Introduction

Human resources are regarded as a country's most valuable asset, and they play a critical role in economic development and growth. According to national policy, the elderly population is defined as 60 and up. Because of the rising demand for financial and social support due to health and related difficulties, the government is under pressure to adopt social policies for the elderly. Clinical preventive care can assist reduce the risks and expenses of chronic illness treatment and can prevent or delay disease onset.

Method: The aged population of either sex who visit a rural health geriatric centre's Outpatient department served as the study participants. Data were collected using a self-designed, pre-structured, and pre-validated questionnaire. The information was gathered in the form of a socio-demographic profile, which included all the necessary information, such as socioeconomic status, Body mass index (BMI), and personal habits. Visual examination, hearing, anaemia, musculoskeletal discomfort, diabetes mellitus, dermatological, hypertension, and female patients' reproductive disorders were all included in the clinical examination.

Result: A maximum of 263 (65.75%) of the subjects were in the age group of 60–69 years, 29.25% were labourers, and 38% were in modified BG Prasad class (III) of socioeconomic classification, 184 (46%) people had a BMI of 25–29.99 kg/m². A total of 102 study participants (25.5%) had a chronic illness. 27.5% of the participants had hypertension, 11.8% had diabetes and coronary heart disease, 20.6% had hypertension and diabetes, and 10.8% had previously suffered from tuberculosis (TB). Hearing loss is a common complaint, and 5.5% reported issues with the genitourinary system, with nocturia accounting for 40.9%.

Conclusion: The study participants, who were between the ages of 60 and 69, experienced a variety of chronic illnesses. The majority of the people in the study had hypertension, diabetes, heart disease, hypertension, diabetes, and a TB history.

Keywords: Chronic illness, clinical prevents services, elderly population
account for 15% of the global population, with Asia experiencing a doubling of the old-age dependency ratio by 2050.[9]

India’s “National policy on older adults” categorizes those aged 60 and up as elderly.[6,8] In India, currently (2020), 10% of the population are elderly. As per the census 2011, 8% of the elderly persons were found in the age group of more than 60 years, compared to 7.4% in the Census 2001, and it is expected that it will be increased to 12.7% by 2025.[8]

The rapid increase in India’s old population is predicted to exceed the country’s social and economic progress. The old dependency ratio increased from 131 in 2001 to 142 in 2011.[7] The government is under pressure from an aging population as the demand for financial and social assistance rises owing to health and related difficulties, the prevalence of which varies between 2% and 37% according to various hospitalized or institutionalized research.[9]

Rapid urbanization and societal modernity have resulted in a breakdown in family values and the framework of family support, and as well as economic insecurity, social isolation, and senior mistreatment, all of which contribute to various psychological diseases.[9] Elders require the assistance of others due to their diminished mobility and incapacitating disabilities.

They are designing social policies for the aged, which must be thoroughly studied in order for society to adapt to ageing and for older populations to adjust to changing circumstances. Clinical preventive care can assist reduce the risks and expenses of chronic illness treatment and prevent or delay disease onset.[10] A variety of evaluation approaches are available to measure comorbidity, and greater levels of comorbidity have been linked to a variety of adverse health consequences.

Clinical prevention services are essential at three stages of disease progression. These are: before the disease (vaccines, for example), before the disease is clinically manifest (breast cancer screening, for example), and after the disease has been established.

The focus should be on improving the public health and prevention aspects of medical education to give physicians a better understanding of issues related to elderly health and to aid in the resolution of complex public health challenges such as rising chronic disease burdens, persistent health disparities, and healthcare financing.[11]

As a result, more nursing professionals with the necessary abilities are needed to meet the demands of the elderly. A country must be adequately prepared to tackle the challenges of an aging population. In addition, to reduce its negative impacts, suitable social and economic policies must be implemented.[12] Projecting spending and planning for future medical requirements at the population level would help the elderly and the government. As a result, the current study was carried out to evaluate clinical preventive treatments for the aged population.

Material and Method

Study design: Descriptive cross-sectional community-based study.

Study area: Geriatric OPD of a tertiary care Medical College Hospital.

Ethics approval: In the first contact with the participant, they were given information about the study and had signed an informed consent form if they wished to participate. The participant’s rights to privacy, confidentiality, withdrawal, and information are detailed in the informed consent. The researchers were also devoted to upholding the participant’s right to privacy. The protocol has been reviewed and approved by the Study Centre’s Ethics Committee for Scientific Research.

Study Duration: One year.

Sample size: The literature review indicated a total prevalence of 50% of current medical problems in the study participants. Based on the above observation with \( \alpha \) level of 0.05 and \( \beta \) of 0.05 (power = 95%), Based on the formula \( 4pq/l^2 \).

\[
SS = 4 \times 0.5 \times 0.5 \times 0.05 \times 0.05 = 400
\]

(Where, \( P = \) prevalence, \( q = 1- p \), \( l = \) allowable error, \( \alpha = \) alpha-5%, \( \beta = \) 1-power- 95%)

The sample size covered came out to be 400 participants.

Study population: The study was conducted on a first-come, first-served basis, with all study individuals entering the geriatric clinic during the study period and meeting the inclusion criteria being included.

Inclusion criteria: The study subjects were the elderly population age 60 and above attending geriatric OPD of rural health centres.

Exclusion criteria: A person diagnosed with a severe health problem recently underwent any surgical procedure or intervention.

Study tools: Data were collected using a self-designed, pre-structured, and pre-validated questionnaire. The information was gathered in the form of a sociodemographic profile, which included names, ages, genders, occupations, socioeconomic status according to the Modified BG Prasad Classification,[13][14] BMI, personal habits, and clinical examination.

Provided services: It includes services provided to them from the beginning of their journey from home to hospital, such as history taking and clinical examinations, investigations, and services provided by the program’s health team.
Methodology

A clinical examination was performed after the individuals were interviewed using a predesigned and organized pro forma. The demographic profiles noted age, educational credentials, religion, BMI, and occupation. The modified BG Prasad scale was used to record and classify socioeconomic status. Dietary habits, morbidity, and other clinical states of the patient were also documented. Further clinical studies were recommended for patients based on their need.

Visual examination (by simple torch and counting fingers), hearing (tuning-fork method), anaemic conditions (based on clinical examination), musculoskeletal pain (based on patient’s complaint), diabetes mellitus (based on who was receiving treatment), dermatological, and hypertension based on JNC VIII classification or treatment were all included in the clinical examination. The gynecological concerns of female patients were identified.

Data analysis: SPSS 17.00 was used to evaluate the obtained data imported into MS Excel. The collected data were tabulated, and descriptive statistics were utilized to depict the respondent’s socio-demographic characteristics. Various tests of significance, such as the Chi-square test, were used to portray analytical/inferential statistics.

Results

Figure 1 shows the distribution of study subjects by age and gender. The maximum of 263 (65.75%) were in the 60–69-year age group, followed by 111 (27.75%) in the 70–79 years age group. The people above 80 years of age had the fewest research subjects, with only 26 (6.5%). The mean age of the study participants was 66.84 years, with a standard deviation of 6.5 years. The age range was 28 years, with a minimum of 60 and a maximum of 88 years. Males made up 53.5% of the study’s 400 participants, while females made up 46.5%.

In the present study, a maximum of 117 (29.25%) study subjects worked as laborer’s while 68 (17%) were farmers by occupation, while 70 (17.5%) of them were retired at the time of study and not working. Currently only 13 (3.25%) had their own business.

Table 1: Distribution of subjects according to their occupation, socioeconomic status, and BMI

| Occupation                                | Study subjects (n=400) | Number | %  |
|-------------------------------------------|-----------------------|--------|----|
| Home maker                               | 132                   |        | 33 |
| Farmer                                   | 68                    |        | 17 |
| Laborer                                  | 117                   |        | 29.25 |
| Retired                                   | 70                    |        | 17.5 |
| Business                                 | 13                    |        | 3.25 |
| Socioeconomic status (As per modified BG Prasad classification) |             |        |    |
| Upper class (I)                          | 16                    |        | 4  |
| Upper class (II)                         | 100                   |        | 25 |
| Middle class (III)                       | 152                   |        | 38 |
| Lower-middle class (IV)                  | 116                   |        | 29 |
| Lower class (V)                          | 16                    |        | 4  |
| Body mass index (kg/m^2)                 |                       |        |    |
| <18.5                                    | 20                    |        | 5  |
| 18.5-24.99                               | 172                   |        | 43 |
| 25-29.99                                 | 184                   |        | 46 |
| 30 and above                             | 24                    |        | 6  |

Mean: 24.78±3.64 (SD), Range: 15.43-31.64

Table 2: Distribution of study subjects according to chronic diseases and hospitalization

| Variable                          | Group       | n=400<sup>\(\%\)</sup> |
|-----------------------------------|-------------|--------------------------|
| History of chronic diseases (n=400) | No          | 298 (74.5)               |
|                                   | Yes         | 102 (25.5)               |
| Types of chronic diseases (n=102) | Hypertension (HT) | 28 (27.45)           |
|                                   | Diabetes (DM)| 12 (11.76)              |
|                                   | Asthma      | 2 (1.96)                 |
|                                   | Coronary heart disease | 12 (11.76)        |
|                                   | HT and DM   | 21 (20.59)               |
|                                   | Tuberculosis| 11 (10.78)               |
|                                   | Other       | 16 (15.69)               |
| Place of medical consultation     | Govt hospital | 63 (15.75)              |
|                                   | Private clinic | 126 (31.5)            |
|                                   | Both        | 211 (52.75)              |
| History of hospitalization in the past year | No | 314 (78.5)          |
|                                   | Yes         | 86 (21.5)                |

Figure 1: Age and gender-wise distribution of study subjects

Figure 2: Distribution of study subjects according to Personal Habits
One hundred and thirty-two females (33%) were homemakers. Females included in the Homemaker category also helped in farming on a seasonal basis and per need. 

Out of 400 study subjects, a maximum number of study subjects, that is, 152 (38%), were in class (III) of Modified BG Prasad socioeconomic classification, 116 (29%) belonged to class (IV) while 100 (25%) were in class (II). Only 16 study subjects each (4%) belonged to class (I) and class (V), respectively.

Maximum study subjects: 184 (46%) had a BMI of 25–29.99 kg/m², 172 (43%) had a BMI of 18.5–24.99 kg/m², and 20 (5%) and 24 (6%) had a BMI of 0–18.5 kg/m² and more than 30 kg/m², respectively. Mean BMI was 24.78 kg/m², and the range was from 15.43 to 31.64 kg/m².

In Figure 2 shows that the majority belongs to mixed diet (74%), regular bowel, and sleep pattern.

Table 3: Morbidity profile of study subjects (Physical symptoms)

| Variable and types          | Groups                      | n   | (%)  |
|-----------------------------|-----------------------------|-----|------|
| Musculoskeletal (n=188)     | Low backache                | 84  | 44.68|
|                             | Joint pain                  | 160 | 85.11|
|                             | Muscular pain               | 116 | 61.70|
|                             | Other                       | 12  | 6.38 |
| Gastrointestinal (n=83)     | Acidity (Heart burn)        | 52  | 62.65|
|                             | Irregular bowel (diarrhoea + Constipation) | 49 | 59.04|
|                             | Pain in abdomen             | 09  | 10.84|
| Cardiovascular (n=88)       | Exertional chest pain       | 30  | 34.09|
|                             | Orthopnoea                  | 10  | 11.36|
|                             | Palpitations                | 37  | 42.05|
|                             | Giddiness                   | 75  | 85.23|
| Respiratory (n=36)          | Cough with expectoration    | 20  | 55.56|
|                             | Breathless ness             | 27  | 75   |
| Ophthalmic (n=116)          | Diminution of vision        | 84  | 72.41|
|                             | Refractory error            | 23  | 19.83|
|                             | Excessive watering/dischARGE | 09 | 7.76 |
| Dermatological (n=13)       | Itching over skin           | 04  | 30.77|
|                             | Patch over skin             | 09  | 69.23|
| ENT (n=82)                  | Hearing loss                | 53  | 64.63|
|                             | Discharge                   | 10  | 12.19|
|                             | Ear pain                    | 04  | 4.88 |
|                             | Other                       | 19  | 23.17|
| Genitourinary (n=22)        | Nocturia                    | 09  | 40.91|
|                             | Dribbling                   | 13  | 59.09|
| Headache                    | Yes                         | 77  | 19.25|
| Generalized weakness        | Yes                         | 12  | 4    |
| Dental complaints           | Yes                         | 123 | 30.75|

Table 5: Number of new cases diagnosed through the CPS program

| Diagnosis               | n   | (%)  |
|-------------------------|-----|------|
| Hypertension            | 27  | 6.67 |
| Diabetes                | 03  | 0.75 |
| Asthma                  | 07  | 1.75 |
| COPD                    | 09  | 2.25 |
| Tuberculosis            | 04  | 1    |
| Cataract                | 52  | 13   |
| Hernia                  | 04  | 1    |
| Hydrocele               | 04  | 1    |
| Prolapse                | 08  | 2    |
| Fibroids                | 05  | 1.25 |
| Ovarian mass            | 01  | 0.25 |
| Coronary heart disease  | 04  | 1    |
| Cardiomyopathy          | 08  | 2    |
| Haemorrhoids            | 03  | 0.75 |
| Dental carries          | 36  | 9    |
| BPH                     | 19  | 4.75 |
| Renal calculi           | 1   | 0.25 |
| Urethra stricture       | 02  | 1.0  |

24 (6%) had a BMI of 0–18.5 kg/m² and more than 30 kg/m², respectively. Mean BMI was 24.78 kg/m², and the range was from 15.43 to 31.64 kg/m².

In Figure 2 shows that the majority belongs to mixed diet (74%), regular bowel, and sleep pattern.
A diminished hearing was a complaint in 53 of 82 subjects (64.63%) having ear, nose, and throat complaints. 22 subjects (5.5%) had complaints related to the genitourinary system, of which nocturia was present in 9 (40.91%) of the subjects. Out of 400 study subjects, headache was the most common symptom in 77 (19.25%) study subjects. 12 (4%) complained of generalized weakness, while 123 (30.75%) had dental complaints. [Table 3].

Out of 186 female patients, 152 (81.7%) had obstetrics and gynecology symptoms. The majority of them have uterine cervix prolapse [Figure 3].

Blood investigations* consists of complete blood count, liver, kidney function tests, random blood sugar.

The above table showed that 114 (28.5%) subjects had some abnormality detected in blood investigation reports like Complete blood count, Liver function tests, Kidney function tests, and random blood sugar levels. Nearly 65.63% of the subjects who had undergone ultrasonography had some abnormalities detected in USG Scan. X-ray findings were suggestive of some pathology in 46 (33.33%) of the study subjects. ECG abnormalities were found in 12 (3%) people. 18 subjects had their urine examination positive, while 5 had some abnormality in the PPT Examination. [Table 4].

The above table showed that 102 (25.5%) of the study subjects had some chronic disease. Out of those 102 subjects, 28 (27.45%) had hypertension, while 12 (11.76%) had diabetes, 12 (11.76%) had coronary heart disease, 21 (20.59%) had both hypertension and diabetes, and 11 (10.78%) had a history of suffering from tuberculosis. [Table 5].

**Discussion**

In the present study, the majority of the subjects, 65.75% (263/400), were between the age group of 60–69 years old, that is, in the category of young old. According to Help age India Publication STATE OF ELDERLY IN INDIA 2014, this distribution of study subjects can be explained because young and middle-aged old’s (60–79 years) are more concerned about their economic needs the need to remain fit and independent. In contrast, those above 80 are often feel sick, frail, physically weak, vulnerable to crime, dependent on others, and frequently need urgent support measures. They are also frequently excluded from the everyday social and economic sectors. Therefore, this group should not be treated as part of a homogenous group of all older persons.\(^{[24]}\)

In a study conducted in Uttar Pradesh (UP) and Maharashtra, Gopal Agrawal, et al.\(^{[17]}\) discovered that the senior-aged (70 years and older) were substantially less likely to seek treatment than the 60–69 age group. In India, where the unorganized sector employs a more significant proportion of the workforce and rural labor is primarily employed in agriculture or related occupations, formal retirement for the elderly is not an option. Age-related health issues were stemming from a sense of being undesired, alienated, and ineffective.

According to the publication Age well India-Older women in India,\(^{[18]}\) the whole Indian population sex ratio is 940:1000 in favor of the male population, but the elderly population (60+) population is 1022:1000 in favor of older women.

Because no one provides a sympathetic ear to elderly women who live alone, they cannot express their distress.\(^{[19]}\) Above all, many older women cannot recognize the symptoms of diseases due to a lack of health awareness. Instead of medical science, the majority of them trust in divine abilities. As a result, the current program is being used by a greater percentage of male study subjects than female study subjects.

A study by Subhojit Dey, et al.\(^{[16]}\) found that high school graduates were four times more likely in Maharashtra to seek treatment than the illiterate group. This paradox in our study can be attributed to the fact that most of the study subjects came from the rural population.

As per Steerupa, et al.\(^{[25]}\) more women report poor health status than males, yet a far greater proportion of men are hospitalized than females (87 versus 67 per 1000 aged persons).

According to Pandve, Chavan, and Giri (2017),\(^{[21]}\) 54% of males had one or more addictions. Masher, a type of chewing tobacco used for tooth cleaning, was addictive in 38%, and it is also a women’s addiction. Tobacco with lime was chewed by 36%, Bidi was smoked by 34%, and alcoholism was found in 15% of the men.

Assessment of study subjects’ physical symptoms: Out of 400 study participants, 188 participants with musculoskeletal system complaints, 84 (44.68%) experienced lower back pain, and 160 (85.11%) had joint pain. Gastrointestinal symptoms were reported by 83 (20.75%), with heartburn being 52 (62.65%) due to dyspepsia. Irregular bowel complaints, diarrhoea, and constipation were present in 49 (43.75). 88 (22%) had cardiovascular system complaints, of which palpitations were the most common complaint present in 37 (42.05%) of the study subjects. Exertional chest pain was present in 30 (34.09%) of the study subjects. 34 (18.28%) female study subjects had some gynaecological complaints, with cervico-uterine prolapsed in 8 (23.53%), and leucorrhoea as a complaint being present in 14 (41.18%).

According to Kamlesh Joshi, et al.,\(^{[21]}\) a low level of literacy and health consciousness, societal limitations, poverty, and inadequate access to health care may be connected to a large number of morbidities, a low level of treatment-seeking in rural areas, and a high number of morbidities among older women.

India’s elderly population\(^{[23]}\) states it has been found that heart disease is the most common chronic problem among both elderly
males and females. The prevalence of heart diseases among elderly males and females was substantially higher in urban areas than in rural areas. Urinary problems were the most common complaint among senior men. On the other side, more older women reported having joint problems.

Conclusion

The study participants, who ranged in age from 60 to 69 years old, had a variety of chronic illnesses. The majority of the participants had hypertension, diabetes, coronary heart disease, hypertension and diabetes, and a TB history. Because most older women live in their homes and rarely go out in public, their health problems go unrecognized, whereas males' health problems go unnoticed, there is a need for clinical and preventive healthcare programs for their well-being.

Significant findings

There is a scary requirement for preventive healthcare programs for the elderly to decrease morbidity patterns and its prevalence in their age group.

Benefit of study

The emphasis on clinical preventive services and health promotion programs brings together recommendations, opening the door, and inviting readers to not only understand the concepts presented but incorporate them into clinical practice, which greatly improves the health of the elderly.

Future research

Some further innovative clinical preventive services programs and tools for assessing the quality of care delivered for individual patients that decrease age-related morbidity are required to break the monotonous work among the stakeholders.

Acknowledgements

The authors are thankful to participants and management for support and resources.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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