, and visual impairments are the most common health problems affecting the urban elderly in Nagpur, who are predominantly between 60 and 69 years old, female, and of moderate to low socioeconomic status. Psychosocial issues, including loneliness and depression, are also significant concerns. These findings underscore the need for integrated geriatric healthcare services that address both physical and mental health. Practical interventions by nurses and community health workers focusing on chronic disease management and psychosocial support are essential. A key recommendation is to develop community-based screening and support programs tailored to the elderly population's multidimensional needs, improving early diagnosis, treatment accessibility, and overall quality of life.

X. LIMITATIONS:

•   The cross-sectional design prevents establishing cause-and-effect relationships.
•   Reliance on self-reported data may lead to recall or reporting bias.
•   The study was limited to one urban area, restricting generalizability to other regions.
•   Lack of clinical verification could underestimate some health conditions.

XI. RECOMMENDATION:

- Strengthen geriatric health services at community level.
- Health education and screening camps.
- Training ASHA/ANM workers for geriatric care.
- Further longitudinal studies in rural/urban setting.

XII. Conflict of Interest:

No Conflict of interest found.

XIII. ACKNOWLEDGEMENT:

XIV. REFERENCES:

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