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Nursing Management of Old Age Senility: The Bangladesh Perspective

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University of Rajshahi, Rajshahi

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NURSING MANAGEMENT OF OLD AGE SENILITY: THE BANGLADESH PERSPECTIVE

THESIS SUBMITTED FOR THE DEGREE
OF
DOCTOR OF PHILOSOPHY
IN THE
INSTITUTE OF BIOLOGICAL SCIENCES
UNIVERSITY OF RAJSHAHI,
RAJSHAHI-6205, BAGLADESH

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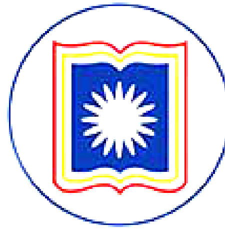

CERTIFICATE

This is to certify that the thesis entitled- "**Nursing Management of Old Age Senility: The Bangladesh Perspective**" prepared by Mosammat Shahinoor Begum, for the award of Degree of DOCTOR OF PHILOSOPHY, is a record bonafied Research Work carried out by her under our supervision. The work is original and to the best of our knowledge and belief, no part of the thesis has been submitted before for any degree or diploma title or recognition.

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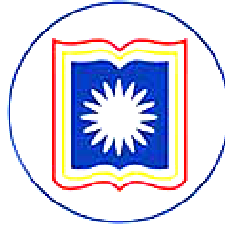

DECLARATION

I hereby declare that the whole of the work now submitted as a thesis entitled- "**Nursing management of Old Age Senility: The Bangladesh Perspective**" to the Institute of Biological Sciences, University of Rajshahi, Bangladesh for the degree of DOCTOR OF PHILOSPHY, is the result of my own investigation. No part of the thesis has been submitted before for my degree, diploma, title or recognition.

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Dedicated to the Almighty Allah then my parents and Family members

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ABSTRACT

The Title of the study is "Nursing management of Old Age Senility:The Bangladesh Perspective". The purpose or the objectives of the study is to identify age related physiological changes in various systems, such as- cardio vascular, central nervous system, and musculoskeletal systems of the elderly, recognize the common health problems that occur with age, prevent or reduce common risk factors contribute to functional decline, impaired quality of life, and access disability in older adults, find out the common old age senility associated with later life, reduce the incidence and prevalence of old age senility among elderly people, establish the appropriate nursing assessment and management procedure, and modeling on the basis of our collected data and predicting the elderly people who develop old age senility. The design of the study is Cross-sectional both qualitative and quantitative study. 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. For this study the above mentioned places were selected for the following reason. Researcher selected Two Divisions of Bangladesh randomly out of Seven through lottery. Dhaka Division, Choose Two Places- Boyosko Punerbason Kendra, Gazipur Probin Hitaishi Songho and Institute of Geriatric Medicine, Agargaon out of Four places. In Khulna Division, Selected Three Places-KMCH, GMCH, One Rural Community conveniently out of Five in the same way. The study was conducted for a period of three years, June 2011 to June 2014. Study population was selected as age group defined According to WHO. UN agreed Cutoff is 60+ years to refer to the elderly population. Elderly persons aged 60 years and above both male and female. The study is based on primary data. The tools used for the study are in-depth interview, structured questionnaire and geriatric depression scale for screening. A standard questionnaire was developed which include- Anthropometric information, Socio-economic information, Information of general health, illness and treatment. Information on nursing management. Questionnaire was pretested and modified on the basis of the present study.

Sample size : 384. Calculation of sample size:$n = Z_2P(1-P) / d_2$ .The Technique of the sampling is Three stages cluster random sampling. The criteria of selection of sample was One person from each household, every day attendance at hospital OPD, application of Geriatric Depression Scale to exclude senility before starting final interview.

The data is statistically analyzed using SPSS 15.0 and 17.0 software. In the analysis , the researcher used logistic regression for the purpose of prediction, classification of observed behavior old age dementia into 'yes' or 'no' and to see the strong association between target variable old age dementia and other related variables. If the elderly people take care by the children than other people except self and life partner, the ward (2.799), test appeared that the result is statistically significant, (.094), Coefficients (-.931), Exp(B)=Odd Ratio (.394). Educational Qualification (Below secondary level) Coefficients (-1.327), Wald (8.475), result is highly Significant, Exp(B)=Odd Ratio (.265). There is strongly association between below Secondary level of education and above secondary level the important factor for the development of old age senility. The occupation of the respondents and the old age dementia are relatively associated. Coefficients -.170, Wald -.308, result Significance- P<. .579 , Exp(B)=Odd Ratio- 1.185 .If care provided by self or life partner or living together with each other, they have better mental condition, low tension and anxiety, they are less influential to ill health. The statistical analysis appeared that they have highly association between absence or surviving of spouse. Wald-26.442, result is highly significance-. P <000 , Exp(B)=Odd Ratio - 5.404 , Coefficients- 1.687 .Risk to disease, mental condition, health education and hospital nursing are highly related , and have strength of association with the old age senility. The logistic regression analysis show that their association observed highly related and strongly significant.. P< .000, P<.000, P<.000, P<.009, respectively. Exp(B)=Odd Ratio between them are shown as- 2.203 ,.180 ,.259 ,.279, respectively. 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, that there is strong relationship between caring types and old age dementia. Caring for parents should be a factor of every individual's utility function as they should happily take care of their old parents. Everyone will become aged and each want to do it with dignity. One should remember that, if he does not care for his parents, he may not receive any in his old age. Therefore, elderly population should be conceptualized as 'senior citizen' rather than just '' old people'.

I. 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 (East-West Center 2002). 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(UN 2002). 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 18 member associations of ADI in the Asia Pacific region are located in Australia, Bangladesh, China, Chinese Taipei, Hong Kong SAR, India, Indonesia, Japan, Macau SAR, Malaysia, Nepal, New Zealand, Pakistan, Philippines, Singapore, Republic of Korea, Sri Lanka and Thailand. The population of the Asia Pacific region in 2015 is estimated at 4 billion based on ADI's categorization of regions. Accordingly, estimates show that more than 11%of the population in the region is over 60 years of age1,2.It is expected that by 2050 a quarter of the total population in the Asia Pacific region will be aged 60 years or older.(Dementia in the Asia Pacific Region Authors Alzheimer's Disease International Alzheimer's Australia Published by Alzheimer's Disease International, London, November 2014 Copyright © Alzheimer's Disease International). It is projected that around one in five persons from low- and middle-income countries are going to be above 60 years of age by 2050. In countries like India, elderly are taken care by families and there is one elderly person for every 10 working-age persons, but this ratio will increase closer to one elderly for every 3 working-age population by 2100. With the increase in the elderly population, there would be a proportionate rise in elderly suffering from dementia as the prevalence of dementia in the elderly is 5%–7%.

In absolute terms, there are about 35.6 million people living in the world currently with dementia and 7.7 million new cases of dementia added every year, i.e., nearly one case every 4 s with highest projections in South Asian nations such as India and China. The number of people living with dementia worldwide is projected to double by 2030 and more than treble by 2050, where majority would be in developing countries like India. (Ramanathan Sathianathan and Suvarna Jyothi Kantipudi, The dementia epidemic: Impact, prevention, and challenges for IndiaIndian J Psychiatry. 2018 Apr-Jun;60(2):165167. doi: 10.4103/psychiatry. Indian JPsychiatry26118 PMCID: PMC6102955PMID: 30166671). According to the latest WHO data published in 2017 Alzheimers/Dementia Deaths in Bangladesh reached 9,917 or 1.26% of total deaths. The age adjusted Death Rate is 10.17 per 100,000 of population ranks Bangladesh #152 in the world. Since available information shows that fertility in Bangladesh has been falling since 1975 and average years of life expectancy will be increasing gradually indicating that. More elderly will survive in future. In terms of percentage it may not be large but in absolute size it will be large number because base population is large. It is assumed that elderly in Bangladesh will live in poverty and due to this joint family will be broken into nuclear family with little or no family care.

1.1 Concept and Meaning of Old Age :

Old age and aging is a concept that defines the final stage of human growth from childhood, youth to old age. In developed countries such as Britain and United States Of America (USA) old age is associated with retirement at 60 years. In other countries retiring age differs according to gender. In Latvia, for example men retire at the age of 55 years whereas women retire at the age of 60. (National Aging Policy, Ministry of Labour, Youth Development and Sports , United Republic of Tanzania, September-2003). Despite the fact that government employees retire at the age of 60 and that older people in rural areas and those who are self-employed stop working only due to limited energy; it remains that at the age of 60 years there are clear indications of decrease in their working ability. Both the National Health Policy and the Public Service Act recognize 60 years as retirement age. For the purpose of this policy, an older person is an individual who is 60 years and above. (www.google.com :- National Aging Policy, Ministry of Labour, Youth Development)

1.2 Defining Old:

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.(Gorman, 2000).

Aging Definition: The process of becoming older, a process that is genetically determined and environmentally modulated.

1.3 WHO definition of old Age:

Over the long run, if fertility continues to decline, the share of the population of working age also declines and that of older persons increases, leading to rising dependency ratios and when this happen, the phenomenon is called the 'demographic burden'. This is an inevitable consequence of demographic transition and every country has to face this problem with development and successful demographic transition. The UN agreed cutoff is 60+ years to refer to the older or elderly persons. Within the elderly population, further classification like oldest old (normally those 80+) and centenarian (100+) and even super-centenarian (110+) are also made.

1.4 Senility and Old Age Senility:

The world population continues to grow older rapidly as fertility rates have fallen to very low levels in most world regions and people tend to live longer. When the global population reached 7 billion in 2012, 562 million (or 8.0 percent) were aged 65 and over. Senility refers to the mental feebleness or impairment caused as a result of old age.

Senility refers to the mental feebleness or impairment caused as a result of old age. A senile person is recognized to be incompetent to enter in to a legal binding contract. Such a person will not be execute a will. Senility is also termed as senile dementia. [In re Rodger, 1980 pa, Dist. and entry. Dec, LEXIS 458 (Pa. CP. Orphans. Ct. Div. 1980], it was observed that the term senility often brings to mind the elderly person who has become moody, cranky and even eccentric. It was the legislature's intent that such persons must not be committed involuntarily on account of those personality changes due to aging which are not tantamount to a severe mental disability.

Definition of Senility : 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.

1.5 Causes of Senility :

There are various diseases associated with senility; although, not all of them are directly associated with advanced age and can occur in children and babies. These degenerative brain diseases include :

Alzheimer's Disease : Is the most common form of senility, where people experiences signs of senility or memory problems such as difficulty remembering past events (especially the more recent ones) as well as learning new things.

Parkinson's Disease : Vascular Dementia, Hungtington's Chorea, Greutzfeldt-Jacob, Lewy Body Disease. Other causes of senility include: Drug Addiction, Anxiety, Depression, Strokes, poor nutrition, Thyroid Dysfunction (Hashimoto's Disease), Alcoholism. Other less common conditions which may accompany senility include ; Urinary Tract Infections, Multiple Sclerosis, Wilson,s Disease, Amyotrophic Lateral Sclerosis, Brain Tumors, AIDS Dementia. (www.nativeremedies.com).

Diagnosing Senility : Properly diagnosing degenerative brain diseases like senility requires a professional screening and / or evaluation y health care practitioner. However, senility is often associated with the aforementioned diseases and conditions. Signs of senility are typically recognizable by the sufferer or close family and friends.

Signs and symptoms of senility : Senility is caused by the degeneration of the brain cells. As a result, senility symptoms can include : Progressive Memory Loss, Anorexia, Poor judgment, Impaired concentration, Confusion. Often noticeable personality changes are signs of senility. (www.nativeremedies.com)

1.6 Helps for Senility: (www.nativeremedies.com)Generally,because it is a degenerative condition, individuals suffering from senility become progressively worse with time. While some conditions cannot be cured early recognition can not allow to create a management plan that will ensure the greatest quality of life for the greatest amount of time, while lessening Common senility symptoms. A through examination and accurate diagnosis is necessary to create a successful management plan. Medication can be prescribed to slow the progress of senility and other degenerative brain diseases, but success is often coupled with unwanted side effects, particularly in the elderly patient. Medication can also be used in combination with psychiatric or behavioral therapies. A combination of herbal and homeopathic remedies such as Ginkgo, Hawthorn, Rosemary and American Ginseng can support the brain and mental health. They also can provide safe, effective relief. Unlike prescription medications, alternative therapies like natural remedies are virtually free of these unwanted side effects, and are a welcome treatment option for managing senility symptoms. Additionally proper nutrition, exercise, and positive life style choices are important in sustaining mental clarity.As we grow older, it is important to participate in stimulating activities, thus keeping our minds active, this is e4specially true for the elderly. And never forget the importance of social interaction, good friends and family relationships.

1.7 Potential Support Index and Care Index,(www.google.com :

National Aging Policy, Ministry of Labour, Youth Development) : The potential support index is calculated for the elderly population as ratio of elderly population to the economically active population. The potential support ratios, which measure the number of persons in the working ages will decline in future from about 15% in 2001 to 5% in

2050. There will be fewer persons to support elderly population in future if present demographic transition continues. The potential support index demonstrates that with the increasing number of elderly population, the support index will decline in future. The elderly care index is a ratio of elderly population aged 80 years and above to population aged 40-60 years. The care index measures only the direct, demographically increase in the cost of burden for long term care associated with the shift in the population age structure. The care index demonstrates that there will be more persons available for care against each elderly persons. The preference of co-residence between old parents and adult children will decline because of household poverty and migration of adult children. Bangladesh, in future considerable numbers of elderly persons may not be able to co-reside with children even if they wish to the shortage of children.

1.8 Change in the Life Expectancy:

Since elderly population will increase with the increase in life expectancy we investigated expected number of years elderly population will survive under different expectations of life at birth. In 2001, en elderly person aged 60 years would expect to live another 16 years. By 2011, the elderly person would expect 6to live17.6 years If expectation of life at birth increased to 67 years and 18.5 years if expectation of life at birth would increase to 70 years by 2011.

1.9 Poverty among older people in Bangladesh:

Older people are often the poorest group in a population and poverty is the greatest risk to the lives of older people. In Bangladesh poverty remains widespread throughout the country where about one third of the population living with an income of less than one dollar a day. It is not possible to assess the poverty situation of the elderly population due lack of disaggregated data by different segment of the population. In Bangladesh many older people spend their lives in poverty and ill health. This is the major risk for the elderly population in Bangladesh. After a life time Of deprivation, old age is likely to mean ill health, social isolation and poverty. This is especially true for older women, who suffer from multiple disadvantages resulting from biases to gender, widowhood and old age. Older women without families and widows are among the most vulnerable in the society. Poverty among the older population can be attributed to vulnerability, loneliness,

deprivation, distress and destitution. At present about 20% of the older population is protected by old age security / pension introduced in 1998 by the government. Most of the older population is forced to continue physically heavy and hard work in rural areas. There is a weak family support system due to disintegration of joint families and formation of increasing nuclear family structure. Old age dependency will increase from about 7% in 2001 to 8.2% by 2025. According to (BBS 2002), Percentage of poor was 44.3% in 2002 and 20% was hard –core poor. Assuming 50% of the older population is absolute poor and 30% are hard-core poor.

1.10 Health problems of elderly and support needed:

Bangladesh's religious and cultural traditions have resulted in a strong extended family system upon which older people have traditionally relied for their support and care. Elderly population receives the social, financial, and health support they require from their adult children. (Cai 1991, Chang 1992, Kabir 1999).Elderly population provides caring of grandchildren or look after the home when their children remain away from home. However, traditional form of family support for older people is weakening due to formation of nuclear families. Presumably, this weakening of ties refers to a reduction in social interaction and financial and physical support for the elderly will increase. The decline in ability of families to provide in-home care will decrease because of poverty. Aging of the population in Bangladesh and it's size have implications for the support of older population. Because of physical and life course changes that tend to occur at older ages, such as decreases in functional ability, older persons require various kinds of support, including financial assistance when they can no longer work and instrumental assistance (that is assistance in conducting daily activities) if physical functioning Begins to fail. In Bangladesh family members particularly older adults used to provide this support. With increasing poverty and breakdown of joint family this support will not be available in future years. Today, the traditional family support system is under pressure from demographic, social and economic change (Cai 1991, Chang 1992, Kabir 1999).

1.11 Elderly Health Problems:/Health Care of the Elderly:

The aging process leads to certain disabilities such as blindness resulting from cataracts and glaucoma, deafness resulting from nerve impairment, loss of mobility from arthritis and

a general inability to care for one self. Old age problems like chest pain, shortness of breath, prolonged cough, dementia, breathlessness / asthma, vision problems, difficulty in movements, tiredness, loneliness and teeth problems are the major illness of the elderly. Geriatric problems come naturally with old age. Ignorance about balance diet and personal hygiene make the older people even more fragile and susceptible to various diseases. It is obvious that people become more and more vulnerable to chronic disease, physical disabilities and mental incapacities in their Old age. As age advances, due to deteriorating physiological conditions, the body becomes prone to illness (Khan and Kabir 2003). The illness of the elderly are multiple and chronic in nature. In the later years of life arthritis, rheumatism, hearing problems and high blood pressures are the most prevalent chronic disease affecting the people. The idea that old age is an age of ailments and physical infirmities is deeply rooted in the Bangladeshi mind and many of the suffering and physical troubles within curable limitations are accepted and inevitable by the elderly (Mustafa and Stratified 2002).

1.12 Parents Maintenance Act, 2013, Bangladesh:

The Parent's Care Act, 2013, a law to ensure social security of the senior citizens, compels the children to take good care of their parents. According to the law, the children will have to take necessary steps to look after their parents and provide them with food and shelter. Each of the children will have to pay 10% of their total income regularly to their parents if they do not live with their parents. Moreover, children will have to meet their parents regularly if they live in separate residences. Furthermore, under no circumstances are children allowed to send their parents in old homes beyond their wishes. At first class magistrate court will settle issues related to the violation of the law. For reconciliation of any issues, local government representatives such as chairmen, members and others authorized by them will settle the disputes. The law has the provision of Tk200,000 as fine and, in default, six months jail term for violation of the law. Spouse or any relative, including the in-laws, will be considered as offenders and will be punished if they are proved to be guilty of having objected to such support.

As live longer, there is a growing demand for care related to conditions such as cardiovascular disease, cancer, chronic obstructive pulmonary disease (COPD) ,arthritis, vision impairment and disability. The problem is likely to be Acute for older women, who constitute the majority of the elderly because of greater longevity among women and the tendency for men to marry women younger than themselves; women are more likely than men to end their lives as widowed. Currently elderly people receive general health care services from government health facilities. There is no separate health service for the elderly population. In Rural areas, the problems of health care for the elderly are even worse.Old age diseases are demanding in terms of diagnostic equipments, long duration of hospitalization, treatment and rehabilitation. The current Boisko Bhata scheme is inadequate to meet basic needs of the elderly population; the burden will even be higher to provide Boisko Bhata to cover the elderly population.

1.13 Mainstreaming Aging into Health:

Mainstreaming aging in health will be an important policy strategy for the vast elderly population. Providing basic training on gerontology to health care providers of FWCs to meet the basic health care needs of the vast poor elderly population. Hasina *et al* (2003) found from a micro level operation research study that training to the providers of FWC on gerontology gave them scope and opportunity to understand basic health problems of the elderly. The providers mentioned that they learned in the training on various health problems such as physical weakness, mental changes, loneliness and retired life how to deal with them (Hasina and Kabir 2003).

1.14 Policy Implications:

In future older people will be the major users of health services and the burden of ill health is increasingly deferred to later life. This means that knowledge about aging process, planning and delivering health services is essential for those working in, or planning health and social care sectors. With the emphasis of two-child family norm, there may exist more and more family structures characterized by two grandchildren by being shared by four grandparents. When more children are sharing the cost of supporting the elderly, the burden may not be great: however, if one couples has to support four grandparents, who

in addition, may live longer in the future, the cost may be excessive. A life cycle approach of health care services should be introduced to meet the future unmet need for health care services of the elderly population

1.15 Research into Aging : A gene has been discovered that helps determine life-span of the fruit fly Drosophila When the gene is mutated (altered),(Rogina B. Reenan R A. December, 15, 2000) it can altered life-span of fruit-flies. It doubles their life-span. The gene has been named Indy (for I'm not dead yet). It appeared that protein encoded by this gene transports and recycles metabolic byproducts. Defects in the gene may lead to production of a protein that renders metabolism less efficient so that its body functions as if the fruit fly were dieting, even though its eating habits are unchanged. Mutations in Indy thus appeared to create a metabolic state mimics caloric restriction.

1.16 Some useful suggestions for extending life:

No known substances can halt aging or extend life, but here are some useful tips for improving the chances of living a long time and staying healthy.(Rogina B. Reenan R A. Nilsen SP, Helfand SL , December, 15, 2000) :

1. Eat a balanced diet, including five helpings of fruits and vegetables a day.
2. Exercise regularly (check with a doctor before starting an exercise program)
3. Don't smoke(it's never too late to quit).
4. Practice safety habits at home to prevent falls and fractures
5. Always wear your seatbelt in a car.
6. Stay in contact with family and friends.
7. Stay active through work. Play and community.
8. Avoid over exposure to the sun and the cold.
9. If you drink moderation is the key.
10. When you drink , let someone else to drive.
11. Keep personal and financial records in order to simplify budgeting and investing.
12. plan long-term housing and money needs.

13. Keep a positive attitude toward life.
14. Do things that make you happy. Source : Med Terms TM Medical Dictionary, www.medterms.com. Last Editorial Review : 12/15/2000.

1.17 Review of Literature :

[Help age international *et al*, 2000:27] "The problems of aging in Bangladesh : A socio-demographic study" including four areas in Bangladesh. Rahman, 2oo2 : 35]The findings of the study reveals that the most of the older persons have got minimum health facilities cause of –

- poverty, lack of employment,
- emotional incongruity, social stress
- exclusion by family and loneliness

Samsad abedin,2012] Social and health status of the Aged in Bangladesh, " The study has emphasized on: to investigate the status and roles of the elderly in family and community in the context of house hold structure and composition,to explore the health status and health care issues.

Rahman, Atiqur, 2004] " Problems of Aging : Aging situations in Bangladesh and the future steps,"

BAAIGM and its Services for the Older people: [Ferdous,2006] "My Experience in the Field Practice,"

Mansur, Ahmed, Mohammed et. al. 2010] "Determinants of living Arrangements, Health and Abuse among Elderly Women :A study of Rural Naogaon District, Bangladesh".

Rahman, Lutfur,1996], " Some Health Problems of the Elderly in Bangladesh".

Rahman, Khorshed, Mofiz et. Al. 2012]."Disease pattern and life style behavior of selected elderly population of Shahabag area of Dhaka city".

Farid , Fauzi et.al, 2011] " Dementia, Islamic Indication and Scientific Evidence,"

So far as we know, no research has been done on "Nursing management of Old age Senility- The Bangladesh Perspective." Therefore, it is very important to study the variable " Old Age Dementia". The researcher found those gap in the previous studies are stated in the objectives.

1.18 Background Information:

Bangladesh lies in the north eastern part of south Asia having borders with India, Myanmar and the Bay of Bengal on the southern side. The area of the countries about 148,000 sq. km. with an estimated population of 140 million making it as one of the most densely populated country of the world. The economy of Bangladesh is mostly agro-based. Agricultures makes highest contribution to gross domestic products(GDP) as can be deduced from the statistics on contributions of different sectors. Bangladesh witnessed on an average growth rate of little over 5% of GDP between 1996-2000 and the projection for the present fiscal year is surround 6%. On the face of population growth of 1.47 per anum, this is a very low growth rate. This is also reflected in the low levels of savings and investment in the economy despite some improvements in recent years. (Rahman Mostafizur, October, 2010)The elderly population in the country now constitute about 7.5 million of which 4.2 million are male and 3.3 million female. Increased life expectancy caused by improvement in living condition, health care as well as changing demographic structure of the country is resulting in increase in proportion of elderly people. This is a disturbing phenomena but the traditional joint family system prevailing in the country shielded the elderly within the family structure. However, modernization of society with break-up of joint family system, urban and out country migration of youth economic degradation in the society are giving rise to the problem of ageing and elderly care has become a major concern for the society. This evolving problem is yet to be fully understood and receive policy level attention by the government and civil society including academics. Ageing is a common phenomena across the world and over time. It includes the proportion of elderly population aged sixty years and above. It is an emerging issue in Bangladesh. The developed countries evolved policy instruments in the form of social security as well as care for the elderly through institutions like old age homes, geriatric hospitals, old age recreation center and many public and private care systems for the aged. With the improvement in health care and increased life expectancy it is becoming a vital problem in the developing countries including Bangladesh. Over the last one decade, in Bangladesh the proportion of elderly population has been gradually increasing. Presently about six percent of the populations are elderly i.e. 9 million. By 2005 one in ten persons will be elderly i.e. 18 million people. (Rahman Mostafizur, October, 2010).

This situation throws the elderly population, particularly the elderly population of the poor families into large-scale social, health and economic insecurity. The elders become mentally sick feeling unwanted by the society. They feel insecure due to lack of financial support either from the family or the state. Lack of sufficient health care facilities for the elders is another major factors that contributed to their sufferings since aging presents a new variety of health problems. The elderly people suffer mostly in acute and chronic illness. Incident of cardio-vascular disease including hypertension, stroke, heart failure are more common in urban area than in rural area. Coupled with those there are eye-problem, gastrointestinal disease and malnutrition in rural area. The incident of such disease emanate from life style change, such as hematological condition, diabetes, osteoporosis, accidents, etc. The health status means, presence or absence of disease and the degree of disability in an individual level of functioning. Thus the level of activities, the older person can do or think they can do are useful indicators for how healthy they are. Perception of good health tend to be associated with other measures of well being, particularly, life satisfaction. The purpose and general structure of a custom-designed computerized database management system to support the clinical, administrative, and research operations of a geriatric nursing outreach program in rural Virginia. The program's goal is to meet the health care needs of elderly residents in rural areas who do not have adequate access to health services and are at risk for institutionalization in nursing homes or psychiatric institutions, hospitalization in acute care facilities, or inappropriate use of emergency services. The major focus of the program is to link formal community-based services, informal community resources, volunteer efforts, and academic resources in order to strengthen the self –reliance of rural communities to care for their elderly citizens. The Rural Elderly Outreach Program (REOP) provides outreach assessment, case management, and psycho social support services by nurse case managers with masters preparation in psycho-geriatric nursing. Potential clients are screened as to whether their needs are primarily of a health versus social services nature assuming responsibility for the former. Initial telephone contact by the nurse clinicians is followed by an outreach visit. This visit includes a comprehensive psycho-geriatric nursing assessment, care giver assessment, collection of key medical data, and assessment of financial and benefits information. Multidisciplinary care plans are developed and implementation strategies are discussed. Old age homes, geriatric hospitals, old age recreation center and many public and private care

systems for the aged. With the improvement in health care and increased life expectancy it is becoming a vital problem in the developing countries including Bangladesh. Over the last one decade, in Bangladesh the proportion of elderly population has been gradually increasing. Presently about six percent of the populations are elderly i.e. 9 million. By 2005 one in ten persons will be elderly i.e. 18 million people.

1.19 Justification of the study:

Traditionally and religiously the elderly people of Bangladesh are very much respectable and they are treated as the symbol of family identity. (Hossain Arshad, 2007),They Are treated as the guardian of ancestral values and provider of continuity since the time immemorial. 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 likes 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. They feel insecure due to lack of financial support either from the family or the state. Lack of insufficient health care facilities for the elders Is another major factor that contributed to the sufferings since aging presents a new variety of health problems due to lack of premedical check up, specialized nursing management, health education and after all comprehensive health care, they are more prone to these problems, more victim of socio-economical injustice and insecurity, and such the mental disease like delirium, depression and dementia are more seen among them.(K.M, Rahman Mustafizur, Elderly population in Bangladesh).Aging population is now a global phenomenon. It is common all over the world that older age range is increasing rapidly on the other hand the member of children and youth population is increasing. We know from the various sources that in 1950, there were about 200 million persons aged 60 and over in the world, constituting 8.1 percent of the total global population. By the 2050, there will be a nine fold increase; the world's elderly population is projected to be 1.8 billion people.

The median age of the world population will jump from 23.5 years in 1950 to 36.2 years in 2050. The Bangladesh has same experience. The older persons, in Bangladesh are still passing their days amidst the tender care and support mostly provided by their extended families without any remarkable backing from the national level. However, the situation is in transition as the family pattern gradually shifting towards the nuclear type due to the change in values, migratory tendency of their offspring and poverty. The only support to the older persons in a large scale and nation wide from the Government is the provision of old age Allowance (Boisko Bhata). Again the formal pensioners, retired government service holder, constitute only a negligible fraction of the total population.(Hossain Arshad, Deputy secretary, 2007, Country statement).

Our society is aging and large numbers of people are living into advanced old age. early identification of treatable disease in older people promote reduction in premature mortality and morbidity in old age. Effective health promotion and provocative health care for older people may extend the active life span of older people reducing the number of people who suffer disability, vulnerability and dependence. To provide new services for the older people. Teaching the health care personnel for more advanced and personalized care. To recognize older people as an important resource in national development. To allocate enough resources with a goal of improving service delivery to older people. To involve older people in decision making in matters that concern them and the nation at large. To involve older people in income Generation Activities To provide legal protection to older people as a special group. After all there is no particular nursing management system specially in the branch of geriatric nursing. In Bangladesh, there has been a significant decline in infant and child mortality rate over the past decade. (Uddin, M.T. M.N. Islam, Baher, July, 2010) Control and prevention of diseases such as measles, diphtheria and poliomyelitis along with extensive use of oral saline have diarrheal diseases have have greatly reduced childhood mortality. A small proportion (6%) of the total population of Bangladesh constitutes the elderly population, but the absolute number of them is quite significant (about 7.2 million) and rate of their increase is fairly high. The majority are male in the urban area where most are women in the rural area. About 90% of the urban elderly males live alone and are married, whereas 89% of the rural elderly women living alone are widowed.

An extensive study on the importance of health education for improving the health quality of the rural elderly of Bangladesh conducted by Rana et. al. They conducted that community Based health education intervention might be a potential public health initiative to change the health status of the elderly. The work of Mansur et. Al revealed that marital status, work status, monthly income, habit of intoxication significantly effect the health status of female elderly of rural Bangladesh. The government of Bangladesh has initiated some programs like pension, gratuity, welfare fund, aged persons fund, group insurance and provident fund for the retired government officials and employees. Health care issue of elderly people of Bangladesh has not yet received any importance, though it is increasing alarmingly. Population projection (2010-2025, BBS, 1981) in Bangladesh would convince us to take proper steps for health care issues of around 7-10% elderly people of Bangladesh. The best approach to enhance the aged people welfare in Bangladesh is to increase their self reliance and provide them proper health care facilities so that they can contribute to the welfare of their family as well as their society.

1.20 Research Questions:

1. What is the aging process develops in normal life?
2. What are theories of aging factors influencing the aging?
3. What physiological changes occur in various system?
4. What are the roles and functions of nurses in geriatric care?
5. Are there any need for research for caring of elderly people?

1.21 Hypothesis:

Holistic nursing management is essential in order to improve the lives of older people to reduce the morbidity in Bangladesh; which increase the old age life-style. Nursing management is the key to prevent disease and to promote health.

1.22 AIMS AND OBJECTIVES :

General Objective :

To explore the Nursing Management of Old Age Senility-The Bangladesh Perspective.

Specific Objectives :

1. Identify age related physiological changes in various systems, such as-

   Cardio-vascular, central nervous system, and musculo-skeletal systems of the elderly.

2 Recognize the common health problems that occur with age.

3. Prevent or reduce common risk factors contribute to functional decline, impaired quality of life, and access disability in older adults.
4. Find out the common old age senility associated with later life.
5. Reduce the incidence and prevalence of old age senility among elderly people.
6. Establish the appropriate nursing assessment and management procedure.

7 Modeling on the basis of our collected data and predicting the elderly people Who will develop old age senility.

1.23: Conceptual Frame Work:

Nursing Management of Old Age Senility applying Nursing Process

1. Assessment of the problems
2. Planning for priority
3. Nursing Demand
4. Nursing Care Plan
5. Implementation and evaluation.

The cyclic exercises of a nurse to manage elderly health problems:

1.24 : parameters of the study:

1. Age
2. Educational Status
3. Occupation of the respondent
4. Caring Type
5. Life Partner Presence
6. Old Age
7. Middle Age
8. Old Age Senility
10. Physiological Changes
11. Risk factors
12. Nursing Management
13. Bangladesh Perspective
14. Old Age Home.
15. Geriatric Care.
16. Limitation of the Study.
17. Operational Definition

1.25 Operational Definition:

Old Age :

(Gomez Leena Myrtle, RN, RM, Post Basic B.Sc. Nursing, November, 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 impair a wide variety of systems. For example, central nervous system changes include age-related memory loss and reduction of cognitive function.

Old Age Senility:

The state of being old. Some times in this state it is exceedingly difficult to know whether the individual is or is not so deprived of the powers of his mind as to be unable to manage his affairs. In general, senility of energy in some of the intellectual operations, while the affections remain natural and perverted; such a state may, however, be followed by actual dementia or idiocy. (Source : Webster's 1828 American Dictionary. Word Net).

Nursing Management of old age senility :

Nursing care should be given according to it's cause, onset of illness and severity. The main aim of nursing care is to make the patients life easier and pleasant. There is no effective treatment of cerebral pathology but we can help the patient in adjustment to life and coping with stress. Maintenance of optimal cognitive functions, Maintenance of physical safety, Maintenance of an optimal level of psychological functioning, Attainment of an optimal exchange of ideas between the patients and others, Maintenance of maximum independence in activities of daily living, maintenance of optimal level of nutrition, monitor food intake and observe food habits, maintain optimal personal hygiene, Maintenance of balance of sleep and activity, Enhancement of socialization and fulfillment of intimacy needs, and provide rehabilitation.(International Journal of Therapies and Rehabilitation Research, ijtrr.com, E- books on Nursing, Nursing Management of Dementia, Date of Last Revision, April 22, 2011).

Risk Factor :

Something that increases a person's chances of developing a disease. For example, Cigarette smoking is a risk factor for lung cancer, and obesity is a risk factor for heart disease.(MedicineNet.com, Medical Dictionary).An environmental, behavioral, or biologic factor confirmed by temporal sequence, usually in longitudinal studies, which if present directly increases the probability of a disease occurring, and if absent or removed reduce the probability. Risk factors are part of the causal chain, or expose the host to the causal chain. Once disease occurs, removal of risk factor may not result in a cure. (Beck JD. Risk revisited. Community Dent Oral Epidermal 1998; 26:220-5).

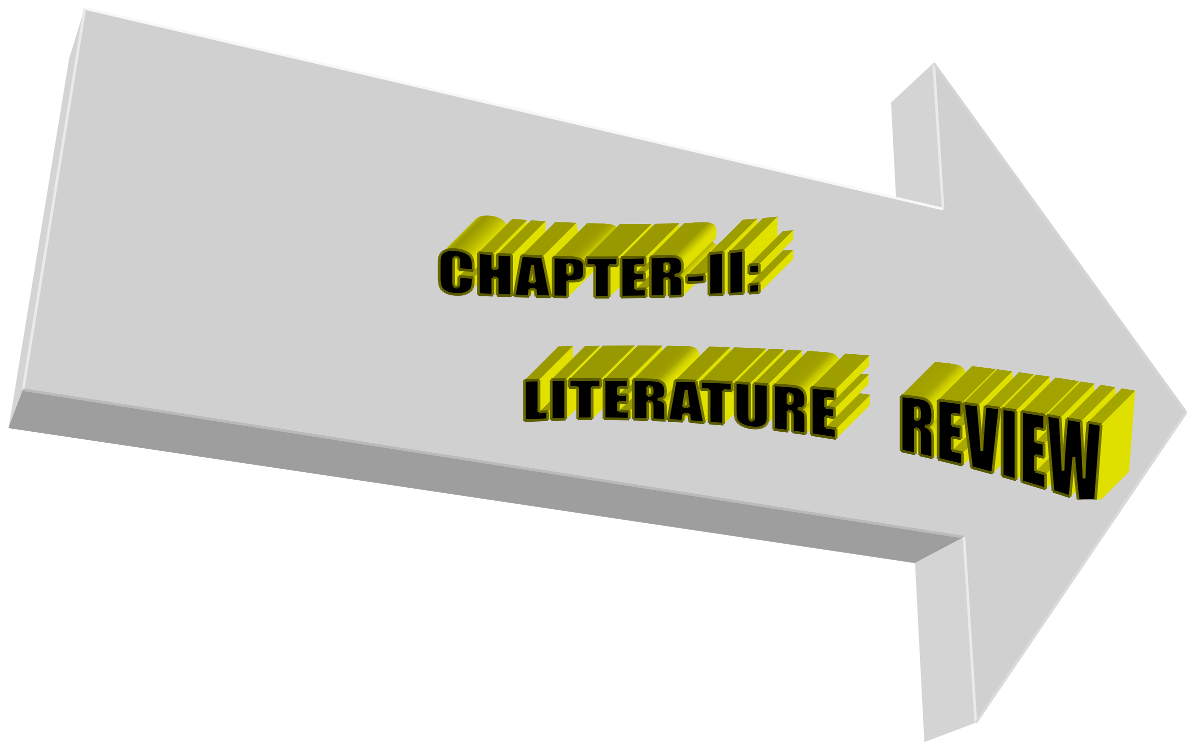
Risk Factor of old age senility :

Studies on risk factors for dementia have mainly focused on AD (Alzheimer's Disease), as it is the most frequent cause of dementia. Age is the most well known risk factor for dementia. Studies of prevalence and incidence of dementia and AD have consistently shown an almost exponential increase with advancing age. In addition, female sex has repeatedly been shown to be associated with an increased risk of AD, especially at old age, other risk factors for AD include genetic and vascular factors.
(*NeurolNeurosurg Psychiatry*2005;**76**:v2v7 doi:10.1136/jnnp.2005.082867). Berr C, Warcata J, Ritchie K. Prevalence of dementia in the elderly in Europe. Neuropsychopharmaco / 2005; 15 : 463-71).

Bangladesh Perspective :

Health care in Bangladesh is in a sad condition, with not enough doctors and nurses available to serve it's people, but, even with this limited number of health care professionals, better care would be possible if greed for money and unaccountability to the people were controlled by the government. Conditions for members of the nursing profession are not acceptable for those who are dedicated to serving the sick. Acknowledgement of nursing professional dignity is almost completely absent. In addition, the salary earned is not enough to make a living. There is an existence Professional associations who are struggling for the rights of the nursing community, although few concrete results have yet been seen. This article is written from the perspective of the author's position as a member of the Board and Treasure of the International Association of Bioethics, and her interest in feminism and bioethics, which justifies her link with oppressed nurses (because most are women) and unethical practices in the nursing profession in Bangladesh. (Hasna Begum, 2010, Health care, Ethics and Nursing in Bangladesh ; a personal perspective, Department of Philosophy, Dhaka University, Dhaka-1000, Bangladesh). Dementia occurs frequently among elderly people, but it is not necessarily part of the typical ageing process.5Globally in2010, it was estimated that approximately 35.6

million people lived with dementia .Furthermore, dementia caused around 46 million deaths in 2015, whereas this figure was only 0.8 million in 1990,The rates of dementia rise markedly with ageing; it affects 5% of people older than 65 years but 20–40% of those older than 85 years.8Dementia is the third most common cause of death in the UK. The World Health Organization has predicted that 75.6 million people will have dementia by 2030.(Md. Sahab UDDIN ,Abdullah Al MAMUN, Shinya TAKEDA ,Md. Shahid SARWAR and Mst. Marium BEGU, Analyzing the chance of developing dementia among geriatric people: a cross-sectional pilot study in Bangladesh, doi:10.1111/psyg.12368 Psychogeriatric 2018).


CHAPTER-II:
LITERATURE REVIEW

2.1 Definition of an Older or Elderly Person:

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 no9 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. (Roebuk, 1979). Adding to the difficulty of establishing a definition, a actual birthdates are quite often unknown because many individuals in Africa do not have an official record of their birth dates. (Thane, 1978, Roebuk 1979).

2.2 Categories of Definition:

Study result published in 1980 provides a basis for a definition of old age in developing countries (Glascock, 1980). This international anthropological study was conducted in the late 1970’s and included multiple areas in Africa. Definition fells 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). Aging-(Priscilla Ebersok, Ph.D. RN, California, 2001) Aging is a gradual process of change over the course of time. Each species has an expected life span, and that of the human species as presently understood is limited to approximately 120 years. Al though the population as a whole is aging, the greatest category increase by group percentage is occurring among those 85 years old and older. With the advancement of the medical science, there has been a tendency to prolong the lives of the old and to consider their medical needs predominant. Nursing leads the field in gerontology: nurses were the first professionals in the nation to be certified as geriatric specialists It is unknown at this time what changes over time are specifically the result of aging, disease, life-style or environmental impact.

2.3 World Health Day 2018: ‘Universal Health Coverage: Everyone, Everywhere’:

“Universal” in Universal Health Coverage means “For All”, without discrimination, leaving no one behind. Everyone everywhere has a right to benefit from health services they need without falling into poverty when using them. World Health Day marks also the 70th anniversary of the World Health Organization; a formidable organization and key leader in striving for a world where Universal Health Coverage is a reality for all – a world where everyone, everywhere can access essential quality health care and services without facing financial hardship. World Health Day shines a spotlight on the need for Universal Health Coverage-and the advantages it can bring, inspiring, motivating and guiding decision makers and stakeholders to commit. The theme of World Health Day 2018 is ‘Universal Health Coverage: everyone, everywhere’. On this special occasion, that also marks the 70th anniversary of the World Health Organization, EPF supports WHO’s call on world leaders to live up to the pledges they made when they agreed the Sustainable Development Goals in 2015 and commit to concrete steps to advance #Health For All.

Access as a Cornerstone of Health Policy:

In 2017, together with our members we launched a thematic campaign on Access to Healthcare for All. In today’s world, political will and a fundamental change in Europe’s approach to healthcare access is required to reach the UN SDGs and achieve Universal Health Coverage for All. To ensure the rights of all patients are respected, to fight the inequalities that persist in health across the EU, and to make health a priority in all policies at national and EU levels. Healthcare should be accessible in a timely way to every patient who needs it, not only to those who can pay and regardless of gender, age, employment and residence status. Regrettably, this is not a reality for all. We believe that every patient should have equitable access to person-centered high-quality health and social care and strives to eliminate disparities and barriers related to access and standards of care and health inequalities within the EU.

EPF's campaign called on Member States and the EU to commit to a long-term vision where equity of access and universal health coverage is a reality for all patients in the EU – a target of the third UN Sustainable Development Goal on ensuring healthy lives. In December 2017, as the result of months of work, we published a Roadmap entitled 'Taking Action -A Roadmap to Achieving Universal Health Coverage for All by 2030'.The Roadmap highlights the gaps and barriers patients face in accessing healthcare, aims to elevate health on the political agenda of the EU and Member States, and encourages more EU cooperation to improve access to healthcare. The Roadmap identifies the challenges that need to be addressed and proposes political steps and actions that EU decision-makers and Member States need to take in order to achieve universal health coverage for all patients in the EU by 2030.

World Health Day Slogan ,Good health adds life to years: (Dr.Samlee Plianbangchang, The Daily Star, 7 April, 2012) : Aging is a natural and inevitable process. For the past century, mankind has been adding years to life. More people now survive the challenges of childbirth and child hood to reach to old age. This trend is not restricted to the resource rich countries, but has become a global phenomenon including the countries of South-East –Asia. It has been estimated that around 142 million people or 8 percent of the total population of the World Health Organization's (WHO) South – East-Asia Region are above the age of 60 years. This number will continue to increase. There is an urgent need to focus attention on the aging population because of the increasing share of elderly person in the total population. Longer life is associated with chronic diseases and disabilities in old age. This affect the overall qualities of life and poses a challenge for the families, communities and national governments. With nuclear families replacing the joint families and with large rural to urban migrations Often the old and the infirm are left at home, This changing patterns of societies are now affecting the age-old balance of care of the old and very old persons at home. On World Health Day, which is being observed today, WHO is highlighting aging as a rapidly emerging priority that most countries have yet to realize and address adequately. The slogan of the day is – Good health adds life to years.

Elderly people draw nationwide attention on world Health Day (National Desk, April 7, 2012) :

The World Health Day was observed in the country today with citizens above 60 years of age drew attention nationwide from the government, donors and NGO's, who acknowledged aging as an emerging public health problem that needs to be invented immediately. According to the UNICEF, the average life expectancy of Bangladesh nationals rose to 69 in 2010 from merely 42 in 1970, while the death rate has been reduced drastically due to improved health care over the years. Health and Family Welfare Minister AFM Ruhul Haque said the country has now close to 7 percent or one crore people aged over 60 years, w3ho are generally neglected in terms of health care and social safety net. The observation was substantiated by noted population scientist and professor of Dhaka University Nur-un Nabi, who says the increased life expectancy has put the nation in a new public health era, where interventions are needed on an urgent basis. The World Health Organization (WHO) in a release this week said the average life expectancy in most of the South-East-Asian countries would reach 75 years in next 40 years, putting the national governments in a position where they have to be prepared on geriatric health, build appropriate health systems and allocate resources accordingly. In 2017, one in eight people worldwide was aged 60 years or over. By 2030, older persons are projected to account for one in six people globally. By the middle of the twenty-first century, one in every five people will be aged 60 years or over. By 2030, older persons will outnumber children aged 0-9 years (1.41 billion versus 1.35 billion); by 2050, there will be more people aged 60 years or over than adolescents and youth aged 10-24 years (2.1 billion versus 2.0 billion). The ageing process is most advanced in high-income countries. Japan is home to the world's most aged population: 33 per cent were aged 60 years or over in 2017. Japan is followed by Italy (29 per cent aged 60 years or over), Germany (28 percent) and Portugal (28 per cent). The pace of world population ageing is accelerating. Projections indicate that the proportion aged 60 years or over globally will increase more than 4 percentage points over the next 15 years, from 12.3 per cent in 2015 to 16.4 per cent in 2030, compared to the 2.3 percentage point increase in the share of older persons that occurred between 2000 and 2015. In 2050, nearly half the world's population will live in relatively aged countries, with at least 20 per cent of the population aged 60 years or over, and one in four people will live in a country where more than 30 per cent of people are above age 60. Currently, the pace of population

ageing in many developing countries is substantially faster than in developed countries in the past. Consequently, today's developing countries must adapt much more quickly to ageing populations and often at much lower levels of national income compared to countries that developed much earlier. (World Population Ageing 2017)

Target Audiences:

Policy-makers in governments and international organizations, City and municipality leaders, Health care providers, Civil Society groups, Researchers, Private sectors entities, Older people, their caregivers, service providers and families, Community leaders, Youth and youth groups and general public. (WWW.ban.searo.who.int.).

Key Messages: Older people are a valuable resource for their societies and should feel valued. Good health throughout life helps us make the most of the positive aspects of aging. Societies who take care of their older populations, and support their active participation in daily life, will be better prepared to cope with the changing world. Expected results : Greater appreciation that good health across life course contributes to a happy and productive older age. People become aware of ageist stereotypes and support older people in being active, resourceful and respected members of the society. Governments implement innovative strategies to ensure good health for the elderly. (World Health Day, 7 April, 2012).

Issues: Rebranding aging as a positive social transformation, Elderly population make positive contributions to society, Promote and live a healthy life-style across life course, Create age-friendly environments and policies to engage the elderly populations, primary health care should be age friendly, positioning health as the single most important factor to make aging positive, Action on aging health is urgent and every one has a role to play.

Protect Your Health as You Grow Older :

(Apollo Hospitals, World Health Day,7 April, 2012, Aging and health: Good Health Adds life to years).Stay healthy as you get older. Aging may increase the risk of some diseases and conditions, but good nutrition, exercise and positive attitude can help mentally and physically active. Learn know how to manage conditions like arthritis,

menopause, osteoporosis, depression, kidney and heart related problems, Having a healthy life styles can help to deal with normal aging changes and make the most of life-

- Control existing health issues in close consultation with doctors.
- Maintain an appropriate and regular exercise routine, eat a healthy diet.
- Don't smoke, Keep mind and body active.
- If feeling persistently depressed or sad, see the doctor.

2.4 International Day for the Elderly 1s October, 2018:

Almost 700 million people are now over the age of 60. By 2050, 2 billion people, over 20 per cent of the world's population, will be 60 or older. The increase in the number of older people will be the greatest and the most rapid in the developing world, with Asia as the region with the largest number of older persons, and Africa facing the largest proportionate growth. With this in mind, enhanced attention to the particular needs and challenges faced by many older people is clearly required. Just as important, however, is the essential contribution the majority of older men and women can continue to make to the functioning of society if adequate guarantees are in place. Human rights lie at the core of all efforts in this regard .Living up to the Secretary-General's guiding principle of "Leaving No-One Behind" necessitates the understanding that demography matters for sustainable development and that population dynamics will shape the key developmental challenges that the world in confronting in the 21st century. If our ambition is to "Build the Future We Want", we must address the population over 60 which is expected to reach 1.4 billion by 2030."Celebrating Older Human Rights Champions." The Universal Declaration of Human Rights (UDHR) turns 70 this year and the International Day for Older Persons celebrates the importance of this Declaration, and commitment to promoting the full and equal enjoyment of all human rights and fundamental freedoms by older persons. Older human rights champions today were born around the time of the adoption of the UDHR in 1948. They are as diverse as the society in which they live: from older people advocating for human rights at the grass root and community level to high profile figures on the international stage. Each and every one demands equal respect and acknowledgement for their dedication and

commitment to contributing to a world free from fear and free from want. The 2018 theme aims to:

- **Promote** the rights enshrined in the Declaration and what it means in the daily lives of older persons;
- **Raise the visibility** of older people as participating members of society committed to improving the enjoyment of human rights in many areas of life and not just those that affect them immediately;
- **Reflect** on progress and challenges in ensuring full and equal enjoyment of human rights and fundamental freedoms by older persons; and
- **Engage** broad audiences across the world and mobilize people for human rights at all stages of life.

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 news papers 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. (Rahman, Mostafizur , K M. Dhaka, 1st, October 2010), 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 programmes to recognize the contribution of older persons and to examine issues that affect their lives. The theme of this year's commemoration is '' Older persons and the achievement of the Millennium Development Goals (MDGs)''.Although there is no universally accepted definition in most gerontological literature, people have 60 years of age are considered as 'old' and taken to be the 'elderly' segment of the population of a country. In Bangladesh, persons aged 60 or above are considered to be elderly. However, in reality people in this country become older even before the age of 60 because of poverty, physical hard work and inability and illness due to malnutrition as well as for geographical condition. The numerical growth of elderly persons around the world is an eloquent testimony not only of reductions in fertility but also of reduction in infant and maternal mortality, improved nutrition, reduction on infectious and parasitic diseases, as well as improvement in health care, education andincome. Global total fertility rate has declined from 5.0 live births per woman in 1950-1955 to 2.7 live births per woman in 2000-2005 and is expected to further reduce to replacement level that is 2.2 live births per woman by 2045- 2050 (UN 2005). Also, life expectancy has increased from 46.5 years in 1950 to 66.0 years in 2000-2005, and is expected to rise 76 years by the year 2045-2050. But with their rapid increase and under the condition of socio economic transformation, the elderly population are experiencing a difficult time. Aging of population is gradually emerging as an issue not separate from social integration, gender advancement, economic stability or poverty. Demographically, population aging is a global experience and Bangladesh is also not left untouched by this demographic reality. In Bangladesh, 6.9 percent of its population was classified as elderly in 1950. the percentage of elderly population started to decline for next 55 years and this percentage of aged population of Bangladesh is projected to increase 8.0 percent by 2020, 11.9 percent by 2035 and 17.0 percent by 2050. The median age of Bangladeshi population was nearly 20 years in 2000 and is projected to increase by

nearly 15 years over the next half century. (Rahman, Mostafizur , K M. Dhaka, 1st, October 2010), The aging index, i.e- the ratio of the people aged 60 years or over to the children less than 15 years of ages might be about 5.7 times higher over the next half century due to the growing number of older persons and reduction of young population. Considering all of these indicators, the aging of population is becoming a grave concern. Population aging is already having a major consequences and implications in all areas of life. Furthermore, most of them are seriously suffering from some basic human needs-related challenges, viz-lack of minimum income and employment opportunities, extreme poverty, illness accompanied by absence of proper health / medical care, nursing management, food and nutrition, living arrangements, isolation, exclusion, loneliness, negligence, psycho-social and cultural complexities and so on. (Miyan, Alimullah,M.2011),.According to Bangladesh Population Census of 2001 and 2011, the number of elderly people by age groups and by sex were as age group 60-64 years comprise of 2.83 million in both sexes, out of them 1.63 million male 1.3million female, Age group from 65-69 years- 1.40 million were both sexes, .81 million were male .63 millions were female elderly population. 3.30 million were both male and female within the age range of 70+ , where.18 million constitutes male and 1.5 million were female elderly population. According to population Census July, 2011), the total population-158,570. 535.15-64 years-34.6% (Male 24.957, 997/Female 45, 917,674) 65 years over- 4 % (Male 2.731, 578 / Female 2.361,435. (www.bbs.gov.bd).

2.5 Historical Trend and Projection of elderly people as proportion of total population:

In Bangladesh the elderly people above 60 years constituted 5.28 % in 1980 but in 2000, the percentage came down to 5.11. (Uddin, M.T. M.N. Islam, Baher, 2010), In 2020 the elderly people will constitute 8.0%. Bangladesh, right now, has the third largest number of old people after India and China. 'Help Age International 'Calls on the state to provide social protection, health care for the aged. In a limited resource country like Bangladesh, burdened with budget deficit (3.2% of the GDP), the government will face more hardship to manage problem compared to the resource-rich countries.

2.6 Middle Age:

(Shephard, Roy. J. (7, March, 1998), Middle age is the period of age beyond young adulthood but before the onset of old age. Various attempts have been made to define this age, which is around the third quarter of the average life span of human beings. According to Collins Dictionary, this is'' usually considered to occur approximately between the ages of 40 and 60''.The Oxford English Dictionary gives a similar definition but with a later start point 'the period between early adulthood and old age, usually considered as the years from about 45 to 65''.The US Census lists middle age as including both the age categories 35 to 44 and 45 to 50, while prominent social scientist, Erikson, sees it ending a little later and defines middle adulthood as between 40 and 65. Middle-aged adults often show visible signs of aging such as loss of skin elasticity and graying of the hair. Physical fitness usually wanes, with a 5-10 kg (10-20 Ib) accumulation of body fat, reduction in aerobic performance and decrease in maximal heart rate. Strength and flexibility also decrease throughout middle age. However, people age at different rates and there can be significant differences between individuals of the same age. (Robin, Roni (2007-02-27), Both male and female fertility declines with advancing age. Advanced maternal age increases the risk of a child being born with some disorders such as down syndrome, Schizophrenia, Autism, decreased intellectual capacity and bi-polar disorder. Most women will experience menopause, which ends natural fertility, in their late 40s or early 50s.(Life Expectancy Profiles," BBC ,6 June 2005), In developed countries, yearly mortality begins to increase more noticeable from age 40 onwards, mainly due to age-related health problems such as heart disease and

cancer. However, the majority of middle-age people in industrialized nations can expect to live in to old age. Life expectancy in developing countries is much lower and the risk of death at all ages is higher. However, well being involves more than merely physical factors, and middle age is not experienced as a 'time of decline' for healthy people. Middle-age people benefit from greater life experience than they had when young, which contributes to happiness and makes emotional responses to stress less volatile.

2.7 External Links :

Preceded by Young Adult	Stages of human development Middle age	Succeeded by Old age

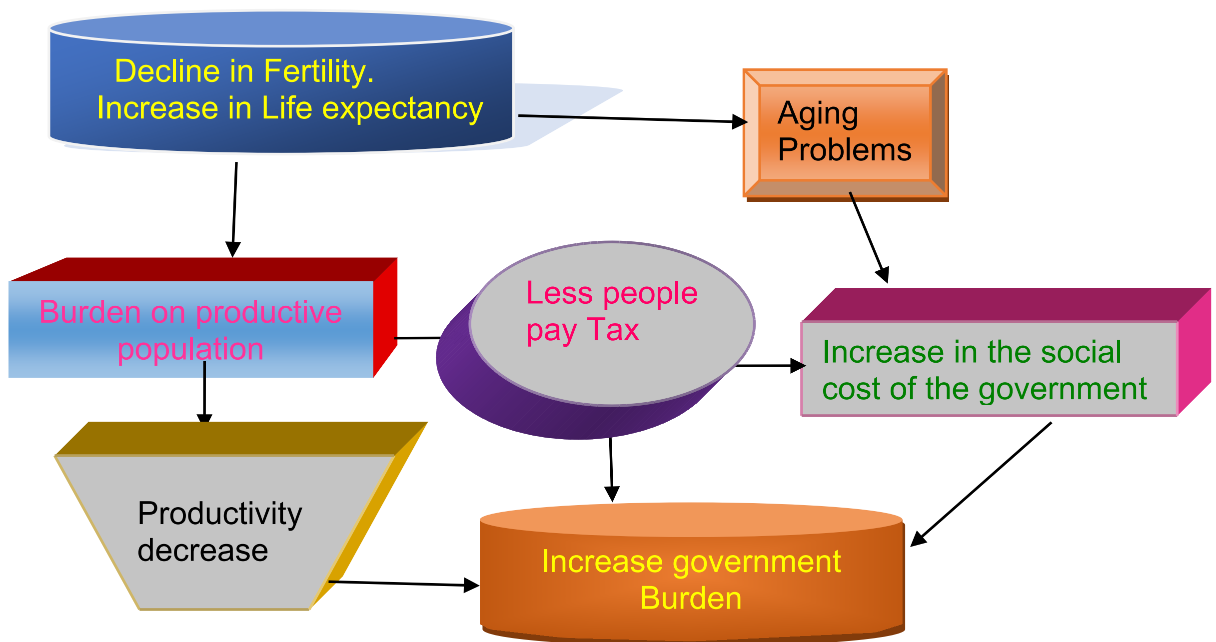
2.8 Basic concepts of Old Age and Geriatric Nursing :

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. (Gomez Leena Myrtle, RN, RM, Post Basic B.Sc Nursing, 2009),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 (Gomez Leena Myrtle, RN, RM, Post Basic B.Sc. Nursing, November, 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 impair 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, J. J. C. Huang, S. Hughes and K. Kornfeld, 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, J. J. C. Huang, S. Hughes and K. Kornfeld, 2007).

2.9 CORRIDOR OF AGING :



Increase life expectancy and decrease in fertility over last 20 years: Fertility decrease on average 6.3 to 3.3 children per month; life expectancy increase on average of o.5 years per month. (Source Kabir, 1999).

2.10 Indicator of Aging:

In 1997, the elderly people of 60 years age were 5% and in 2002,the figure increased into 9.2% of total population, among them the economically active aging population were in higher position (75%) in 1997, they fell down (46%) in the year of 2002. The literary rate of the same group of population appeared at 30% seems to be higher than that of in 2002 , came down at 5%, the 6 times lower. On the other hand, The age group of 70 and above represented lower proportion 0.8% in 1997 and 1.5% in 2002, out of the total population. it is evident that rural ageing is suffering more than that of the urban in terms of both health status and old age activities. (Osman Israq Sayed Muhammad. (2005).

2.11 Madrid international plan of action in Bangladesh:

(WWW.HELPAGE.ORG(2011). Age demands Action in Bangladesh).

In 2002, the Second World Assembly on Ageing adopted the Madrid International Plan of Action on Ageing and it's challenge of 'building a society for all ages'. This focuses on reducing poverty, addressing health care issues and introducing anti-discriminatory legislation for older people.

Importance's of MIPP- Because:

It is an international agreement which commits governments morally and politically to include ageing in all social and economic development policies, including poverty reduction strategies. It aims to ensure that people everywhere can age with security and dignity, and continue to participate in their society as citizens with full rights. It emphasizes the right and potential of older people to participate actively in economic and social development.

Older People in Bangladesh : (. www.helpage.org(2011, Age demands Action in Bangladesh). There is a steady increase in the proportion of the population aged 60 and above. The majority of older people live in rural areas where services, health care provision and access to clean water are more precarious. Older people in

Bangladesh experience poverty, have low food security and require targeted assistance. The impact of annual cyclones, floods, and over population contributes to widespread poverty affecting all ages. Bangladesh ranks 137 out of 177 countries in UNDP's 2006 Human Development Index, and a 2006 estimate indicates that 36 percent of the population live on US$1 a day. While a significant proportion of this percentage is thought to be older people, their needs compete with the demands of other vulnerable groups supported by stronger advocacy initiatives.(From a World Bank perspective), Bangladesh has done remarkably well in improving it's social indicators in many respects. Achievements include- increasing the national literacy rate, improving school attendance for girls and reducing the rate of population growth. However, expenditure on safety net programs is fairly low and has been declining, and is less than what other countries at a similar level of development spend on such programs. Safety net expenditures now account for less than 20 percent of all social sector expenditures, down from about 30 percent in the late 1990s. The first day of the month of October celebrates the older generation and is referred to as the International Day of Older Persons. According to United Nations, among the entire world population, around 700 million people are now over the age of 60. It is also being predicted that, two billion people which is likely to be 20 per cent of the world's population by 2050, will be aged 60 years or older. A recent report on Age-Sex Composition of Bangladesh's population carried out by Bangladesh Bureau of Statistics (BBS), shows that the percentage above the age of 60 years stands at 7.9, while it is 5.1 percent for those above 65 years. Dhaka has been ranked as the second least livable city by the Economist Intelligence Unit's annual global survey – a survey that takes into account factors such as access to health-care, political and social stability, and environment. The absence of basic services apposite to the needs of the older generation including comfort ability of transport services, park facilities, improved health-care, age-friendly housing and recreational facilities, prove to be challenges that need to be addressed.(Dhaka Tribune Published on October 4th, 2018).

2.12 Ageing policy:

Bangladesh's 27 social safety net programs are administered by several ministries, including the Ministry of Social Welfare, the Ministry of Food and Disaster Management, the Ministry of Women's and Children Affairs and the Ministry of Freedom Fighters Affairs. The eligibility criteria for receiving assistance from a specific ministry's funds make it likely that many older people have fallen through the social safety net.

Poverty: In 2006, 6 percent (8.3 million) of the population was aged 60 or over and this figure is predicted to rise to 17 percent by 2050. 40 percent of older people live below the national poverty line. Most older people live in rural areas with limited access to health, water , sanitation and other services. In a recent study 50 percent of older people in rural Bangladesh suffered chronic energy deficiency and 62 percent were at risk of malnutrition. The proportion of people over the age of 60 in the labor force is currently 66 percent for men and 18 percent for women.

Social pensions: The government provides two social pension schemes. Contributory pensions for civil servants means-tested non-contributory pension for older people, the Old Age Allowance. The Old Age Allowance reaches about 20 percent (1.7 million) of people age 60 and above. The pension is worth 220 taka (approximately US$3) per month to those older people not covered by the public employment scheme and who are living below the poverty line. Social assistance and relief- Five key programs deliver social assistance in Bangladesh. Cash for education, Vulnerable Group development, Food for work program, Income generation for the Vulnerable Group Development. Challenging the Frontiers of Poverty Reduction/Targeting the Ultra Poor. (www.helpage.org(2011, Age demands Action in Bangladesh).

Health: Access to free , quality health care is a priority for older people. In 1978, the Bangladesh Government introduced a policy of Universal Health Care.

Currently, the Ministry of Health and Family Welfare is responsible for health policy and implementing the Health, Nutrition and Population Sector Program. Under this program older people are entitled to use the national health care services and are most likely to access them at the sub-district Thana Health Complex level and at the Union Health and Family Welfare Centers as well as hospitals. Providing free health care and medicine to older people on presentation of ID card. Increasing the number of doctors with expertise in geriatric care. (www.helpage.org(2011, Age demands Action in Bangladesh).

Health Status of Elderly people:

Most of the elderly population in Bangladesh now lives in rural areas. Literacy rate among the elderly is lower than national rate. There are separate facilities for the elderly in primary, secondary or tertiary tiers of health care system. But there is no special Government Geriatric Hospital or Clinic in Bangladesh for the elderly population. The elderly people suffer mostly in acute and chronic illness. No comprehensive health policy exists for the elderly in Bangladesh. Incident of cardio-vascular disease including hypertension, stroke, heart failure are common. Coupled with those there are eye problem, gastrointestinal disease, malnutrition, hematological condition, diabetes, osteoporosis, accident etc. poor socio-economic condition, Lack of nutrition- macro or micro nutrient in diet, Mental disease like delirium, depression and dementia, abuse by family, society- psychologically or financially, disease from environmental pollution- arsenic, water and air pollution, Natural calamities- repeated flood, cyclone and erosion of river, lack of awareness and knowledge about health, disease and exercise, weight and personal hygiene. After all lack of health care, specially designed for elderly people are the main cause to prone such disease· (www.unescap.org, Hossain Arshad, (2007), Seminar on the Social, Health and Economic Consequences).The study shows that (I.M. Shafiqul Kalam and Hafiz T.A. Khan, (2006), ageing and the illness is inter related and is a natural process. We Should not take it burden or liability. It is very important to educate people and to build more awareness among people. Older people should regarded as valuable human resources as they doing huge services at home and outside.

The total population in the EU is projected to increase from 511 million in 2016 to 520 million in 2070, but the working-age population (15-64) will decrease significantly from 333 million in 2016 to 292 million in 2070 due to fertility, life expectancy and migration flow dynamics. For males, the projected population in 2070 is lower than or close to the population in 2016 in all age cohorts between 0 and 64 years old. Conversely, in all age cohorts of 65 years old and above, the projected population in 2070 is higher than in 2016. For females, the projected population in 2070 is lower than or close to the population in 2016 in all age cohorts between 0 and 69. Conversely, in the age cohorts above 69 years old, the projected population in 2070 will be higher than in 2016. Moreover, while in 2016 the largest cohort for both males and females is 45-49 years old, in 2070 the largest cohort will be 70-74 years old for women and 50-54 years old for men. Overall, the median age will rise by 4 years for both men and women by 2070. Similar developments are projected for the euro area. The projected changes in the population structure reflect assumptions on fertility rates, life expectancy and migration flows. The total fertility rate is assumed to rise in almost all Member States between 2016 and 2070, increasing from 1.58 to 1.81 for the EU as whole. In the EU, life expectancy at birth for males is expected to increase by 7.8 years over the projection period, from 78.3 in 2016 to 86.1 in 2070. For females, life expectancy at birth is projected to increase by 6.6 years, from 83.7 in 2016 to 90.3 in 2070, implying a convergence of life expectancy between males and females. Annual net migration inflows to the EU are projected to decrease from about 1.5 million people in 2016 to 0.8 million people by 2070, representing a decreased contribution from 0.3% to 0.15% of the total population. (The 2018Ageing Report ISSN 2443-8014 (online) Underlying Assumptions and Projection Methodologies Institutional paper 0651 November 2017).

2.13 Health Care in Old Age:

The World Health Organization (WHO) estimates that about 75% of deaths in people over the age of 65 in industrialized countries are from heart diseases, cancer and cardio vascular diseases (such as stroke).

Another major cause of deaths and disability is osteoporosis and associated bone fractures, which affects many women due to post-menopausal bone loss. The new research from Eilleen Crimmins, at the University of Southern California, shows that average ''morbidity'' or , the period of life spend with serious diseases or loss of functional mobility, has actually increased in the last few decades. The researcher shows that the average number of healthy years has decreased since 1998. We spend fewer years of our lives without disease, even though we live longer. Millions of senior citizens across the globe are not getting the proper health care they need because governments and the society are not aware enough of the problem. By 2025, there will about 1200 million people aged 65 years according to UN estimates. 7 percent of the 1.1 billion Indian population is today over the age of 60. They too wish to have a better access to health care, look forward to fun, health, dignity, economic independence and a peaceful death. Japan is the most elderly country in the history of the world, it average life span 82 years and soaring, is creating an entirely new kind of society, the vast implications of Which, during its embryonic decades. Twenty three percent of the population is 65 or over, as against a mere 13 percent under 15. Care of elderly consumes half the national health as budget. By 2055, the government predicts, half the population will be pensioners. About 47 countries during the pas 10 years, the number of older persons had doubled, and in most developing countries, the population of older persons had increased by 50 percent. Some health problem and common ailments that generally affect senior citizens are blood pressure, cardiac problems, diabetes, joint pains, kidney infections, cancer, tuberculosis, etc. Once they occur, these disease may take a long time to heal due to old age. So, it is important to get medical checkups regularly to prevent the onset of any of these health conditions. (Gits4u.com/ File: 1: Common Diseases in Old Age.htm.). As the age increase the risk of diseases also increase, common conditions such as cold and infections are acute conditions, but they are more debilitating and require more care in specially older people. These temporary problems also make them restricted from their social activities.(Gomez Leena Myrtle, RN, RM, Post Basic B.Sc. Nursing, 2009).

2.14 Comparison of proportion of elderly population in developed and some selected Asian Countries, 2000: Kabir R. and shajahan, M. (2009). Bangladesg J. Sci. Res. 22 (1 and 2);119-130, (December) :

Due to rapidly increasing elderly population, it can be forecasted that aging would create major health problems in Bangladesh. Because of increasing life expectancy aging population will increase and Bangladesh will face many difficulties in managing these challenges. These includes factors such as poverty, changing social and cultural norms, and inadequate health care facilities for elderly population. In Srilanka, over 9% aged 60 years above are elderly population while it was little over 6 percent in Bangladesh. In developed countries one in five persons are elderly. Among the South Asian Countries, Srilanka had over 9 percent of the population aged 60 years and above. Developed countries include Western Europe, Canada, Australia and Japan. (Source: World population of aging 1950-2050, Department of Economics and Social Affairs, Population Division, United Nations, New York, 2002).

2.15 Change in life Expectancy : (BBS, 2007) :

Since elderly population will increase with the increase life expectancy we investigated expected number of years elderly population will survive under different expectations of life at birth. In 2001, an elderly person aged 60 years would expect to live another 16 years. By 2011, the elderly person would expect to live 17.6 years if expectation of life at birth increased to 67 years if expectation of life at birth would increase to 70 years by 2011.

2.16 Physical Changes of Ageing:

Physiologic changes have a cumulative effect in the continuum of biologic, Psychologic, social and environmental processes of ageing. Ageing is not a disease, nor it is a condition that is correctable by medical or surgical intervention, Ageing is a series of complex changes that occur in all living organisms. Gold man (1979) indicates four characteristics of physiologic ageing, it is universal, progressive, decremented and intrinsic. The universality of ageing places it outside the realm of pathologic study. Stehler (1992).

Suggests that physical ageing includes the following :

1. Universal changes occur in all people. However, just because a disease or condition occurs predominantly in older adults, it should not be concluded that the disease or condition is a consequence of ageing.
2. Intrinsic changes are processes that occur extensively within the body and do not result from another terminal factor or factors.
3. Progressive changes are processes not events. This onset is both gradual and cumulative.
4. Deleterious changes are processes or phenomena that are negative. These changes decrease the organism's capacity to survive. Interesting approaches to the ageing process and age-related changes have been offered by Sloane (1992) and Lakatta (1995). Sloane suggests the'' rule of thirds'' Which suggests that one third of age-related changes occur as a result of functional decline due to disease, one third are due to inactivity or disuse, and one third are caused by ageing itself. Lakatta places age-related changes in to two categories: Usual (average) ageing and successful (pure) ageing. Usual ageing refers to the ''combined effect of the ageing process, disease and adverse environmental and life-style factors. Successful ageing refers to'' changes due to solely to the ageing process uncomplicated by damage from environment, life-style or disease'' The Bultimore Logitudina l study of women began in the 1980s, provides a summary of selected Changes, anatomic and physiologic changes with ageing of healthy adults. Significant changes in structure, function, and biochemistry, as well as genetic endowment, are responsible for the alterations in tissue elasticity, subcutaneous fat, gastrointestinal function and motility, muscle, bone, immunity and the sensorium. These changes are not mutually exclusive but, rather, are synergistic, and contribute to alteration in each system and to the general evidence of advanced age. No system truly escapes age changes. Some changes are external visible and therefore easy to recognize and address; others are internal and harder to realize that assistance is needed.

Some important changes are-Cardiovascular:

(Health after 50: 1994, Important new advice for treating hypertension), Cardiovascular disease is a major cause of death world wide in people as 60 and over. In the United States, one half of all cardiovascular disease occurs in those years of age and older. One every two persons age 60 and over may have some severe narrowing of the coronary arteries. But only above these 50% of those have clinical signs of coronary artery dysfunction. Screening for this occult manifestation now be done with Magnetic Resonance Imaging (MRI). Health professionals are accustomed to caring for the aged persons with cardiac-related conditions such as the congestive heart failure and hyper tension and may be inclined to assume that all aged individuals have especially larger heart. Studies suggest that (Kenny,1982), the left ventricle was thickens as much as 30% by 80 years of age because of the increase in myocyte size, but the size remains relatively unchanged in healthy adults. Contraction of the older heart prolonged, most likely because of the slow release of calcium in to the myoplasm during systole. Reduced efficiency and contractile strength of the heart muscles are reflected in- (1) a reduced cardiac output that decrease by 1% per year from the average baseline of 5 L/ min and (2) a stroke volume decline of 0.7% per year (Jacob 1981, Kenny,1982). Heart valves may thicken and stiffen as a result of lipid deposits, collagen degeneration and fibrosis. Valvular condition in the aged are considered residual effects of earlier rheumatic infections and arteriosclerosis. Aortic and mitral valves are most commonly affected and result in slight to moderate regurgitation of blood. Decreased elasticity of arteries and arterioles produce changes that affect blood flow to body organs such as the heart, kidneys and pituitary glands. Dilatation and elongation of the aorta occurs as a result of collagen and elastin changes and calcium deposition from degenerating elastin. In the past, the accepted upper limits of normal blood pressure for the aged adult was 160/90. However, the Fifth Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood pressure states that both the young and the old have similar pressure. It is estimated that 50% of persons over age 65 in industrialized society have blood pressure at or greater than 140/90 mm. of Hg. (The National Health and Nutrition Examination survey conducted during 1988 and 1991), confirms that hypertension rates for black men and black women over the age of 60 increased to over 60% for black men and 80% for black women.

2.17 General Risk Factors that can stress the heart or aggravate existing condition:

(Jacobs R; November, 1981) Stressor- Continued high intake of dietary animal fat, salt and calories Obesity and excessive weight, Long term cigarette smoking, lack of regular exercise, Internalization of emotions and air pollution. Extra demand or Aggravating events Existing chronic conditions, infection, anemia Pneumonia, cardiac dysrhythmias, surgery, fever, diarrhea, hypoglycemia, malnutrition, avitminosis, circulatory overload, drug induced condition, renal disease and prostatic obstruction. (Lakatta. E G. 1993, Cardio vascular regulatory mechanisms of advance aging). (Lillington GA: October, 1979), The prominent effect of age related changes on the respiratory system is reduced efficiency in ventilation and gas exchange. Stable respiratory functions also affected by a lower resistance to infection engendered by a diminished immune system response and less effective self cleansing action of the respiratory cilia. Calcification stiffens the tracheal and laryngeal cartilage. Cilia line in the trachea are less effective because of their decreased number, resulting in less respiratory epithelium and increased bronchial mucosal gland hyper trophy. The impact of that is difficulty moving mucus, debris, and dust into the pharynx.

2.18 Breakthrough Research and Treatment advances:

Today's technology allows incredible visualization of musculoskeletal structures, well beyond the black and white x-ray, and of musculoskeletal functions with minimal intrusion in to body. Nucleotide bone scans, Magnetic Resonance Imaging(MRI),Ultrasound and Computed Tomography (CT) Scan allow doctors to 'see' injuries such as torn ligaments, ruptured tendons, and stress fracture, Arthroscopy uses fiber optic Technology to view the inside of a joint, providing a method of minimally invasive visualization for diagnostic and therapeutic purposes (www.google.com). The Musculoskeletal system, 2011) In most areas of health and medicine, the most significant breakthroughs in research and treatment for musculoskeletal conditions comes from new discoveries in genetics

Researchers have identified many of gene mutations responsible for muscular dystrophy, for example. Though Gene therapy as treatment for genetically based musculoskeletal conditions remains experimental, the potential is great for treatments that can reverse the

effects of gene mutations to halt and correct disease process. (www.google.com, The Musculoskeletal system, 2011).

2.19 Normal Aging part-1:cardio-vascular, respiratory, gastrointestinal:

Dr. Karen Fruetel emphasized in her review of the physiological changes accompanying aging that attributes of ‘‘ normal aging’’ have been derived from clinical studies. The studies are either cross sectional, meaning that health markers are derived from comparisons between predefined aging cohorts, or are longitudinal studies that follow the same individuals over a number of years. Obtaining information on the true physiological consequences of aging is a challenge. Autopsy studies suggest that advanced age associated with increased left ventricular (LV) mass. Studies also show increased myocyte size and decreased number, and focal proliferation of the matrix in which myocyte resides. (Dr. Fruetel)There is increased collagen cross linking. As for systolic function, there is little change when at rest. However, there is decreased beta adrenergic stimulation. Exercise elicits Altered effects: there is decreased exercise related increase in heart rate and contractility, and peak cardiac output is blunted by 20-30% in response to maximal effort. The key age-related physiological changes to the heart as increased left Ventricular wall thickening, alterations in diastolic filling, and impaired Ejection Fraction (EF) and heart response to exercise. Data from the Baltimore Longitudinal Study of Aging (BLSA) found a 20% increase in the size of the aortic root. Further, BLSA figures show carotid wall intimal medial thickness increases 2-3 folds. Some researchers consider decreased availability of nitric oxide in the endothelium as one of the earliest signs of arterial aging and a pathological sign of atherosclerosis. Other key biochemical changes include increased angiotensin 11 with age, and an increase in inflammatory markers.

Prevalence of cardiovascular disease among older adults. She detailed some changes to the gastrointestinal system with age. Physiological anorexia, a state in which consumption and caloric requirements drop with age. Older adults are more prone to gastric damage due to increased susceptibility owing to lower gastric prostaglandin levels, nor change in colonic transit times. Gastrointestinal absorption is slightly changed with reduced absorption of key Vitamins and nutrients such as folate, B^{12}, vitamin D and

calcium. (Dr. Fruetel).Age -related change to the human respiratory system- Studies show that change occurs in the epithelial lining based on bronchial alveolar lavage cell populations, with a higher percentage of polymorpho nuclear leucocytes but lower macrophages. Generally studies show that peak expiratory flow changes, most age-related changes are in expiration and not the inspiration phase. Studies of older adults who inhaled noxious substance altered central nervous system perception o Broncho constriction. (Fruetel Karen, M. Ed. MD. FRCPC, (2009).

2.20 Normal Changes that occur in old age:

It may not always be possible to differentiate normal aging from disease- In almost all 90 year old brains there are a few plaques and tangles . If these plaques and tangles were seen in a young brain they would present Alzheimer's Disease. They may occur normally in aging. (Pugh. K. G. and Wei, J. Y. (2001),It is diseases that make old age miserable, not the normal changes of aging. Although we have more wrinkles, more grey hair, and stiffer arteries the normal change of aging are unlikely to kill us, even Jeanne Calment in France who died at age 122! People die from infections or other diseases, some of which might not have caused of their problems when they were young. The normal changes with aging reduce reserve capacity. Injuries or infections that only slowed down when young can cause disability and dependency when old. An acute illness can cause a ''cascade of health problems'' that can lead to rapid declines in health and function. Aging results in a diminished ability to maintain homeostasis and regulate body systems-For example, the elderly are more vulnerable to hypothermia when it is very cold or hyperthermia when it is very hot outside because they are unable to compensate as effectively by regulating their body temperature. Aging is accompanied by heterogeneity- Everyone age differently and the rate of change in the function of organ systems can vary markedly in individuals. Age-related changes in one system are not predictive of changes in other systems. The rate of physiologic decline can be modified- An older person does not age faster than someone who is younger. However, biological age is different from chronological age. A physically fit 50 year old can have the functional capacity of a thirty year old while someone who smokes and is sedentary may function as they were several decades older. (Pugh. K. G. and Wei, J. Y. (2001).

Age-related changes that occur in the following systems: (Pugh. K. G. and Wei, J. Y. (2001).

The cardiovascular system includes the heart which pumps the blood throughout the body and the network of blood vessels through which the blood is transported. In healthy people, the changes that normally occur in the cardiovascular system with aging do not significantly limit the normal work capacity of the heart. In Western countries, systolic blood pressure tends to increase throughout a person's life span, while diastolic pressure rises until age 60 and then levels off. Nearly 50% of older adults have chronic hypertension. Increase in systolic pressure do not occur in many non industrialized societies which suggests that risk for hypertension is affected by environmental factors such as diet and life style as well as heredity. An elevated blood pressure increase risk for stroke, heart attack and kidney failure.

Major cardiovascular changes with aging:

The maximum heart rate decreases and it takes longer for heart rate and blood pressure to return to normal resting levels after exertion. The aorta and other arteries becomes thicker and stiffer which may bring a moderate increase in systolic blood pressure with aging. In some individuals, this may result in hypertension. The valves between the chambers of the heart thicken and become stiffer. As a result heart murmurs are fairly common among older adults. The pacemaker of the heart loses cells and develops fibrous tissue and fat deposits. These changes may cause a slightly slower heart rate and even heart block. Aberrant heart rhythms and extra heart beats become more common. The baroreceptors which monitor blood pressure become less sensitive.

Central Nervous System:(Sailer, A. Dichgans J, and Gerloff, C (2ooo), The aging of the central nervous system is often portrayed as an irreversible loss of functions and decline in abilities. In the past, scientists reported that we ‘' lose a million of neurons every day''. Fortunately, that's not correct. The adult brain retains a remarkable plasticity in it's ability to compensate functionally for those losses that do occur, Further, some cognitive abilities, such as wisdom and life experiences, are stable or may increase with age. The weight of brain peaks around age 20 and then a modest decline occurs with age that is limited to the gray matter (outer surface of the brain) in healthy older people. Most neurological declines occur after age 60 and are not that severe. At age 65, less than 2% of older Americans have cognitive impairment. The incidence of cognitive impairment increase with age so hat by age 85, up to $^{1}/^{3}$ of older persons have some

degree of cognitive impairment. The concept of attention involves both sustained attention (for example, ability to focus) and selective attention (the ability to distinguish relevant information). Older adults appear to perform tasks requiring sustained attention or selective attention extremely well in to old age.

Language: One aspect of language- semantic knowledge- appears to decline with age, although significant differences are found until relatively late in the life span (greater than 70 years). Semantic knowledge involves word retrieval and is tested by having respondents name common objects. Linguistic abilities that are not affected include phonologic knowledge (use of sounds of language), lexical knowledge (the name of an item and the meaning of a word), and syntactic knowledge (ability to combine words correctly). (Sailer, A. Dichgans J, and Gerloff, C (2ooo),

Memory: After arthritis, memory problems are the second most frequent complain among older adults. From age 45, the overall frequency of complaints of memory problems increases steadily. The literature reveals a discrepancy between subjective reports of memory failure and objective abilities. The efficiency of memory may differ considerably depending on the situation or context. For example, reliable recall of visual images such painting may be accompanied by a relatively poor recall of verbal words.

Encoding: Getting information in to the system. Storage: retaining information. Older adults show decline in visual-spatial abilities which affect visual tasks such as identifying incomplete figures, recognizing embedded objects, or arranging blocks in to a design.

Conceptualization: Mental flexibility and capacity for abstraction do appear to decline with age however, the greatest age differences appear among those who are seventy or older.

General Intelligence: In measure of intelligence, older adults display what is called The ('classic aging pattern). Performance scores which measure problem solving ability tend to decline with age. Verbal scores which measure learning knowledge such as comprehension, arithmetic, and vocabulary, tend to remain stable. Considerable debate continues regarding the point at which declines occur and the magnitude of the declines.

Relatively little decline in performance occurs prior to age 50. Substantial declines appear to occur after age 70. (Sailer, A. Dichgans J, and Gerloff, C (2ooo).

Reaction Time: Tests of reaction time indicate a decline in the processing of information among adults age 40 and older. and that the more complex the required processing, the larger the age differences in processing time. The average 70 year old can take up to 4 times longer than a 20 year old in tests involving basic memory skills. (Sailer, A. Dichgans J, and Gerloff, C (2ooo),

Musculoskeletal System: By the time of reaching age 80, most of all will lose an average of about 2 inches of height. The primary factors contributing to this reduction in height include compression of vertebrae, changes in posture, and increased curvature of the hips and knees. In addition, most older Americans gain weight until about age 60, after which declines. There are a number of other changes in the body with aging that affect the bones, muscle, skin. Nearly 90% of adult skeletal mass is formed by the of the teenage years. Osteoporosis has been described as a ‘’pediatric disease with geriatric consequences(Duane Alexander, Director of the National Institute of Child and Human Development). Prevention must begin early. Women have a more rapid rate of bone loss than men, with the most rapid losses occurring in the 5 years following menopause. Osteoporosis affects about 8 million American women.

Eventually, the bones have the strength of an egg shell and even minor trauma can cause the bone to collapse and fracture. (Reed D, Foley, D. *et al*. (1998),

Protecting skin: Prevent most but not all of the ‘’aging’’ of the skin by avoiding sun exposure. Ultraviolet light cause the pathological effects that produce wrinkles, thin skin, pigmentation changes and benign and malignant tumors. Going to be out in the sun for more than few minutes, have to taken the following precautions. Sunscreen with a sun protective factor (SPF) of at least 30 minutes. Broad brimmed hat to shade the face. Sunglasses to protect eyes Light –colored, long-sleeved clothing and pants. The most common changes in the skin include- A thinning of the area between the dermis and epidermis by about 20%, Elastin and collagen decrease. Reduction in size of cells. Inability of skin to retain moisture.

Muscle: As age, muscles generally decrease in strength, endurance, size, and weight. Typically, losses about 23 percent of muscle mass by age 80 as both the number and size of muscle fibers decrease. These change may be more the result of inactivity, poor nutrition and chronic illness or disease. Both men and women experience an increase in body fat with age. In women body fat increases linearly from about 25% to about 41% at age 74. In men, the increase in body fat is similar to that of women until age 50 when it slows. The increase in fat mass occurs primarily around the abdomen. In women, the increase in fat is more often found in the thigh. Age-related Changes in the Musculoskeletal System-Height decreases an average of 2 inches. Weight increases until about age 60 and then declines. Body fat mass can double, lean muscle mass is lost. Hair becomes gray. (Reed D, Foley, D. *et al*. (1998).

2.21 Common Health problems in Old Age:

'Scientist find Pill to slow down aging- In major research, scientist say they have found a cure for age need to do to slow down biological clock is to postponed the cause. They believe their findings helps seniors stay healthy as well as help children with a rare condition that causes them to grow older before their time .(Chris Hutchin Son, professor at Durham University), who led the study said, findings are very early changes that show the potential for helping people live more comfortable and less painful live

when they reach 70 or so years of age and beyond.''(The Daily Mail reports November 3, 2011).Some health problems and common ailments that generally affect senior citizens are- Alzheimer's Disease, Mental illness, Arthritis and Osteoporosis, Blood pressure, Heart problems and heart attack, stroke, Cancer, Diabetes, Kidney disease, Control obesity, Prostate enlargement, tuberculosis, Eye diseases, Skin care, Mosquito bite Diseases, Fall- related injury.

Alzheimer's Disease:

A recently recognized brain disorder that mimics clinical features of Alzheimer's disease has for the first time been defined with recommended diagnostic criteria and other guidelines for advancing and catalyzing future research. Scientists from several National Institutes of Health-funded institutions, in collaboration with international peers,

described the newly-named pathway to dementia, Limbic-predominant Age-related TDP-43 Encephalopathy, or LATE, in a report published on April 30, 2019, in the journal *Brain*. It is also mean as a brain disorder and a slow and gradual disease that begins in the part of the controls the memory. After 60, the risk is one in 20, but after 80 it is one in five. No one knows why it has occurs when cells in the brain start drying. The best way to prevent these conditions from occurring is to keep oneself mentally busy. Take part such dancing, yoga and meditation. Read books, play board, games and card and interact with other people to engage quality of life. Eat a balanced nutritious diet, avoid alcohol and smoking. Consult with doctor and vitamin supplementation could be help of it. A new study has shown that drinking beet juice daily can increase blood flow to the brain in older adults could hold great potential for combating the dementia. (Researchers at the British Science Festival in September 2011), reported findings that high doses of B vitamin , folic acid could reducing memory decline and brain shrinkage in those already suffering from mild cognitive impairment.

Mental illness: (According to World Health Organization), 25% of world population is Suffering from mental illness, 40% of these cases are diagnosed and treated. One million annual suicides are the result of these and missed cases. The most common causes for these suicides are depression, dementia, anxiety, and schizophrenia. These health issues are characterized by confusion, memory loss, and disorientation. Studies seen beneficial role of vitamin D in reducing the risk disease linked to dementia such as vascular disease. Except for three vitamins- D, K and Biotin, the other vitamins can be found in fruits, vegetables, lean meats and must be a part of our regular diet. Walking ward off mental decline- A study says, Brain scans revealed that older people walking between nine miles a week appeared to have more brain tissue in key areas. The Pittsburgh University study of suggested they had less ''brain shrinkage'' which is linked to memory problems. Protect Brain in Old Age- New research suggests to protect the brain are-Boosting B vitamin intake-(Researchers at the British Science Festival), reported the findings the dosage of B vitamin and Folic Acid could reduce memory decline and brain shrinkage. Cutting Fat, Carbohydrate- A diet low in saturated fat and refined sugars may reduce the risk of developing mental decline.

Exercising: Aerobic exercise may reduce the chances of developing dementia and slow the progression of disease once it starts.

Arthritis and Osteoporosis: Simply means ''inflammation of the joints'. The word rheumatism is even more general and describe aches and pains in bones, joints and muscles. The symptoms include pain, swelling and stiffness with limitation of joint movement. Rheumatoid Arthritis (RA)- is caused by inflammation of the joint lining in synovial (moving) joint, but more common in peripheral joints, such the hands, fingers. RA can cause functional disability, significant pain and joint destruction, leading to deformity and mortality. It usually affects people between 25 years and 55 years of age.

Prevention: Regular physical exercise and walking, a balanced diet, a healthy life style can prevent disease. Recommended for taking amounts of calcium and vitamin D daily. Participate in regular weight exercise. Avoidance of smoking and excessive alcohol. Take a bone density test to check the condition of bones.

Blood Pressure: Is actually the pressure of blood against the walls of arteries. Typical values for a healthy adult human are approximately 120/80 mm of Hg (Millimeter of Mercury). But if Blood Pressure equal to or above 140 over 90 mm Hg, then that means suffering from high blood pressure or hyper tension has been called ''silent killer''. General symptoms are drowsiness, confusion, nausea, and loss of vision. **Here some basic steps that may be followed to check high blood pressure or hyper tension.** Be physically active by regular exercise, walking, yoga etc. Maintain a healthy body weight Follow a healthy eating plan that emphasizes fruits, vegetables and low fat dairy foods. Avoid alcoholic beverages and Quit smoking. Have a low salt intake. Even an hour of sleep in day time could help lower blood pressure after mental stress. (Ryan Brindle and sarah Conklin from the Allegheny College in the US), found that participant who slept 45 minutes in day time had lower average blood pressure after stress than those who did not sleep. The WHO (World Health Organization estimates that in 2006, 3 millions people die of cardiovascular diseases, such as heart disease and stroke in India. Some of the basic staying free from heart diseases are- eat a healthy diet to prevent or reduce pressure

and blood cholesterol levels. Lose weight if .over weight. Quit smoking. Reduce stress. Participate in a physical activity and do healthy exercises, walk, run and practice yoga. Restricting salt consumption to 5gm (one teaspoon in 24 hours) and avoiding salty fried food, pickles and chutneys will help alleviate this problems. There are 15 millions people who have a stroke each year.(According to the world Stroke day 2010), stroke is the second leading cause of death for people above the age of 60, and the fifth cause in people aged 15 to 59. There are two types of stroke- 1. Ischemic which occurs in 85% of patients and 2. Hemorrhagic which seen in 15% patients.

Treatment: Urgent reopening of the blocked artery can save the brain and reverse the paralysis and prevent the disability. Older people who eat olive oil have a lower risk of stroke than those who do not, suggested a (study of 7000 french people that was Published July 01, 2011, in the United States).

Regular intake of grape fruit prevents diabetes, heart problems:

Researchers in a new study reveals that regular intake of grapes play more important roles in the prevention of diabetes and cardiovascular diseases.

The most abundant grapes are the flavonoids. Other chemical constituents identified in grape fruit include limuloid glycine’s, glycosides, furanocoumarins, vitamin C, carotenoids, pectin and potassium.

2.22 The secret of long life:

There are simple steps that can dramatically increase the probability of living longer and healthier life. Life style choices are far more important- no smoking, regular exercise, not being over weight, and eating a Mediterranean-style diet daily. Diets rich in vegetables and fruits are effective for lowering cholesterol , blood sugar levels, raised blood pressure, prevent constipation and colon cancer. The expert agree that regardless of gender, men and women would both do well to follow a balanced diet, exercise regularly and avoid stress to live a healthy and long life. Scientists delay aging by purging old cells- (Researchers at the Mayo Clinic) have concluded that purging cells which accumulate with age could prevent or delay the onset of age related disorders or disability. The study performed in the mouse models offered the first evidence that so called ''deadbeat'' cells could contribute to aging. Scientists delay aging by purging old cells ''By attacking these cells and what they produce, one day we may be able to break the link between aging mechanisms and predisposition to diseases like heart disease, stroke, cancer anddementia'', explained (James Kirkland).

Diabetes: Is a metabolic disorder characterized by high blood sugar, that affects ability to produce or respond to insulin, a hormone that allows blood glucose to entire the body and be used for energy. The main problem of diabetes is that it can not be cured, it can only be managed. The common symptoms includes; excessive thirst, excessive urination, infections, extreme hunger, weight loss, extreme fatigue, irritability, nausea, vomiting, sweet smelling breath, etc. Diabetes is one of the leading cause of death and disability. About 65 percent of deaths of among those with diabetes are attributed to heart disease and stroke. (Beck, L. H. (2000), To control diabetes ; exercise daily : Morning walk, yoga, running and aerobics all help. Make healthy foods, choose foods with lower fat, calories and salt. Try fresh vegetables and fruits. Replace soft drinks, juices and water. Eat sensible meals and snacks at regular times throughout the day.

Kidney diseases: It can be characterized as congenital or acquired. Chronic kidney disease is known to affect the elderly and is associated with acute kidney failure, cardiovascular disease and death. Keep blood pressure under control, maintain a healthy weight, maintain low levels of fats. Don't smoke or use ay tobacco products. (A study by Villareal, published in the ''New England Journal of Medicine''), found diet and

exercise together improved physical performance by 21% in obese older adults. A lack of mobility in older obese adults puts them at greater risk for developing high blood pressure, diabetes and heart disease.

Osteoporosis: Osteoporosis can happen to any bones, but is most common in the hip, wrist and in spine and vertebrae. Vertebrae bones support to stand T sit upright. (Dr. Mahesh Biijawara, a spine surgeon at Mahaveer Jain Hospital), said this while speaking on the occasion of the World Osteoporosis Day on October 20, 2010 said, ‘’Major osteoporosis fractures occur in the spine, wrist and hip bones and between 25% to 60% of women aged over 60 years develop spinal compression fractures.’’

The following steps are helpful to stop bones from weak and brittle: 1.Get enough calcium each day. 2. Get enough vitamin D each day, can get vitamin D through sunlight and milk. 3. Eat a healthy diet-like vitamin A, vitamin C, magnesium and zinc, as well as protein, milk, fruits and green vegetables. 4. Being active really helps the bones. 5. Don’t smoke, it damage bones and lowers the estrogen in the body. 6. Reduces chances of falling by making home safer.

Eyes diseases: Eye disease like cataracts and age related macular degeneration, loss Of vision etc. are major eye problems in old age. The disease is common among people 75 and older, a group that will triple in size over the next 40 years. Mares noted. Already one in a people older than 65 have early signs of AMD(Age-related macular degeneration) is caused by abnormal blood vessel growth behind retina or a break down of light-sensitive cells Within the retina itself, both of which can lead to serious vision impairment. Age-related blindness, cataract and other retinal diseases can be prevented and cured with the nanotechnology.

With more than 40 million people in the world suffering from blindness, (experts at the Chennai Conference said), it was now possible to prevent and Postpone cataract with the help of nano particles therapeutic agents. Glaucoma remains a leading cause of world wide and there is currently no way to restore vision once it has been lost. Fight for sight funding is explore the possibility that stem cell treatments could one day be used to treat glaucoma. (The Scottish professor Keith Martin, a neuro-scientist at Cambridge University).

Prevention: While reading or doing concentrated activity, rest eyes for five to 30 minute4s intervals. Look away from work, close eyes or simply stare off in to space. Blink regularly. Palm eyes, sit comfortably, breathe deeply, and cover eyes with the palms of hands. Protect eyes from direct sun-rays and any kinds of dangerous substances.

Green Tea: Scientists have discovered that green tea can help prevent glaucomaand other eye disease. They have found that the healthful substances found in green tea- renowned for their powerful antioxidant and disease-fighting properties- do penetrate into tissues of eyes. The new study has documented how the lens, retina and other eye tissues absorb these substances. (Chi Pui Pang and colleagues), pointed out that so called green tea 'catechins' have been among a number of antioxidants thought capable of protecting the eye. Those include- vitamin C, vitamin E, lutein and zeaxanthin.

Skin Care: The skin loses it's elasticity with age, becoming dry and wrinkled. Itching and scratching cause mechanical injury and secondary bacterial infection. Apply a small quantity of a mixture of 500ml of coconut oil, 500ml of sesame oil and 100 ml of olive oil half an hour before bath. Add a teaspoon of coconut oil to the bath water. Use a moisturizing soap. Apply body lotion or baby oil after bath. Doctors recommends foods rich in antioxidants-green tea, citrus fruits like oranges and Pomegranate, collard greens, broccoli, romaine lettuce and egg yolks- to combat skin damage from the sun.

Go Green in Old Age: The research suggests a number of naturally-occurring substances may offer the hope of new treatment to block the progression of inflammation..'' For thousands of years people used natural remedies to try and some times succeed in curing their ailments and preserving their youth". (Professor Declan Naughton, from the University's School of Life Sciences), said. The new study tested 21 plant extracts for evidence of their efficiency in fighting cancer and also in the battle against aging. Of the 21 extracts, three- White tea, Witch hazel and Rose- showed considerable potential, with white tea displaying the most marked results.''Indeed it appeared that drinking a simple cup of white tea might well help reduce an individual's risk of cancer, rheumatoid arthritis or even just

age-related wrinkles,'' Prof. Naughton said. Regular use of some medicinal plants are very helpful in old age. Tulsi (Holy Basil) has a positive effect over blood pressure and also a de-toxicant, it' regular use prevents heart disease. Ayurveda recommends taking a tonic made from the fruit Amala : a medicinal plant is the best rejuvenate in old age that helps maintain proper nourishment of the tissues, particularly muscles and bones, while supporting the proper function of the adrenal and reproductive system. Learn gardening, it is an adventure and keeps always fit and young. To maintain a good state of health or at least prevent Deterioration. Have adequate sleep, between seven and eight hours per day. Eat meals that will ensure balanced nutrition. Have regular physical exercise and intellectual exercises. Maintain appropriate weight. Have money adequate for needs, including health matter. Live in healthy environment. Avoid loneliness. Work opportunities for those willing and afford. (Australlian National University led by Dannon Stigers and Chris Eston, research team) have discovered a new way in which age-related diseases such as Alzheimers, heart disease and cataracts can develop. Smoking, fatty foods and environmental pollutants are all culprits, but the body also produce its own free radicals , as we age, our natural defenses against them weaken. Combating free radicals with anti oxidants is one way to keep the worst effects of old age at bay. (Eston point out-)'' People take vitamin E supplements, or eat foods that are high in vitamin E, the other thing you can do is eat lots of onion and Garlic, because it has these anti-oxidants. Or, of course, the most popular one is to drink lots of red wine'' (A team researchers from the University of Texas Health Science Center San Antonio has revealed in May, 2011), that DNA in old age gets Damage which makes elder people vulnerable to Community Acquired pneumonia. It has been observed that about I billion adult all over the world are at risk of pneumonia. Out of them 800 million adults are older than 65 and an estimated that 210 million are suffering from Chronic Obstructive Pulmonary Disease(COPD).

2.23 Common Risk Factors in old ages:

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. 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 female. 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.(www.gogle.com, National 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, lose 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.

2.24 Mobility, functional status and personal care in late life :

Physical mobility, the capability of movement is necessary for health and well being of all persons, but is especially important to older persons because a variety of factor impinge upon mobility of aging. Houge (1984) identified mobility as the most important functional ability that determines degree of independence and health care needs among older population. Katz and Colleagues (1983, 1985) Major activities limitations are present in 45.7% of those 65 and older who reside in the community (US Department of Health and Human services (USDHHS), 1982), and it appears that there is an increased chance of becoming disabled with increasing age. The prevalence rates of ADL impairments for those 65-74, 75-84, and 85+ are 6.9 percent, 16.0 percent, and 43.6 percent respectively (USDHHS, 1943).In recent view, Maas (1989), reported that impaired mobility was one of the most frequent nursing diagnosis for elderly residents of long term care facilities and ranged from 26 percent to 35 percent. In acute care setting, impaired mobility was found to be significantly associated with increasing age (Mion, McClaren, and Frengley, 1988, Warshaw, Moore, Friedman, *et al*, 1982). In a sample of patient 75 years older, 60 percent were found to have some degree of mobility impairment while 34 percent were unable to walk (Mion, Frengley and Adams, 1986). Prevalence of Alzheimer's and Other Dementias in the United States is an estimated 5.7

million Americans of all ages are living with Alzheimer's dementia in 2018. This number includes an estimated 5.5 million people age 65 and older and approximately 200,000 individuals under age 65 who have younger-ons*et al*zheimer's, though there is greater uncertainty about the younger-onset estimate. Millions of Americans have Alzheimer's or other dementias. As the size and proportion of the U.S. population age 65 and older continue to increase, the number of Americans with Alzheimer's or other dementias will grow. This number will escalate rapidly in coming years, as the population of Americans age 65 and older is projected to grow from 53 million in2018 to 88 million by 2050. The baby boom generation has already begun to reach age 65 andbeyond,146 the age range of greatest risk of Alzheimer's; in fact, the oldest members of the baby boom generation turned age 72 in 2018.(*2018 Alzheimer's Disease Facts and figures*, Alzheimer's Association., Alzheimers Dement 2018;14(3):367-429)

Predisposition and Causes of Impaired Mobility :

Body reserves of the musculo-skeletal system diminish with aging. Lean muscle mass decreases 20 percent to 30 percent by age 70 and bone demineralization begins in the 3rd decade (Berman, Haxby and Pomerantz, 1988, Katz, Dube and Calkins, 1986). The aging process does not cause impaired mobility. Several predisposing factors in addition to age-related changes can lead to impaired mobility. Chronic disease, sedentary life style, smoking and nutrition are thought to have as many, if not more, detrimental effects on functions as the aging process itself (Brocklehurst and Hanley,1976, Rowe and khan, 1987). The effects of impaired mobility can be categorized broadly in to four areas- falls, physiological consequences, psychological consequences and social consequences (Maas, 1989). Thus impaired mobility is a threat to the overall health and well being of older adults.

Intervention Recommended to Reduce or Prevent falls: Personal Factors- Detecting underlying diseases, Changing medications, Counseling On medications, promoting exercises, physical therapies, balance and gait. Environmental factors – Assess setting for hazards, education in community on hazards, alterations of furniture and use of safety devices.

Nursing Intervention related to functional and personal care problems of elder persons:

In a descriptive study, Athlin and Norberg (1987), observed the development of a therapeutic relationship between six demented individuals and their assigned staff care givers. Of special interest were the types of deliberative nursing management strategies used by the nurse during feeding episodes and the relationship of these to the caregivers frustration with feeding difficulties. Their analysis suggested that the therapeutic relationship developed over a four week period, frustration with feeding episodes was greatly decreased and feeding became less difficulty. In a exploratory/descriptive study, (Michaelsson, Norberg, Samuelsson (1987), investigated that the assessment criteria that nursing personnel use to determine the presence or absence of thirst among severely demented clients in terminal disease states. They found six methods used by nurses (e.g. patient's behavior / reaction, intuition), none of which satisfactorily managed the problems of preventing dehydration. In a series of investigation, Sandman and Colleagues (1986) observed various prompting activities that were more or less successful for eliciting completion of morning care, including the use of tactile stimulation and the initiation of activities. Vanort and Philips (1990) are currently observing feeding interactions between nursing Staff and demented clients to identify nursing behaviors that elicit, sustain and extinguish feeding (e,g, enface position, modeling of eating behavior, creation of feeding context, sensitivity to feeding cues) and nursing behaviors that elicit, sustain and extinguish aberrant behavior during feeding encounters (ignoring feeding cues, ignoring socialization cues, chastising). Beck's (1988) seven categories of assistance given during dressing (including complete physical guidance, gesturing or modeling, occasional physical guidance, repeated verbal prompts) also are a beginning effort to describe nursing interventions.

2.25 Old age Senility and Types of Senility:

The generalized characterization of progressive decline in mental functioning as a condition of the aging process. Within geriatric medicine, this term has limited meaning and is often substituted for the diagnosis of senile dementia or senile psychosis. The physical and mental deterioration associated with old age.

Senility : The state of being old. Some times in this state it is exceedingly difficult to know whether the individual is or is not so deprived of the powers of his mind as to be unable to manage his affairs. In general, senility of energy in some of the intellectual operations, while the affections remain natural and un perverted; such a state may, however, be followed by actual dementia or idiocy. (Source : Webster's 1828 American Dictionary. Word Net).

Types of Dementia :

Dementing disorders can be classified many different ways. These classification schemes attempt to group disorders that have particular features in common, such as whether they are progressive or what parts of the brain are affected, Some forms of dementia are classified as either primary or secondary dementia. Example of primary dementia include- Alzheimer's disease, Vascular dementia, Lewy body dementia, HIV associated dementia, Huntington's disease, Creutzfeldt-jakob disease and more. Secondary dementia- Progressive supra-nuclear palsy, Multiple sclerosis, ALS Dementia, Normal pressure dementia (WWW.medicinenet.com).Alzheimer,s disease is the most prevalent dementing disease, accounting for more than half of all cases. It results from a gradual deterioration in the condition of the nerve cells in the brain, causing progressive deterioration of memory, intellect, learning, reasoning, language, judgment and perception as described by Alzheimer (1907).

Many conditions other than Alzheimer,s disease cause dementia in older people, especially vascular dementia, formerly known as multi-infarct dementia, which accounts for about 20 percent of cases (Miller and Morris, 1993).Vascular dementia is caused by a series of small strokes that cut off the blood supply to the brain. Some people may have mixed dementia cause by both Alzheimer's disease and multi-infarct dementia. As of yet there is no known cure for either condition, but control of vascular risk factors, and the

use of anti-cholinesterase inhibitors may slow down, or temporarily improve, the decline in these illness. In addition, many of the symptoms of Alzheimer,s disease, particularly those related to depression, agitation, hallucinations, and delusions can sometimes be controlled or alleviated by taking medications. Lewy Body dementia accounts for a further 20 percent of dementing illness (Perry *et al*, 1990), while the remainder are accounted for by a range of uncommon conditions, including Pick's disease and other frontal lobe dementias, Creutzfeldt-jacob disease, and Huntington's Chorea.

2.26 The symptoms and stages of dementia:

(Dr. Eamon O' shea and Ms Siobhan O' Reilly; An Action plan for dementia, National University of Ireland, Galway National Council on Aging and Older people Report No. 54) Dementia is largely, although not exclusively, a disorder of old age. It has an insidious onset and gradually progression varies between individuals, but death usually comes within a decade of the original diagnosis. All dementias are characterized by a range of signs and symptoms. The common symptoms and behavioral changes associated with dementia include the following :

▫Memory loss▫ Disorientation▫ Language difficulties ▫ Wandering▫ The failure to recognize people or objects▫ Impaired comprehension, reasoning and judgment ▫The loss of ability to learn or initiate▫ Mood swings ▫Night time wakefulness ▫The gradual failure to perform daily living tasks▫ Hallucinations and delusions ▫Challenging behaviors, such as verbal and physical aggression, suspicion, agitation and repetitive acts, inappropriate sexual behavior, stealing and hiding things, and the use of abusive or obscene language.

Stage 1 Early difficulties: This stage is characterized by the following symptoms :

Forgetfulness, reduced attention span, lack of spontaneity, lack of initiative, disorientation of time and place, depression and fear, anxiety or suspiciousness about possessions, or about the behavior of other people.

Stage 2 Emergence of significant difficulties: Problems recognizing close family and friends, difficulties dealing with money, restlessness and agitation especially at night, repetitiveness in conversations and actions
Increased disorientation and forgetfulness.

Stage 3 Revealing and confirming: Uncharacteristic mood swings outbursts, speech impairment, wandering around home and away from home, impaired judgment, increased disorientation of time and place.

Stage 4 Dependency and incapacity: Assistance with all the activities of daily living, the person may no longer talk, the person may no longer recognize family members, inability to make decisions, coexistence of other medical and physical conditions.

Stage 5 End stage: People with dementia who are in the final stages of the disease lose most, if not all, of their ability to communicate and respond. They are not able to speak for themselves or make decisions regarding medical treatments. They require palliative care that is responsive to their needs and that allows them to die with dignity, without pain and with as much comfort as possible. Careers need a lot of emotional support when the loss they have been experiencing over the course of the disease is finally bound by death. (Dr. Eamon O' Shea and Ms Siobhan O' Reilly; An Action plan for dementia, National University of Ireland, Galway National Council on Aging and Older people Report No. 54).

2.27 Pathophysiology of Dementia : (www. Nursingcrib.com: Lhynnelli, RN February 22, 2010, Pathophysiology of dementia). Primary dementia are degenerative disorders that are progressive, irreversible and not due to any other condition. Specific disorders are Dementia of the Alzheimer's type (DAT) and vascular dementia. Dementia of Alzheimer's type believed to have multiple causative factors.

1. Genetic Factors :

- Familial Alzheimer's disease is associated with abnormal genes on chromosomes 1, 14, and 21. In particular, with genes located on these chromosomes 1 and 14 that encode for amyloid precursor protein which leads to mutation of the amyloid beta-peptide in plaques.

- A specific cholesterol bearing protein, Apo lipoprotein E4, is found on chromosome 19 twice as often as people with DAT as in general population.

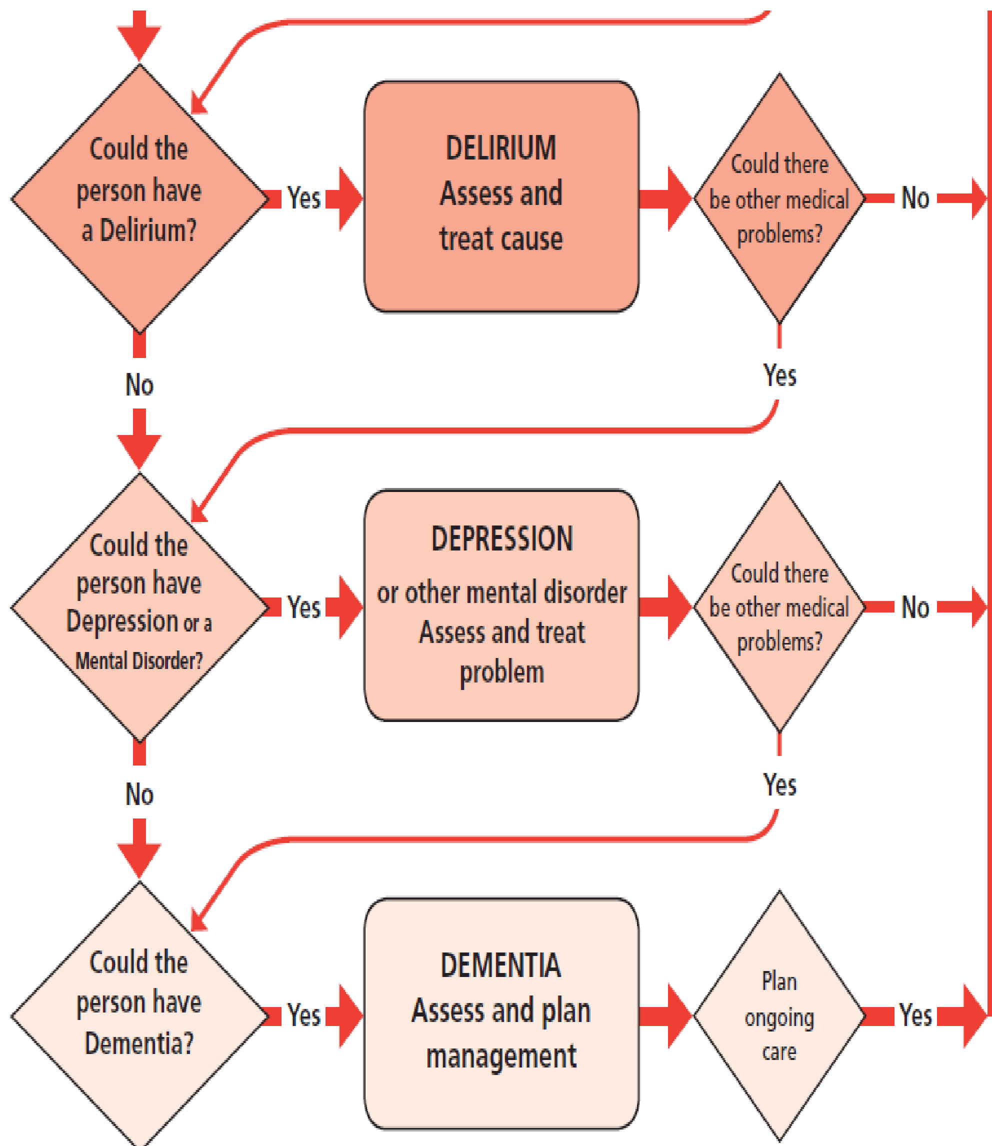
2. .Biochemical brain structure factors :

- The neurotransmitter acetylcholine has been implicated in terms of relative deficit and / or receptor abnormalities as relate to Alzheimer's disease.
- Autopsy findings reveal presence of brain changes, that is, the presence of amyloid plaques and neurofibrillary.
- Additional areas of investigation includes; slow viral infection, autoimmune processes, and head trauma.

Secondary Dementia : Occurs as a result of another pathologic processes.

1. Infection-related dementias- Acquired Immune deficiency syndrome, chronic meningitis, Creutzfeldt-Jakob disease, progressive multi focal Leuko encephalopathy, post encephalitic dementia syndrome, syphilis, sub acute sclerosing pan encephalitis, tuberculosis.
2. Sub cortical degenerative disorders- Huntington's disease, parkinson's disease, wilson's disease, thalamic dementia.
3. Hydrocephalus, Vascular dementias, Traumatic conditions such as post traumatic encephalopathy and subdural hematoma.
4. Vascular dementias
5. Neoplastic dementias- Glioma, Meningioma, Meningeal carcinomatosis.
6. Inflammatory conditions, such sarcoidosis, systematic lupus erythema
7. Toxic conditions, such as alcohol-related syndrome and iatrogenic dementias
8. Metabolic Disorders- Anemias, Deficiency states, Hepatic encephalopathy, Porphyria, Uremia. (www. Nursingcrib.com: Lhynnelli, RN February 22, 2010)

2.28: Nursing Management Strategy: Pools Algorithm-



Islamic Indication :

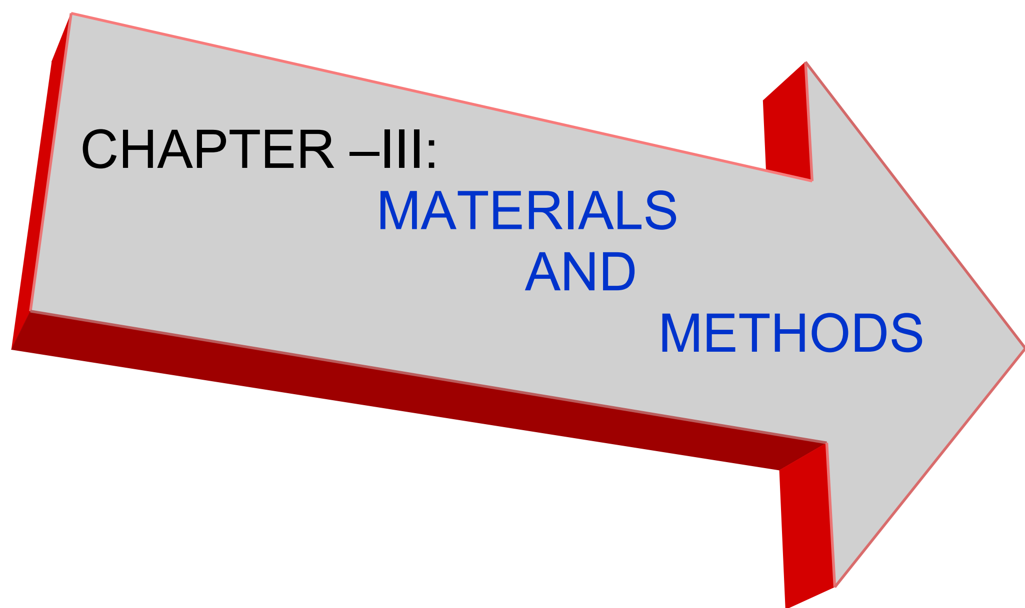
Dementia is a non-specific illness characterized by cluster of symptoms and signs manifested by slow progressive loss of brain function notably lapses in memory, disorientation, confusion, mood swings, changes in personality, language problems, such as difficulty in finding the right words for everyday objects, loss of behavioral inhibitions loss of motivation, and difficulties in problem solving beyond what might be expected from normal aging. It is global health and social crisis. (Center for promoting Ideas, USA www.ijasnet.com 215).

Besides, there are some warning signs of dementia that one can look out carefully and take certain steps to reduce the risk of dementia. The warning signs are : memory loss that affects day-to-day performance, difficulty in doing familiar tasks, confusion about time and place, problems in communication, difficulty in planning or solving problems, poor judgment, misplacing things, changes in mood, changes in behavior, changes in personality, withdrawal from work, cessation of social networking. Almighty tells us that He is controlling the affairs of His servants. He is the One Who created them out of nothing, then He will cause them to die. But there are some of them that He allows to grow old, which is a physical weakness, as Allah says, “Allah is He Who created you in a state of) weakness, then gave you strength after weakness, then after strength gave weakness.

2.29 Falls / related injuries and associated mortality:

A number of researchers examined the relationship between restraint reduction and injuries/death among nursing home residents. In 1996, 1998 and 2002 Capezuti *et al* undertook secondary analyses of data from a longitudinal study trial of moderately to severely cognitively impaired and functionally dependent residents. Capezuti *et al* (1996) found that non-confused ambulatory residents were rarely restrained while confused ambulatory residents were restrained. After controlling for the use of psychoactive medication, restraint use was not associated with lower fall risk among confused ambulatory residents. Approximately 25% of falls occurred on transfer of a resident from a bed, chair or toilet, and resulted in a minor injury.

A snap shot from the Out patient Department, Khulna Medical College Hospital, Khulna, Bangladesh


CHAPTER –III:
MATERIALS
AND
METHODS

3.1 The Study Design: A Cross-Sectional Descriptive Type of Cor- relational Study (both qualitative and quantitative types).

3.2 Place of study and Information of the Study Places: 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 For this study the above mentioned places were selected for the following reasons :

1. It was my native place. It was easy to collect necessary information for me in staying my residence. It was selected purposively considering well communication, suitable location and availability of target population.

2. These place is located in the central of khulna City, so there are one Government Medical College Hospital, one private Medical College Hospital, one General Hospital and so many private clinics situated in the city having a complete mixture of urban, semi urban and rural population of study group.

3. There are many older people, both male and female, presented at the OPD and In Patient Department of these mentioned health facilities, having different types of health problems for seeking treatment. So it was not too much difficult for me to obtain targeted population and sample size; and necessary information regarding this subject..

4. Being assurance of all possible support, guidance and co operation from the respective supervisors of my course was able to conduct the study.
5. Finally, it would be easier to create the baseline way to provide educational intervention in future, when necessary. More over this study is a new one by nursing personnel in these areas

3.3. Selection of the Study Place:

Researcher selected Two Divisions of Bangladesh randomly out of Seven through lottery.

1. Dhaka Division- Choose Two Places-
   Boyosko Punerbason Kendra, Gazipur

   Probin Hitaishi Songho and Institute of Geriatric Medicine, Agargaon, Dhaka

   out of Four places.
2. Khulna Division- Selected Three Places-

   KMCH, GMCH, One Rural Community conveniently out of Five in the same

   way.

3.4 : Study Period:

The study was conducted for a period of three years, June 2011 to June 2018. The initial months were taken for the selection of objectives, following the review of literature development of research instrument, assessing the consistency and internal validity of the instrument discussing with the research experts to receive their opinions, pre testing the questionnaire among similar socio-demographic population Outside the study population, preparation for data collection, thereafter data collection, compilation, data analysis through SPSS windows 17,0 and preparation for report Writing and submission.

3.5 Study Population:

Study population was selected as age group defined According to WHO. UN agreed Cutoff is 60+ years to refer to the elderly population. In Britain, as far back as 1875, 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 Generally use 60+ years to refer to the older population (personal correspondence. 2011). 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.

3.6 Sample Size and Sampling Technique:

Sample size : 384 both male and females; Calculation of sample size: n $= Z_2P(1-P) / d_{2;}$ Sampling Technique: Used Three Stages Cluster Random Sampling technique.

3.7 Selection of Sample Sizes:

The sample was selected in a way that one person from each household, visiting homes of the mentioned community and from the days of attendance at Hospital Outpatient Department and the application of GDS to exclude Old Age Senility among the patient came to receive treatment.

3.8 Data Collection Instruments or Tools used for the study:

- In-depth interview
- Structured Questionnaire
- Geriatric Depression Scale for screening.

Design of the Questionnaire: A standard questionnaire was developed which includes-

1. Anthropometric information
2. Socio-economic information
3. Information of general health, illness and treatment.
4. Information on Nursing Management. Questionnaire was pretested and modified on the basis of the present study.

3.9 Ethical Consideration:

After getting approval from the respected university, all the subjects have given a verbal and written explanation of the study. The researcher was assured
the respondent's participation on voluntary basis and was maintained the confidentiality throughout the study. A single identification number was used on the questionnaire.

3.10 Pre-testing: A pre test of the questionnaire was applied in to the similar level of the population under study to check it's appropriateness. Before pre testing, validity, reliability and internal consistency were checked, and take suggestions from the expert behind the research background. And made Bangla version of the questionnaire for easily understanding of the respondents. Standard instruments was used to assess function, mental status, falls, social support, sleep, depression, pressure ulcer risk, and risk for complications during hospitalization; analysis of the usefulness of these instruments in practice. Modifications in history taking and physical examination to encompass changes common to older adults. Assessment of home and community living

situations and analysis of how services (eg. transportation, location, and environmental modifications) facilitate and impede independent living. Assessment of relationships among intergenerational families, the capacity and expectations of family members to provide care, family knowledge of care giving, and assessment of family burden.

3.11 Data collection procedure:

- Follow the attendance Register of OPD and Indoor of hospitals.
- Select the age groups as WHO cutoff point.
- Select one elderly person from each house in case of community.
- Face to face interview
- Administration of questionnaire
- Observation

3.12 Data Processing, Analysis and Quality Control:

The demographic data and general information will be analyzed using frequency distribution table, graphical representation, and level of significance by chi-square and t-test. Data was analyzed using SPSS 17.0 software for quantitative aspects whereas the qualitative data were analyzed by coding and sequencing the record of in depth interview advanced Logistic Regression

.

3.13 Variables under study:

The targeted variable was "Old Age Dementia". To achieve our objectives, we have to study the logistic regression between our target variable and others which are highly related to old Age Dementia. With the help of descriptive plots of the data set as well as previous studies, we consider only ten explanatory variables.

3.14 Inclusion Criteria: A review of research literature published in English between 1992 and 2003 are Papers included or excluded in this review were chosen according to the following criteria:

• Main focus on the age group from 65 years age both male and female.

• Literate, illiterate Or only signed their names.

• The research was based both on healthy, long-term and short -term aged care.

3.15 Exclusion criteria:

Papers excluded from the review were papers that meet the following criteria:

• Paper focused mainly on other forms of restraint (eg chemical restraint);

• Research did not focus on people with a diagnosis of dementia;

• Aged people with dip and dump, blind and unable to respond are excluded with the permission of course supervisors.

3.16 Searching strategy:

Three major databases, Cumulative Index of Nursing and Allied Health Literature (CINAHL Proudest and Medline were searched using the search terms 'dementia', physical restraint', 'cognitive', 'nursing home', 'long term care', and 'nursing attitudes' within the time period of 2011-2013. A manual search of the reference list of the identified articles was also used to uncover further relevant articles. The search found 42 papers related to dementia (cognitive impairment) and physical restraint in nursing homes or long-term care settings. Each paper was checked against the inclusion criteria and this resulted in 22 papers that are discussed in this paper.

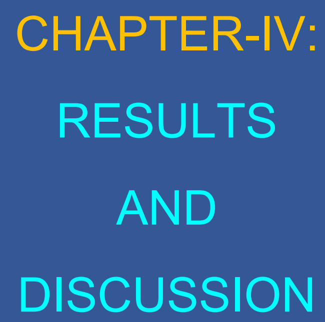

CHAPTER-IV:
RESULTS
AND
DISCUSSION

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

Age				**N = 384**	
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	60-65	138	35.9	35.9	35.9
	66-70	107	27.9	27.9	63.8
	71-75	95	24.7	24.7	88.5
	>75	44	11.5	11.5	100.0
	Total	384	100.0	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.

Table-2: Shows frequency and percent distribution of occupational status of the respondents N=384

	Frequency	Percent	Valid Percent	Cumulative Percent
Unemployed	220	57.3	57.3	57.3
Employed	164	42.7	42.7	100.0
Total	384	100.0	100.0	

The 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).

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

N = 384

		Caring Type			
		Self and life Partner	Children	Others	Total
Old Age Dementia	No	76	134	27	237
	Yes	26	106	15	147
Total		102	240	42	384

In this table, care provider of the respondents are grouped in to self and life partner, children and others indicates son–in-law, daughter–in-law, grand children 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, $P < .005$, in the Degree of freedom 2. (Table-3).

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	95	237
	Yes	100	47	147
Total		242	142	384

Test Statistics	Values	Df	Significance
Pearson Chi-Square	2.562	1	0,o6
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 highly significant, $P < 0.06$.

Table-5. Classification.

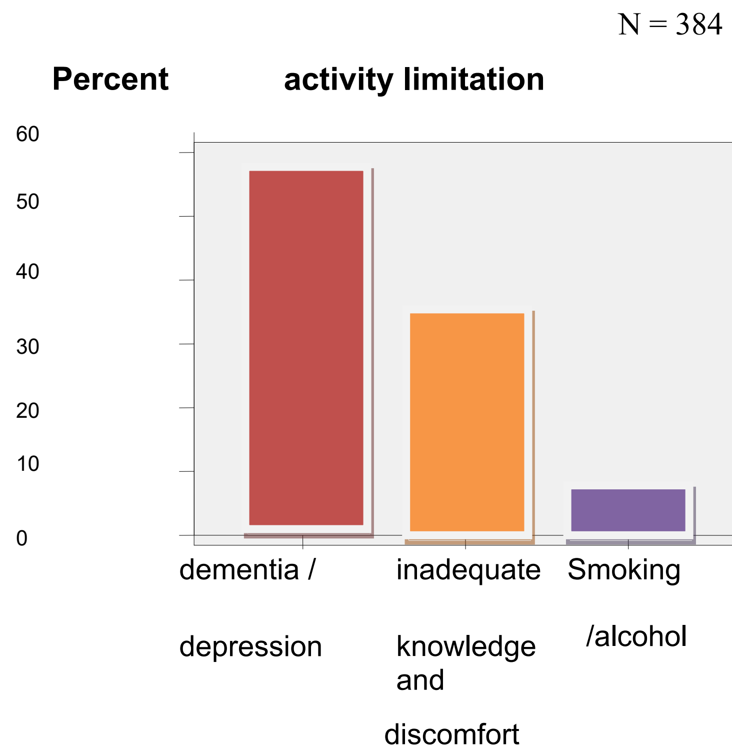
N = 384

Observed		Predicted		Percentage Correct
		Old Age Dementia		
		No	Yes	
Old Age Dementia	No	210	27	88.6
	Yes	43	103	70.5
Over all Percentage		253	130	81.7

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 81% correct.

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

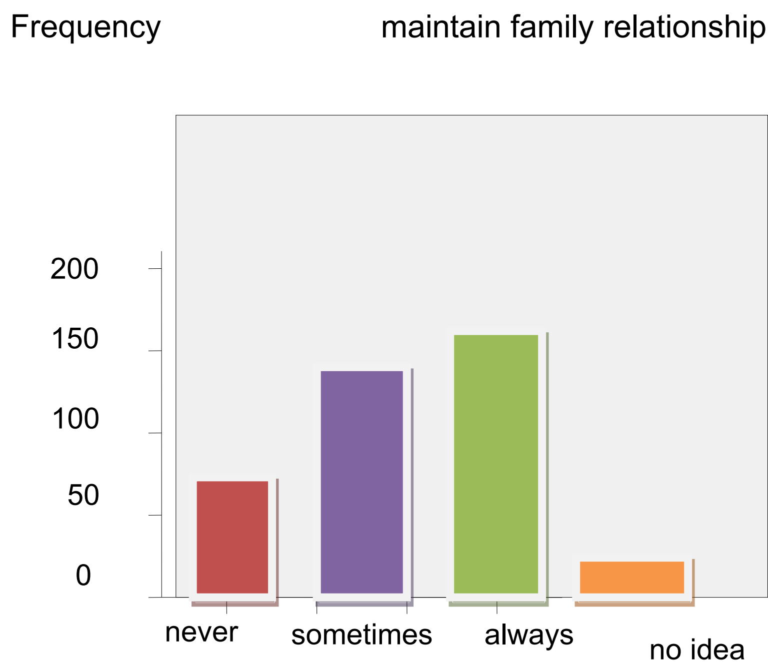
N = 384



The bar chart indicated the some important senile factors those were highly associated to be limited the daily activities performing by the elderly people, such as the highest frequency is dementia/depression (56.8%), the 2nd lowest proportion represent inadequate knowledge of senility and feeling discomfort (35.4%) and the next lowest one is smoking / alcohol (7.8%) are responsible for limiting physical activities of the elderly people.

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

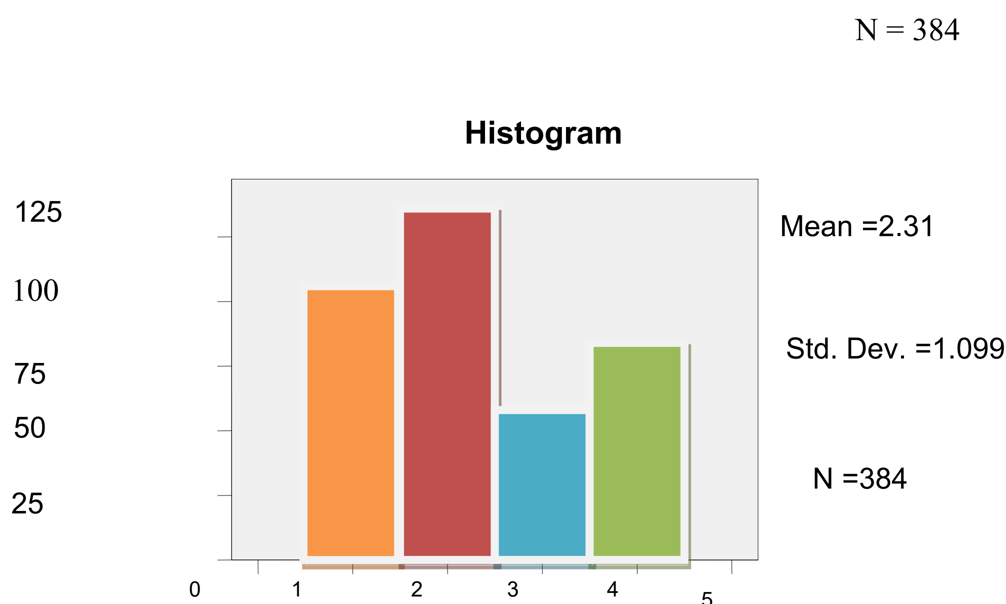
N = 384



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.

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

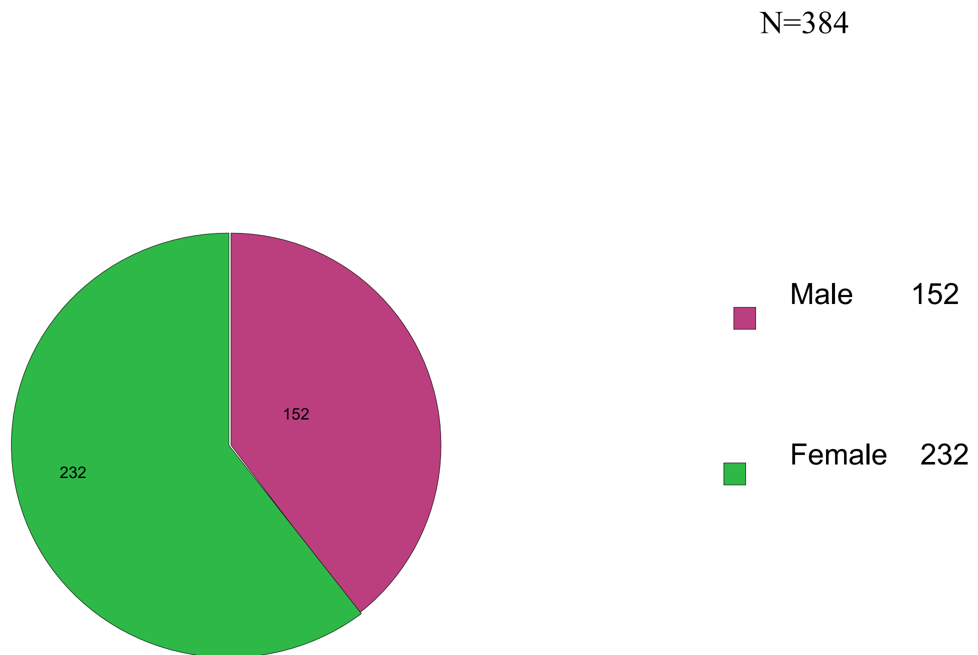
N = 384



According to the figure-3, in the X - axis, the number-2, The highest incidence and prevalence psycho-geriatric 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 includes 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.

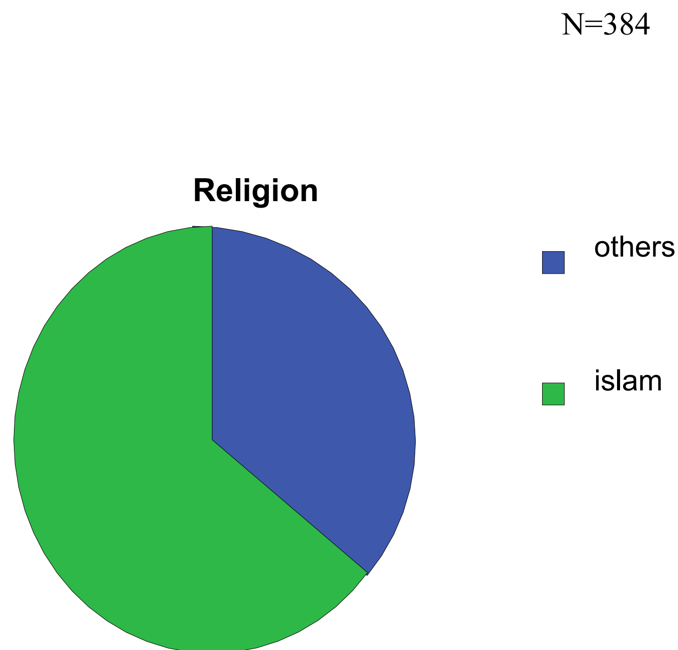
N=384



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.

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.

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

N = 384

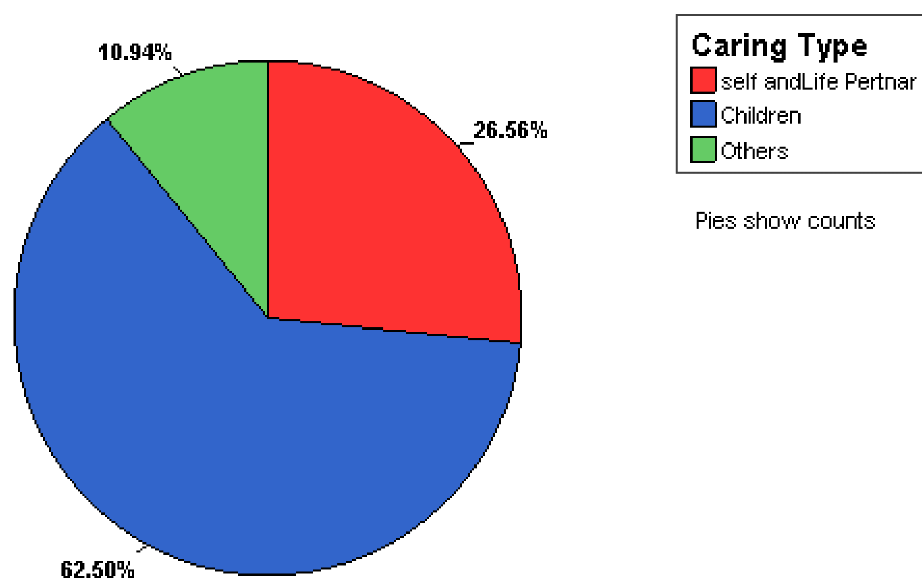


Fig. 6, The pie chart gives us information about the percent distribution of the type of caring In terms of children comprises the larger proportion (62.50%), the next higher position is self and life partner occupying (26,56%). He other one shows the very few respondents (10.94%) represents the other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

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

N=384

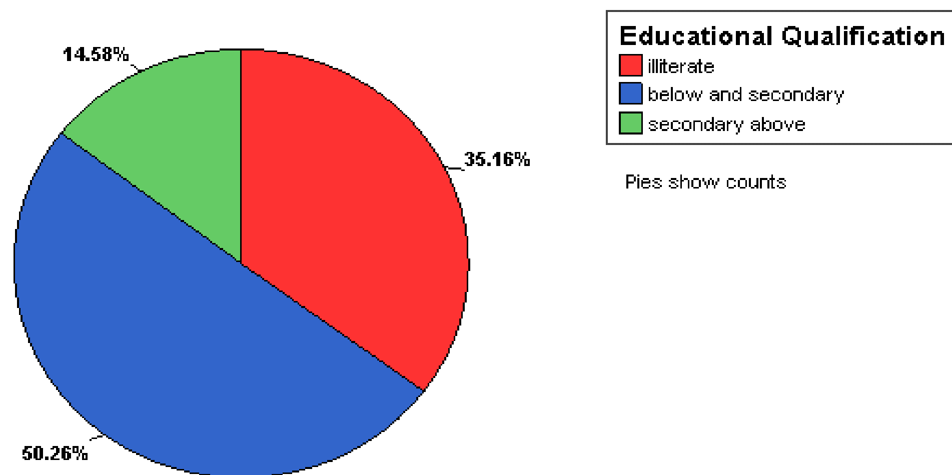
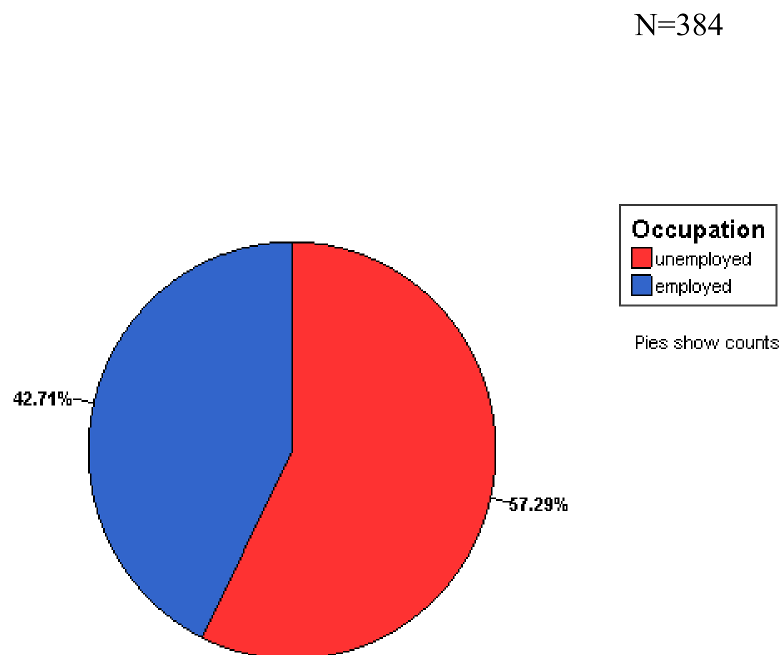


Fig.7. The pie chart describes us one of the socio-demographic component as the educational qualification of the population under the study. Here the 50.26% indicates below the secondary level of education, and the other half portion of the figure remains illiterate (35.16%), above secondary level of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

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

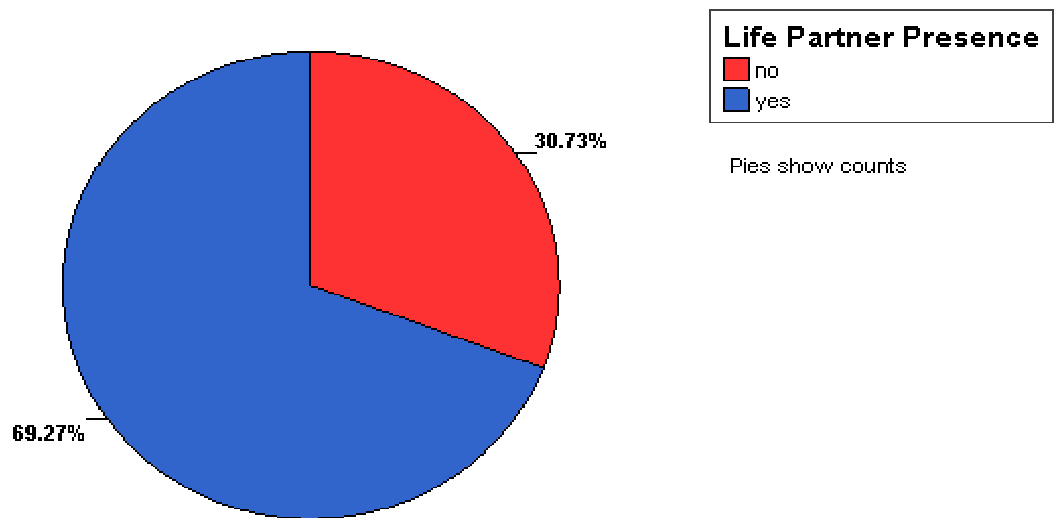
N=384



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.

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

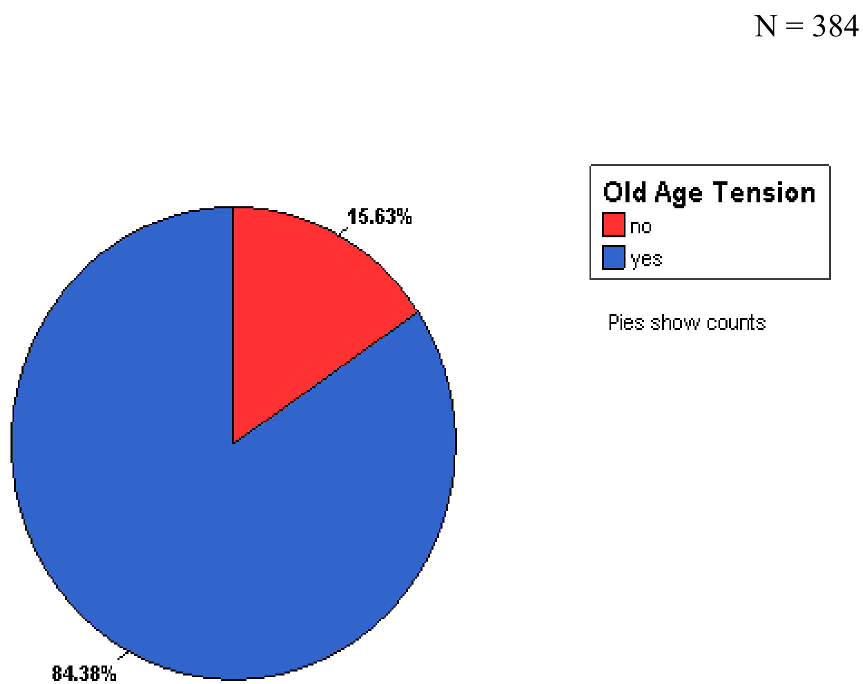
N = 384



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.

Fig-10 : The Pie chart gives the information about Tension of the study subjects.

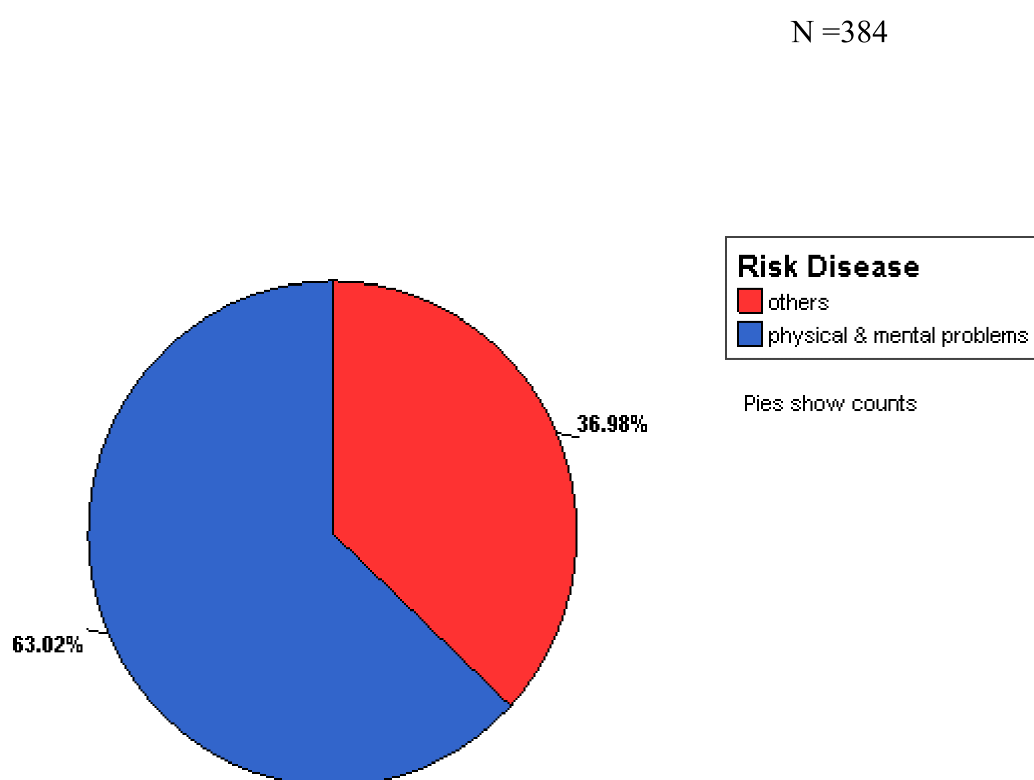
N = 384



The figure-10, The pie chart describes about having the old age tension in the way of percent distribution, in terms of no tension and yes tension. Here one-fifth portion respondents (15.63%) said they have little bit or no tension regarding old age senility, but the rest of them (84.38%), expressed they sometimes or always have tension those are directly influence on their health, the largest proportion of the total Population under the study.

Fig. 11: The Pie chart gives the information about the vulnerability to diseases of the study subjects.

N =384



The figure-11, the above pie chart gives us information about the percent distribution regarding the vulnerability to the development of senile dementia in the elderly people; in terms of physical and mental health problems and other psycho-social problems, such as diabetes mellitus, hypertension, stroke, heart diseases, cardiovascular diseases, pulmonary diseases, psycho-somatic illness, pain, etc. Two-third of the population (63.02%) gave positive answer about the risk factors those are responsible prior to the development old age dementia. The other problems (36.98 %) have comparatively lower significant rather than physical and mental problems like- insomnia, confusion, poor self-esteem, sadness, loneliness, poor mental strength, dement5ia, depression.

Fig-12 : The Pie chart gives the information about the Mental Status of the study Subjects.

N = 384

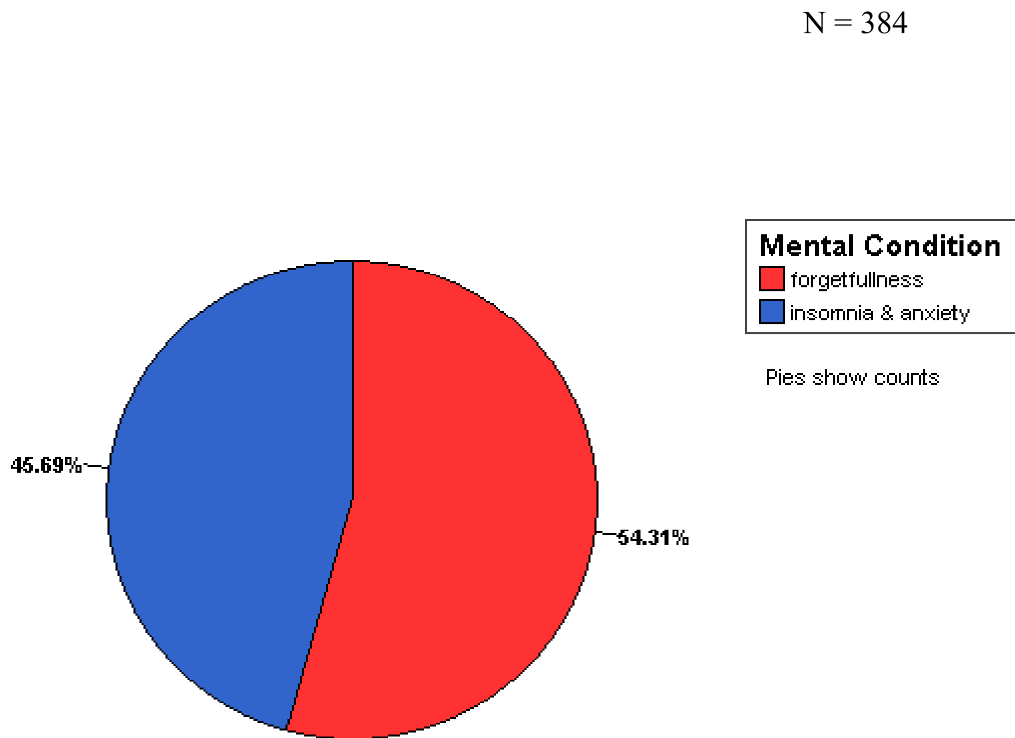
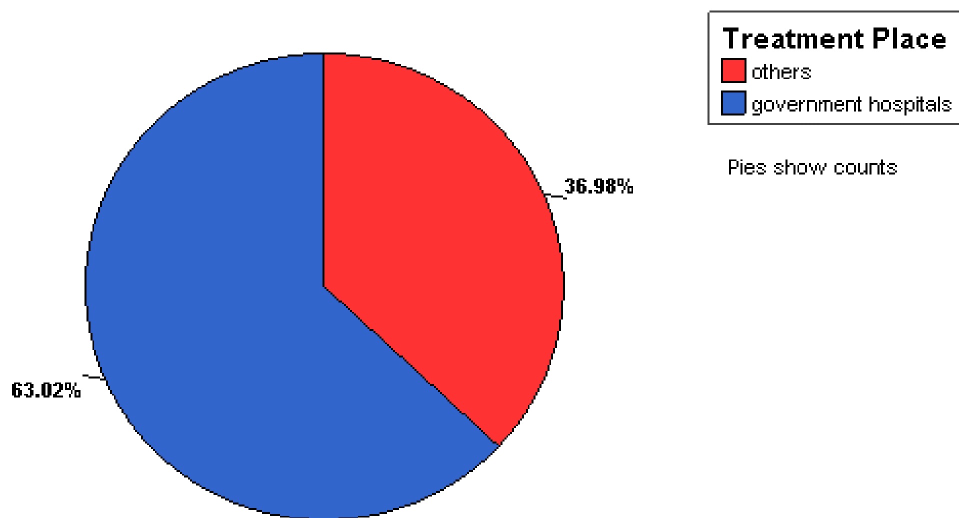


Figure-12, the above pie chart gives information about distribution of mental status existing among the elderly population under the group in the form of percentage. In the study, it is revealed that majority of the study population (approximately 54.31 %), more than half, suffered from one of the major elderly psychological problem such as forgetfulness, the most common one. On the other hand, insomnia, sleeplessness and anxiety (45.69%) presented rest of the subjects.

Fig-13: The Pie chart gives the information about the Place of Treatment of the study group.

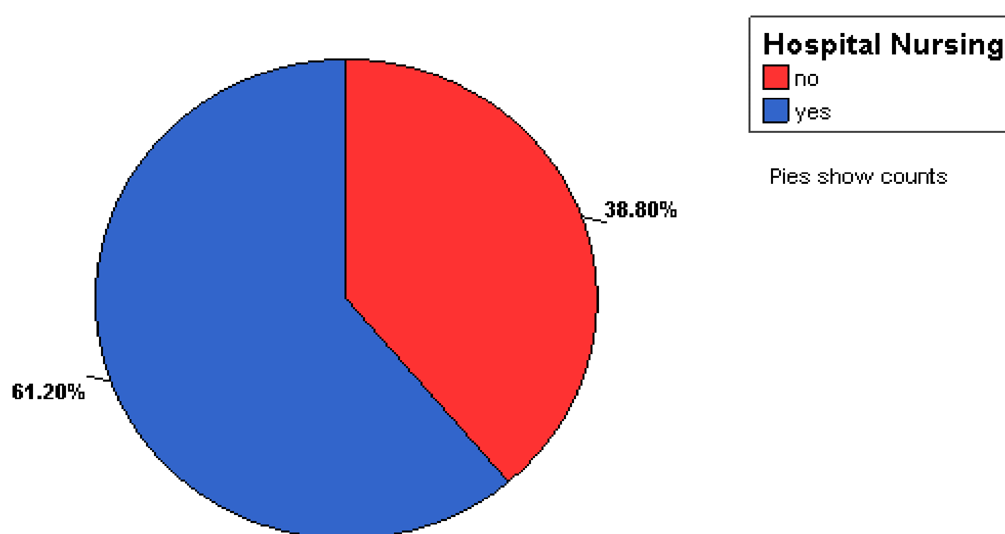
N = 384



The above pie chart, figure-13, indicates about the choice of treatment places in the percent distribution by way of government hospitals and other than government hospitals. Here, most of the participants, approximately two-third (63.02 %) received medical treatment and nursing management from public hospitals. On the other hand, the rest of the participants, nearly one-third portion (36.98%) expressed their opinions to get treatment from other private hospitals or doctor's clinics of nursing course.

Fig.14: Shows the percent distribution of Receiving Hospital Nursing Management of the respondent.

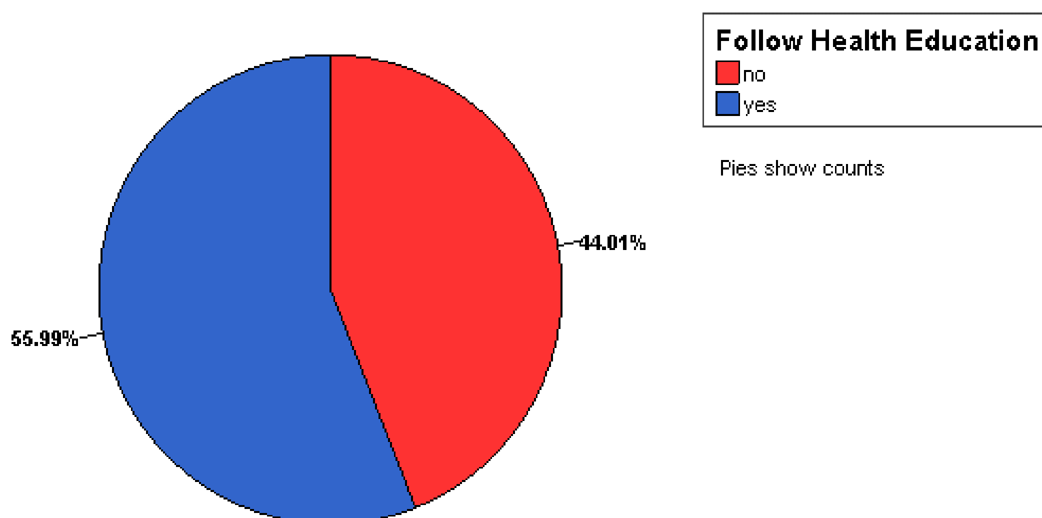
N = 386



The above chart, figure-14, gives the explanation regarding nursing management status in the Bangladesh, either hospital's nursing management system or family nursing care. The majority respondents (61.20%) approximately two-third (38.80%) did not receive nursing management from hospitals, irrespective of public or private one's.

Fig.15: Shows the percent distribution of the elderly people Following Health Education by hospital nurses.

N = 384

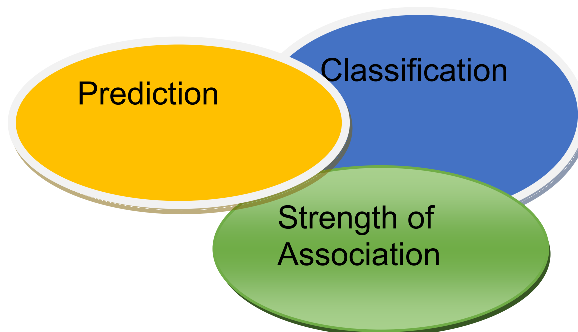


The above figure-15, gives information regarding health education provided by the hospital nurses followed by the participants or not in case of illness. Nearly half of the population (44.01%) did not agree to that. But more than half (55.99 %) received care. The people who did not followed health education are not too little, are much more significance to risk for dementia, should come to our concern.

Logistic regression Analysis :

Using the cross tabulation analysis the variables-Caring Type, Educational Qualification, Occupation, Marital Status, loneliness, Old age Tension, Mental Condition, Risk disease, Treatment Place, Follow Health Education and Hospital Nursing are highly depend on the our target variable "Old age dementia". 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").

Objectives of Logistic Regression :



Summary Result of Logistic Regression

Variables	Coefficients	Wald	Significance.	Exp(B)=Odd Ratio
Caring Type (Children)	-.931	2.799	.094	.394
Caring Type (Others)	.599	1.540	.215	1.821
Educational Qualification (Below secondary)	-1.327	8.475	.004	.265
Educational Qualification (Above secondary)	-.174	.178	.673	.840
Occupation	.170	.308	.579	1.185
Life Partner Presence	1.687	26.442	.000	5.404
Old Age Tension	-.462	1.397	.237	.630
Risk Disease	-1.275	14.808	.000	.279
Mental Condition	-1.717	35.135	.000	.180
Treatment Place	-.610	4.089	.043	.543
Follow Health Education	-1.353	21.410	.000	.259
Hospital Nursing	.790	6.924	.009	2.203
Constant	1.058	2.734	.098	

The data is statistically analyzed using SPSS 15.0 and 17.0 software. In the analysis, it was used Logistic Regression of some most important variables those are highly related to the study. The researcher used logistic regression for the purpose of prediction, classification of observed behavior old age dementia into 'yes' or 'no' and to see the strong association between target variable old age dementia and other related variables. If the elderly people take care by the children than other people except self and life partner, the Wald (2.799), test appeared that the result is statistically significant, (.094), Coefficients (-.931), Exp(B)=Odd Ratio (.394). Educational Qualification (Below secondary level) Coefficients (-1.327), Wald (8.475), result is highly Significant, Exp(B)=Odd Ratio (.265).There is strongly association between below Secondary level of education and above secondary level the important factor for the development of old age senility. Occupation is the important factor for the elderly people. Those are not employed or not involved into income generation, they are possibly high risk to the health problems. The occupation of the respondents and the old age dementia are relatively associated. Coefficients-170, Wald-.308, result Significance-P<.579, Exp(B)=Odd Ratio- 1.185 .

If care provided by self or life partner or living together with each other, they have better mental condition, low tension and anxiety, they are less influential to ill health. The statistical analysis appeared that they have highly association between absence or surviving of spouse. Wald-26.442, result is highly significance P<000, Exp(B)=Odd Ratio-5.404, Coefficients-1.687. Risk to disease, mental condition, health education and hospital nursing are highly related and have strength of association with the old age senility. The logistic regression analysis show that their association highly related and strongly significant .P<.000, P<.000, P<.000, P<.009, respectively. Exp(B)=Odd Ratio between them are shown as- 2.203 ,.180 ,.259 ,.279, respectively.

Discussion:

Over the last one decade, in Bangladesh the proportion of elderly population has been gradually increasing. Presently about six percent of the populations are elderly i.e. 9 million. By 2005 one in ten persons will be elderly i.e. 18 million people. (Rahman Mostafizur, October, 2010).This situation throws the elderly population, particularly the elderly population of the poor families into large-scale social, health and economic insecurity. The elders become mentally sick feeling unwanted by the society. They feel insecure due to lack of financial support either from the family or the state. Lack of sufficient health care facilities for the elders is another major factors that contributed to their sufferings since aging presents a new variety of health problems. The elderly people suffer mostly in acute and chronic illness. Incident of cardio-vascular disease including hypertension, stroke, heart failure are more common in urban area than in rural area. Coupled with those there are eye-problem, gastrointestinal disease and malnutrition in rural area. The incident of such disease emanate from life style change, such as hematological condition, diabetes, osteoporosis, accidents, etc. The health status means, presence or absence of disease and the degree of disability in an individual level of functioning. Thus the level of activities, the older person can do or think they can do are useful indicators for how healthy they are. Perception of good health tend to be associated with other measures of well being, particularly, life satisfaction. The purpose and general structure of a custom-designed computerized database management system to support the clinical, administrative, and research operations of a geriatric nursing outreach program in rural Virginia. The program's goal is to meet the health care needs of elderly residents in rural areas who do not have adequate access to health services and are at risk for institutionalization in nursing homes or psychiatric institutions, hospitalization in acute care facilities, or inappropriate use of emergency services. The major focus of the program is to link formal community-based services, informal community resources, volunteer efforts, and academic resources in order to strengthen the self –reliance of rural communities to care for their elderly citizens. The Rural Elderly Outreach Program (REOP) provides outreach assessment, case management, and psycho social support services by nurse case managers with masters preparation in psycho-geriatric nursing. Potential clients are screened as to whether their needs are primarily of a health versus social services nature assuming responsibility for the former.

Initial telephone contact by the nurse clinicians is followed by an outreach visit. This visit includes a comprehensive psycho-geriatric nursing assessment, care giver assessment, collection of key medical data, and assessment of financial and benefits information. Multidisciplinary care plans are developed and implementation strategies are discussed. Old age homes, geriatric hospitals, old age recreation center and many public and private care systems for the aged. With the improvement in health care and increased life expectancy it is becoming a vital problem in the developing countries including Bangladesh. Over the last one decade, in Bangladesh the proportion of elderly population has been gradually increasing. Presently about six percent of the populations are elderly i.e. 9 million. By 2005 one in ten persons will be elderly i.e. 18 million people. Aging of the population in Bangladesh and it's size have implications for the support of older population. Because of physical and life course changes that tend to occur at older ages, such as decreases in functional ability, older persons require various kinds of support, including financial assistance when they can no longer work and instrumental assistance (that is assistance in conducting daily activities) if physical functioning Begins to fail. In Bangladesh family members particularly older adults used to provide this support. With increasing poverty and breakdown of joint family this support will not be available in future years. Senility refers to the mental feebleness or impairment caused as a result of old age. A senile person is recognized to be incompetent to enter in to a legal binding contract. Such a person will not be execute a will. Senility is also termed as senile dementia. [In re Rodger, 1980 pa, Dist. And City. Dec, LEXIS 458 (Pa. CP. Orphans. Ct. Div. 1980), it was observed that the term senility often brings to mind the elderly person who has become moody, cranky and even eccentric. It was the legislature's intent that such persons must not be committed involuntarily on account of those personality changes due to aging which are not tantamount to a severe mental disability. Aging is accompanied by heterogeneity-Everyone age differently and the rate of change in the function of organ systems can vary markedly in individuals.

Age-related changes in one system are not predictive of changes in other systems. The rate of physiologic decline can be modified- An older person does not age faster than someone who is younger. However, biological age is different from chronological age. Physiologic changes have a cumulative effect in the continuum of biologic, psychological, social and environmental processes of ageing. Ageing is not a disease, nor it is a condition that is correctable by medical or surgical intervention, Ageing is a series

of complex changes that occur in all living organisms. Gold man (1979) indicates four characteristics of physiologic ageing, it is universal, progressive, decremented and intrinsic. The universality of ageing places it outside the realm of pathologic study. Stehler (i992) suggests that physical ageing includes the following : Universal changes occur in all people. However, just because a disease or condition occurs predominantly in older adults, it should not be concluded that the disease or condition is a consequence of ageing. Intrinsic changes are processes that occur extensively within the body and do not result from another terminal factor or factors. Progressive changes are processes not events. This onset is both gradual and cumulative Deleterious changes are processes or phenomena that are negative. These changes decrease the organism's capacity to survive. Interesting approaches to the ageing process and age-related changes have been offered by Sloane (1992) and Lakatta (1995). Sloane suggests the ''rule of thirds'' Which suggests that one third of age- related changes occur as a result of functional decline due to disease, one third are due to inactivity or disuse, and one third are caused by ageing itself. Lakatta places age-related changes in to two categories: Usual (average) ageing and successful (pure) ageing. Usual ageing refers to the ''combined effect of the ageing process, disease and adverse environmental and life-style factors. Successful ageing refers to ''changes due to solely to the ageing process uncomplicated by damage from environment, life-style or disease'' The Bultimore Longitudinal study of women began in the 1980s, provides a summary of selected Changes, anatomic and physiologic changes with ageing of healthy adults. Significant changes in structure, function, and biochemistry, as well as genetic endowment, are responsible for the alterations in tissue elasticity, subcutaneous fat, gastrointestinal function motility, muscle, bone, immunity the sensorium.

These changes are not mutually exclusive but, rather, are synergistic, and contribute to alteration in each system and to the general evidence of advanced age. No system truly escapes age changes. Some changes are external and visible and therefore easy to recognize and address; others are internal and harder to realize that assistance is needed. Alzheimer's disease is the most prevalent dementing disease, accounting for more than half of all cases. It results from a gradual deterioration in the condition of the nerve cells in the brain, causing progressive deterioration of memory, intellect, learning, reasoning, language, judgment and perception. As described by Alzheimer (1907), this label was used only for dementia arising in middle age, but now the term is applied to the much

more common primary degenerative dementia occurring in later life, formerly known as senile dementia. Many conditions other than Alzheimer's disease cause dementia in older people, especially vascular dementia, formerly known as multi-infarct dementia, which accounts for about 20 percent of cases (Miller and Morris, 1993). Whatever the level of economic development, population aging will pose a challenge for delivering health care needs of the elderly population because of resource constraints. As live longer, there is a growing demand for care related to conditions such as cardiovascular disease, cancer, chronic obstructive pulmonary disease (COPD), arthritis, vision impairment and disability. The problem is likely to be Acute for older women, who constitute the majority of the elderly because of greater longevity among women and the tendency for men to marry women younger than themselves; women are more likely than men to end their lives as widowed. Currently elderly people receive general health care services from government health facilities. There is no separate health service for the elderly population. In Rural areas, the problems of health care for the elderly are even worse. Old age diseases are demanding in terms of diagnostic equipments, long duration of hospitalization, treatment and rehabilitation.

The current Boisko Bhata Scheme is inadequate to meet basic needs of the elderly population; the burden will even be higher to provide Boisko Bhata to cover the elderly population. 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, lose 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. Health care in Bangladesh is in a sad condition, with not enough doctors and nurses available to serve it's people, but, even with this limited number of health care professionals, better care would be possible if greed for money and unaccountability to the people were controlled by the government. Conditions for members of the nursing profession are not acceptable for those who are dedicated to serving the sick. Acknowledgement of nursing professional dignity is almost completely absent. In addition, the salary earned is not enough to make a living. There is an existence Professional associations who are struggling for the rights of the nursing community, although few concrete results have yet been seen. This article is written from the perspective of the author's position as a member of the Board and Treasure of the International Association of Bioethics, and her interest in feminism and bioethics, which justifies her link with oppressed nurses (because most are women) and unethical practices in the nursing profession in Bangladesh. (Hasna Begum, 2010, Health care, Ethics and Nursing in Bangladesh; a personal perspective, Department of Philosophy, Dhaka University, Dhaka-1000, Bangladesh). Nursing care should be given according to it's cause, onset of illness and severity.

The main aim of nursing care is to make the patients life easier and pleasant. There is no effective treatment of cerebral pathology but we can help the patient in adjustment to life and coping with stress. Maintenance of optimal cognitive functions, Maintenance of physical safety, Maintenance of an optimal level of psychological functioning, Attainment of an optimal exchange of ideas between the patients and others, Maintenance of maximum independence in activities of daily living, maintenance of optimal level of nutrition, monitor food intake and observe food habits, maintain optimal personal hygiene, Maintenance of balance of sleep and activity, Enhancement of socialization and fulfillment of intimacy needs, and provide rehabilitation. (International Journal of Therapies and Rehabilitation Research, ijtrr.com, E-books on Nursing, Nursing Management of Dementia, Date of Last Revision, April 22, 2011). [Help age international *et al*, 2000:27] "The problems of aging in Bangladesh: A socio-demographic study" including four areas in Bangladesh. Rahman, 2oo2: 35]The findings

of the study reveals that the most of the older persons have got minimum health facilities cause of poverty, lack of employment, emotional incongruity, social stress, exclusion by family and loneliness. Samsad Abedin,2012] Social and health status of the Aged in Bangladesh," The study has emphasized on: to investigate the status and roles of the elderly in family and community in the context of house hold structure and composition, to explore the health status and health care issues. Rahman, Atiqur, 2004] " Problems of Aging : Aging situations in Bangladesh and the future steps," and its Services for the Older people: [Ferdous,2006] "My Experience in the Field Practice, "Mansur, Ahmed, Mohammed et. al.2010] "Determinants of living Arrangements, Health and Abuse among Elderly Women: A study of Rural Naogaon District, Bangladesh".,Lutfur,1996], "Some Health Problems of the Elderly in Bangladesh". Rahman, Khorshed, Mofiz et. Al. 2012]. "Disease pattern and life style behavior of selected elderly population of Shahabag area of Dhaka city". Farid, Fauzi et.al, 2011] "Dementia, Islamic Indication and Scientific Evidence," So far as we know, no research has been done on "Nursing management of Old age Senility- The Bangladesh Perspective."

Therefore, it is very important to study the variable "Old Age Dementia". The researcher found those gap in the previous studies are stated in the objectives.
Elderly population in Bangladesh).Aging population is now a global phenomenon. It is common all over the world that older age range is increasing rapidly on the other hand the member of children and youth population is increasing. We know from the various sources that in 1950, there were about 200 million persons aged 60 and over in the world, constituting 8.1 percent of the total global population. By the 2050, there will be a nine fold increase; the world's elderly population is projected to be 1.8 billion people. The median age of the world population will jump from 23.5 years in 1950 to 36.2 years in 2050. The Bangladesh has same experience. The older persons, in Bangladesh are still passing their days amidst the tender care and support mostly provided by their extended families without any remarkable backing from the national level. However, the situation is in transition as the family pattern gradually shifting towards the nuclear type due to the change in values, migratory tendency of their offspring and poverty. The design of the study is Cross-sectional both qualitative and quantitative study. 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 For this study the above mentioned places were selected for the following reason. Researcher selected Two Divisions of Bangladesh randomly out of Seven through lottery. Dhaka Division-Choose Two Places- Boyosko Punerbason Kendra, Gazipur Probin Hitaishi Songho and Institute of Geriatric Medicine, Agargaon out of Four places. Khulna Division-Selected Three Places- KMCH, GMCH, One Rural Community conveniently out of Five in the same way. The study was conducted for a period of three years, June 2011 to June 2018. Study population was selected as age group defined According to WHO. UN agreed Cutoff is 60+ years to refer to the elderly population. Elderly persons aged 60 years and above both male and female. The study is based on primary data. The tools used for the study are in-depth interview, structured questionnaire and geriatric depression scale for screening.

A standard questionnaire was developed which include-Anthropometric information Socio-economic information, Information of general health, illness and treatment. Information on nursing management. Questionnaire was pretested and modified on the basis of the present study. Sample size was 384 Calculation of sample size: $n = Z_2P(1-P) / d_2$. Sa The Technique of the sampling is Three stages cluster random sampling. The selection criteria was one person from each household, every day attendance at hospital OPD, application of GDS to exclude senility home visiting. Somewhere, the trained nursing students of Khulna Nursing Institute, helped the researcher in the data collection procedure. Study population was selected as age group defined According to WHO. UN agreed Cutoff is 60+ years to refer to the elderly population. In Britain, as far back as 1875, 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 Generally use 60+ years to refer to the older population (personal correspondence. 2011). 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: Elderly persons aged 60 years and above both male and female. The study is based on primary data. The data is statistically analyzed using SPSS 15.0 and 17.0 soft ware. In the analysis , it was used Logistic Regression of some most important variables those are highly related to the study. The researcher used logistic regression for the purpose of prediction, classification of observed behavior old age dementia into ‘yes’ or ‘no’ and to see the strong association between target variable old age dementia and other related variables. Before analyzing, the raw data was compiled,

tabulated, omitted and possible editing made by the researcher with help of course super visors, and the Head of the department of Statistics, of the university of Rajshahi. Using the cross tabulation analysis to the variables-Caring Type, Educational Qualification, Occupation, Marital Status, loneliness, Old age Tension, Mental Condition, Risk disease, Treatment Place, Follow Health Education and Hospital Nursing are highly depend on the our target variable “Old age dementia”. 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”). (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 Standard 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. The 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). Care provider of the respondents are grouped in to self and life partner, children and others indicates 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< .005, in the Degree of freedom 2. (Table-3). 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 highly significant, P<0.06. (table-4). 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. 105”failure”, or ”yes” vs. ”no”). If we predict 100 over elderly people after 60 years of age, who have possibility to develop dementia, in this context, our prediction will be 81% correct. (table-5).

The some important senile factors those were highly associated to be limited the daily activities performing by the elderly people, such as The highest frequency is dementia/depression (56.8%), the 2nd lowest proportion represent inadequate knowledge of senility and feeling discomfort (35.4%) and the next lowest one is smoking/alcohol (7.8%) are responsible for limiting physical activities of the elderly people. (The Bar graph-1).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 kins. 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. (figure-2).The highest incidence and prevalence psycho-geriatric 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 includes in the pillar no 1 and4 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, Standard Deviation= 1.099. (fig-3). The pie chart shows the highest frequency constitutes the female 232(60.4) and the next proportion male 152(39.6) out of 384. (Fig.4).

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 (Fig.5).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. (Fig.6).The socio-demographic component 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. (Fig.7) (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. The majority of the study population have still life partner presented (69.27%), which mention the three-fourth of the total population. (Fig.9). Here one-fifth portion respondents (15.63%) said they have little bit or no tension regarding old age senility, but the rest of them (84.38%), expressed they sometimes or always have tension those are directly influence on their health, the largest proportion of the total Population under the study. (Fig.10).The percent distribution regarding the vulnerability to the development of senile dementia in the elderly people; in terms of physical and mental health problems and other psycho-social problems, such as diabetes mellitus, hypertension, stroke, heart diseases, cardiovascular diseases, pulmonary diseases, psycho-somatic illness, pain, etc. Two-third of the population (63.02 %) gave positive answer about the risk factors those are responsible prior to the development old age dementia. The other problems (36.98%) have comparatively lower significant rather than physical and mental problems like- insomnia, confusion, poor self-esteem, sadness, loneliness, poor mental strength, dementia, depression. (Fig-11). The mental status existing among the elderly population under the group in the form of percentage. In the study, it is revealed that majority of the study population (approximately 54.31%), more than half, suffered from one of the major elderly psychological problem such as forgetfulness, the most common one.

On the other hand, insomnia, sleeplessness and anxiety (45.69%) presented rest of the subjects. (Fig.12).The choice of treatment places in the percent distribution by way of government hospitals and other than government hospitals. Here, most of the participants, approximately two-third (63.02%) received medical treatment and nursing management from public hospitals. On the other hand, the rest of the participants, nearly one-third portion (36.98%) expressed their opinions to get treatment from other private hospitals or doctor’s clinics of nursing course.(Fig.13).The explanation regarding nursing management status in the Bangladesh, either hospital’s nursing management system or family nursing care. The majority respondents (61.20%) approximately two-third (38.80%) did not receive nursing management from hospitals, irrespective of public or private one’s. (Fig.14).Health education provided by the

Hospital nurses followed by the participants or not in case of illness. Nearly half of the population (44.01%) did not agree to that. But more than half (55.99 %) Received care. The people who did not followed health education are not too little, Are much more significance to risk for dementia, should come to our concern. (fig.15). When a new child is born, he is taken of care of. Gradually he becomes young and productive. He contribute to the society. At a point of time, he becomes old and weak. It is the rule of Allah, the almighty and therefore unchangeable. They cannot be made productive like youngsters again. It should be remembered that, a cost benefit analysis will not be helpful in mitigating the problem, as spending on the aged will not eyelid much return as in the case of young people. Family support is the best mean to provide care for the graying population. In Bangladesh, family support is still there for the elderly. But moral codes such as 'caring for the elderly' are breaking down. So family support based care should be strengthened. Religious institutions such as mosques can be used as centers for old aged welfare. Strengthening the concept of Zakat can contribute to the old age fund. Caring for parents should be a factor of every individual's utility function as they should happily take care of their old parents. Everyone will become aged and each want to do it with dignity. One should remember that, if he does not care for his parents, he may not receive any in his old age. Therefore, elderly population should be conceptualized as 'Senior Citizen' rather than just '' old people''.

On duty nurse caring a elderly patient in a private hospital.

Some snapshot of the population under study and place of study

CHAPTER-V
Conclusion
and
Recommendation

Conclusion:

The development of "Old age Senility" refers to "Old age Dementia" is highly depended on the types of caring, like as-family Care givers. The percentage of age. ranged from 65 to >75 years with mean age of 2.08, median 2.00, the mode 1, Standard Deviation 1.033 and the Std. Error of Mean .053 within the N=384. . 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, that there is strong relationship between caring types and old age dementia. Association is highly significance, P< .005, in the Degree of freedom 2. (54.31%), more than half, suffered from one of the major elderly psychological problem such as forgetfulness, the most common one. On the other hand, insomnia, sleeplessness and anxiety (45.69%) presented rest of the subjects. . If The mental status existing among the elderly population under the group in the form of percentage. In the study, it is revealed that majority of the study population (approximately 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 highly significant, P < 0.06. If care provided by self or life partner or living together with each other, they have better mental condition, low tension and anxiety, they are less influential to ill health.

The statistical analysis appeared that they have highly association between absence or surviving of spouse.Wald-26.442, result is highly significance-. P<000, Exp(B)=Odd Ratio-5.404, Coefficients-1.687. Risk to disease, mental condition, health education and hospital nursing are highly related, and have strength of association with the old age senility. The logistic regression analysis show that their association highly related and strongly significant. P<.000, P<.000, P<.000, P<.009,respectively.Exp(B)=Odd Ratio between them reshown as-2.203,.180,.259,.279, respectively. The choice of treatment places in the percent distribution by way of government hospitals and other than government hospitals. Here, most of the participants, approximately two-third (63.02%)

received medical treatment and nursing management from public hospitals. On the other hand, the rest of the participants, nearly one-third portion (36.98%) expressed their opinions to get 109 treatment from other private hospitals or doctor's clinics of nursing course. (Fig.13).The explanation regarding nursing management status in the Bangladesh, either hospital's nursing management system or family nursing care. The majority respondents (61.20%) approximately two-third (38.80%) did not receive nursing management from hospitals, irrespective of public or private one's. (Fig.14). Health education provided by the Hospital nurses followed by the participants or not in case of illness. Nearly half of the population (44.01%) did not agree to that. But more than half (55.99%) Received care. The people who did not followed health education are not too little, are much more significance to risk for dementia, should come to our concern. (fig.15).

Home Nursing and Hospital Nursing. Result is highly significance, $P<.094$,$P<.009$, respectively. Following health Education of Professional Nursing in the Prevention of disease and Promotion of Health greatly influences to the old age senility. The result is highly significant. $P<.000$. There is strong relationship between Nursing management and Development of Old age Dementia is highly significant. According to government statistics, around 7.5% (1.25 crore) of the country's total population constitutes elderly people, while the number is expected to increase sharply and reach around 20% (over4 crore) by 2050.Population ageing has profound implications for many facets of human life. An ageing population will affect everything from economies, labor markets to health and social care. This prospect requires a better understanding of the implications and possibilities posed by population ageing as well as the situation of older persons themselves. While the older population is growing at an accelerated speed, many gaps in ageing related statistics and data exist, affecting the ability to develop targeted policies and programs that address ageing related challenges.

Future recommendation:

- Interested to include some other places under the study .
- Would like to carry out the study in the technique of SRS.
- It is difficult to carry out a study in personal initiative, so interested to involve any other organization.
- Apply the result of the study in the nursing management of old age senility.
- Incorporate the nursing management course of old age senility at all levels of Nursing Curriculum.
- Plan for Geriatric Nursing Project and may recommendation to DG Nursing and Midwifery to produce nursing specialty on the elderly care/geriatric nurse.
- Free health services in the government hospital and recommend for making Geriatric nursing care corner at hospital.
- Sensitize the government as well as Development partners to set up Community Health Nursing Center initially for each divisional city where Community Health Nurses have scopes to serve the peoples on need based.

Future Plans :

The researcher is anticipate that the clinical, administrative, and research database management needs will continue to evolve, change, and expand. Consequently, She expect that the program will require further revisions and expansions. The advantage of the multi-modular design structure is that it readily lends itself to changes both within and across elements of the systems. Furthermore, The researcher hope to gain valuable feedback on the data base program's design and features as it is tested in other settings that she wishes provide health care services similar to our program's model based on our experience with the system. Sensitize the government as well as Development partners to set up Community Health Nursing Center initially for each divisional city where Community Health Nurses have scopes to serve the peoples on need based.

Limitation of the study:

- Data was not properly randomly distributed.
- Some respondents did not cooperate to give their information, so researcher collected necessary information through observation and conversation.
- The background of the researcher is not statistics, so statistical tools can not apply properly to analyze data.

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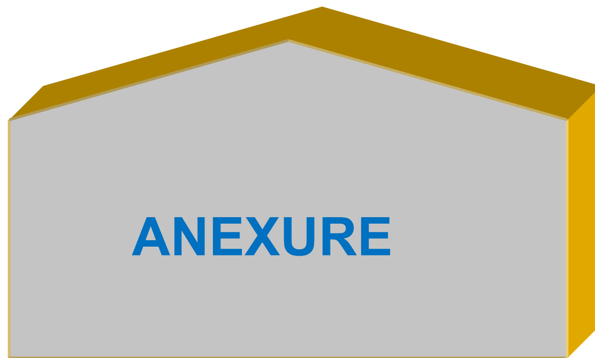
ANEXURE

ANNEX-1:
Summary table of Data collection Forms and Instruments

Title	*Description*	*Timetable*
Initial Contact form	Basic demographics on patient, family, referral source, information on presenting problem.	*At intake*
Financial status form	Sources of monthly income for patient, spouse, other household members, insurance coverage, residence status, employment status, guardianship status.	*At intake*
Intake diagnosis of disease form	Clinical admission and diagnosis	*At intake*
Medical Assessment form	Basic health status information : illness history, current problems, medications, allergies.	*At intake*
Nursing Management Methods.	Physical and instrumental activities of daily living of patient and caregiver, cognitive status, depression scale, mood-dementia scale, geriatric behavioral scale, substance abuse, caregiver burden and coping, home environment.	*At intake, every 6 months and at termination*
Health services of elderly People given.	Hospitalization, clinic visits, private doctors office visits, emergency room visits, meal delivery or meal sites, nursing home, home health care, mental health services, transportation.	*At intake, every 6 months, and at termination*

Name, age, Gender, Occupation, Education, Income and other relevant variables.

ANNEX-2 : Tools for data collection. (English)

QUESTIONNAIRES

Code No:
Hospital / Place:
Date:
Time:

Introduction: This questionnaire is divided into 4 sections. In the first section there are socio-demographic questions for you. In the second section about health problems in old age, the third section is related to medical assessment and fourth section is nursing management related questionnaire.

Section 1: Socio-demographic data

Instruction: Please fill in the blank spaces or put a tick Mark (√) on the right answer as bracket Indicated.

1.Age- ……………………………………………………………………………………..

2. Gender: ( ) 1. Male ( ) 2. Female

3. Marital status: ( ) 1. Single ( ) 2. Married ( ) 3. Divorced ( ) Widowed/ widower

4. Number of family members:…………………………………………………………..

5. Name of the dependant person who take care of you: …………………………………… .

6. Relationship between dependent person and you: ……………………………………………..

7. Home location: ( ) 1. Near to hospital ( ) 2. Remote area

3. Religion: ( ) 1. Muslim ( ) 2.. Hindu ( ) 3 . Christians ( ) 4. Buddhist

5. Educational Qualification : ( ) 1. Illiterate ( ) 2. Primary ( ) 3. Secondary. / Higher secondary ( ) 4. BA/ B.Sc / MA / M.Sc

6. Occupation : ( ) 1. Unemployment ( ) 2. Employed ( ) 3 . Retired ( ) 4. Others

7. Source of income:
………………………………………………………………………………

8. Monthly income: ( ) 1. ∟ Taka 10,000/= ( ) 2. Taka 11,000/= 15,000/=
( ) 3. Taka 15,001/=to 20,000/= ( ) 4. ┘ Taka 20,000/=

Section 2: Health Problems or Diseases Related Questionnaire

Instruction: Please read carefully and choice correct answer by tick mark (√) as you best

1. How are you ? ( ) 1. Good ( ) 2. Unwell
( ) 3. Nothing abnormality detected ( ) Others.

2. Do you like to be alone? ( ) 1. Not at all ( ) 2. Sometimes.

3. What is the cause of loneliness? ( ) 1. Thinking about old age ( ) 2. Family burden
( ) 3. Loss of spouse ( ) 4. Spirituality.

4. Do you have fatigue about your health.?
( ) 1. Yes ( ) 2. No
( ) 3. Sometimes ( ) 4. Severe fatigue

.5. Do you have Shortness of breath?
( ) 1. Yes ( ) 2 . No ( ) 3. Sometimes
( ) 4. Severe shortness of breath.

6. Do you think that the elderly persons are risk to suffer some form of chronic diseases?
( ) 1. Yes ( ) 2 . No (If yes, What are the causes?
Please specify………………………………………………

7. Did you suffered any diseases in the followings? ( ) 1. Yes ( ) 2. No
(If Yes, which one more)? Please give (√) mark.

( ) 1. Diabetes mellitus ( ) 2. Hypertension ( ) 3 . Stroke
( ) 4. Mental illness ( ) 5. Cancer ( ) 6. HIV/ AIDS

( ) 7. Heart diseases ( ) 8. Pneumonia ( ) 9. Pain Or discomfort

( ) 10. Disability(daily living, exercise, moving, eating, bathing, etc).

8. If disability yes, which of the following risk factor contributed the disability to Increases functional limitation?

( ) 1. Cognitive impairment ( ) 2. Depression ( ) 3. Disease burden
( ) 4. Smoking ( ) 5. Alcohol ( ) 6. Vision impairment
( ) 7. Low level physical activities.

9. Which of the following you feel inability?
( ) 1. Attention ( ) 2. Perception ( ) 3. Communication ( ) 4. Consciousness

10. Which type of mental condition you have?
( ) 1. Forgetfulness ( ) 2. Sleeplessness ( ) 3. Anxiety ( ) 4. Confusion

11. Do you think elderly people are frustrated for inadequate nursing?
( ) 1. Yes ( ) 2. No ( ) 3 . Not at all.

12. What do you think about the role of geriatric care giver ?
( ) 1. Not important ( ) 2. Important ( ) 3.Very much important

Section 3: Medical Assessment and Treatment Related Questionnaire

Instruction: Please read carefully and choice correct answer by tick mark (√) as you best.

1. Clinical Diagnosis : If yes, please mention…………………………………………....................

2. Past history, any medical / Surgical / any other health problems?

If yes, please mention
....

3. Please indicate the current health problems in the followings-
( ) 1. Diabetes ( ) 2. Asthma. ( ) 3. Emphysema or COPD
( ) 4. Other lung disease………………
( ) 5 . Heart disease .Type of heart disease………………………………
( ) 6 . Arthritis or other rheumatic disease,
( ) 7. Cancer, Type of cancer……………………………………………
( ) 8. Depression ( ) 9. Dementia ( ) 10. Psycho- geriatric problems ( ) 11. Aligner's disease ( ) 12. Any other chronic condition,

4. Have you received any treatment? ( ) Yes ( ) No. ( ) If yes mention the designation by whom you treated?

( ) 1. Doctor ( ) 2. Nurse ( ) 3. Homoeopathist ( ) 4. Other Indigenous.

5. In the followings from which you received treatment in case of illness ?

( ) 1. Govt Hospitalization ( ) 2. Non govt. hospitals
( ) 3. Polly Chikitshok ( ) 4. Indigenous practitioners

6. How can you defense yourself when you are in depression?

( ) 1. Religious beliefs and practices ( ) 2. Nostalgic images
( ) 3. Meditation ( ) 4. Gossip with close kinships

7. Do you satisfy those who are providing of your care?

( ) 1. Very satisfy ( ) 2. Satisfy ( ) 3. Unsatisfied

8. What do you feel if you will be send to a old age home?

( ) 1. Good, because will reduce family burden. ( ) 2. Independent life
( ) 3. Great sin for children ( ) 4. Like orphanage

Section 4: Nursing management of old age senility Related Questionnaire Instruction:

Please read carefully each statement and tick '√' the box that which you're correct answer to the following questions. **-**If you do not practice at all in accordance with the statement, please tick "√" in the box of "never".
-If you practice very often in accordance with the statement, please tick "√" in the box of "sometimes".
-If you practice every time in accordance with the statement, please tick "√" in the box of "always".
Never means you do not practice at all in accordance with statement. **Sometimes** mean you practice very often in accordance with the statement. **Always** means you practice every time , No Idea have no c6ncept to practice in accordance with the statement

No	*Nursing Management of old age senility*	Never	Sometimes	Always	Idea No
1	I have ability for maximizing life potential-(personal fulfillment ,Spiritual fulfillment, social relations, sexuality, cognition)				
2	I do practice for prevention and relief of stress-(through communication, pain control, senses, memory, orientation ,loss, Changes and adaptation, behavior, relatives and carers}				
3	I do identify the factors related to promotion and maintenance of health (personal hygiene, dressing, sleeping, mobility, eating and drinking, breathing, emotion, elimination, motivation)				
4	I actively seeks and enjoys social contact with family, neighbors and friends.				
5	I am able to make and express choices regarding food and drinks.				
6	I perform my daily activities without dependency.				
7	I can identify any risks before onset of disease.				
8	I can find out common contributing factors related to old age senility.				
9	I can pay attention on my personal fitness.				
10	I can enjoy my hobby and recreational activities without interfering my health status.				
11	I can control my personal feelings and emotions.				
12	I apply defense mechanism through nostalgic image when sadness, feel lonely and tension.				
13	I seek care and treatment when needed.				
14	I follow counseling and motivation from doctors and nurses.				
15	I have confidence on family care giver- spouse, son, daughters.				
16	I have confidence on nursing management system of govt. hospitals / private hospitals in the country.				

No	*Nursing Management of old age senility*	Never	Sometimes	Always	No Idea
17.	I have confidence on nursing management system of old age homes.				
18	I can perform self medication when illness.				
19	I take general precaution regarding my health				
20	I avoid smoking and other addicted things that cause threats to good health.				
21	I would practice the health promoting activities-walk for exercise, swimming, bicycling or other aerobic exercises.				
22	I have interest on my hobbies and doing recreational activities-Reading books, journals, telling stories, fishing, etc.				
23	I think it is the children's duty to give to their elderly parents				
24	I expect the nursing care by family members incase of illness.				
25	I believe nurses are the key provider to deliver holistic care				
26	I cherish a desire to live in old age home				
27	I recommend for geriatric nursing specialty in our country				
28	I always recommended to the authority to continue old age special nursing management				

Thank You for your valuable information and kind co-operation.

Annex-3: Tools for data collection. (Bengali)

প্রশ্নমালা

কোড নং:

হাসপাতা/স্থানের নাম: ....

তারিখ:

সময়:

নির্দেশনা: এই প্রশ্নমালাকে ৪টি পর্বে ভাগ করা হয়েছে। ১ম পর্ব আর্থ-সামাজিক অবস্থা সংক্রান্ত প্রশ্নমালা, ২য় পর্ব বৃদ্ধ বয়সের স্বাস্থ্য সমস্যা সম্পর্কিত প্রশ্নমালা, ৩য় পর্ব রোগ নির্ণয় ও চিকিৎসা সংক্রান্ত এবং ৪র্থ পর্ব নার্সিং ম্যানেজমেন্ট সম্পর্কিত প্রশ্নমালা।

পর্ব-১ : আর্থ-সামাজিক সম্পর্কিত প্রশ্নমালা :-

নির্দেশনা: অনুগ্রহপূর্বক প্রয়োজনীয় ক্ষেত্রে শূন্যস্থান পূরণ করুন অথবা ডানপাশে প্রদত্ত ব্র্যাকেটে (√) চিহ্ন দিন।

১। বয়স: ....

দ২। লিঙ্গ: ☐ ১। পুরুষ ☐ ২। মহিলা

৩। বৈবাহিক অবস্থা: ☐ ১। অবিবাহিত/অবিবাহিতা ☐ ২। বিবাহিত/বিবাহিতা ☐ ৩। তালাক প্রাপ্ত ☐ ৪। বিধবা

৪। পরিবারের সদস্য সংখ্যা: .... জন

৫। পরিবারের যার প্রতি আপনি বেশি নির্ভরশীল তার নাম: .... (অসুস্থ্যতার ক্ষেত্রে)

৬। যার প্রতি আপনি বেশি নির্ভরশীল তার সাথে আপনার সম্পর্ক: ....

৭। বাড়ীর অবস্থান: ☐ ১। হাসপাতালের কাছাকাছি ☐ ২। দূরবর্তী দুর্গম এলাকায় ☐ ৩। দুরে

৮। ধর্ম: ☐ ১। ইসলাম ☐ ২। হিন্দু ☐ ৩। খ্রিষ্টান ☐ ৪। বৌদ্ধ

৯। শিক্ষাগত যোগ্যতা: ☐ ১। অশিক্ষিত ☐ ২। প্রাথমিক শিক্ষা ☐ ৩। মাধ্যমিক/উচ্চ মাধ্যমিক ☐ ৪। বি.এ/বি.এস.সি/এম.এ/এম.এস.সি ☐ ৫। অন্যান্য ।

১০। পেশা: ☐ ১।বেকার ☐ ২। চাকুরী প্রাপ্ত ☐ ৩। অবসর প্রাপ্ত ☐ ৪। অন্যান্য

১১। আয়ের উৎস: ....

১২। মাসিক আয়: ☐ ১। ১০,০০০/= টাকা ☐ ২। ১১,০০০১৫,০০০/= টাকা ☐ ৩। ১৫,০০০২০,০০০/= টাকা ☐ ৪। ২০,০০০/= টাকা

পর্ব-২ : স্বাস্থ্য সমস্যা ও রোগ সম্পর্কিত প্রশ্নমালা:-

১। আপনি কেমন আছেন? ☐ ১।ভাল আছি ☐ ২। তেমন ভাল নেই

☐ ৩ । তেমন কোন অসুবিধা নেই ☐ । ৪ মোটামুটি আছি

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২। আপনার কি কখনো একা থাকতে ভাল লাগে? ☐ ১ । মোটেই না ☐ ২ । মাঝে-মধ্যে
☐ ৩ । হ্যাঁ

৩। আপনার মাঝে-মধ্যে একা থাকার কারণ কি? ☐ ১ । বৃদ্ধ বয়স সম্পর্কে চিন্ড়-ভাবনা

☐ ২ ।পরিবারের বোঝা মনে করে চিন্ড়া করি ☐ ৩। স্বামী/স্ত্রী হারানোর কষ্ট ☐ ৪। ধর্মীয় ও আধ্যাত্মিক চেতনায় ।

৪। আপনি কি আপনার বর্তমান স্বাস্থ্য নিয়ে চিন্তিত? ☐ ১। হ্যাঁ ☐ ২ ।না ☐ ৩। মাঝে মাঝে
☐ ৪। খুবই চিন্তিত ।

৫। আপনার স্বাভাবিক শ্বাস-প্রশ্বাসে কোন ঘাটতি (কষ্ট) আছে কি?
☐ ১। হ্যাঁ ☐ ২। না ☐ ৩। মাঝে মাঝে ☐ ৪। খুবই কষ্ট ।

৬। আপনি কি মনে করেন যে বৃদ্ধ লোকেরা কিছু ধরনের দীর্ঘমেয়াদী রোগের জন্য ঝুঁকিপূর্ণ?
☐ ১। হ্যাঁ ☐ ২। না

আপনার উত্তর যদি হ্যাঁ হয় তবে সেই ঝুঁকিপূর্ণ রোগগুলো কি কি বলবেন কি?
....

৭। নিচে যে রোগের নামগুলো দেওয়া হলো তার মধ্যে কোন ধরনের অসুখ কি আপনার আছে?
(যদি আপনার উত্তর হ্যাঁ হয় তবে কোন ধরনের অসুখে আপনি বেশি ভুগছেন অনুগ্রহপূর্বক তার পাশের খালি বাক্সে টিক চিহ্ন দিন)

☐ ১। ডায়াবেটিস ☐ ২। উচ্চ রক্তচাপ ☐ ৩। স্ট্রোক
☐ ৪। মানসিক অসুস্থ্যতা ☐ ৫। ক্যান্সার ☐ ৬। এইচ.আই.ভি/এইডস
☐ ৭। হৃদ রোগ ☐ ৮। নিউমোনিয়া ☐ ৯। ব্যাথা অথবা কোন ধরনের অস্বস্থি লাগা
☐ ১০। শারীরিক অথবা মানসিক অক্ষমতা (দৈনন্দিন কাজ-কর্ম যেমন; নিজে নিজে খাওয়া-দাওয়া, গোসল করা, পায়খানা-প্রস্রাব করা, শারীরিক ব্যায়াম, চলাচল, ভবিষ্যৎ চিন্ড়া-ভাবনা, সিদ্ধান্ড় নেওয়া, পরিকল্পনা করা ইত্যাদি)

৮। নিচের কোন ধরনের ঝুঁকিপূর্ণ অবস্থ্যাটি আপনার স্বাভাবিক কর্মক্ষমতাকে ব্যাহত করে?
☐ ১। দুর্বল জ্ঞান শক্তি ☐ ২। বিষন্নতা / দূশ্চিন্ড়া
☐ ৩। রোগজনিত কষ্ট ☐ ৪। ধূমপান / নেশা জাতীয় পানীয়
☐ ৫। বুক ধড়ফড় করা ☐ ৬। দৃষ্টিশক্তি লোপ পাওয়া
☐ ৭। শারীরিক কাজকর্মের স্বল্পতা ☐ ৮। অস্থিরতা ☐ ৯। হাত-পা কাঁপা

৯। নিচের কোন ধরনের কাজটিতে আপনি অক্ষমতা মনে করেন?
☐ ১। মনোযোগ ☐ ২। উপলব্ধি ☐ ৩। যোগাযোগ ☐ ৪। স্মৃতিশক্তি।

১০। নিচের কোন ধরনের মানসিক অবস্থা কি আপনার আছে? যদি থাকে তো বলুন-
☐ ১। সহজেই ভুলে যাওয়া ☐ ২। অনিদ্রা ☐ ৩। দুঃশ্চিন্ড়া ☐ ৪। দ্বিধা-দ্বন্দ্ব / সিদ্ধান্ড় হীনতা।

১১। আপনি কি মনে করেন যে বয়স্ক লোকেরা আমাদের দেশের নার্সিং ব্যবস্থাপনার অপ্রতুলতা নিয়ে খুব হতাশ? ☐ ১। হ্যাঁ ☐ ২। না ☐ ৩। আদৌ সেরকম না ।

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১২। বয়স্ক লোকদের স্বাস্থ্য সেবা দানকারী নার্সদের ভূমিকা সম্পর্কে আপনার মতামত কি ?
☐ ১। গুরুত্বপূর্ণ নয় ☐ ২। গুরুত্বপূর্ণ ☐ ৩। খুবই গুরুত্বপূর্ণ ।

পর্ব-৩ : রোগ নির্ণয় ও চিকিৎসা সম্পর্কিত প্রশ্নমালা:-

১।রোগ যদি থাকে তার নাম লিখুন: ....
....

২। অতীতের কোন রোগের ইতিহাস, মেডিকেল/সার্জিক্যাল/অন্যান্য স্বাস্থ্য সমস্যা যদি থাকে তাহলে উলেলখ করুন:

....
....

.৩। অনুগ্রহপূর্বক নিচে প্রদত্ত বর্তমান স্বাস্থ্য সমস্যা উলেণ্টখ করুন:

☐ ১। ডায়াবেটিস ☐ ২। হাপানী রোগ ☐ ৩। দীর্ঘমেয়াদী বাধাগ্রস্থ ফুসফুসের রোগ (সি, ও, পিডি)
☐৪। অন্যান্য ফুসফুসের প্রদাহ জনিত রোগ
☐৫। হৃদরোগ,কোন..
☐ ৬। বাতজ্বর ও গীটে ব্যাথা) ☐৭। ক্যান্সার, ধরন উলেণ্টখ করুন ....
. ☐ ৮। উদ্যমহীনতা ☐ ৯। মানসিক শক্তি হারিয়ে ফেলা ☐ ১০। বয়স্ক মানসিক সমস্যা

☐ ১১। এ্যালজিমারস ডিজিজ (সদ্য শোনা জিনিষ ভুলে যাওয়া) ☐ ১২। অন্যান্য দীর্ঘমেয়াদী মানসিক সমস্যা।

৪।উপরে উলেণ্টখিত কোন রোগ হয়ে থাকলে আপনি কি চিকিৎসা নিয়েছেন? ☐ ১। হ্যাঁ ২। না ।

যদি চিকিৎসা নিয়ে থাকেন তাহলে কার কাছ থেকে নিয়েছেন উলেণ্টখ কর্ন:
☐ ১। ডাক্তার ☐ ২। নার্স ☐ ৩। হোমিওপ্যাথী ☐ ৪।। ঝাড়-ফুঁক/কবিরাজী/অন্যান্য

৫। অসুস্থ্য হলে কোথার থেকে আপনি চিকিৎসা নেন?
☐ ১। সরকারি হাসপাতাল ☐ ২। প্রাইভেট হাসপাতাল/ক্লিনিক ☐ ৩। পলণ্টী চিকিৎসক
☐ ৪। হোমিওপ্যাথিক / আয়ুর্বেদ / কবিরাজ / ঝাড়-ফুঁক ।

৬। বিষন্নতা কিংবা মানসিক কষ্ট হলে আপনি কিভাবে নিজেকে ঠিক রাখেন (প্রতিরোধ করেন)?
☐ ১। ধর্মীয় বিশ্বাস ও কর্মকান্ডের মাধ্যমে ☐ ২। অতীতের কোন সুখময় স্মৃতি স্মরণ করে
☐ ৩। ধ্যান অথবা গভীর চিন্ড়া করে ☐ ৪। নিকটতম বন্ধু/বান্ধবের সাথে গল্প-গুজব করে ।
☐ ৫। কাজের মাধ্যমে ☐ ৬। গান শুনে ☐ ৭। আলণ্টাহ আলণ্টাহ করে ।

৭। আপনার সেবাদানকারী পরিবারের সদস্যদের প্রতি আপনি কি সন্তুষ্ট?
☐ ১। খুবই সন্তুষ্ট ☐ ২। সন্তুষ্ট ☐ ৩। তেমন কোন সন্তুষ্ট নয় ।

৮ । আপনার সেবাদানকারী নার্সদের প্রতি আপনি কি সন্তুষ্ট?
☐ ১। খুবই সন্তুষ্ট ☐ ২। সন্তুষ্ট ☐ ৩। তেমন কোন সন্তুষ্ট নয় ।

৮। আপনাকে যদি কোন বৃদ্ধাশ্রমে পাঠানো হয়, তাহলে আপনার কেমন লাগবে?
☐ ১। পরিবারের বোঝা কমে যাবে বলে ভাল লাগবে
☐ ২। স্বাধীন জীবন ☐ ৩। ছেলে-মেয়েদের জন্য খুবই পাপ ☐ ৪। এতিমখানা
☐ ৫। বনবাস । ☐ ৬। আমাদের দেশে পারিবারিক বন্ধন খুব শক্ত তাই খারাপ লাগবে,
☐ ৭ । গরীবদের জন্য প্রযোজ্য নয়। অশান্ড়ি ।

পর্ব -৪ ঃ বার্ধক্যজনিত স্বাস্থ্য সমস্যায় নার্সিং ম্যানেজমেন্ট সম্পর্কিত প্রশ্নমালা।

নির্দেশনাঃ অনুগ্রহ পূর্বক নীচের প্রত্যেকটি বাক্য যত্নসহকারে পড়ুন এবং সঠিক উত্তরের জন্য পাশে প্রদত্ত বক্সে (✓) টিক চিহ্ন দিন।

আপনি যদি বর্ণিত কাজাটি না করে থাকনে তাহলে “কখনই না ” বাক্সে টিক চিহ্ন দিন। আপনি যদি উক্ত কাজটি মাঝে মাঝে করে থাকেন তাহলে ‘মাঝে মাঝে’ ঘরে টিক চিহ্ন দিন। আর আপনি যদি কাজটি সব সময় করে থাকেন তাহলে “সব সময়” বাক্সে টিক চিহ্ন দিন।

ক্রমিক নং	বাধ্যক্যজনিত স্বাস্থ্য সমস্যায় নার্সিং ম্যানেজমেন্ট	কখনই না	মাঝে মাঝে	সব সময়	ধারনা নেই
১	আমি আমার জীবনকে সার্বিক ভাবে সর্বোচ্চ সম্ভাবনাময় করে তুলতে সক্ষম ।				
২	আমি আমার মানসিক কষ্ট প্রতিরোধ ও সকল প্রকার যনত্রনার লাঘব করার অভ্যাস গড়ে তুলি।				
৩	সুস্বাস্থ্যের সহায়ক কাজ গুলো আমি সম্পাদন করতে পারি।(যেমন - ব্যক্তিগত পরিস্কার পরিচ্ছন্নতা, কাপড় পরিধান, ঘুম, চলাচল, পানাহার, নির্মল বায়ু, আবেগ-অনুভূতি, কৌতুহল, পায়খানা-প্রসাব ত্যাগ ইত্যাদি) ।				
৪	আমি সক্রিয়ভাবে আমার পরিবার পরিজনদের সাথে সামাজিক সুসম্পর্ক বজায় রাখতে পারি।				
৫	আমি সক্রিয়ভাবে আমার পাড়া- প্রতিবেশী ও বন্ধু-বান্ধবের সাথে সামাজিক সুসম্পর্ক বজায় রাখতে পারি।				
৬	আমি সহজেই খাদ্র দ্রব্য ও পানীয়য়ের ক্ষেত্রে আমার পছন্দ অপছন্দ প্রকাশ করতে পারি।				
৭	কারো নির্ভরশীলতা ছাড়াই আমি আমার দৈনন্দিন কার্যাবলী সম্পাদন করতে পারি।				
৮	কোন অসুখ হওয়ার পূর্বেই কারণগুলো আমি চিহ্নিত করতে পারি।				
৯	বার্ধ্যক্য জনিত স্বাস্থ্য সমস্যার সাধারণ কারণগুলো আমি বুঝতে পারি।				
১০	আমি আমার ব্যক্তিগত যোগ্যতার প্রতি মনোযোগী।				
১১	স্বাস্থ্যের কোন ক্ষতি সাধন ছাড়াই আমি আমার শখের কাজ, খেলাধুলা ও আনন্দ উপভোগ করে থাকি।				
১২	আমি আমার ব্যক্তিগত আবেগ অনুভূতিগুলো নিয়ন্ত্রণ করতে পারি।				
১৩	অতীতের কোন সুখময় স্মৃতিকে স্মরন করে আমি আমার দুঃখ-কষ্ট, দুঃশ্চিন্তা ও নিঃসঙ্গতাকে ভুলে থাকতে পারি।				
১৪	আমি প্রয়োজনবোধে রোগের ক্ষেত্রে স্বাস্থ্য সেবা ও সমভাব্য চিকিৎসা চাইতে পারি।				
১৫	ডাক্তার ও নার্স কর্তৃক প্রদত্ত স্বাস্থ্য শিক্ষা ও পরামর্শ মেনে চলি।				
১৬	পরিবারের সেবাদানকারীদের (যেমন - স্বামী/স্ত্রী, পুত্র-কণ্যা, পুত্রবধু,)প্রতি আমার অনেক আস্থা আছে।				

ক্রমিক নং	বাধ্যক্যজনিত স্বাস্থ্য সমস্যায় নার্সিং ম্যানেজমেন্ট	কখনই না	মাঝে মাঝে	সব সময়	ধারনা নেই
১৭	সরকারী হাসপাতাল / প্রাইভেট হাসপাতাল / ক্লিনিকের নার্সিং ম্যানেজমেন্ট পদ্ধতির উপর আমার দৃঢ় বিশ্বাস আছে।				
১৮	বৃদ্ধাশ্রমে প্রদেয় নার্সিং ম্যানেজমেন্ট পদ্ধতির প্রতি আমার অনেক বিশ্বাস আছে।				
১৯	অসুস্থ্য হলে আমি কারো সাহায্য ছাড়া নিজেই ঔষধ সেবন করতে পারি।				
২০	স্বাস্থ্য সম্পর্কে আমি সতর্কতামূলক ব্যবস্থা গ্রহণ করে থাকি।				
২১	আমি ধূমপানসহ অন্যান্য আসক্তিমূলক জিনিস যেগুলো সুস্বাস্থ্যের জন্য আশংকাজনক তাহা পরিহার করে থাকি।				
২২	আমি স্বাস্থ্য উন্নয়নশীল কর্মকান্ডগুলো অনুশীলন করে থাকি। (যেমন - ব্যাথা কমানোর জন্য হাটা, সাঁতার কাটা, সাইকেল চালানো এবং এমনকি কোন প্রকার উপকরণ ছাড়াই শরীর চর্চা) ।				
২৩	বই পড়া, সংবাদপত্র পাঠ, গল্পবলা, মাছ ধরা, ইত্যাদি শখ ও অন্যান্য বিনোদনমূলক কাজের প্রতি আমার অনেক ঝোঁক আছে।				
২৪	আমি মনে করি যে, বৃদ্ধাবস্থায় পিতা-মাতাকে আরাম-আয়েশ ও সুখ-শান্তি দেওয়াই সন্তান-সন্ততিদের কর্তব্য।				
২৫	অসুস্থ্য হলে পরিবার, পরিজনদের থেকে প্রাপ্ত সেবাই আমার প্রত্যাশা।				
২৬	আমি বিশ্বাস করি যে, শারীরীক, মানসিক, সামাজিক সহ-সার্বিক স্বাস্থ্য সেবা প্রদানের ক্ষেত্রে সেবিকাগণই অন্যতম।				
২৭	আমি মনে মনে বাকিটা জীবন বৃদ্ধাশ্রমে থাকার ইচ্ছা পোষন করি।				
২৮	বার্ধ্যক্য জনিত স্বাস্থ্যসেবা প্রদানের জন্য বিশেষ নার্সিং কেয়ার ব্যবস্থা চলমান রাখার জন্য আমি কর্তৃপক্ষের প্রতি জোর সুপারিশ করি।				

ANNEX-4:
The Geriatric Depression Scale

THE GERIATRIC DEPRESSION SCALE (GDS)
This is a self rating instrument.

	Name of Client: **DOB:**		
	Assessor: **Date of Test**		
	Choose the answer for how you felt over the past week.	**Points for Response**	
		YES	**NO**
1	Are you basically satisfied with your life?	0	1
2	Have you dropped many of your activities and interests?	1	0
3	Do you feel that your life is empty?	1	0
4	Do you often get bored?	1	0
5	Are you hopeful about the future?	0	1
6	Are you bothered by thoughts you can't get out of your head?	1	0
7	Are you in good spirits most of the time?	0	1
8	Are you afraid that something bad is going to happen to you?	1	0
9	Do you feel happy most of the time?	0	1
10	Do you often feel helpless?	1	0
11	Do you often get restless and fidgety?	1	0
12	Do you prefer to stay at home, rather than going out and doing new things?	1	0
13	Do you frequently worry about the future?	1	0
14	Do you feel you have more problems with memory than most?	1	0
15	Do you think it is wonderful to be alive now?	0	1
16	Do you often feel downhearted and blue?	1	0
17	Do you feel pretty worthless the way you are now?	1	0
18	Do you worry a lot about the past?	1	0
19	Do you find life very exciting?	0	1
20	Is it hard for you to get started on new projects?	1	0
21	Do you feel full of energy?	0	1
22	Do you feel your situation is hopeless?	1	0
23	Do you think that most people are better off than you are?	1	0
24	Do you frequently get upset over little things?	1	0
25	Do you frequently feel like crying?	1	0
26	Do you have trouble concentrating?	1	0
27	Do you enjoy getting up in the morning?	0	1
28	Do you prefer to avoid social gatherings?	1	0
29	Is it easy for you to make decisions?	0	1
30	Is your mind as clear as it used to be?	0	1

Scoring:
Add up all the answers scoring number one.
Minimum score: 0 Maximum score: 30
Scores of 0 - 9 are considered normal
If the client scores 10 or above, it is an indicator of depression.
10 - 19 indicate mild depression
20 - 30 indicate severe depression.

WHY SCREEN FOR DEPRESSION IN OLDER ADULTS:
Depression is common in late life, affecting nearly five million of the 31 million Americans aged 65 and older (Geriatric Nursing, 1992).

Both major and minor depression are reported in 13% of community dwelling older adults, 24% of older medical outpatients and 43% of both acute care and nursing home dwelling older adults. Contrary to popular belief, depression is not a natural part of aging. Depression is often reversible with prompt and appropriate treatment. However, if left untreated, depression may result in the onset of physical, cognitive and social impairment as well as delayed recovery from medical illness and surgery, increased health care utilization and suicide.

BEST TOOL:
While there are many instruments available to measure depression, the Geriatric Depression Scale (GDS), first created by Yesavage et al (1983). has been tested and extensively with the older population. It is a brief questionnaire in which participants are asked to respond to the 30 questions by answering yes or no in reference to how they felt on the day of administration. Scores of 0 - 9 are considered normal, 10 - 19 indicate mild depression and 20 -30 indicate severe depression.
There is also a 15 item questionnaire available and a 4 item one.
In some editions of the tool the depressive answers are shaded for ease of highlighting the areas of difficulty that the client has and thus can be focused in on. The edition here is not shaded.

TARGET POPULATION:
The GDS may be used with healthy, medically ill and mild to moderately cognitively impaired older adults. It has been extensively used in community, acute and long-term care settings.

VALIDITY/RELIABILITY:
Yesavage et al.(1983) found that the GDS has a 92% sensitivity and a 89% specificity when evaluated against diagnostic criteria **THE GERIATRIC DEPRESSION SCALE (GDS)**
The validity and reliability of the tool have been supported through both clinical practice and research.

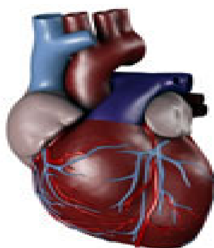
STRENGTHS AND LIMITATIONS: The GDS is not a substitute for a diagnostic interview by mental health professionals. It is a useful screening tool in the clinical setting to facilitate assessment of depression in older adults especially when baseline measurements are compared to subsequent scores. It can be self administered or done with the health professional. It takes 5 to 10 minutes to complete.

ANNEX-5:
Map of Khulna City Corporation.

ANNEX-6:
The Impact of Aging in Bangladesh

The ageing population threatens the growth of this nation, as the government is forced to commit more economic resources to an economically unproductive segment of their population. It may lead to considerable increase in expenses on social security with rise in the expenditure and their share in national income. Rural is supposed to suffer to a greater extent (Kabir, 1999). Life time poverty there makes it hard to save and accumulate assets. This means, they will face chronic poverty. 44 percent of rural population is poor by the ' head count ratio ' method and the figure is 26 percent for the urban in the year 2000 (Osmani, 2003). Due to urbanization and increase in nuclear families coupled with decreasing fertility and increasing longevity, inabilities of families to take care of old age is increasing alarming. Ageing is supposed to put pressure on the labour force. Old age dependency ratio will increase from 8.2 now to 12.8 in 2025 (Kabir, 1999).

Government has recently introduced Old Age Allowance Programme which covers small fraction of elderly people in the country who are not covered by pension system, Family support is the basic security of most elderly people in Bangladesh.



Routine Checkup: Healthy Aging