



Nursing Management of Old age Senility: The Bangladesh Perspective

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Abstract: *This study focuses on the challenges posed by the increasing prevalence of senility or age-related cognitive decline among the elderly population in Bangladesh. The objectives of the study include identifying age-related physiological changes in various systems such as cardiovascular, central nervous, and musculoskeletal systems among the elderly. The research also aims to recognize common health problems associated with aging and to explore strategies for preventing or reducing risk factors contributing to functional decline, impaired quality of life, and disability in older adults. The research questions guiding this study inquire about the physiological changes occurring in various systems among the elderly, the roles and functions of nurses in geriatric care, and the need for further research to improve the care provided to the elderly population. This study contributes to the understanding of the unique challenges faced by elderly individuals dealing with senility in the Bangladeshi context and seeks to inform nursing strategies, interventions, and frameworks that can enhance the quality of life and healthcare outcomes for this population. The analysis delved into demographic features, health conditions, caregiving, and relationships of the elderly in the study. These insights shed light on aging, health challenges, and social dynamics. The age distribution skewed towards 60-70, especially 60-65, indicating a focus on younger elderly. A logistic regression model predicts dementia well. Graphs highlight factors limiting elderly activities, family relationship trends, prevalent health conditions, and demographic summaries. Key findings include the need for broader age inclusion, economic support, nurturing relationships, better healthcare, addressing lifestyle issues, and focusing on mental health. These findings hold implications for policies, healthcare planning, and elderly well-being. Recommendations involve diversified age representation, economic empowerment, support for relationships, enhanced healthcare, awareness campaigns, and ongoing research.*

Keywords: Senility, Old Age, Dementia, Nursing, Demographic

1. Introduction

Ninety thousand (90,000) people reach the age of 60 every day and about three million each month. By 2030 about one sixth of the world's population will be aged over 60 years. Populations are aging most rapidly in developing countries. By 2020, Europe will be the oldest region with older people constituting 24% of the total population. In terms of percentage population of elderly, Japan will have 31% elderly population. Seven of ten countries with largest populations in the world will be from developing countries. These countries are China India, Brazil, Indonesia, Pakistan, Mexico, and Bangladesh. Bangladesh is one of the twenty developing countries with largest number of elderly population. By 2025, Bangladesh along with four other Asian countries (China, India, Indonesia and Pakistan) will account for about half of the world's total elderly population. Population projection suggests that one in 10 persons will be elderly in Bangladesh by 2025 and by 2050 one in five persons will be elderly. If the present demographic transition Continues then by 2050 proportion under 15 years will be same as that of the elderly population 60 years and above (BBS, 2007). The aging process is of course a biological reality which has it's own dynamic, largely beyond human control. However, it is also subject to the constructions by which each society makes sense of old age. In the developed world, chronological time plays a paramount role. The age of 60 or 65, roughly equivalent to retirement ages in most developed countries, is said to be the beginning of old age. In many parts of the developing world, chronological time has little or no more importance in the meaning of old age. Other socially constructed meanings of age are more significant such as the roles assigned to older people; in some cases, it is the loss of roles accompanying physical decline which is significant in defining old age. Thus, in contrast to the chronological milestones which mark life stages in the developed world, old age in many developing countries is seen to begin at the point when active contribution is no longer possible (Randel et al., 1999). Senility is defined as "the weakness or mental infirmity of old age," and is associated with the deterioration of the body and mind in the elderly. It is commonly referred to as "dementia". Different areas of brain control different skills and abilities. When mental functions such as memory, language, orientation, or judgment deteriorate, this may be a direct result of the way dementia has affected the brain. The study on nursing care for senility in old age from the perspective of Bangladesh is essential to address the specific challenges and opportunities associated with the aging population in the country. It can lead to improved care strategies, increased awareness, enhanced caregiver support, and better overall healthcare outcomes for the elderly population.

2. Problem Statement

As the population of elderly individuals increases in Bangladesh, the prevalence of senility or age-related cognitive decline has become a significant concern. This condition poses challenges for providing appropriate nursing care tailored to the unique needs of elderly individuals experiencing senility. The problem statement addresses the lack of comprehensive understanding and specialized nursing approaches to effectively manage and improve the quality of life for elderly individuals dealing with senility in the context of Bangladesh. This situation necessitates the exploration of dedicated nursing strategies, interventions, and

frameworks that consider the cultural, social, and economic aspects of the country while providing holistic care to seniors with cognitive decline.

3. Rationale of the Study

Senility or Dementia is a global issue, with increasing prevalence rates impacting on health services internationally. People with dementia are frequently admitted to hospital, an environment that may not be suited to their needs. While many initiatives have been developed to improve their care in the acute setting, there is a lack of cohesive understanding of how nursing personnel experience and perceive the care they give to people with dementia in the acute setting. Traditionally and religiously the elderly people of Bangladesh are very much respectable and they are treated as the symbol of family identity. They are also considered as venerable counselor, and are consulted as advisors since a lot of experience made them the authorities. For these reasons they are always respected and the young tries to take best care of their elderly relatives in the family. But due to various socio-economic reasons the traditional values and customs are eroding. With the advent of technology, the Younger found the experimental knowledge of the elders to be outdated and even quaint. Therefore, the youth no longer like to live with the elders. Moreover, now the younger has to go out for work. As a result, traditional joint family structures have broken down and, in most cases familial supports have been withdrawn from the elders like other countries of this region. This situation throws the elderly population, particularly the elderly population of the poor families in to large scale social, health and economic insecurity. The elders become mentally sick feeling unwanted by the society. While some aspects of the statement are reflective of well-established global issues related to dementia and elderly care, the discussion of traditional values and customs in Bangladesh is rational in its depiction of changing societal dynamics and the potential impact on the elderly population's well-being. However, the accuracy of these statements would need to be verified through up-to-date research and data.

4. Objectives of the Study

1. To identify age related physiological changes in various systems, such as-Cardio-vascular, central nervous system, and musculo-skeletal systems of the elderly.
2. To recognize the common health problems that occur with age.
3. To prevent or reduce common risk factors contribute to functional decline, impaired quality of life, and access disability in older adults.

5. Research Questions

1. What physiological changes occur in various system?
2. What are the roles and functions of nurses in geriatric care?
3. Are there any need for research for caring of elderly people?

6. Related Literature Review

Most developed world countries have accepted the chronological age of 65 years as a definition of elderly or older person, but like many westernized concepts, this does not adapt well to the situation in Africa. While this definition is somewhat arbitrary, it is many times associated with the age at which one can begin to receive pension benefits. At the moment, there is no United Nations standard numerical criterion, but the UN agreed cutoff is 60+ years to refer to the older population (Personal Correspondence, 2001). As far back as 1875, in Britain, the Friendly societies Act, enacted the definition of old age as, ‘any age after 50,’ yet pension schemes mostly used age 60 or 65 years for eligibility (Roebuck, 1979). Adding to the difficulty of establishing a definition, actual birth dates are quite often unknown because many individuals in Africa do not have an official record of their birth dates (Roebuck, 1979). Study result published in 1980 provides a basis for a definition of old age in developing countries (Glascock & Feinman, 1980). This international anthropological study was conducted in the late 1970’s and included multiple areas in Africa. Definition falls in to three main categories: 1. Chronology, 2. Change in social role (i.e. Change in work patterns, adult status of children and menopause); and 3. Change in capabilities (i.e. invalid status, senility and change in physical characteristics). Bangladesh, was observed in the country as elsewhere in the world with a call for raising awareness about the issues affecting the old age people, such as senescence and elder abuse. Different organizations have chalked out a range of programs to observed the day. United Nations Association of Bangladesh awarded national professor Salauddin Ahmed, educationalist Latifa Akhand and film maker Shuvas Datto on the day for their contribution to the society. A committee has also been formed with representation of the social welfare ministry, Forum for the Rights of Elderly-Bangladesh, Prabin Hitaishi Sangha, Resource integration Center and some other organizations to celebrate the day. International Day of Older Persons is a special day for older persons or senior citizens all over the world. In the countries, politicians make speeches, particularly those responsible for government departments that focus senior citizens, at the time of the year. International Day of Older Persons is a special day for older persons or senior citizens all over the world. In the countries, politicians make speeches, particularly those responsible for government departments that focus senior citizens, at the time of the year. Some radios, televisions or newspapers published interviews with senior citizens on various issues such as achievements they made to create a better society. Other activities surrounding this day include: displays of promotional materials on the International Day of Old in schools, tertiary institutions, office buildings and public notice boards; media announcements on the day so that to promote older persons, and inter-generational co- operation on voluntary activities focused on the environmental health, education, or community services. This day observed the first Time throughout the world on October 1, 1991 (K Shaha, 2000). The International day of Older persons-2010 was being observed throughout the world under the leadership of United Nations as well as in Bangladesh through programs to recognize the contribution of older persons and to examine issues that affect their lives. From Greek gears (old age) and IARIKE (medicine) is the branch of medicine concerned with medical problems and the care of older people. Geriatric Nursing is defined as the specialized nursing care of the older adults that occurs in any setting in which nurses use knowledge, expertise and caring abilities to promote optimal functioning. Myrtle Gomez (2009) said Gerontic nursing includes

comprehensive understanding of aging within holistic perspective. It is more than the medical and scientific approach and encompasses nurses' concept of the spiritual bio-psycho social person. Ethical issues and rights of the elderly wherever they are, we have to adopt daily changes in their care, influencing policies that affect them, issues of autonomy and self-determination less frequently, so the care taker had to know, issues properly. An old age is (Myrtle Gomez, 2009) as the individual develops and matures, socially and physically from birth through adolescence, and after the age of 30, additional changes occur that reflects normal declines in all organ systems, then it is called old age. This process of growing old is called Senescence. Aging is an important biological process that profoundly affects human health. Aging is observed throughout the animal and plant kingdoms. In humans, age-related degenerative changes play a central role in impairing the function of elderly people. It also impairs a wide variety of systems. For example, central nervous system changes include age- related memory loss and reduction of cognitive function, Reduction of muscular strength, or sarcopenia, is a serious problem for many elderly people (Collins et al., 2007). The remarkable time in aging research- a combination of traditional models and new approaches has led to impressive new insight in to causes of aging and factors that can modulate the rate of aging. The analysis of genetically tractable model organisms with short life spans, such as yeast, worms and flies, has resulted in the identification of an increasing number of genes that can modulate the rate of aging. Studies of mice, an important model for aging research because of their relevance to humans and relatively short lifespan for a vertebrate, are also identifying genes that influencing aging (Collins et al., 2007). The prevalence of morbidity in Bangladesh varies by age groups, gender and urban/rural residence. Common diseases contracted by both male and female at the old age (60+) are rheumatic fever, asthma, ulcer, fever and acute respiratory infection. Disease pattern in the urban areas is different from that in the rural areas. Chicken pox, viral fever, high blood pressure, diabetes and heart disease are more common in urban areas. In the absence of proper care in time, morbidity leads to chronic illness, disability and even in death. A recent survey of 347,150 rural people revealed that 4,447 of them were disabled and among them 2,456 were male, 1,991 females. Tuberculosis has been reduced substantially by effective immunization program among the younger age group, but it still prevails among the older population and is more prevalent among males. Entire population of the country is exposed to risk of contracting goiter because of iodine deficiency and poor micro-nutrient content in soil (Encyclopedia of Bangladesh, 2006). Studies have shown that elderly people who are underweight are at higher risk of acute illness and death. They also have a significantly higher risk of dying within a year of hospitalization than those with adequate nutrition. However, a study in Russia found that weight loss over 3 kg was associated with a higher risk of disability. A study in China showed that low income, rural residence, and low protein and energy intake were associated with losses in muscle and body mass, which are themselves linked with increased illness, functional impairment, and death. Another study in Japan found a decline in dietary diversity to be associated with a reduction in functional ability. Being underweight is also associated with frailty. Anorexia and weight loss are common among the elderly, and a number of risks may prevent them from getting enough of the right foods. Their ability to taste and smell may decrease their appetite for needed foods, and they may have dental problems that make it difficult to eat. Reduced physical activity lessens the need for energy and food consumption. In addition, the

elderly may face difficulties because they are socially isolated, loss of spouse, or have problems of mobility. Elderly patients who are institutionalized are at especially high risk of under nutrition. A study of body weight in Taiwan and the Philippines found underweight to be more common among people over 70, women, the unmarried, rural residents and the poor. A study in the United Kingdom indicated that 12 percent of the non-institutionalized elderly were undernourished, compared with 20 percent of those living in institutions and 40 percent of those who were hospitalized. French studies indicated that about 3 percent of the elderly living at home, and about 40 percent of those institutionalized were under nourished. There is relatively little data on the prevalence of under nutrition among the elderly in the developing world. The tribal population in India is among India's poorest groups, and one study found that more than 60 percent of the tribal men and women over age 60 suffered from a chronic deficiency in needed calories. Risks to Adequate Nutrition Among the Elderly Decrease ability to taste and smell, dental problems, reduction in physical activity and lack of mobility, social isolation due to the death of one's spouse, pharmaceuticals, poor mental health, being institutionalized, intentionally inadequate care, poverty, displacement or social disruption. (Population Reference Bureau, 2007), Bangladesh.

7. Methods

The study was carried out in the In-Patient and Out Patient Department of Medical College Hospital, Khulna, General Hospital Khulna, Private Clinics, one ward and one surrounding community under city corporation, Khulna. Researcher selected Two Divisions of Bangladesh randomly out of Seven through lottery. Data are collected from Boyosko Punerbasan Kendra, Gazipur, Probin Hitaishi Songho and Institute of Geriatric Medicine, Agargaon, Dhaka, Khulna Medical College & Hospital (KMCH), Gazi Medical College & Hospital (GMCH), Khulna. Study population was selected as age group defined According to WHO. UN agreed Cutoff is 60+ years to refer to the elderly population. The elderly population of age group of 55 years and above, both sex, male and female, of different socio-demographic status irrespective of social class, religion, education and occupation. Study Population was considered as Elderly persons aged 60 years and above both male and female. The study is based on primary data. Data is collected through In-depth interview, Structured Questionnaire, Geriatric Depression Scale for screening from 384 both male and females. Various social, cultural, environmental and economic factors, as well as availability of health care services profoundly affect the health and nutrition of the mothers and their children. Moreover, early Marriage and high Fertility expose the mothers prematurely to mental and physical stresses.

8. Analysis and Results

Percent distribution of the respondents by their age group

Table-1: Percent distribution of the respondents by their age

N=384

Age groups	Frequency (n)	Percent (%)	Cumulative Percent
60-65	138	35.9	35.9
66-70	107	27.9	63.8
71-75	95	24.7	88.5
>75	44	11.5	100.0
Total	384	100.0	

The Table-1 shows the distribution of the respondents according to their demographic characteristics by the percentage of age. Their age ranged from 65 to >75 years with mean age of 2.08, median 2.00, the mode 1, std. deviation 1.033 and the std. error of mean .053 within the N=384. The maximum respondents 138 (35.9%) belonged to the class interval of 60-65 years of ages. Followed by 44 persons (11.5%) belonged to age group of >75 years by age, which represented the lowest frequency.

Frequency and percent distribution of occupational status of the respondents

Table-2: Shows frequency and percent distribution of occupational status of the respondents

N=384

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Occupational status	Frequency (n)	Percent (%)	Cumulative Percent
Unemployed	220	57.3	57.3
Employed	164	42.7	100.0
Total	384	100.0	

respondents mainly came from unemployed group who have no income generation 220 (57.3 %), and only 164 numbers (42.75%) were belonging either private jobs or other income sources. (Table 2).

Cross relationships between the caring types and old age dementia

Table-3. Shows cross relationships between the caring types and old age dementia

Old Age Dementia	Caring Type n (%)			Total
	Self and life Partner	Children	Others	
No	76 (74.5)	134 (55.8)	27 (64.3)	237 (61.7)
Yes	26 (25.5)	106 (44.2)	15 (35.7)	147 (38.3)
Total	102 (100)	240 (100)	42 (100)	384 (100)

In this table, care providers of the respondents are grouped in to self and life partner, children and others indicate son-in-law, daughter-in-law, grandchildren and other paid companions. There is a relationship between types of care provider of the elderly people and the development of old age senility. If care provided by the self and life partner and the children than others, there is no chance of old age dementia. The Pearson Chi-Square shows, there is strong relationship between caring types and old age dementia. Association is highly significance, p-value<.005, in the Degree of freedom 2. (Table-3).

Cross relationships between Treatment place and Old age Dementia.

Table-4. Shows cross relationships between Treatment place and Old age Dementia.

N = 384

Treatment place				
		Government Hospitals	Others	Total
Old Age Dementia	No	142 (58.7)	95 (66.9)	237 (61.7)
	Yes	100 (41.3)	47 (33.1)	147 (38.3)
Total		242 (100)	142 (100)	384 (100)
Test Statistics		Values	DF	p-value
Pearson Chi-Square		2.562	1	0.06
Likelihood Ratio		2.584	1	0.05

The table-4 also shows the cross relationship between the choice of treatment places like government hospitals, private hospitals, private clinics, other indigenous system of medicine and the development of old age dementia. If the care received from Government hospitals and nursing management than other mentioned health care facilities, there is no chance of happening old age senility. In the Degree of freedom 1, Pearson Chi-Square shows the result is marginally significant, $p\text{-value} < 0.06$.

Classification

Table-5. Classification

N=384

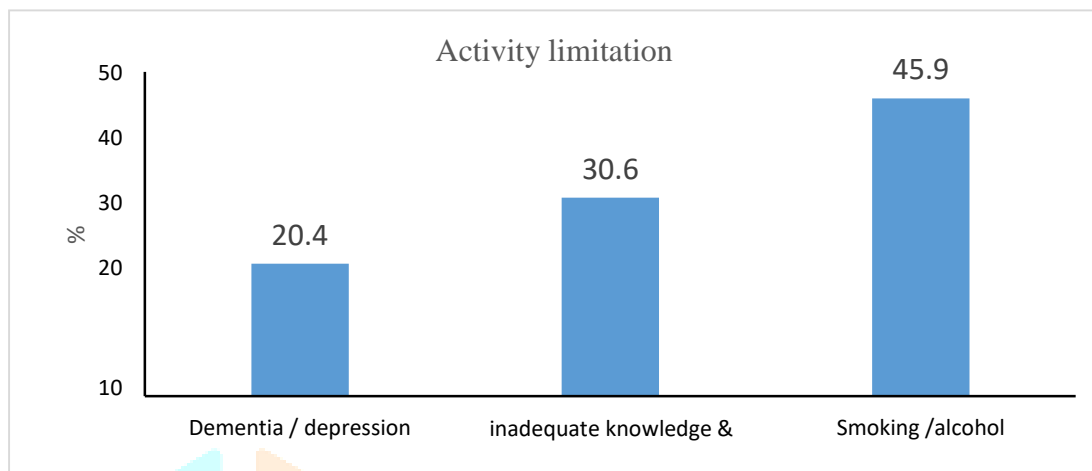
		Observed value		
Old Age Dementia		No	Yes	Total
Predicted value	No	210 (88.2)	43 (29.5)	253 (65.9)
	Yes	28 (11.8)	103 (70.5)	131 (34.1)
Total		238 (100)	146 (100)	384 (100)

Since our target variable is binary, we may apply logistic regression. Also observe that "Old Age Dementia" follow the Bernoulli distribution. Logistic regression can be binomial. Binomial or binary logistic regression refers to the instance in which the observed outcome can have only two possible types (e.g., "dead" vs. "alive", "success" vs. "failure", or "yes" vs. "no"). If we predict over 100 elderly people after 60 years of age, who have possibility to develop dementia, in this context, our prediction will be 88% corrected as "No" and 70.5% corrected as "Yes".

Percent distribution of activity limitation related to old age senility of the study subjects.

Fig-1: The figure shows the percent distribution of activity limitation related to old age senility of the study subjects.

N = 384

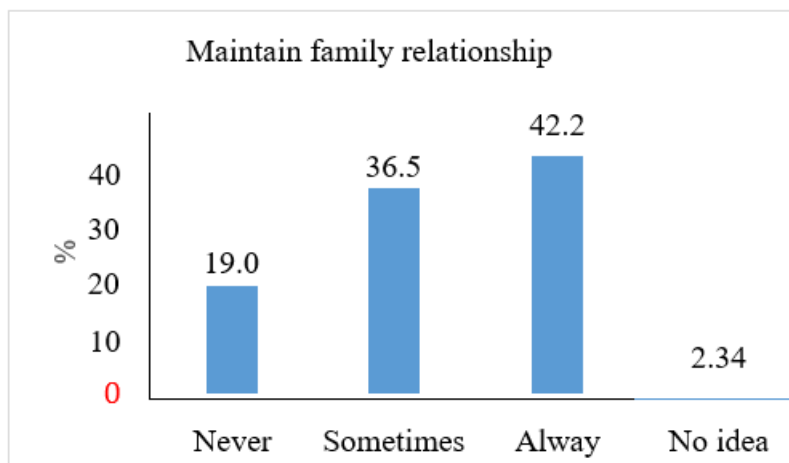


The bar chart indicated some important senile factors those were highly associated to be limited the daily activities performing by the elderly people, such as the lowest frequency is dementia/depression (20.4%), the moderate proportion represent inadequate knowledge of senility and feeling discomfort (30.6%) and the next highest one is smoking / alcohol (45.9%) are responsible for limiting physical activities of the elderly people.

Percent distribution of maintaining family relationships by the respondents.

Fig-2: The graph shows the percent distribution of maintaining family relationships by the respondents.

N = 384.

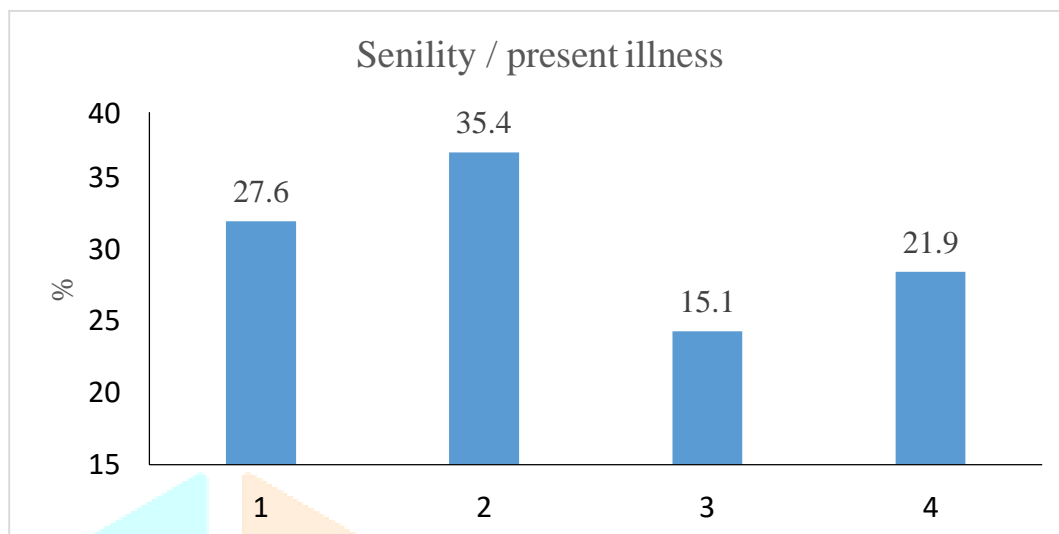


The figure-2, bar graph gives us information about the proportion of maintaining family relationships in the options of never, sometimes, always, and having no idea by the study population. Here, the highest percentages (42.2%) agreed that they always maintained family relationships with their kens. But the next higher proportion (36.5%) sometimes maintained relationships. Very little numbers said that they have No idea (2.3%), on the other hand, never maintained (19.0%) proportionately moderate number out of 384.

Frequency distribution of the old age senility/present illness of different categories by the respondents.

Fig-3: The Histogram shows the frequency distribution of the old age senility / present illness of different categories by the respondents.

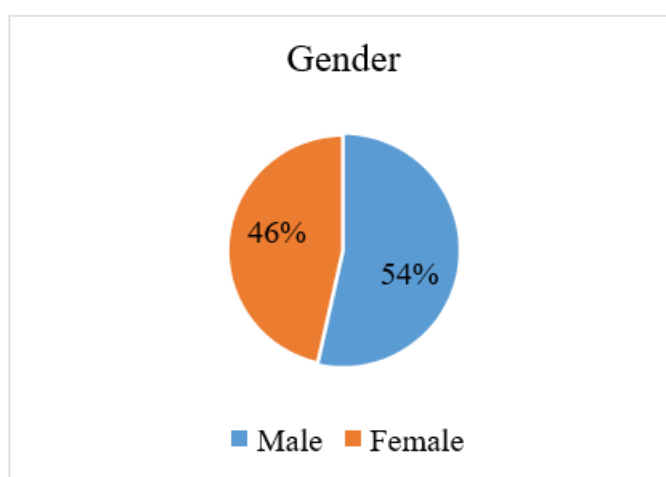
N = 384



According to the figure-3, in the X-axis, the number-2, The highest incidence and prevalence psychogeriatric problems /Alzheimer’s disease represented in the Y-axis 136 (35.4%), and the lowest incidence in the X-axis, pillar no-3, rheumatoid arthritis, diabetes mellitus, hypertension 58 (15.15) showed in the Y-axis. The other types of senility include in the pillar no 1 and 4 of the X- axis, showed in the Y-axis, 106 (27.6%) and 84 (21.9%), respectively. In the statistical analysis, it is appeared that the mean=2.31, std. deviation=1.099.

Fig-4: The Pie Chart shows gender distribution of the respondent.

N=384

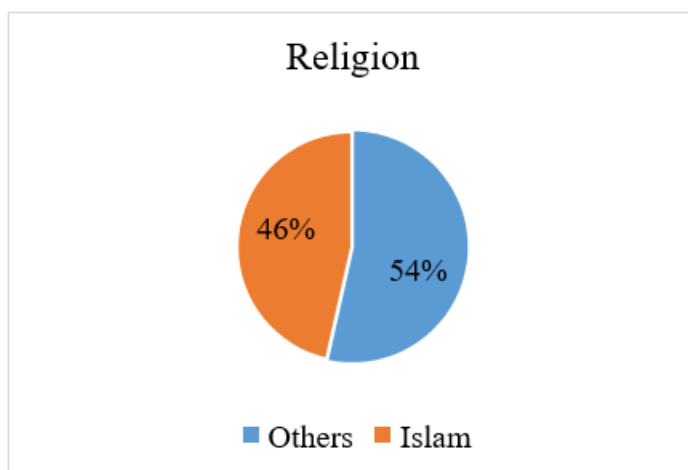


The above pie chart shows the information on the distribution of respondents in terms of male (152) colored by pink marking comprises the lower number and the number of females (232) shown by green marking occupied the major portion of total number of the study population.

Distribution of religion of the respondent

Fig-5: The Pie chart shows the distribution of religion of the respondent.

N=384



The study population participated in the study holding the various religious groups like Islam, Hindu, Buddhist and Christians, but they were divided in to two major groups, Islam greater portion (green color) represented Islam.

Caring types of elderly people in case of illness

Fig-6: The Pie chart shows the caring types of elderly people in case of illness.

N = 384

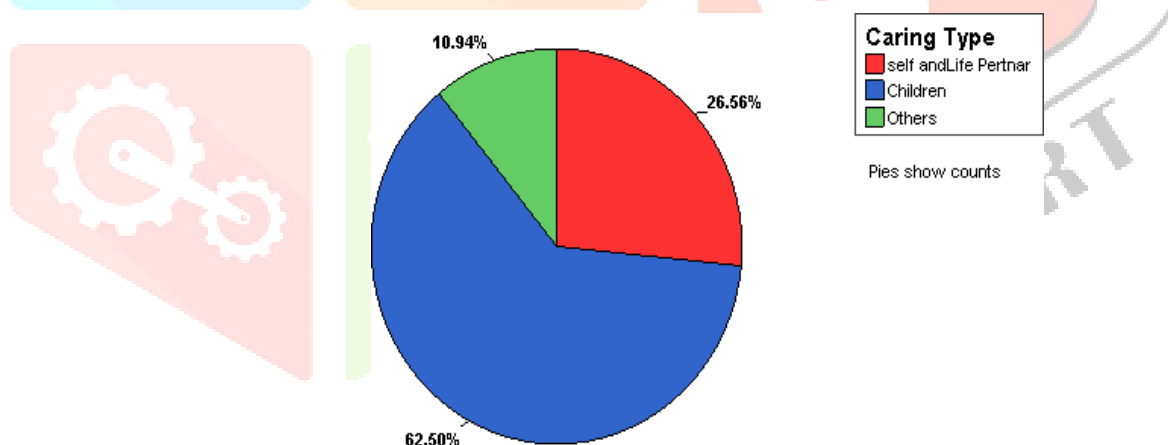


Fig. 6, the pie chart gives us information about the percent distribution of the type of caring In terms of children comprises the larger proportion (62.50%), the next higher position is self and life partner occupying (26, 56%). The other one shows the very few respondents (10.94%) represents the other peoples except self, life partner and children.

Educational Qualification of the respondent

Fig. 7: The Pie chart shows the Educational Qualification of the respondent.

N=384

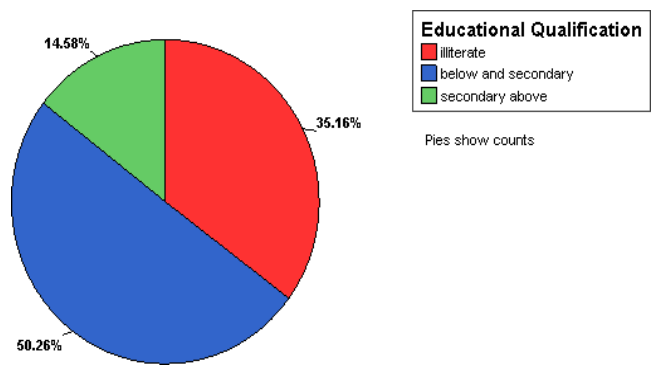
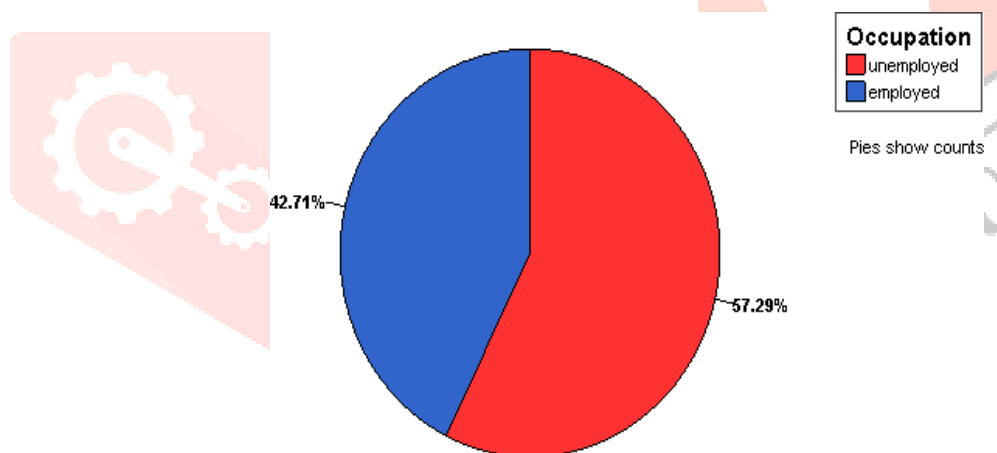


Fig.7, the pie chart describes us one of the socio-demographic components as the educational qualification of the population under the study. Here the 50.26% indicates below the secondary level of education, and the other half portion of the figure remains illiterate (35.16%), above secondary level of education (14.58%) respectively.

Occupation of the respondent

Fig- 8: The Pie chart shows the Occupation of the respondent.

N=384

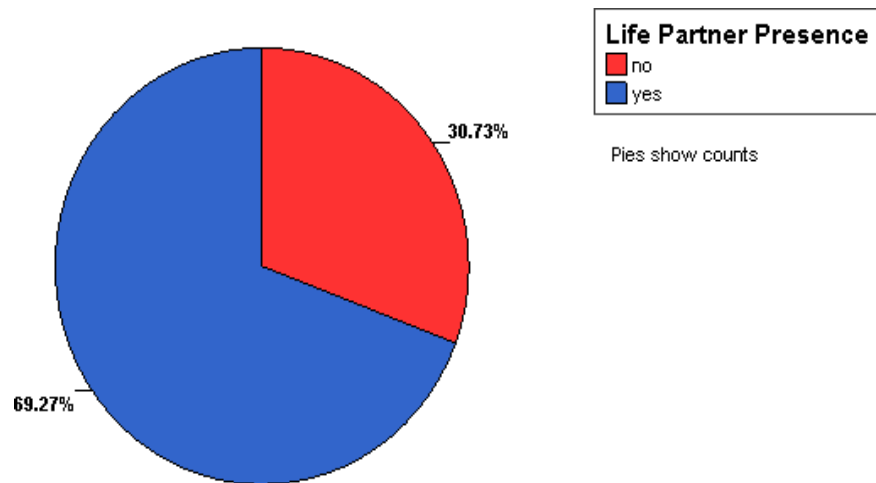


The fig.8, describes the occupational status in terms of unemployed, the largest proportion (57.29%), the two-third of the total population. The other one shows the income generating group (42.71%) those are very little in number.

Information about Life partner of the study subjects.

Fig.-9: The Pie chart gives the information about Life partner of the study subjects.

N = 384



The above pie chart describes about living life partner, husband and wife of the population under the study group. The majority of the study population have still life partner presented (69.27%), which mention the three-fourth of the total population.

9. Discussion

The analysis presented various aspects related to the demographic characteristics, health conditions, caregiving, and relationships of the study population. These findings provide valuable insights into the aging process, health challenges, and social dynamics among the elderly respondents. The distribution of respondents by age groups (Table-1) reveals that the majority of the participants are in the 60-70 age range, with the highest percentage falling within the 60-65 age group. This indicates a sample skewed towards the younger end of the elderly spectrum. The occupational status distribution (Table-2) highlights that a significant proportion (57.3%) of the respondents are unemployed, potentially indicating a population with reduced income and increased reliance on external support. The cross-relationships between caregiving types and old age dementia (Table-3) illustrate an interesting connection between the care providers and the development of dementia. The statistics suggest that when care is provided by self and life partners or children, there is a lower likelihood of old age dementia. This underscores the potential impact of familial and close relationships on the cognitive health of the elderly. The relationship between treatment place and old age dementia (Table-4) highlights that care received from government hospitals may be associated with a lower likelihood of developing dementia. This could imply that government healthcare facilities are better equipped to handle age-related cognitive conditions, although the significance level is marginally substantial.

The classification table (Table-5) presents the results of a logistic regression model applied to predict old age dementia. The prediction accuracies for "No" and "Yes" outcomes indicate that the model performs relatively well in identifying those with and without dementia. Moving to the graphical representations, the bar chart depicting activity limitation related to old age senility (Fig-1) reveals that factors like inadequate knowledge

of senility, discomfort, and smoking/alcohol play a significant role in limiting the physical activities of the elderly. The bar graph on maintaining family relationships (Fig-2) signifies that a substantial portion of the respondents (42.2%) always maintains family relationships, while a considerable number (36.5%) do so sometimes, underlining the importance of family bonds in old age. The histogram displaying the frequency distribution of old age senility/present illness (Fig-3) provides an insight into the prevalence of various health conditions among the elderly. It's clear that psycho-geriatric problems/Alzheimer's disease and other chronic conditions are prevalent, with Alzheimer's disease being the most common. The pie charts related to gender distribution (Fig-4), religious distribution (Fig-5), caring types during illness (Fig-6), educational qualifications (Fig-7), occupation (Fig-8), and information about life partners (Fig-9) offer quick visual summaries of these aspects within the study population.

10. Findings

The study population is skewed toward the younger end of the elderly spectrum, with a majority falling within the 60-70 age range, particularly the 60-65 age group. This suggests that the sample might not fully represent the entire spectrum of aging experiences. A significant proportion (57.3%) of respondents are unemployed, potentially indicating economic challenges among the elderly population. This could lead to increased reliance on external support and resources. An interesting connection is observed between caregiving types and the likelihood of developing dementia. Care provided by self, life partners, or children seems to be associated with a lower likelihood of old age dementia. This highlights the positive impact of close relationships and family involvement on cognitive health. Care received from government hospitals appears to be linked with a lower likelihood of developing dementia. This might suggest that government healthcare facilities are better equipped to manage age-related cognitive conditions. The logistic regression model applied to predict old age dementia seems to perform relatively well in distinguishing between individuals with and without dementia, based on the accuracy rates for "No" and "Yes" outcomes. Factors like inadequate knowledge of senility, discomfort, smoking, and alcohol appear to significantly limit the physical activities of the elderly, highlighting the importance of addressing these factors to promote healthier aging. The majority of respondents (42.2%) always maintain family relationships, emphasizing the significance of family bonds during old age. However, a notable percentage (36.5%) sometimes maintain family relationships, suggesting that there might be room for improvement in this area. The prevalence of psycho-geriatric problems/Alzheimer's disease and other chronic conditions, particularly Alzheimer's disease, indicates the prominence of these health issues among the elderly population. The pie charts provide quick visual summaries of the gender distribution, religious distribution, caregiving types during illness, educational qualifications, occupation, and information about life partners within the study population.

Overall, the analysis sheds light on various factors influencing the aging process, health challenges, and social dynamics among the elderly. It underscores the importance of family support, healthcare facilities, and addressing lifestyle factors to promote better cognitive and physical health during old age. The findings could have implications for policy-making, healthcare planning, and interventions aimed at improving the well-being of the elderly population.

11. Recommendations

1. Since the study population is skewed toward the younger end of the elderly spectrum, efforts should be made to include a more comprehensive range of ages. This will help to capture a broader spectrum of aging experiences and provide a more representative picture.
2. The high percentage of unemployed respondents suggests economic challenges among the elderly. To alleviate this, consider implementing targeted interventions such as vocational training, job placement programs, and financial support to empower the elderly population economically.
3. The positive impact of close relationships on cognitive health is evident. To enhance the well-being of the elderly, initiatives that promote family involvement, social interactions, and community engagement should be encouraged. Support groups and social activities can foster stronger social connections.
4. The link between care received from government hospitals and lower likelihood of developing dementia indicates the importance of well-equipped healthcare facilities. Invest in training healthcare professionals to manage age-related cognitive conditions effectively and ensure that government hospitals are adequately equipped for such care.
6. Inadequate knowledge of senility, discomfort, smoking, and alcohol have been identified as factors limiting physical activities. Launch educational campaigns to raise awareness about the benefits of healthy aging practices, the risks associated with unhealthy behaviors, and how to address discomfort effectively.
7. While a significant percentage of respondents maintain family relationships, there is room for improvement. Develop programs that encourage regular family interactions and provide resources to address conflicts or challenges within family relationships.
8. Given the prominence of psycho-geriatric problems and Alzheimer's disease, prioritize mental health support for the elderly population. Offer access to counseling, therapy, and mental health resources to address cognitive and psychological challenges.
9. Use the findings to inform policy-making and healthcare planning efforts. Create policies that support the elderly population's well-being, including economic assistance, access to healthcare, and social support initiatives.
10. Implement interventions to encourage healthier lifestyles among the elderly, including promoting physical activity, offering smoking cessation programs, and educating about the risks of excessive alcohol consumption.
11. The findings provide a foundation for further research into the connections between caregiving, health outcomes, and social dynamics among the elderly. Continuously monitor these trends and adapt interventions based on new insights.

12. Conclusion

The comprehensive analysis presented valuable insights into the demographic, health, caregiving, and relational aspects of the elderly study population. While the sample skewed towards the younger end of the elderly spectrum and economic challenges were apparent, positive connections between close relationships and cognitive health were observed. Government healthcare facilities appeared beneficial in reducing dementia risk. Lifestyle factors and inadequate knowledge posed limitations on physical activities. Family bonds played a crucial role in maintaining well-being, though improvements could be made. The prominence of mental health issues highlighted a need for support, and the findings hold implications for policy-making

and interventions. Recommendations range from inclusivity in age representation to enhancing economic empowerment, supporting family interactions, and addressing health-related challenges. By acting upon these recommendations, policymakers and healthcare providers can promote healthier aging and improved quality of life for the elderly population.

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